E-Waste Management and the Right to a Healthy sustainable Environment in Nigeria

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Abstract: The rise in the manufacture and usage of Information Communication Technology (ICT) has brought quantities of Electrical and Electronic Equipment (EEE). This results into transboundary movement of Waste Electrical and Electronic Equipment (WEEE) popularly known as Electronic waste (e-waste) to developing countries such as Nigeria. E-Waste is dangerous to public health and the environment. The increase in e-waste in Nigeria has not corresponded to growth in the processes related to collection, re-use, recovery, and recycling of EEE. Proper e-waste collection and recycling are important to recovering valuable materials from e-waste and protects human health and the environment. The existence of healthy environment is a necessary condition for the well-being of everyone. Hence, the significance of the concept of right to a healthy environment. The institutional policy and legal framework in place in Nigeria for this is inadequate. The study discussed the law and the right to a heathy environment in Nigeria in relation to the management of e-waste It adopted doctrinal methodology and used primary, secondary, and documentary materials to examine the effect of crude management of e-waste on the right of Nigerians to a heathy and the sustainability of the Nigerian environment. The study found that no single e-waste management option will be satisfactory as the optimum ewaste management strategy in Nigeria; but the use of mix e-waste management approaches that include the enactment of a holistic e-waste legislation to promote and protect the right of citizens to live in a heathy environment. The study found that the adoption of a circular economy concerning sustainable e-waste management is an environmental and public health imperative. It recommended institutional policy reform of advocacy interventions and legal reforms that provides for Design for Environment (DfE) to protect the right to a healthy environment in Nigeria.

Keywords: Information Communication Technology, Electrical and Electronic Waste, Healthy Sustainable Environment, Nigeria.

Introduction

Information Communication Technology (ICT has brought great changes to the modern way of living almost in every nook and cranny of all countries. Human development and modern life have been enhanced by rapid progress in ICT. For example, television sets, radio sets, computers, wireless devices like Global System Mobile (GSM) handsets, and other electrical appliances, such as refrigerators, air conditioners have become articles of a good life. However, the growth in the production and consumption of ICT has brought about large quantities of Electronic waste popularly called (E-waste) or waste electrical and electronic equipment (WEEE) which has become a topical global environmental issue.

Nigeria is a destination country for Electrical and Electronic Waste from Europe, the United States of America (USA), and other countries that include Japan, Belgium, Finland, Israel, Netherlands, and Singapore, etc.² Specifically, 45% of the e-waste in the country is from the European Union, another 45% are from the USA and the remaining 10% are from locations such as Japan, Belgium, Finland, Israel, Germany, Korea, Netherlands, Norway, and Singapore.³ Furthermore, it is estimated that about 500 containers of second-hand

Osibanjo and I. C. Nnorom: 'The Challenge of Electronic Waste (E-Waste) Management in Developing Countries' *Waste Management and Research* (2007) 25, 489 489 available online at https://www.researchgate.net/publication/5621644 The Challenge of Electronic Waste E-waste Management in Developing Countries/link/55dce88508ae591b309abc2b/download> 9 May 2022.

²P Kiddee, 'Electronic Waste Management Approaches: An Overview' *Waste Management*33 (2013) 1237. available at >>%20DEBATE%20Electronic%20Waste.pdf">https://edisciplinas.usp.br/pluginfile.php/4060581/mod_resource/content/1/AULA%209%20-ac>>>%20DEBATE%20Electronic%20Waste.pdf> accessed 9 May 2022.

³I C Nnorom and O. Osibanjo: 'Electronic Waste (e-waste): Material Flows and Management Practices in Nigeria' *Waste Management* 28 (8) (2008) 1475 available online at

https://www.sciencedirect.com/science/article/abs/pii/S0956053X07002243?via%3Dihub accessed 9 May 2022

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electronics are imported into Nigeria every month from Europe with each container holding 500 computers. About three-quarters of these imported products are bad equipment that cannot be reused and as such, they are dumped in landfills. The Basel Action Network (BAN) coordinated the study in Nigeria – 'Exporting Reuse and Abuse to Africa' revealed the level of trans-boundary movement of second-hand and scraps EEE into Nigeria. This study observed that about 25-75% of the imported second-hand computer products are not in working condition and cannot be repaired. This is because Nigeria is a developing country with a large population. The country is adjudged the most populous country in Africa. It has a high consumption rate for imported products. Hence, it cannot completely do without the importation of these products either as new Electrical and Electronic Equipment (EEE) or Used Electrical and Electronic Equipment (UEEE) or End-of Life Electrical and Electronic Equipment (EOL EEE) or indeed outright Electrical and Electronic Waste (E-waste)/Waste Electrical and Electronic (WEEE). This leads to rapidly growing electronic waste volumes. The development also makes Nigeria's e-waste generation by far the highest in all West African countries, and within the sub-Saharan Africa.

However, Nigeria like other developing countries, does not have an adequate system for the treatment of e-waste, for example, facility for the separation, storage, collection, transportation, and disposal of e-waste⁹. Thus, the increase in e-waste in Nigeria has not corresponded to the increase in the processes related to collection, recycle and re-use of EEE. ¹⁰The proper e-waste management activities consist of:

- (i) collection
- (ii) reception
- (iii) sorting
- (iv) recovering of materials
- (v) biological treatment of organic materials
- (vi) thermal treatment, and
- (vii) landfill. ¹¹The collection, recycle and re-use as well as checking the quantities and movements of e-waste is important for appraising development for a specific period and to establish and review benchmarks or targets for sustainable environment and circular economy. ¹²

At present, the way e-waste is produced, consumed, and disposed ofin the country is unsustainable as it comes with externalities, for example, the usage of resources, the release of greenhouse gases and toxic substances during informal recycling procedures. ¹³ This makes the Nigerian environment unhealthy with likely implication to public health, flora and fauna in the country.

In consequence, the central question that this article seeks to answer is whether the unremitting informal management of electrical and electronic equipment in Nigeria that produces toxic substances which are dangerous to human health violates the right of the citizenry to a healthy and sustainable environment in Nigeria? The article argues that the inability of the government of Nigeria as the duty bearer for the protection

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⁴(n 1) ibid

⁵ibid

⁶Business & Human Rights Resource Centre, 'The Digital Dump: Exporting Reuse and Abuse to Africa' available at https://www.business-humanrights.org/en/latest-news/pdf-full-report-the-digital-dump-exporting-re-use-and-abuse-to-africa/ accessed 12 May 2022.

⁷ibid

⁸A Manhart and others, 'Informal E-Waste Management in Lagos, Nigeria- Socio- Economic Impacts and Feasibility of International Recycling Co-operations' *Final Report of Component 3 of the UNEP SBC E- Waste Africa Project* (Lagos, June 2011) 1available online at https://www.oeko.de/oekodoc/1371/2011-008-en.pdf accessed 31 December 2014

⁹(n 2) ibid

 $^{^{10}}$ R Kahhat and others, 'Exploring E-Waste Management Systems in the United States' Resource, Conservation and Recycling (2008)2

¹¹V W Y Tam, 'The Effectiveness of Electrical and Electronic Waste Recycling and Its Implications to Green Building: Empirical Studies in India and Switzerland' Journal of Green Building (2011) Vol 6 Number 2 https://doi.org/10.3992/jgb.6.2.122 accessed 9 May 2022

¹²V Forti and others, 'The Global E-Waste Monitor 2020: Quantities, Flows and Circular Economy Potential' United Nation's University (UNU)/United Nation's Institute for Training Research (UNITAR) – Co-hosted by SCYCLE Programme International Telecommunication Union (I(ISWA), Bon/Geneva/Rotterdam, available online at https://www.researchgate.net/publication/342783104 accessed 21 July 2021.

¹³ibid

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of human rights, and indeed the environment and to this extent the control of the crude and informal management of e-waste in the country violates the environmental objectives under the Fundamental Objectives and Directive Principles of State Policy provided in Chapter II of the 1999 Constitution of the Federal Republic of Nigeria.

In specific term, under section 20 of this Constitution, it is provided that the Nigerian State 'shall protect and improve the environment and safeguard the water, air and land, forest and wide life of Nigeria' However, this provision of the Constitution apparently is not observed in relation to the crude management of EEE in Nigeria. The immediate ensuing segment clarifies the EEE phenomenon to aid the understanding of the discourse.

Conceptual Clarification/Definition

Electrical and Electronic Equipment (EEE)

Electrical and Electronic Equipment (EEE) is equipment that is dependent on electric currents or electromagnetic fields to work well. It includes equipment for the generation, transfer, and measurement of such currents designed for use with a voltage rating not exceeding 1000 Volts for Alternating Current (AC) and 1500 Volts for Direct Current (DC).¹⁴

Within the scope of this discourse, EEE refers to electrical and electronic appliances like refrigerators, air conditioners, mobile phones/ handsets, washing machines, microwave ovens, television sets, stereo equipment, computers and accessories, and so forth and so on.

Waste Electrical and Electronic Equipment (WEEE)/Electronic Waste (E-Waste)

Waste electrical and electronic equipment (WEEE), electronic waste, or 'e-waste' is the term that embraces the various types of electrical and electronic equipment that have become useless to their owners. It is noteworthy that there is no standard definition in the meantime. In this work, the terms 'WEEE' and 'e-waste' are used interchangeably following the EU WEEE Directive 15 and the National Environmental (Electrical/Electronic Sector) Regulations 2011. 16

Furthermore, according to Nigeria's National Environmental, (Electrical/Electronic Sector) Regulation 2011, 'e-waste' means Waste Electrical Electronic Equipment (WEEE) including old, End-of-Life (EoL) or discarded electrical/electronic appliances using electricity.

Used Electrical and Electronic Equipment (UEEE)

Used Electrical and Electronic Equipment (UEEE) are electrical and electronic equipment that are abandoned by their owners after use. Such equipment can still be used without repairs or repaired before use. UEEE is made up of functioning and non-functional equipment.

End-of-Life Electrical and Electronic Equipment (EoL EEE)

This is EEE that is in its end of life phase starting from the time when the last user disposes of it or intends to dispose of it;¹⁷ it may still be functional or can be repaired to be functional or out rightly subject to be disposed of as the waste.

Management

The term 'management' is used in a variety of ways. It can refer to members of an organisation that make key decisions regarding how and in what way products or services are produced. The term may also be used to refer to a body of knowledge that has accumulated over the years through scientific research and observation of managers in practice. 18

Further, 'management' is also the process of doing work with other people to attain organisational goals in a dynamic environment. Specific to the process is the effective and efficient use of resources and coping with a changing environment. ¹⁹The particular sources of change as far as the term 'management' is concerned

¹⁴Directive 2002/96/EC of the European Parliament and of the Council of 27 January 2003 on Waste Electrical and Electronic Equipment (EEE). See also, the Nigeria's National Environmental (Electrical/Electronic Sector) Regulations 2011, Regulation 69.

¹⁵ibid

¹⁶Regulation 69.

¹⁷O Deubzer;' E- waste Management in Germany' available online at:

http:isp.unu.edu/publications/scyle/files/ewaste-management-in-germany.pdf> accessed 27 May 2022.

¹⁸R J Aldag and T. M. Stearns, *Management* (2ndEdn South-Western Publishing Co, Cincinnati 1991) 13.

¹⁹C M Cassidy and R. Kreitner; *Principles of Management* (South – Western, CENGAGE Learning 2009) 5,

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include globalisation, the evolution of product quality, environmentalism/sustainability, and ethical reawakening, the internet, and social media revolution. ²⁰In essence, management is the process of attaining organisational goals by engaging in the four main functions of planning, organising, leading, and controlling. ²¹

These main four functions are done in formally organised groups through the art of creating an environment where people can perform as individuals and yet cooperate towards the attainment of group goals. 'Management' in this way involves the art of removing blocks to such performance as well as the art of optimizing efficiency and effectively reaching goals.²²

E-waste Management

From the clarification of the connotation of 'Management' within the immediate preceding section of the discussion 'E-waste management' connotes the planning; organising, and controlling the inflow of e-waste into Nigeria through effective (prompt disposal of hazardous substances in the e-waste) and efficient approach (deployment of fewer resources) while recovering reusable materials to promote and protectthe citizen's right to a healthy and sustainable environment.

Conceptualizing Sustainability of the Environment

Perhaps, the call for action for the sustainability of the environment can best be appreciated in the words of the Brundtl and Report²³ describing the environment as seen from the space in the middle of the 20th century in 1987. The Report states:

'From space, we can see a small and fragile ball dominated not by human activity and edifice but by a pattern of clouds, oceans, greenery, and soils. Humanity's inability to fit its activities into that pattern is changing planetary systems, fundamentally. Many such changes are accompanied by life-threatening hazards. This new reality from which there is no escape must be recognized and managed'²⁴.

But the concept of sustainability seems difficult to deal with. Its detailed analysis seems to be non-existent.²⁵ The use and explication of the concept are dependent on how it is applied within an issue-area. This makes the concept open to individual political and philosophical interpretations.²⁶ Thus, we hear of the terms 'sustainability or 'sustainable' or 'sustainability'; agricultural sustainability';

²⁰ibid

²¹K M Bartol and D. C. Martins, *Management* (3rdEdn, Irwin, McGraw-Hill 1998) 5

²²H Koontz, 'The Management Theory Jungle' *The Journal of the Academy of Management*' Vol. 4, No. 3 (Dec., 1961) 186.

²³Also referred to as 'Report of the World Commission on Environment and Development: Our Common Future' The World Commission on Environment and Development (WCED) 1987 had its meeting in 1984 for its three year of work. The Commission had urgent call by the General Assembly of the United Nations to – propose long-term environmental strategies for achieving sustainable development by the year 2000 and beyond; to recommend ways of concern that the environment may be translated into greater cooperation among developing countries and between countries of different economic and social development and lead to the achievement of common mutually supportive objectives that take account of interrelationships between people, resources, environment and development; to consider ways and means by which international communities can deal more effectively with environmental concerns; and to help define shared perceptions of long –term environmental issues and appropriate efforts needed to deal successfully with the problems of protecting and enhancing the environment, a long term agenda for action during the coming decades, and aspirational goals for the world community. See, G.H Brundtland; 'Report of the World Commission on Environment and Development: Our Common Future' (1987) 5 available on line at

https://sustainabledevelopment.un.org/content/documents/5987our-common-future.pdf accessed 6th May 2017

²⁴ibid at 11

²⁵S M. Lele; 'Sustainable Development: A Critical Review' World Development, Vol. 19, No. 6 (1991) 615

²⁶J Morelli; 'Environmental Sustainability: A Definition for Environmental Professionals' Journal of Environmental Sustainability, (2011) 3 Vol. 1 Issue.

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'economic sustainability';²⁷'social sustainability; 'environmental sustainability',²⁸ and 'maximum sustained catch',²⁹

According to the Dictionary, the adjective 'sustainable' means 'involving the use of natural products and energy in a way that does not harm the environment' The word with its noun form 'sustainability' are among the Academic Word List (AWL) that the Dictionary states as words that occurred across a range of 28 subject areas such as Biology, History, Marketing and International Law in four academic disciplines - Arts, Commerce, Law, and Science. This analysis bears out the assertion that the words are used according to the disciplinary orientation of the researcher or author.

It is instructive to note that there have been efforts to define the term 'sustainable' or 'sustainability' by scholars and different professional groups. Hence, some persons take to the three-pronged way of a definition; that is, a definition that is simultaneously befitting to the economy-society-environment. Yet, others see 'sustainability' or 'sustainable' as a relationship between human society and nature. To this extent, sustainability can be referred to as the necessity of humanity to maintain the ways of life that are dependent on air, water, food, and soil for existence. This concept of sustainability alludes to the relation of humanity with nature.

For the present discourse, however, the concept of sustainability that it applies is the 'three-pronged approach of the definition befitting to the economy-society-environment'. It connotes the manufacturing of EEE in a way that is friendly to the economy, society, and the environment. In other words, EEE should be produced and used in the country in a way that makes the products less polluting or less harmful to human health and the environment, less resource-intensive, and profitable leading to environmental sustainability in Nigeria.

The Concept of HumanRight to a Healthy Environment

The importance of the right to a healthy environment for every human being cannot be overstated. This is because the environment can be argued to be the main basis for the physical, physiological and the psychological development, and indeed survival of everyone. This assertion is underscored by the place given to the environment in the proclamation that both the natural and man-made environment are essential to the enjoyment of the basic human rights including the right to life.³³ Thus, the international community of nations agree that everyone has the fundamental right to freedom, equality and adequate condition of the life, in an environment of quality that permits a life of dignity and well-being, and everyone has a genuine responsibility to protect and improve the environment.³⁴ The United Nation's Conference on Environment and Development alluded also to the connectivity between the survival of human beings and sustainable development in Principle1 of its report. It states: 'Human beings are the centre of concern for sustainable development. They are entitled to a healthy and productive life in harmony with nature.³⁵ Furthermore, at International Human Rights Law, it is now well-known that a healthy environment is a sine qua nonfor the promotion and protection other accepted rights. 36To this extent, human rights is an existing principle of international law, it underscores the reason for the acceptance that human rights principle to environment is an aspect of international law.³⁷Thus, in Gabcikoro - Nagymaros Case³⁸, the International Court of Justice speaking through a separate opinion per Honourable Justice Weeramantry stated as follows:

²⁷ibid

²⁸R Goodland; 'The Concept of Environmental Sustainability' Annual Review of Ecology and Systematics,26 (1995) 3 Vol. 26

²⁹One of the early uses of the term 'sustained' within the context of a discipline was in 1950 by the International Convention for the Northwest Atlantic Fisheries (dated 8 February 1949, but came into force on 3 July 1950).

³⁰AS Hornby, Oxford Advanced Learner's Dictionary, (9thedn, Oxford University Press 2015) xi

³¹J Morelli (n 4) at 2

³²K Bosselman; The Principle of Sustainability – Transforming Laws and Governance (2008) 9

³³United Nation, Report of the United Nation's Conference on the Human Environment, Proclamation 1 Stockholm, 5 – 16 June 1972 (United Nations New York 1973) 3.

³⁴Principle 1, ibid.

³⁵Report of the United Nation's Conference on Environment and Development, Rio de Janeiro 3 – 14 9 United Nations 1993) available at https://www.un.org/esa/dsd/agenda21/Agenda%2021.pdf accessed 17 July 2022.

³⁶B Lewis. 'Environmental Rights or a Right to the Environment: Exploring the Nexus between Human Rights and Environmental Protection (2012) Vol 8 (2) Mcquarie Journal of International and Comparative Environmental Law 37.

³⁷C F Edward-Ekpoans C N Nwali, *Environmental Law: Human Rights and Globalisation – Development and Dynamics* (Mult-Development Company Ltd Port Harcourt 201) 44.

³⁸[197] ICJ Rep 92

"...the protection of the environment is...a vitalpart of contemporary human rights doctrine, for it is a *sine qua non* for numerous human rights such as the right to health and the right to life itself. It is scarcely necessary to elaborate on this, as damage to the environment can impair and undermine all the human rights ...in the Universal Declaration on Human Rights and other human rights instruments.³⁹

Furthermore, in Kawas Fernandez v. Honduras, ⁴⁰ the Inter-American Court of Human Rights considered the constitutional recognition of right to a healthy environment in some countries in the region as legally important in the interpretation of freedom of expression to protectenvironmental right defenders. Also, Principle 10 of the Rio Declaration alludes to the linkage between the individual and the environment and states that environmental issues are best handled with the participation of all concerned; the Principle enjoins national authorities to allow individualsthe opportunity to participate in the decision making process in relation to environmental issues affecting them. ⁴¹

Across the globe in recent time, the right to a heathy environment through the recognition of the right to safe, clean, healthy and sustainable environment has been accepted legally by provisions in Constitutions, environmental legislation, as well as by the ratification of regional treaties. ⁴² In this way, there are 111 States where the right to safe, clean, healthy and sustainable environment have constitutional protection; while there are about 126 State Parties that ratified regional treaties with provisions for the right to a healthy environment. ⁴³ For instance, there are 52 States that are parties to the African Charter on Human and People's Rights, 45 States are parties to the Aarhus Convention that deals with access to information, public participation and access to justice in environmental matters, 16 are State Parties to the San Salvador Protocol and 16 States that are Parties to the Arab Charter on Human Rights. ⁴⁴ Also, there are 101 States that have specific legislation, regulations and policies incorporating the right to a heathy environment. ⁴⁵

Yet, there are international treaties or instruments that make provisions that bring forth clearly the intersection between environmental need for human existence and the full enjoyment of human rights by everyone. A few instances will suffice, the Universal Declaration on Human Rights (UDHR) in article 3 provides that everyone has the right to life, liberty and security of person; ⁴⁶ while article 12 (1) of the International Covenant on Economic, Social and Cultural Rights (ESCR) provides that State Parties recognize the right of everyone to the enjoyment of the highest attainable standard of physical and mental health. ⁴⁷ Also, articles 11 (1) of the ECSCR and 25 (2) UDHR respectively provide that everyone has the right to standard of living adequate for human beings, including the right to health, food, clothing and housing and so forth and so on. The Convention on the Right of the Child provides that children have the right to live in clean and safe environment. ⁴⁸ Indeed, article 24 (2) (c) of the Convention obligates States to consider the 'dangers and risks of environmental pollution'. The Convention on the Elimination of all Forms of Discrimination against Women (CEDAW) mandates States to ensure that women enjoy 'adequate living condition in relation to housing...sanitation...water supply'⁴⁹ as well as '...adequate nutrition during pregnancy and lactation'. ⁵⁰ Although these instrument do not out rightly provide for the right to a healthy environment, there is no gainsaying the fact that their provisions are connected or intertwined with the right to a healthy environment.

³⁹ibid

⁴⁰Inter-American Ct of H. R Ser. C No 193 (Apr. 32009) para. 148.

⁴¹(n 50) ibid.

⁴²UNEP,'Right to a Healthy Environment: Good Practices' Report of the Special Rapporteur on the Issue on Human Rights Obligations Relating to the Enjoyment of a Safe, Clean, Healthy and Sustainable Environment available at <

⁴³ibid

⁴⁴ibid. In Latin America, as at 1 December 2019, 5 State Parties have ratified the Escazu Agreement that deals with Access to Information, Public Participation and Access to Justice in Environmental Matter. ibid.

⁴⁵ibid

⁴⁶United Nations, 'Universal Declaration of Human Rights' available at

https://wedocs.unep.org/bitstream/handle/20.500.11822/32450/RHE.pdf accessed 20 May 2022

https://www.un.org/en/udhrbook/pdf/udhr_booklet_en_web.pdf accessed 17 May 2022.

⁴⁷United Nations, 'International Covenant on Economic Social and Cultural Rights' available at https://www.ohchr.org/sites/default/files/cescr.pdf accessed 17 May 2022.

⁴⁸Article 24.

⁴⁹Article 14 (h).

⁵⁰Article 12 (2).

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To give the right to a heathy environment the normative pride of place it rightly deserves in human rights discourse, the United Nations Human Rights Council on 8 October 2021 adopted Resolution 48/13⁵¹ recognising that 'a clean, healthy and sustainable environment is a human right'. In all, more than 80 percent of the UN member states, 156 out of 193, have statutory enactments that legally make the provisions for the right to a safe, clean and heathy sustainable environment.⁵² It can be rightly argued from the foregoing discussion that theright to a healthy environment has moved away from being a 'soft law' to a 'hard law' that is gaining traction among the international community.

E-waste Management and the Right to a Healthy SustainableEnvironment in Nigeria

The components of E-waste such as Printed circuit boards, Motherboards, and Cathode ray tubes (CRTs), etc. contain toxins that affect parts of the human body⁵³. Thus, Printed Circuit Boards that contain Lead, Cadmium and Berillium affect the human nervous system; Motherboards that contains Lead Oxide and Cadmium affect the lungs and skin; Switches and Flat Screen Monitors made up of Cadmium affect the brain and the skin. Whilst computer batteries, cable and plastic housing that contain Polychlorinated Bephyenyls (PCB) and Bromine affect the kidney and liver as well as the immune system respectively.⁵⁴Also studies have shown that exposure to the mixture of chemicals emitted during e-waste processing is harmful to human health and induces adverse effects including skin disease, under-development of the brain in children, damage to the nervous system, malfunctioning of kidneys, respiratory problems, endocrine disruption, adverse pregnancy and birth outcomes, and poor health burden heritage perpetuated through mother- to -child.⁵⁵In fact crude handling of e-waste is generally dangerous to public health.

Meanwhile, Nigeria like other developing countriesdoes not have a comprehensive system for the treatment of e-waste, for example, facility for the separation, storage, collection, transportation, and disposal of e-waste. ⁵⁶For example, there are inadequate facilities for the collection, recovery, and recycling of e-waste in the country as there is a poor interface between the informal sectors with the regulatory authority. ⁵⁷ There is also no measurable target in terms of prevention, reuse or recycling of e-waste as well as no provision in the law ⁵⁸ in the country to incorporate prevention, re-use and recycling into design by manufacturers of EEE. ⁵⁹This is notwithstanding the fact that proper prevention, re-use, recycling and design for EEE is very important in the formal management of e-waste to protect the human or public health and the environment.

Consequently, within the Nigerian environment where e-waste is crudely treated clouds of smoke hangover the dump sites and the odour of burning of plastic is always in the air from these dump sites across the city of Lagos. At these dump sites, children often scavenge through electronic waste to earn around US \$ 2 a day for collecting valuable components. Also at the dump sites, cables and wires are burnt to recover reusable metals like copper wire and in the process, toxic chemicals and metals are released into the surrounding atmosphere. This takes place because these informal handlers of WEEE seem not to have information on the danger of in-proper handling of WEEE to human beings and the environment whilst the environmental objectiveguarantee in the Constitution highlighted below in the immediate segmentseems not to be observed by the government.

1999 Constitution of Nigeria and the Right to a Healthy Sustainable Environment

The starting point in analyzing the legal framework for the right to a healthy sustainable environmentin regard to the crude management of e-waste and the maintenance of the environment generally in the country is

⁵¹A/HRC/RES/48/13.

⁵²(n 57) 12.

⁵³S Pramila and others, 'E-waste – A challenge for Tomorrow' Research Journal of Recent SciencesMarch (2012) 89 Vol. 1 (3).

⁵⁴ibid

⁵⁵X Wang and others; 'Health Risk Assessment of Lead for Children in Tinfoil Manufacturing and E-Waste Recycling Areas of Zheigiang Province, China' Sci. Total Environ. (2012) 426

⁵⁶See, (n 35) ibid

⁵⁷O Fagbohun (n 4) ibid

⁵⁸National Environmental (Electrical/Electronic Sector) Regulations 2011.

⁵⁹I E Faluyi, 'The Role of Extended Producer Responsibility in the Management of Electronic Waste in Developing Countries – The Nigerian Case Study' *Dissertation for the Award of the Degree of Master of Science of the University of Bath* (2015) 44 - 45

⁶⁰See, (n 34) ibid

⁶¹ibid

⁶²ibid

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to have recourse to the provisions of the basic law of Nigeria, that is, the Constitution. ⁶³ The Constitution makes provision for the environmental objectives of Nigeria under the Fundamental Objectives and Directive Principles of State Policy.⁶⁴ It states -'The State shall protect and improve the environment and safeguard the water, air and land, forest and wide life of Nigeria. 65

However, the transboundary movements of e-waste into Nigeria as well as the informal trade in it are against the sustainability of the environmental provisions of the Constitution. Notwithstanding the specific provisions of the Constitution in sections 13 for 'all organs authorities and persons' 'to observe and apply the provisions of the Constitution and section on environmental sustainability quoted above as well as Article 24 of the African Charter on Human and People's Rights (Ratification) Act 1983 which provides that 'All peoples shall have the right to a general and satisfactory environment favorable to their development', the activities of those involved in e-waste associated business make the realization of these provisions unattainable.

It is instructive that this environmental sustainability provision does not belong to Chapter IV of the Constitution that deals with the civil and political or fundamental human rights of the citizenry, but rather, it belongs to Chapter II provisions that deal with socio-economic rights that are non-justiciable by virtue of section 6 (6) (c)⁶⁶ of the Constitution. Hence, these provisions appear otiose concerning environmental constitutionalism. 67 Thus, the provisions in sections 13 and 20 have also been adjudged as mere 'platitudes' 68 and rather 'narrow' and 'remote' to mitigate the environmental challenges in the country, particularly concerning the management of e-waste. Thus, the fundamental law in Nigeria, the - the Constitution does not provide for the right to a healthy sustainable environment. While the environmental objective of the Nigeria State in section 20 of the Constitution as alluded is not observed in relation to environmentally sound management of e-waste.

Perhaps, enshrining environmental rights in the Constitution as human rights can assist in mitigating the e-waste challenge in the country as any breach afterwards will be tantamount to a fundamental human rights breach with obvious consequences.⁷⁰

⁶³1999 Constitution of the Federal Republic of Nigeria as amended

⁶⁴See, (n 81) Chapter 1 above

⁶⁵See section 20

⁶⁶This provides that the judicial powers vested in the courts 'shall not, except as otherwise provided by this Constitution, extend to any issue or question as to whether any act or omission by any statutory or person or as to whether any law or any judicial decision is in conformity with the Fundamental Objectives and Directive Principles of State Policy set out in Chapter II of this Constitution'. However, in the case of Social and Economic Rights Action Centre and Anor Vs. Federal Republic of Nigeria (2002) 2CHR 537, the African Commission on Human and Peoples Rights relying on the case of Valesquez Rodgriquez Vs, Honduras ((1988) Series C, No 4 and X and YV (Netherland's Case) 91 ECHR (1985) (Ser. A) 32 held that the action of the Federal Government of Nigeria by doing nothing pertaining to the environmental degradation in Ogoni community in Rivers State as a result of toxic waste, oil spillage and eco-system alteration etc. is tantamount to violation of the rights of the Ogoni people to a healthy environment. See, C F Edward-Expo and C N Wali, 'Environmental Law: Human Rights and Globalisation - Development and Dynamics' (Multi-Intelligence Development Company Ltd Port Harcourt 2010) 66 - 67

⁶⁷Environmental Constitutionalism refers to the examination of domestic and international environmental concerns and the measures taken to constitutionalise them. In other words, it involves exploring the letters and the spirit of the Constitution for protecting the right of the citizens to a healthy environment. See, T Okonkwo, 'Environmental Constitutionalism in Nigeria - Are we there yet? (2015) Nig. J. R. 175 – 176 available online at <a href="https://law.unn.edu.ng/wp-content/uploads/sites/12/2016/08/8-Environmental-Constitutionalism-content/uploads/sites/12/2016/08/8-Environmental-Constitutionalism-content/uploads/sites/12/2016/08/8-Environmental-Constitutionalism-content/uploads/sites/12/2016/08/8-Environmental-Constitutionalism-content/uploads/sites/12/2016/08/8-Environmental-Constitutionalism-content/uploads/sites/12/2016/08/8-Environmental-Constitutionalism-content/uploads/sites/12/2016/08/8-Environmental-Constitutionalism-content/uploads/sites/12/2016/08/8-Environmental-Constitutionalism-content/uploads/sites/12/2016/08/8-Environmental-Constitutionalism-content/uploads/sites/12/2016/08/8-Environmental-Constitutionalism-content/uploads/sites/12/2016/08/8-Environmental-Constitutionalism-content/uploads/sites/12/2016/08/8-Environmental-Constitutionalism-content/uploads/sites/12/2016/08/8-Environmental-Constitutionalism-content/uploads/sites/12/2016/08/8-Environmental-Constitutionalism-content/uploads/sites/12/2016/08/8-Environmental-Constitutionalism-content/uploads/sites/12/2016/08/8-Environmental-Constitutionalism-content/uploads/sites/12/2016/08/8-Environmental-Constitutionalism-content/uploads/sites/12/2016/08/8-Environmental-Constitutionalism-content/uploads/sites/12/2016/08/8-Environmental-Constitutionalism-content/uploads/sites/12/2016/08/8-Environmental-Constitutionalism-content/uploads/sites/12/2016/08/8-Environmental-Constitutionalism-content/uploads/sites/12/2016/08/8-Environmental-Constitutionalism-content/uploads/sites/12/2016/08/8-Environmental-Constitutionalism-content/uploads/sites/12/2016/08/8-Environmental-Constitutionalism-content/uploads/sites/sit

Okonkwo.pdf> accessed 18th July 2020, citing B Hudson, 'Structural Environmental Constitutionalism' 40 B C ENVTL. AFF. L. REV 403. 403 - 404, L J Kotze, 'Arguing Global Environmental Constitutionalism' 1 TRANSNATL' ENVTL. 199, 203 - 204 (2012), D A Kysar, 'Global Environmental Constitutionalism: Getting There from Here' TRANSNATL. ENVTL. L83, 90 (2012) ⁶⁸ibid

⁶⁹O Fagbohun, 'The Emergence and Development of Environmental Law in Nigeria (1960 - 2010' in *Law and* Development - 50 Years of Nationhood, E Azinge and N Aduba, eds, (Nigerian Institute of Advanced Legal Studies 2010) 225 available online at

http://www.elri-

ng.org/publication/Law%20&%20Development%20in%20Nigeria%2050%20%20years%20of%20Nationhood.

pdf> accessed 18th May 2020
⁷⁰In Gbemre V. Shell PDC Nigeria Ltd. Unreported 14 November 2005 (Fed. HC (Nig), the Court conceptualised environmental protection in Nigeria in terms of fundamental human rights provisions in sections

Conclusion / Recommendations

This article has demonstrated that the manufacture and usage of ICT and EEE although has brought positive changes to modern living, it has also brought large quantities of e-waste that are illegally moved to developing countries such as Nigeria. Ithas further demonstrated that e-waste is more informallymanaged in Nigeria for materials of value, with effect on human health and the environment, while the environment has been argued to be the main basis for the physical, physiological and the psychological development, and indeed survival of everyone. It has been shown that the crude approach for e-waste management in Nigeria is because of inadequate or comprehensive formal facilities for the environmentally sound management of e-waste and that proper e-waste management is encapsulated in a scheme for prevention, collection, reuse and recycling of e-waste which protects human health and the environment as well as promotes circular economy. The article has equally drawn a linkage between the provision for the fundamental human right to life in the Nigeria Constitution, 71 and the right to a healthy sustainable environment that is not provided in the Nigeria Constitution as a substantive human rights enforceable at law by the citizens.

In consequence, there is the need to scale upadvocacy and awareness activities about the hazardous nature of e-waste by way of policy reform. This will improve the various ways e-waste scavengers, repairers, refurbishers, recyclers, EEE distributors, and importers carry out their activities on e-waste trade. This approach will highlight the dangers inherent in the crude management of e-waste in Nigeria. Also, this articlerecommends the reform of the extant legal framework for e-waste management in the country by way of the enactment of a holistic legal regime that provides for Electronic Waste Management Fundand sets measurable target for stakeholders in the e-waste management value chain. This willprovide for a formal e-waste management scheme which aims at prevention, collection, re-use, recycling as well as 'product design for the environment' (DfE) for EEE that will protect the human health and the environment in the management of e-waste in Nigeria. The DfE will be in addition to the Extended Producer Responsibility programme provided under the dedicated administrative regulations⁷² for the management of e-waste in Nigeria. This isbecause no single e-waste management option will be satisfactory as the optimal performing e-waste management strategy in the country. But rather, the deployment of a mix e-waste management approaches inclusive of the adoption of a circular economy in relation to e-waste management thatmandates the establishment of formal e-waste recycling facilities. This will protect the right to a healthy sustainableenvironment pertaining to e-waste management and will be the optimal e-waste management strategy in Nigeria.

^{33 (}right to life) and 34 (right to human dignity) of the 1999 Constitution of the Federal Republic of Nigeria as amended and held that the flaring of gas by Shell in the applicants community during exploration and production activities is a gross violation of the human rights of the people of the community to life, including the right to healthy environment and the human right to the dignity of the human person as enshrined in the Constitution. See, B Faturoti and others, 'Environmental Protection in Nigerian Oil and Gas Industry and Jonah Gbemre V. Shell PDC Nigeria Ltd: Let the Plunder Continue? (May 2019) 5. The Supreme Court of Philippines reached the same position in the case of *Juan Antonio Oposa V. Fulgencio S. Factoram Jr*, (G. R. No. 101083, 224 SCRA 792 (Supreme Court of Philippines July 30 1993) See, also *Metropolitan Manila Development Authority V. Concerned Residents of Manila Bay*, G R Nos 171947 – 48 (Supreme Court of Philippines, December 19 2008).

⁷¹Section 33

⁷²See, Schedule VIII National Environmental (Electrical/Electronic Sector) Regulations 2011.