"GLOBAL PERSPERCTIVE OF E-WASTE"

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I feel highly honoured to be invited to give the key note address at this very important Workshop on the Regulation and Management of E-waste in Nigeria being organized by the Lagos State Environmental Protection Agency (LASEPA), Environmental Law Research Institute (ELR) and the Basel Convention Regional Coordinating Center for Africa (BCRCC). The collaboration among these three bodies is an eloquent testimony of the strong commitment each organisation has on the issue of Waste Electrical and Electronic Equipment (WEEE), popularly known as e-waste.

2. Distinguished Ladies and gentlemen, the theme for this summit is quite timely as the whole world is currently grappling for a solution to the ever increasing generation of WEEE, its movement from developed to developing countries and the associated impact on human health and the environment.

3. I must say I am quite impressed with the pace Lagos State has taken to respond to this problem, following the International Conference on e-waste Control organized by NESREA in 2009. This is a clear indication of Nigeria's interest in ensuring that the country is rid of all forms of wastes including WEEE.

4. Before going further, we all need to be on the same platform in first understanding what constitutes WEEE. For the purpose of this address, WEEE encompasses a broad and growing range of electronic devices ranging from large household devices such as refrigerators, air conditioners and consumer electronics such as personal stereos, computers, cell phones which have been discarded by their users (Puckett and Smith, 2002).

5. The global concerns about WEEE arose from the following:

- Proliferation of the use of electronic devices in recent decades and the rapid growth in the quantities of electronic devices, such as PCs, mobile telephones and entertainment electronics that requires disposal throughout the world. It has been found that the USA discards 30 million computers each year and 100 million phones are disposed off in Europe each year;
- The rapid changes in technology, planned obsolescence of EEE and low initial cost of near end of life EEE, have resulted in a fast-growing surplus of electronic waste around the globe. Cumulatively, about 500 million PCs reach the end of their service lives between 1994 and 2003. Similar quantities of electronic wastes are expected for all kinds of portable electronic devices such as MP3 players, computer games and peripherals;

- WEEE contains hazardous constituents that may negatively impact the environment and affect human health if not properly managed as is the case in developing countries which lack adequate infrastructure to manage wastes safely.

6. Distinguished ladies and gentlemen, E-waste has been recognized as one of the topical environmental issues of the 21st century. At the Second Session of the International Conference on Chemical Management (ICCM-2) held in Geneva, Switzerland in May 2009, e-waste was one of the emerging issues proposed and discussed extensively by the African Group at the Conference. It was a battle that the African Group led by Nigeria, fought to ensure that the issue was included in the International Agenda. Since then, the subject has occupied a major point for discussion in many international fora.

7. Developing countries are now facing huge challenges in the management of WEEE which are either internally generated or imported illegally as "second hand" goods in an attempt to bridge the so-called 'digital divide'. Most second hand EEE consignments imported into developing countries are mixtures of less than 25% of used, functional EEE and over 75% of WEEE. Even the so called functional products are near their end-of-life, which so many developing countries have the challenge of dealing with.

8. Some of the challenges that make WEEE a problem in the developing countries include:

- Lack of distinction between used electrical/electronic equipment and electronic waste;
- Lack of relevant laws to address the WEEE problems;
- The non-environmentally sound management of WEEE such as crude recovery of valuable components;
- Lack of effective take-back and Extended Producer Responsibility programs for end-of-life EEE;
- The absence of national infrastructure for formal recycling; and
- Lack of awareness and public education on the problems associated with importation of near-end –of –life and end-of-life EEE.

9. WEEE or e-waste, though an emerging problem, can be a very valuable source of secondary raw materials if they are sorted and handled correctly. Entire new business opportunities are evolving around trading, repairing and recovering materials from redundant electronic devices. This is because the large volumes of e-waste being generated contain considerable quantities of valuable materials such as precious metals. The percentage of valuable components (iron, copper, aluminum, gold and other metals) in e-waste is higher than that of the pollutants. The first generation PCs used to contain up to 4 g of gold each; however this has decreased to about 1 g today. The value of ordinary metals contained in e-waste is also very high, 1 ton of e-waste contains up to 0.2 tons of copper, which can be sold for about 500 Euros at the current world price (Soderstrom, 2004).

10. Although the gradual and steady increase in the generation of WEEE intensifies the interest for recycling to conserve the resources and protect the environment, the sad aspect of this problem is that, most of the technicians are not aware of the risks, neither do they know of better practices. This is because they employ crude recycling practices such as open burning or dumping into surface water bodies and any available space in their efforts to dispose WEEE. While it is a source of livelihood for the urban and rural poor, it often causes severe risks to humans and the local environment.

11. The lack of adequate national regulation and/or weak enforcement of existing laws, promote the growth of a semi-formal or informal economy in developing countries. However, efforts are being made globally and nationally to address the WEEE problem. On the global level, the most prominent international initiative stemming against e-waste trade is the Basel Convention on the Control of Transboundary Movement of Hazardous Wastes and their Disposal which entered into force in 1992. This Convention puts the onus on exporting countries to ensure that hazardous wastes are managed in an environmentally sound manner in the country of import. Apart from Afghanistan, Haiti, and the United States of America, all 164 signatories have ratified the convention.

12. Another global effort in tackling e-waste problem is StEP (Solving the E-waste Problem) initiative. StEP is an initiative of various United Nations Organizations with the overall aim to solve the e-waste problem. They initiate and facilitate approaches towards the sustainable handling of e-waste with prominent members from the industry, governments, international organizations, NGOs and the science sector. StEP develops just and environmentally safe solutions for e-waste problems through analysis, planning and pilot projects.

13. IMPEL TFS is involved in capacity building through exchange of knowledge and best practices facilitating inter-agency, cross-border collaboration and operational enforcement activities on transfrontier waste shipments. Nigeria has benefitted from their exchange training programe in Belgium for relevant authorities from developing countries aimed at building capacity of participants on monitoring and controlling exports from Europe to Africa on used EEE and end-of-life EEE.

14. In realization of the e-waste problem in Africa following the release of the film "the Digital Dump" produced by Basel Action Network, the Basel Convention Secretariat developed the "E-waste Africa Project" for some African countries including Nigeria, Ghana, and Benin Republic. The main objective of the project is to build local capacity to address the flow of e-waste and electrical electronic equipment destined for reuse.

15. Also at global level is the Directive on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (2002/95/EC) commonly referred to as the Restriction of Hazardous Substances Directive (RoHS Directive). This was adopted in February 2003 by the European Union and came into force in July 2006, This directive restricts the use of six hazardous materials in the manufacture of various types of electronic and electrical equipment. These are Lead, Mercury, Cadmium, Hexavalent Chromium, PolyBrominated Biphenyls and PolyBrominated Diphenyl Ether

16. Legislators are now increasingly adopting Extended Producer Responsibility (EPR) policies to manage various kinds of wastes, such as discarded cars, electrical and electronic appliances and batteries, which require special handling and treatment. Notable among these is the EU which in 1991, designated e-waste as a priority waste stream and in August 2004 the legislation on Waste from Electrical and Electronic Equipment (WEEE) came into force, making it incumbent on manufacturers and distributors to take back their products from consumers and recycle them.

17. Nationally, many countries are passing new laws to try to halt the trade and control the e-waste problem. Many developed countries have legislation in place that requires electronic manufacturers and importers to take-back used electronic products at their End-of-Life (EoL) based on the principle of Extended Producer Responsibility (EPR).

18. Korea has adopted and enforced the extended producer responsibility and is making consistent efforts to improve the recycling rate to the standards indicated in the EU directives for WEEE. Also in Switzerland, the first electronic waste recycling system was implemented in 1991, beginning with collection of old refrigerators and over the years, all other electric and electronic devices were gradually added to the system.

19. The Nigerian Government is not left out in the efforts to solve the e-waste problems. Some of the efforts made so far include the following:

i. Establishment of the National Environmental Standards and Regulations Enforcement Agency to enforce compliance with laws, guidelines, policies and standards on environmental matters;
ii. Setting up of an inter-ministerial committee comprising of key stakeholders to brainstorm on the strategies for solving e-waste problems in the country;
iii. Successful organization of an International Conference on E-waste Control in July 2009, The Conference focused on E-Waste Control along the Supply Chain; Opportunities in E-Waste; Environmental and Health Impacts of E-Waste; Practices in E-Waste Control; and Regulatory, Monitoring and Enforcement Issues in E-Waste; The Conference came up with a Communiqué, otherwise called the Abuja Platform on E-Waste, which contains some key recommendations which are being cited at global conferences on e-waste;
iv. Reactivation of the National Toxic Waste Dump Watch Programme with relevant enforcement authorities as members;
v. Commencement of registration of importers of EEE in the country with the aim of stemming down the indiscriminate importation of e-waste into the country. The companies importing used electrical electronic equipment are expected to register with the Agency and comply with the conditions stipulated in the Guidelines for such importation. So far, 190

companies have registered with the Agency, a precursor to their consideration of their application to import electrical equipment into the country;

vi. Development of the National Environmental (Electrical Electronic Sector) Regulations with inputs from foreign environmental sister Agencies; which is currently at the last stage of due deligence processing ;

vii. Development of guidelines for importation of used EEE into the country;

viii. Networking with international environmental organizations {International Network for Environmental Compliance and Enforcement (INECE) Seaport Environmental Security Network (SESN), the International Criminal Police Organisation (INTERPOL)} resulting in intelligence information dissemination to the Agency (receipts of alerts on illegal waste shipment);

ix. Interception and repatriation of vessels containing hazardous wastes to their countries of origin; and

x. Interacting with investors/entrepreneurs on the establishment of e-waste recycling plant.

20. Ladies and gentlemen, considering all the efforts made globally and nationally, what are the options for the present and the future? What are the possible solutions?

21. One of the probable solutions is to implement the Extended Producer Responsibility (EPR). The EPR is being propagated as a paradigm shift in waste management. The OECD defines it as an environmental policy approach in which a producer's responsibility for a product is extended to the post consumer stage of the product's life cycle, including its final disposal. Keeping in line with the Polluter-pays Principle, an EPR policy is characterized by the shifting of responsibility away from the municipalities to include the costs of treatment and disposal into the price of the product, reflecting the environmental impacts of the product.

22. Recycling materials from end-of-life electronics collected under the EPR is another effective solution to the growing e-waste problem. Recycling reduces the amount of greenhouse gas emissions caused by the manufacturing of new products. Most electronic devices contain a variety of materials, including metals that can be recovered for future use. Thus provides business opportunities in e-waste/entrepreneurship (waste to wealth) such as the reuse of some computer components in assembling new ones and other parts reduced to metals for flatware and jewelry. By dismantling and providing reuse possibilities, intact natural resources are conserved; air and water pollution caused by unsound environmental disposal of hazardous substances from e-waste is avoided.

23. The current challenge has been to find a mid point for the implementation of even an 'abridged' form of EPR in developing countries. This has become necessary in the light of the present high level of trans-boundary movement of e-waste into the developing countries and the lack of basic or state-of-the-art recycling and waste disposal facilities

24. Distinguished ladies and gentlemen, our next steps should include: Strict enforcement of all regulations on transboudary movement of hazardous waste, establishment of recycling facilities and international collaboration to solve trans-boundary movement of E-waste through policy harmonization, sharing of experiences, training/capacity building and technology transfer.

25. With the era of hi-tech, it is obvious that the issue of e-waste will continue to be on the increase. The various legislations and enforcement in the developed countries will encourage the e-waste merchants to continue to export these products to developing countries.

26. As a country, Nigeria has signaled her refusal to be a dumping ground. On the other hand, we need to take advantage of the business opportunities being presented with e-waste recycling since we have internally generated WEEE and still continues to import functional used EEE.

27. I am pleased to inform you that, NESREA in its bid to control the impact of e-waste in the country has incorporated the Extended Producer's Responsibility (EPR) in all its relevant regulations but we need to go further to implement it. In closing, I want to pose the following questions to you to enable us make progress in the management of e-waste in developing countries:

i. How do we operationalise EPR for EEE?
ii. How do we ensure that manufacturers take back their products which we already paid for when buying the products?
iii. How do we join the developed countries to benefit in the recycling of EEE manufactured in-country and the used EEE imported into our country?

28. I thank you for your kind attention.