

JoMUN XVI

Forum: Environment Commission

Issue: Measures to effectively manage electronic waste disposal in African countries

Student Officer: Ishita Pillai

Position: Under Deputy Secretary General, President of General Assembly 3

INTRODUCTION

Electronic device use has increased exponentially in the past decades, and along with that, so has the production of such devices. These devices are disposed, and more than 500 million PCs have accumulated in these decades. However, PCs are only a small fraction of the electronic waste, or e-waste, that exists today. E-waste, which is mostly first world waste, ends up in the developing countries around the world. Economically, the developing countries – having lowest wages – would lose least productivity from morbidity and mortality, as there would be a low cost to pay. These least developed countries (LDCs) are under-polluted in comparison, and would benefit to trade with pollution trading schemes, as they have spare air and water. And environmental protection for health and aesthetic reasons would more drastically affect the rich; however, in these poorer nations, pollution would be of low impact in comparison to what they already face.

The economic reasoning may be humanitarily flawed. Considering the negative implications of the crude recycling methods used in these wasted camps, the UNEP formed the Basel Convention in 1989 and it entered into force in 1992. Its main objective is protecting human health, and the environment against the adverse effects of these hazardous wastes–The Basel Convention in 1989 was also an international initiative to prohibit the movement of hazardous wastes, and to ensure healthy methods of waste disposal. This movement was the first of its kind in the protection of humans and the environment against such waste disposal. The movement of e-waste is controlled and watched over by the Basel Convention, as e-waste is considered as a ‘hazardous waste’, and is harmful to humans and the environment.

Countries in Africa, especially those on the coast, experience high levels of illegal import of electronic waste. Waste dumps in these countries create business hubs through these illegal means, and endanger the lives of those who live there. E-waste possess toxic chemicals such as lead, cadmium and mercury. Even though it possesses such harsh chemicals, it also contains valuable components, such as gold and copper – recovering these metals from the e-waste has become a profitable, and extremely dangerous business, especially in these slums.

DEFINITION OF KEY TERMS

Electronic Waste

Electrical components and electronic devices which are discarded with no use. They will either be reused, resold, salvaged, recycled or disposed of. Informal, and illegal, depositing of such waste especially in developing countries lead to environmental pollution, and adverse effects to human health.

Morbidity

The rate of a disease in a population, considering the condition of the diseased. Does not count deaths.

Mortality

The number of deaths in a time period, in a particular area or a particular cause.

Least Developed Countries

A group of countries with the lowest socioeconomic development indicators, and lowest Human Development Index (HDI) of all the countries.

Hazardous Waste

It is waste which has qualities that make it dangerous and harmful to human health and/or the environment amongst other factors. Hazardous waste is a broad term, and can be liquids, solids, contained gases, or a by-product of such.

Toxicity

It is the degree to which an organism or the environment can be affected by a particular chemical substance, or mixture of such substances.

Import

To introduce or bring in goods and services into another country – usually a commodity, article or service.

Illegal

An act or practice that is forbidden by the law, especially criminal law.

BACKGROUND ON THE ISSUE

Electronic waste, or e-waste is classified as a hazardous waste. Since the augmentation of electronic use, there has been an increase in electronic products. Increasing amounts of such e-waste is being produced, especially in More Economically Developed Countries (MEDCs), and then dumped in LDCs. Many countries in Africa, especially in West Africa, are used as electronic waste dumping grounds. This dumping of e-waste pollutes the land and also takes up a lot of space. However, e-waste has devastating humanitarian and health concerns. Although electronic waste comprises of obsolete technology, it has some properties that make it valuable – especially for those who are living below the poverty line. Most of the electronics that end up in the dump have gone through many second hand and reusing stations before being thrown away; thus, the device itself is not that useful. However, the components, especially copper wiring, are worth a lot of money, and the precious metals – albeit in small quantities – when collected can also be sold. Within these dumps, people burn the plastic in order to retrieve these metals. When burning these waste, there is a release of toxic pollutants, such as organic pollutants and heavy metals. These pollutants accumulate in the human body through the inhalation of the contaminated air. These lead to inflammation and oxidative stress – both of these are indicators to cardiovascular disease, cancer, and DNA damage.

With the many environmental laws in developed countries, most e-waste goes to the developing countries, where legislation on recycling is almost non-existent. An example of an area that suffers from this electronic waste epidemic is Ghana. In Agbogbloshie – a suburb of the capital city Accra – severe conditions exist. It is a site of muddy roads, shacks and mounds of electronic waste. Burning of this waste occurs at the edge of the site, which release toxic gases. Children play and live on and

around the site. This method of recycling within Agbogbloshie raises many concerns: from air pollution, to human health.

Yet, it is to be noted that Agbogbloshie, or any dump site, is not the last point of the recycling process. Business that run within the dump sites sell these retrieved items to computer and device repair shops. Within these computer shops, the resources are used to fix other electronic items. Nevertheless, not all devices are salvageable – what cannot be salvaged is sold back to the dump sites. What sites like Agbogbloshie suffer from is a vicious cycle, wherein, most of the electronic waste in the dump sites, are produced by this process itself, as the electronics in these developing nations are used for much longer than the developed nations.

MAJOR COUNTRIES AND ORGANIZATIONS INVOLVED

United Nations Environment Programme (UNEP)

The UNEP is a subcommittee of the UN, which aims to lead and encourage proactiveness in the affairs of the environment, with the goal of inspiring, informing and providing nations and people with the ability to improve the quality of the environment, without compromising the safety of people, and to improve the quality of life. The UNEP assesses the environmental trends within nations, regions and the world itself, to monitor the changes that occur, and to suggest possible solutions to well manage the safety of the environment. The UNEP analyses the trend on e-waste accumulation and searches for the loopholes in existing solutions in place. With this, it has proposed an action plan to mainstream and disseminate sound environmental practices on the management of e-waste in developing countries. These include sustainable business plans to manual dismantling facilities, pre-processing activities and end-processing activities.

United Nations Interregional Crime and Justice Research Institute

This organisation analyses information of environmental crimes, and looks for the causes and effects of it. Through investigations, it was found that these illegal e-waste dumping emerges from organised transnational crime, led usually be high profits and low risk of detection, conviction and prosecution. Usually, these lead to threats to security, and socio-economic development, and is often linked to corruption. UNICRI maps out the main trends and patterns, involvements of crime, and trafficking routes and has done case studies – for example the Italian Case – to outline measures to be taken to help create a template for solutions to this problem. The UNICRI, Interpol and other international organisations provide a conceptual WEEE stream model with the main actors, an investigation into criminal activities and organized crime groups to recommend, based on the identified markers, trends for solutions to the European Commission, various law enforcement and environmental authorities.

Global Partnership on Waste Management (GPWM)

The GPWM is a platform, and convergence where international organisations, governments and businesses suggest action plans, and the implementation of such, on better waste management. In November 2010, it was launched to enhance international cooperation to strengthen awareness, and efficiency of waste management.

Ghana

Ghana has a high concentration of electronic waste, with large dumps. Agbogbloshie is an area that suffers from these malpractices.

Nigeria

Nigeria has a rising amount of electronic waste, and a close relationship with trade outflows in e-waste with Ghana.

TIMELINE OF KEY EVENTS

1976	Public law, Resource Conservation and Recovery Act (RCRA) is created to ensure.
1988	Khian Sea incident ends. This is the major start of the history on electronic waste. A cargo loaded with electronic waste, over this time period, dumped 4,000 tonnes of waste in the Atlantic and Indian Ocean, and near the coast of Haiti.
1989	The Basel Convention is created – an international treaty to prevent WEEE dumping.
1993	Major publications begin to advertise the adverse effects of electronic waste disposal.
2003	The Waste Electrical and Electronic Equipment Directive (WEEE Directive) became European Law.
2005	Electronics manufacturers are held financially responsible to agree with the terms of the WEEE Directive.
2010	USA creates electronic waste task force.

RELEVANT UN RESOLUTIONS, TREATIES, AND EVENTS

(Resolution 9/1) Human Rights Council

Mandate on the adverse effects that the movement and dumping of hazardous waste has on human rights.

(Resolution 79) International Telecommunication Union (2012)

The role of various technology in the controlling of e-waste.

(A/RES/64/45) General Assembly (2010)

Reinforces the requirement to ban dumping of hazardous wastes and to control transboundary movements within Africa.

PREVIOUS ATTEMPTS TO SOLVE THE ISSUE

Pan-African Forum on E-Waste

This was a meeting held at the United Nations Environment Programme (UNEP) in Nairobi Kenya. In this forum, the UN, non-governmental organizations (NGOs), private sectors, 18 African countries and academia discussed the implications and solutions to electronic waste disposal on the

continent. It was held on 16th March 2012, and was agreed that measures to reduce the health and environmental impacts of such crude disposal as top priority. It also established that well management of disposal in these countries could have the potential to create environmental friendly and green jobs while also fostering economic development in the electrical and electronic sectors. This forum was organised by the Basel convention and UNEP, and focused on long-term solutions to rising levels of out-of-date devices. The Forum adopted a “Call to Action” initiative, which sets up plans to manage e-waste collection through recycling, transport, disposal and safe storage of these materials.

Waste Electrical and Electronic Equipment Directive (WEEE Directive)

Directive by the European Community (2012/19EU) which aims to, along with the Restriction of Hazardous Substances Directive (RoHS Directive) control the flow of such hazardous substances, and the restriction of the use of such substances in electrical and electronic equipment. These became European Law in February 2003. It was revised by the European Commission to tackle the augmentation of content in the waste stream; this revision entered into force on 13 August 2012, and was effective on 14 February 2014.

Basel Convention

The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal was an action against the discovery of waste depositing in Africa and other LDCs in 1980s. It was adopted on 22 March 1989 in Basel Switzerland. It aims to reduce hazardous waste generation and promotes management of such wastes. It attempts to apply regulatory systems on cases where transboundary movement is permissible, and restrictions to be placed where they are not.

POSSIBLE SOLUTIONS

Increase in Formalised Recycling

E-waste disposal has many negative impacts. It, however, creates business opportunities for people – e-waste contains many precious metals, which through unsafe methods, are retrieved. These methods cause concern for human health and environmental sanity. A solution to work around this arrangement is to create products that have easy access to the valuable metals and resources within these electronics. Before disposal of these electronics, such metals can be easily removed, providing negative incentive to exploiting such waste. This will definitely help the environment, and diminish some of the reasons for the harmful recycling of e-waste in these LDCs.

Increased monitoring of imports

Although it is illegal to export e-waste, with several checks to prevent it, smuggling of this hazardous waste still occurs. There are extensive smuggling networks, and technicalities through classification of waste as second-hand goods, that aid in this dumping of e-waste in LDCs. For example, waste batteries are often declared as plastic, or metal scrap. These methods often involve transport through truck networks, followed by major smuggling hubs such as sea container transport. This lack of control over waste extradition is exploited by those who claim work for safe waste disposal, which instead is dumped and recycled unsafely and inefficiently. Thus, stronger consequences on illegal waste exports should be actioned, and better checks on cargo – such as border checks on large cargo – could be done to prevent such cases from reoccurring.

Increased awareness on e-waste

Increased awareness on the true nature of electronic waste is crucial in order for this issue to cease. Most of the people who try to dangerously recycle the mismanaged waste disposal are unaware of the consequences of their actions. They are unaware of the complications that may arise not only for themselves, but also their family and the environment. Teaching children from a young age – within the affected countries – what e-waste is, and what recycling by burning, or tampering with the obsolete electronics may cause. By using outreach workshops, or training camps, people will be more knowledgeable about these adverse effects, and would take action against it. Moreover, education outside these countries, especially those where a lot of e-waste is produced; this may encourage the reuse of electronic items to the fullest, and also put stress on proper recycling methods.

Technological assimilation into e-waste network

Within the countries where electronic waste is dumped, especially in West Africa, extraction of the precious metals, such as gold and copper, from the electronics is a form of livelihood, and helps boost small family income. Thus, completely removing the electronic waste from these regions may be not only unrealistic, but also harmful for these small economies. Thus, a better solution must be put into place to help protect these workers. Use of technology could help to protect their health and the environment. Creation of an application, which updates on the location of new e-waste and centres of business hubs to trade would be extremely helpful to people who use the e-waste to support income. However, to use this to advantage, information on safe practices, and tips – such as using gloves and goggles – could be added as pop-ups, and sidebars. Although this will not slow down the rate of this e-waste recycling, it will make it a safer practice, and ensure that human health may be preserved.

Increase of infrastructure in countries inflicted with high concentrations of e-waste

Lack of infrastructure often makes it difficult for countries with high amounts of electronic waste to recycle the e-waste and remove efficiently the dangers it may bring. Creation of recycling plants, specialised in electronic disposal, in areas of high electronic waste production, could reduce the negative impacts it brings. Also, better healthcare facilities targeted at health concerns affiliated with the crude methods of recycling, could help people who base their livelihood on this dangerous extraction of precious metals.

WORKS CITED

- "Africa: Where Do 50 Million Tonnes A Year Of Toxic E-Waste Go?." allAfrica.com. N. p., 2017. Web. 28 Mar. 2018.
- "Basel Convention Home Page ." Basel.int. N. p., 2018. Web. 28 Mar. 2018.
- "E-Waste Africa | Your Total Environmentally Friendly Lamp Recycling." Ewasteafrica.net. N. p., 2018. Web. 28 Mar. 2018.
- "UN-Backed Initiative To Address Electronic Waste Problem In Africa Adopted." UN News. N. p., 2012. Web. 28 Mar. 2018.
- Citeseerx.ist.psu.edu. N. p., 2018. Web. 28 Mar. 2018.
- Minter, Adam. "The Burning Truth Behind An E-Waste Dump In Africa." Smithsonian. N. p., 2016. Web. 28 Mar. 2018.
- Schmidt, Charles. "Unfair Trade E-Waste In Africa." Environmental Health Perspectives 114.4 (2006): A232. Web. 28 Mar. 2018.
- SPIEGEL ONLINE, Germany. "The E-Waste Republic: Discarded Electronics And Ghana's Environmental Conundrum - SPIEGEL ONLINE - International." SPIEGEL ONLINE. N. p., 2018. Web. 28 Mar. 2018.

APPENDIX OR APPENDICES

http://www.proyectaryproducir.com.ar/public_html/Seminarios_Posgrado/Material_de_referencia/Global%20Perspective%20on%20e-waste.pdf

Good resource on understanding Global perspectives on electronic waste.

<http://www.basel.int/Implementation/LegalMatters/LegalClarity/Meetings/1stRAEWGmtg/tabid/6237/Default.aspx>

Links within the site as well to address the happenings of the Basel Convention.

<http://www.abc.net.au/news/2017-03-10/australian-e-waste-ending-up-in-toxic-african-dump/8339760>

A case study that will help to understand the whole process of illegal e-waste disposal.