E-waste Management & Related Environmental Issues in Sri Lanka

(With reference to Gampaha District)

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Introduction

During the period of past few years, the use of electronic devises in Sri Lanka has increased rapidly and their lifespan is being declined considerably.

The problem of this study is there any impact of hoarding an irregular collect of unserviceable waste particulars of electronic devices on environmental problems. Most of the developing countries in the world are facing serious health hazards and other critical environmental problems as a result of irregular disposal of the waste electronic devices. As an example, within the urban area of Gampaha district eight tons of electronic waste devices piles up for every two days. The objectives of this study is to identify the impact on the environment by way of improper disposal e-waste devices, identify the steps which have been taken to minimize the devices issues related to e-waste on environment and what are solutions to overcome or mitigate the harmful environmental issues due to improper e-waste disposal in Sri Lanka. Both primary and secondary data have been used for this study. Primary data was collected from Gampaha district, Sri Lanka.

- Green Links (Pvt Ltd),Wattala,Gampaha.
- Z-max Enterprises, Sapugaskanda,Gampaha.

- R & G Capital (pvt) Ltd, Wattala,Gampaha.

It was employed interview schedule, observation and group discussion for this study. Secondary data was collected from books, magazines and relevant reports on e-waste disposal in Sri Lanka.

Data Analysis

Impact of improper disposal e-waste on Environment (Hazardous nature of the e-waste)

E-waste is of a concern largely due to the toxicity and carcinogenicity of some of the substance if processed improperly. It has been recorded that up to thirty eight separate chemical elements are incorporated into electronic waste items.

The table below shows the annual imports of major types of electronic and electronical items in Sri Lanka(According to 2010 statistics of Sri Lanka customs) we can get an idea about the amount of e-waste generated and the gravity of the e-waste problem in Sri Lanka in one year.

Item	PC	Printers	TV	Mobile Phones	AC machines	Refrigerators	Photo Copy Machines	Washing Machines	Batteries
Annual Imports	300,000	130,000	400,000	1,200,000	40,000	250,000	6,000	70,000	6,000,000
Average Life Time (years)	6	6	12	3	15	25	10	20	0.2
Forecasted Growth Rate	12%	7%	7%	40%	5%	5%	4%	8%	1%

Source: Statues Reports on E-waste Management on Sri Lanka, 2010

Generally the urban poor has engaged in the trade of collecting the waste items and recycling which is the most unsafe and polluting livelihood opportunities for survival. Likewise almost all of the workers who are engaged in these recycling practices are the urban poor and are unaware of the hazards associated with these practices. Although the information of such environmental problems are not manifest in Sri Lanka at the moment, it could be assumed that such problems will be present in the future.

Hazardous nature of the e-waste in Sri Lanka

Air pollution is caused by the disposal of e-waste. (Hazardous nature of the e-waste in Sri Lanka)

Electronic components and accessories consist of not only poisonous elements but also certain degree of gold, silver and copper. When these valuable elements are being separated from the hoards of e-waste in Sri Lanka by improper methods there is a tendency of causing a great deal of environmental pollution. It is reported that in Gampaha district, shanty dwellers are in the practice of trying to extract copper from the computer wires.

The Manner in which water pollution is caused by e-waste material

E-Waste which contains over 38 chemicals which are harmful to human health is of concern largely due to the toxicity and carcinogenicity of some of the substances if processed improperly. While the rest is dumped at landfills which causes in sicknesses due to contamination of water. Therefore, when it is dumped and parts of it get mixed up with the landfills ,they cause diseases and environmental pollution. In many parts of Gampaha District, improper land filling could be observed.

Heap of printed circuit boards collected by informal sector at Wattala area, Gampaha.

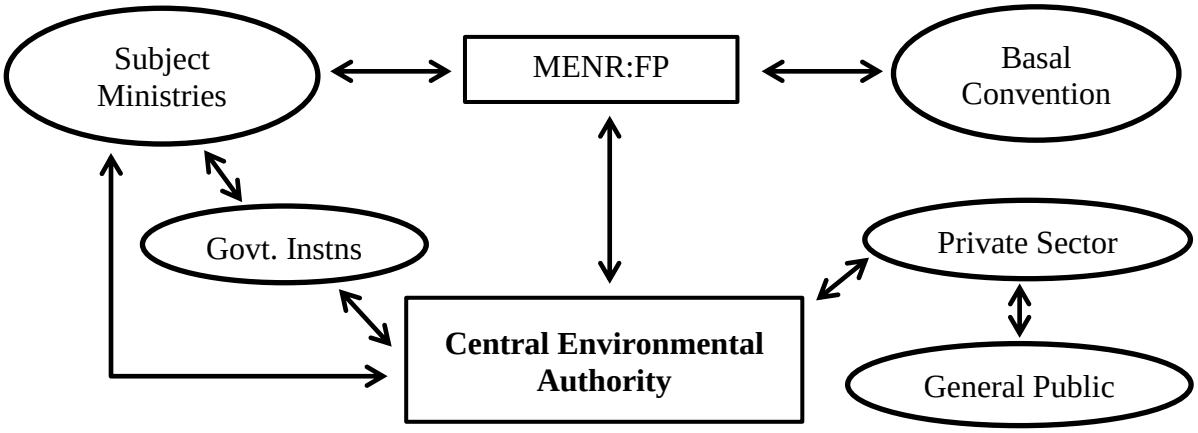
Disposal of E-waste at marshy land, Wattala, Gampaha District.

The impact on human beings by improper disposal of e-waste

Man could be defined as a producer of garbage by nature. Apart from the pollution cause towards water, air, and soil, generally man will also be affected by way of being subjected to diseases such as dermatitis lung cancer, brain disorders, kidney diseases, productive disorders and abortion etc.Through adverse effect of the disposal of e-waste.Allthough, any indications of any unhealthy situations are not visible at present, It will be a serious problems to humans in the future by the this improper act.

Central Environmental Authority (CEA) of Sri Lanka has taken action already for these issues. As the responsible regulationary agency for sustainable environment management, the CEA is pleased to collaborate with fourteen private sector parties in launching this programme on e-waste management programme is a milestone in achieving a healthy and safe environment in the country for present and future generation. The timely involvement of the CEA to minimize environmental pollution from e-waste is praise worthy.

CEA has launched the e-waste management project with the assistants of fourteen privet sector partner organizations is including Sri Lanka Telecom, Mobitel, Dialog, Etisalat, Hutch and Lankabel from the Telecommunications industry, Singer and Abans from the home appliances industry, metropolitan, E-wiz, virtusa, abc trade and investments from the office appliances industry together with service providers Geo Cycle and Green Link to collect e-waste in Sri Lanka. The initial frame work develops for the implementation of component of the project is given below.



Source: Ministry of Environment and Natural Resources in Sri Lanka, 2010

The Hierarchy for Handling E-Waste in Sri Lanka

E-waste best management practices dictate that the waste is processed in the most environmentally desirable method. Environmentally desirable means that none of the waste will be handled in such a way as to contaminate the environment. If handled improperly, toxic components found in e-waste can find their way into the water or air and potentially cause serious illness or disease in animals and humans. E-waste

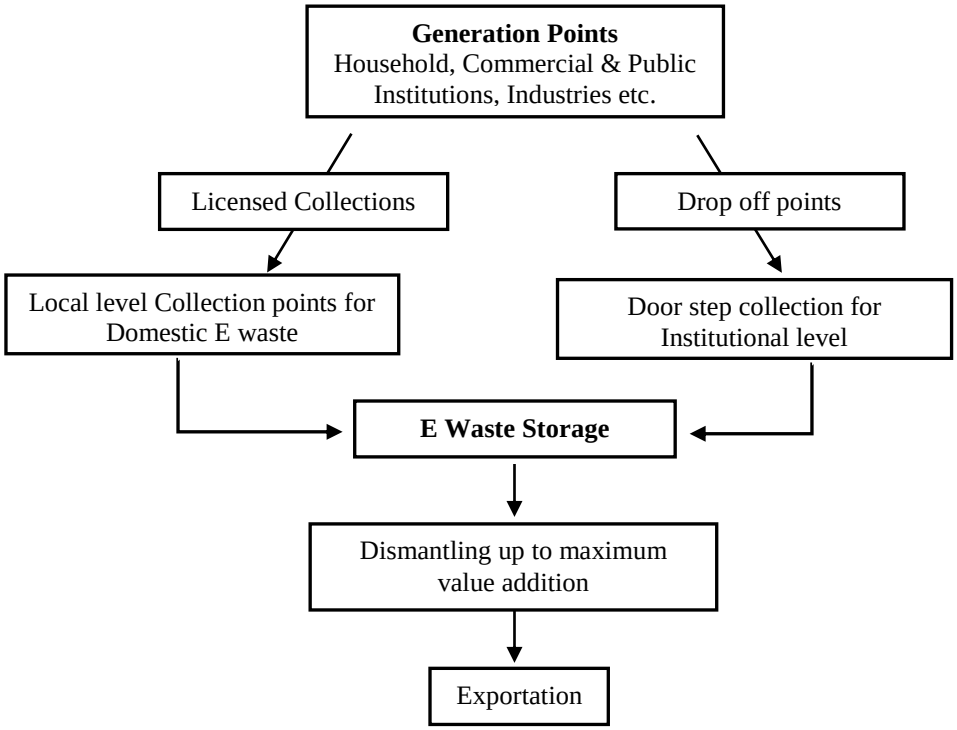
management hierarchy for electronics and processing residuals, in order of preference, is listed below:

1. Reuse of electronics equipment, components, or refurbished items.

2. Recycling equipment or components for material recovery.

3. Management of components for energy recovery.

4. Disposal of components via incineration or landfill (least preferable).



Future Activities to be carried out on E waste Management

Central Environmental Authority has already taken the following initiatives to establish a strong E waste management system throughout the Sri Lanka.

National Level E waste Management Programme in Sri Lanka

- CEA invited the private and public sector stakeholders who are dealing with E waste to join the National level corporate E waste Management programme by entering in to an MOU with the CEA, while leading companies in telecommunication sector, IT sector (software, hardware and It venders) and

electrical and electronic venders have already informed the CEA their willingness to join with the National level programme.

- This programme will be launched under a common logo and a theme. "Ensuring E waste Free Environment" where as each and every stakeholder company joining with the National level corporate programme should ensure proper lifecycle management of E waste, complying the internal regulations as well as international rules and regulations stipulated with respect the E waste and Hazardous waste in order to earn the right to use the common logo for their corporate activities.

- Through this programme, it is expected that these organizations would expand the existing e-waste collection network and identify suitable locations to install waste collection centers, while also improving collection mechanism and it is expected to carry out joint initiatives and individual initiatives to conduct awareness programmes amongst general public by means of several promotional modes as per the conditions and closures given in the MOU.

Conclusion and Recommendations

Sri Lankan are in the habit of preserving all their used electronics items and don't give them away for nothing. But e-waste has no price, and will only cause harm if they are stored of thrown in to open garbage dumps. Methodical management process is being arranged by the Central Environmental Authority under the auspices of the Ministry of Environment. It is proposed to develop the course of management of E-waste disposal under a common theme and a Logo with the collaboration of Government and Private Sector.

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