

17th World Congress and Expo on Recycling: E-waste Management Plan (Financial Analysis)

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Abstract

The purpose of this study to assess the quantity of E-waste generation and its management in India along with the financial assesment of the e-watse in Delhi, the capital of India if recycled in a formal way. Due to rapid increase in urbanization and industrialization, the generation of E-waste has also increased at a very fast rate. Due to presence of deadly chemicals and toxic materials in the electronic items, the safe disposal of E waste is becoming a nightmare for humans and environment. Globally only 15-20% of E-waste is recycled while the rest will be dumped in developing countries like India, china and Nigeria. A current estimate of E-waste growth in India is exponential. Informal sector accounts for 95% recycling of E-waste while 5% reaches to authorized recycler. To manage e-waste in India, a specific set of principles must be followed. It must start with avoiding e-waste generation and then followed by reduction, reusing, recycling, recovering, treatment and proper disposal of e-waste. There must be a proper conglomeration of the four primary pillars, i.e. technology, policies, legislation and administration. There are many obstacles in the way of proper e-waste management, the one main being the presence of informal sector. There is a dire need of formalization of the informal sector and introduction of the technologies with awareness and education about the e-waste to the workers and other stakeholders. A proper assessment for the quantification, characterization, dumping techniques, and impact of e-waste must be done. A proper e-waste handling and collection centers must be set up with collaboration with the private sector and the manufacturers. A take back program must be designed in an effective manner which provides incentives to the stakeholders managing the e-waste and the development of some return schemes should be done to encourage the consumers to return back the electronic and electrical devices once they reach the end of useful life for better collection and handling of e-waste. More recycling facilities must be set up in each state and a better infrastructure must be provided effectively because at this particular time, change is a must.

Over the last decades the industry has revolutionized the world: electrical and electronic merchandise became omnipresent of today's life round the planet. while not these products, trendy life wouldn't be attainable in developed and developing countries. These products ar utilized in areas like drugs, transportation, education, health, food-supply, communication, security, environmental protection and culture. In several cases, functionalities enabled ar powerfully connected with property development and with a number of the Millennium Development Goals. After use those merchandise ar discarded– generally once re-use cycles in countries totally different from those wherever they were ab initio sold – turning into what's unremarkably known as e-waste. E-waste is sometimes thought to be a waste downside, which might cause environmental injury and human health severe consequences if not safely managed. On the opposite hand e-waste is additional often seen as a possible supply of financial gain for people and entrepreneurs aiming at recovering the precious materials (metals in particular) contained in discarded instrumentality. Treatment processes of e-waste aim so to either take away the venturous parts andrecover the maximum amount of the most materials (e.g. metals, glass and plastics) as possible; achieving both objectives is most desired.

It has been over a decade since national and international regulative authorities began to develop policies (initiated in 1990 in Switzerland) to deal with the challenge of sound e-waste processing. Compared to ancient waste streams, e-waste handling poses anyway distinctive and complex challenges. Some high technical school metals are indispensable for flat-screen televisions, mobile phones and countless different merchandise. Antimony, cobalt, lithium, tantalum, metallic element and metal are widely used on a spread of electronic merchandise. Identical cluster of hi-tech metals also are fundamental to new environmentally friendly merchandise like solar panels requiring metallic element, gallium, element and atomic number 52. In several cases the industry annually uses relevant shares of primary production of those metals (if we tend to solely count electrical and equipment (EEE) this will vary from 4% of Pt to four hundred and forty yards of Copper, up to seventy two within the case of Ruthenium). On the opposite hand e-waste contains vital amounts of cyanogenic and environmentally sensitive materials and is so extraordinarily venturous to humans and therefore the setting, if not properly disposed of or recycled. The materials, that are of principal concern with relevance environmental, and health risks embody brominated flame-retardants, cadmium, mercury or lead, to call simply a couple of. Landfills, though wide used for waste disposal, are subject to unseaworthy and e-waste disposed of in landfills will leach significant metals and different cyanogenic substances like mercury, metallic element and lead into the soil, groundwater and atmosphere. Plastics create a significant environmental risk for reasons aside from toxicity, most notably thanks to the durability and longevity of fabric. Recently for a growing range of individuals utilisation and separation of e-waste became a main supply of financial gain. In most cases, though, this can be done informally, with no or hardly any health and safety standards, exposing staff and therefore the encompassing neighbourhoods to extensive health dangers also as resulting in a considerable environmental pollution. Moreover, utilisation here sometimes focuses on a couple of valuable components like gold and copper (with often poor utilisation yields), whereas most different metals are discarded and inevitably lost.

Biography

Samroot Samreen Wani is a 25 year old budding researcher. She is a graduate in Civil Engineering and has a post graduation in Renewable Energy Engineering and Management from TERI School of Advanced Studies. Currently, she is working as a State Engagement Consultant in The Energy and Resources Institute, New Delhi, India. She was awarded RESEARCH UNDER LITERAL ACCESS (RULA) AWARD for International Innovation and Betterment Excellence in Technical Research, 2018 - OUTSTANDING RESEARCHER - THREE DIMENSIONAL TRANSPORTATION. She has three publications on her name till date.

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