

Adequate Development on Waste Management Design

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Abstract— The waste are increasing day by day through population, nature etc so this waste have to be reduced otherwise the environment would be worse in future and enriched with full of wastes. This paper mainly discuss about the reduction of wastes completely by following some of the new trends which could possibly reduce all the wastes of the environment. The wastes will affect the environment but also spread diseases to the human beings surrounded by the location. By following the new way of waste reduction it could be feel better to the population and the environment.

Keywords: Waste, Environment, Population, Diseases.

I.INTRODUCTION:

The waste management process which carries the variety of issues such as minimization of wastes in the way of the source which have to be reduced completely, reuse of the waste which states that the waste product which can used once again for example the wood can be used for tool as well as a coal. Some other methods are also available such as waste removal, waste transportation and landfill process which are the different ways of waste reduction process where are to be discussed in detail manner. In most of the developing countries they know the values of the waste management system and provide the different kinds of rules and regulations to secure the country from the waste pollution. Some of the reasons are to be discussed for the cause of wastes and prevention method is also being studied.

II.INDUSTRIAL GROWTH:

Waste Management industries have to be in more number then the wastes have to be reduced or recycled in a perfect manner. By growing of industrial for waste management many process of waste can be reduced in multiple ways such as incarnation. In the year of 2004 and 2006 there are 17% of the waste management industries are available in the survey of 2010 there are 70,000 professional are working in the waste management industries. As per year 4000 are appointed per annually in the waste management industries and this improvement should be higher in range.



1. Wooden waste reused for Biomass fuel in UK

The figure 1 shows that the waste management industry in the UK has collect the saw dust and wooden wastages and stored in a place and these wastes are used for the biomass fuel for the power plant process etc.

III.PUBLIC AWARENESS:

The public awareness is plays the important role in the waste management system and the public has to reduce the wastes completely such as domestic wastes producing at their homes and the people has to guided by the municipal or government to be aware of wasting the products etc. Separate meetings are to be arranged for the group of peoples and the municipal or government has to tell about and share the knowledge of the waste management system.

Also public have to make the strong co-operations in the waste management process. They have to minimize the product and they separate the waste as bio-waste, degradable and non-degradable have to be separated and they have to mainly focus on minimization of wastes completely.

IV.REGULATIONS / TECHNOLOGY:

Some of the developing countries do not have the strong regulations in the waste management process. Waste management organizations have to create the new rules and regulations for effective usage of wastes such as recycling, reusing and reducing etc. The RCRA and EU Waste Framework are plays the important role in the waste management industry.



2. Bottle Recycling Machine

The Figure 2 shows the advanced recycling machines for bottles the machine will crush and made into the pieces further it moves for the reuse process. With the advent of these technologies the waste management can be achieved effectively and a wide range of management technologies are evolved in the way of collection, recycling minimizing etc. For example collection is stated into organic and inorganic wastes by manually or machine oriented, Recycling process deals with the iron, plastic are to send in the machines and used further.

V.DIVERSION TECHNIQUE:

Instead of disposal the wastes are turned into the diversion technique where it would be most advanced method of technology. Disposal will cause pollution to the environment it is very dangerous while disposing materials like plastics and polythene etc. Go Green and Cradle to Cradle are the two concepts which explains detailed way of convergence from diversion. This is the best technique to transferring of wasteful material into useful objectives, reuse, reduce and recycle is the perfect slogan for the diversion technique.

VI.SKILLED MANPOWER:

The technologies used in the waste management process is higher and it is very complex to handle so that the waste management industry needs the skilled manpower to handle the equipments and now a days there is a rise of demand for the manpower in the sector of waste management industry. So every industry has to create awareness and to select the required manpower for the industries

There should be a clear planning is necessary for the waste management process for both the metropolitan and urban area. As well as the educational oriented are necessary for the managing sector of the waste management system and more expertise is needed in this scheme so they

could prepare effective progress in a sustainable and supervision manner.

VII.PROHIBIT PLASTICS:

The plastics are the material which is dangerous to the environment and the plastics material will take thousands of years to decompose into degradable material, where this has to be completely stopped instead of using plastic bags the cloth made bags are better than plastic bags. The plastic made bags are familiar and weightless because of easy to carry from one place to other. Also packing of food by the plastic bags will create some diseases to the humans as plastic materials are should be stopped while including the polystyrene foam.



3. Boxes made of Polystyrene Form

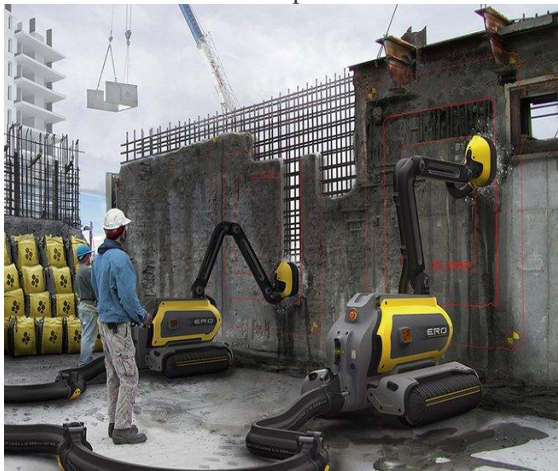
Instead of using non biodegradable wastes it should have to be changed by the using of biodegradable wastes it should be analysed by the municipal / government and a label have to be framed for the that the plastics which can be used for the recycling process and non bio-degradable wastes such as carry bags, polythene covers should be avoided completely to manage effectively.

VIII.SUSTAINABLE INNOVATION:

The sustainable innovation of the waste management moves to the higher levels in all the sector field where this innovation takes to the future needs that the recycles machine gets the bottle further it will be crushed with group of bottles and turned into the rectangle shaped group of bottles also some of the equipments in the waste management system which have to search in the deep ground buried plastics are collected and turned for recycling process.

The below figure 4 shows that the new technology based robots are in the field of reconstruction process where it would have to be decompose the changed model buildings where this technology requires the water jet technology where it is used to cut the concrete wall and it sucks all the wastages of the building through the vacuum pump. As well as some of the bags are to be added

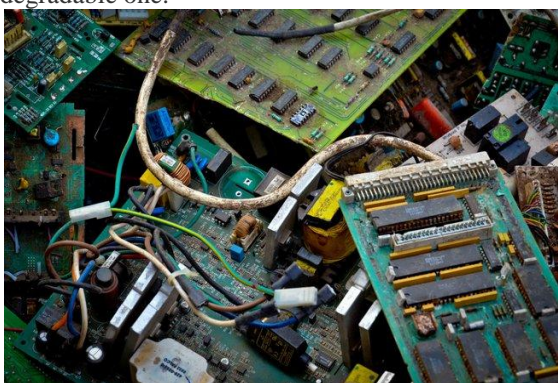
in the robots for the collection of unwanted wastes of the concrete materials and these materials can be used for other construction process.



4. Omer's Robot for Decomposing Buildings

IX.E – WASTE MANAGEMENT:

The e waste is commonly known as the electronic wastages which are collected from the various electronic devices mostly personal computer, mobile phones, transistor and other home appliances. Where the e-wastes are termed as the non degradable wastes and some of the few companies are made to design the boards into the degradable one.



5. PCB boards and chips which are not in usage

Now a day's e waste become the most important barriers and this is difficult to reduce so a separate organization has to be founded to minimize this e-waste.

X.CONCLUSION:

Thus the adequate waste management deals about the technologies based improvements, also with the skilled manpower requirement and the main motive is to change the disposal into the divergence process and some of the new innovations are also to be discovered such as robotic technology to reconstruction building process system where these technologies and rules have to be followed for effective waste management.

References:

1. <http://recycling.about.com/od/Solid-Waste-Management/fl/Trends-in-Solid-Waste-Management.htm>
2. <http://haltonrecycles.wordpress.com/2013/04/15/four-ways-waste-management-is-changing-and-what-this-means-for-jobs/>
3. http://www.mswmanagement.com/MSW/Editorial/The_New_Normal_in_Solid_Waste_Management_16368.aspx
4. <http://www.solidwastemag.com/news/trends-in-waste-for-2013/1002463704/?&er=NA>
5. Waste Management (2013). [Retrieved from <http://www.sciencedirect.com/science/article/pii/S0956053X14000269> "Editorial Board/Aims & Scopes"].
6. Davidson, G. (2011). "Waste Management Practices". Retrieved from [http://www.dal.ca/content/dam/dalhousie/pdf/sustainability/Waste%20Management%20Literature%20Review%20Final%20June%202011%20\(1.49%20MB\).pdf](http://www.dal.ca/content/dam/dalhousie/pdf/sustainability/Waste%20Management%20Literature%20Review%20Final%20June%202011%20(1.49%20MB).pdf).
7. Barbalace, Roberta Crowell (2003-08). "The History of Waste". EnvironmentalChemistry.com. Retrieved 2013-12-09.
8. Florence Nightingale, Selected Writings of Florence Nightingale, ed. Lucy Ridgely Seymer (New York: The Macmillan Co., 1954), pp. 38287
9. Herbert, Lewis (2007). "Centenary History of Waste and Waste Managers in London and South East England". Chartered Institution of Wastes Management.
10. Chadwick, Edwin (1842). "Chadwick's Report on Sanitary Conditions". *excerpt from Report...from the Poor Law Commissioners on an Inquiry into the Sanitary Conditions of the Labouring Population of Great Britain (pp.369-372) (online source)*. added by Laura Del Col: to The Victorian Web. Retrieved 2009-11-08.
11. National Waste & Recycling Association. "History of Solid Waste Management". Washington, DC. Retrieved 2013-12-09.
12. Gandy, Matthew (1994). *Recycling and the Politics of Urban Waste*. Earthscan. ISBN 9781853831683.
13. "Covered Bodies". ^[dead link]
14. City of Chicago, Illinois. Department of Streets and Sanitation. "What is Single Stream Recycling." Accessed 2013-12-09.
15. Montgomery County, Maryland. Division of Solid Waste Services. "Curbside Collection." Accessed 2013-12-09.
16. USEPA (2014). "Energy Recovery from Waste".
17. New Energy Corporation (2014). "Waste Hierarchy".
18. USEPA (2012). "Frequent Questions".
19. Government of Montana (2012). "Resource Recovery".
20. Grand Traverse County (2006). "What is Resource Recovery?".
21. "Removing food remains to reduce waste". Recycling-guide.org.uk. Retrieved 2012-09-25.
22. Schneider, Michael; Johnson, Liz. "Lightweighting". Projects in Scientific Computing. Pittsburgh Supercomputing Center, Carnegie Mellon University, University of Pittsburgh. Retrieved 2012-09-25.
23. RESEM Waste Tyre Pyrolysis Plant in USA, retrieved 2011-10-24
24. http://www.siemens.com/entry/cc/features/greencityindex_international/all/en/pdf/report_northamerica_en.pdf
25. United Nations Environmental Programme (2013). "Guidelines for National Waste Management Strategies Moving from Challenges to Opportunities.". ISBN 978-92-807-3333-4.
26. Science Direct (2013). "Waste Management". Volume 33, Issue 1 pp220-232.
27. Maczulak, Anne Elizabeth (2010). *Pollution: Treating Environmental Toxins*. New York: Infobase Publishing. p. 120. ISBN 9781438126333.

28. U.S. Environmental Protection Agency, Washington, DC (2011). "Introduction to the National Pretreatment Program" Document no. EPA-833-B-11-001. pp. 1-1, 1-2.
29. "King County Industrial Waste Enforcement Response Plan". King County Government, Seattle, WA. March 31, 2009. Retrieved March 8, 2014.