

A STUDY ON SOLID WASTE MANAGEMENT IN CHENNAI

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ABSTRACT

Municipal solid waste management (MSW) is one of the major areas of concern all over the major areas of concern all over the world .in developing country like India ,there is a rapid increase in municipal solid waste due to urbanisation and population growth. composition of waste varies with different factors like living standard ,climatic condition ,socio-economic factor etc...this paper gives current scenario of india with respect to municipal solid waste quantity, quality and its management. we have presented a brief overview of municipal solid waste management in major cities medium scale towns and small scale towns. We have also presented some intresting results on MSWM of small scale towns and their surrounding villages.

Keywords: Villages, Water waste management, Develop program, Solid waste management.

INTRODUCTION

It is not only in the sites with pockets of poverty but also equally significant booming parts of expanding urban areas . a need to protect environment has become of paramount important for decades now due to the mankind consciousness that suitainable development can take place at a cost of environment only and thus the rejection of the same is like a foolish man who tries to cut down the very branch of tree on which he is sitting.solid waste management is a major responsibility of the local government. it is a complex task which

requires appropriate organisational capacity and cooperation between numerous stake holders both in the private and public sectors . even though it is essential to public health and environmental protection, solid waste management in most cities of developing countries in particular Tanzania is highly unsatisfactory. Anand.S in the year 2010 written a book in the name of SOLID WASTE MANAGEMENT IN INDIA in the MITAL PUBLICATION in the page .5 explained about the solid waste management. S.R.Myneni in the year 2008 in his book ENVIRONMENTAL LAW in page 2 explains about the solid waste management. Peter Schubeler et.al in the year 1996, in his book name CONCEPTUAL FRAME WORK FOR MUNICIPAL SOLID WASTE MANAGEMENT IN LOW –INCOME CONTRIES in his first edition in the SWISS AGENCY FOR DEVELOPMENT AND COOPERATION ,SWITZERLAND in the page 9 explains about the solid waste management the solid waste management .IMPROVING MUNICIPAL SOLID WASTE MANAGEMENT IN INDIA by p.u.Ashani in the year 2007 explains about the improving the solid waste management .K.Sasikumar in the year. Ntakumulenga in his paper THE STATUS OF SOLID WASTE MANAGEMENT IN TANZANIA a paper presented during the coastal east Africa solid waste workshop held in flic en flac ,Mauritius in the page 8 explains about the solid waste management.Jagbir singh in his book SOLID WASTE MANAGEMENT PRESENT AND FUTURE CHALLENGES in the year 2010 in the page 198 explains about the waste management .Angamuthu periyathambi in his book MUNICIPAL SOLID WASTE MANAGEMENT IN AISA AND THE PACIFIC ISLANDS in the page 353 in the year 2013 explains about the municipal solid waste.Dharshini mahadevia in the year 2008 in the book SOLID WASTE MANAGEMENT IN INDIAN CITIES :STATUS AND EMERGING TRENDS explains about 2009 in the page 102 in his book solid waste management explains about the waste management. SOLID AND LIQUID WASTE MANAGEMENT by Vasudevan rajaram in the year 2016 discusses solid waste as well as liquid waste managementand various economical methods to manage wastes .SUSTAINABLE SOLID WASTE MANAGEMENT by Urvashi dhamija explains about the solid waste management.MUNICIPAL SOLID WASTE TO ENERGY CONSERVATION PROCESS by GorryC.Young in the year 2010 provides many case study on various waste to energy.with regard to the challenges facing solid waste management in urban areas and with due respect that cities and towns grow and generate more solid waste,the environmental impact from solid waste become gradually unbearable . therefore this research has been conducted on the examination of laws and practices on solid waste management in urban areas taking municipality as the case study.

MATERIALS AND METHODS:

The use of PICO analysis collecting and according to the primary data .usage of empirical form of the study .reason for usage of empirical study the use of random sampling to reach population .whether zero waste management compaign has encouraged the problem waste management in Chennai? .the problem is that improper solid waste management due to this zero waste management compaign in Chennai has come .the outcome is the proper waste management.the study has been done through survey method . we choose empirical type of study .our population size consist of 18462231 of it and the sampling size is 601.in this sampling confidence level is 95%and marginal error is 4%. The objectives of the study to study the current practices related to various waste management and.to encourage people to avoid waste and to reuse and recycle.

HYPOTHESIS:

1.there is no significant change caused solid waste management compaign to improve waste management.

2. there is significant change caused solid waste management compaign to improve waste management.

REGULATORY FRAMEWORK OF FOR MSWM IN INDIA:

The municipal solid waste (management and handling) rules 2000 have stipulated steps to be taken by all local administrative bodies (Lab)for better MSWM in India .each LAB must provide the infrastructure and services with regard to collection, storage, segregation , transport ,treatment, and disposal of MSW. According to the MSWM rule 2000 the urban development departments of the respective state governments are responsible for inforcing the provisions ssof the rules in metropolitan cities .the district majestrates or deputy commissioners of the concerned Districts are responsible for enforcing the provisions within the territorial limits of their jurisdiction .the state pollution control boards are responsible for monitoring compliance with the standards on a air ,water, noise pollution. They must also monitor compliance with compost quality standards and incineration standards as specified as specified in the rules.MSWM rule 2000 gives all aspects of MSWM from collection to disposal .

MSW IN METRO CITIES:

Solid waste management is one of the most challenging issues in metro cities .they are facing serious pollution problems due to the generation of solid waste .different cities also show increase in generation of solid waste with increase in population and urbanisation in India .during the year 2004-05, CPCB through NEERI ,conducted survey in 59 cities (35 metro cities and 24 state capitals).and estimated 39,031 tons per day MSW generation in these 59 cities .the survey conducted by the central institute of plastics engineering and technology(CIPET)at the instance of CPCB has reported generation of 50,592 tons of MSW per day in the year 2010-11 in same 59 cities .

MSW PRESENT SCENERIO AND FUTURE DIRECTIONS:

Solid waste management in metro cities especially Chennai is different from small scale towns and village surrounding them .in metro cities waste collection and segregation can be done at different places as per zoning according to socio -economic ,commercial residential area ,industrial area, etc...waste cumulatively collected can be segregated and disposed as required which will give economical option as it requires less manpower and other amenities (united nations environment program,2009).integrated municipal solid waste management must be done to ensure the safe and environmentally sound disposal of waste.in the developing countries like India where 71% population resides in small scale towns and villages interface between small scale towns and their surrounding villages should be done for better MSWM. villages generate very small quantity of waste ,which becomes difficult as well as financially not viable to manage at individual villages . moreover ,major portion of waste generated from villages is biodegradable in nature . Hence ,quantity of disposable waste reduces further .hence, it is advisable to explore the integrated MSWM strategy that is exclusively developed for such scenario. overall , the deficiencies in MSWM are primarily caused by apathy of municipal authorities ,lack of community involvement ,lack of technical know how , and inadequate financial resourses . kumar and pandit ,also observed the system of waste management in India

RESULTS OF THE STUDY:

The quality and quantity of MSW generated by a particular community varies according to their socio-economic status ,cultural habits, urban structure ,population and commercial activities etc...planning,designing,and operation of municipal solid waste management system can be done on the basis of composition and the quantity of MSW

contains more organic material and less hazardous material than western countries like USA, Canada ,etc...the quantity of waste paper in INDIA , is much less , as even the quantity thrown a way is pickled up by people for its use as a fuel and also for packaging of materials/food sold by roadside hawkers .the plastics , rubber, and leather contents are lower the paper contents, and do not exceed 1%except in metropolitan cities .the metal content is also low,(less than 1%).these low values are especially due to the large scale recycling of these constituents .paper is recycled on a priority basis while plastics and glass are recycled to a lesser extent.

DISCUSSION:

Management of municipal solid waste is becoming difficult due to its varying impacts and increasing quantity .according to the municipal solid waste rule 2000 in India MSWM is responsibility of local administrative body (LAB) . elected representatives of the cities govern LABS .cities and towns in India are classified according to population as class 1 town population of 100000and above ,class 2 population of 50000-99999, class 3 population 20000-49999,class4 town population 10000-19999, class 5 town of 5000-9999, class 6 town population below 5000. Cities having population 10 lakh and more are considered as metro cities like Chennai . in India availability of resources needed for MSWM largely depends on status of local administrative body as per the above classification .municipal solid waste management includes collection , storage , transportation and disposal of solid waste .poor collection and inadequate transportation leads to heap of MSW at man below 5000. Cities having population 10 lakh and more are considered as metro cities like Chennai . in India availability of resources needed for MSWM largely depends on status of local administrative body as per the above classification .municipal solid waste management includes collection , storage , transportation and disposal of solid waste .poor collection and inadequate transportation leads to heap of MSW at many places , which causes health and environmental problems .governments world over are making efforts to solid waste management in their respective countries .

CONCLUSION:

Municipal solid waste generated depends on population , climate, urbanization, socio-economic criteria etc...overall MSWM practices adapted in India present are inadequate .it is also noted that efforts are made to improve the MSWM in major cities but due attention is not paid for MSW of medium and small scale towns .the current regulations (MSWM

rules,2000)are very stringent .many deficiencies are identifying in the implementation of the policy .non compliances in MSWM are largely due to lack of training, financial constrains, lack of financial constrains , lack of proper planning and leadership. for developing country like india having 71% ,population residing in small scale towns and villages proper waste management policy should implement in these areas . Optimization studies should be carried out to explore the feasibility of integrated waste management through clustering of small towns and their surrounding villages for better mswm.

REFERENCES:

- [1] Joseph,k., ‘Perspectives of solid waste management in India’, International symposium on the technology and management of the treatment and reuse of the municipal solid waste, 2002, pp.117-126. [English]
- [2] Hanrahan ,Srivastava , and Ramakrishna, ‘Solid Waste Management in Household Level”, Intertnational journal for engineering and science , vol.2(2), 2007, pp.220 – 230. [English]
- [3] Sharma, S., shah ,K.W., Generation and disposal of solid waste in Hoshangabad .In : book of proceedings of the second international congress of chemistry and environment, Indore,India , 2005, pp.749-751. [English]
- [4] Central pollution control board (CPCB), .management of municipal solid waste .ministry of environment and forest , New Delhi , India, 2004.[English]
- [5] Shekdar,A.V., krishnaswamy ,K.N., Tikekar ,V.G.,Bhide ,A.D., ‘Indian urban solid waste management systems – jaded systems in need of resource augmentation’. Journal of waste management 12(4) 1992, pp.379-387. [English]
- [6] Practical guide book on strategic planning in municipal solid waste management, world bank report 2006. [English]
- [7] Pappu, A.,Saxena , M., Asokar , S.R.,’solid waste generation in India and their recycling potential in building materials’ Journal of building and environment, vol. 42(6), 2007, pp.2311-2324. [English].
- [8] Shekdar ,A.V., ‘Municipal solid waste management – the indian perspective’ Journal of Indian Association for Environmental Management 26(2), 1999, pp.100-108. [English].

- [9] Bhide , A.D., Shekdar ,A.V., ‘Solid waste management in Indian urban centres’, International solid waste association times (ISWA), Vol.2(1), 2007, pp.26-28. [English]
- [10] Imura , H., Yedla , S., Shinirkawa ,H., and Memon, M.A., ‘Urban environmental issues and trends in Aisa – an overview’, International review for environmental strategies ,vol.5, 2005, pp.357-382. [English]
- [11] Rathi , S., ‘Alternative approaches for better municipal solid waste management in Mumbai ,India’ Journal of waste management, vol.26(10), 2006, pp.1192-1200. [English]
- [12] Sharholly, M., Ahmed, K., Mahmood, G., and Trivedi, R.C., 2005 ‘Analysis of municipal solid waste management systems in Delhi –a review’ Second international congress of chemistry and environment ,Indore ,India , 2005, pp.773-777. [English]
- [13] Ray, M.R., Roychoudhury , S., Mukherjee, G., Roy, S., and Lahiri, T., ‘Respiratory and General Health Impairments of Workers Employed in a Municipal Solid Waste Disposal at Open Landfill Site in Delhi’ International Journal of Hygiene and Environmental Health vol.108 (4), 2005, pp. 255-262. [English]
- [14] Jha, M.K., Sondhi, O.A.K., and Pansare ,M., ‘Solid Waste Management – A Case Study’, Indian Journal of Environmental Protection, Vol. 23(10), 2003, pp. 1153-1160. [English]
- [15] Kansal ,A., ‘Solid Waste Management Strategies for India’, Indian Journal of Environmental Protection 22(4), 2002, pp.444-448. [English]
- [16] Kansal ,A., Prasad , R.K., and Gupta, S., ‘Delhi Municipal Solid Waste and Environment –An Appraisal’, Indian Journal of Environmental Protection, Vol.18(2), 1998, pp.123-128. [English]
- [17] Singh, S.K., and Singh, R.S., ‘Astudy on Municipal Solid Waste and Its Management Practices in Dhanbad –Jharia Coalifield’, Indian Journal of Environmental Protection, Vol.18(11), 1998, pp.850-852. [English]
- [18] Gupta, S., Krishna, M., Prasad, Gupta, S., and Kansal, A., ‘Solid Waste Wanagement in India: Options and Opportunities’, Resource Conservation and Recycling, Vol.24(1), 1998, pp.137-154. [English]

- [19] Shannigrahi,A,S., Chatterjee N., and Olaniya, M.S., ‘Physico –Chemical Characteristic of Municipal Solid Wastes in Mega City’, Indian Journal of Environmental Protection, Vol.17(7), 1997, p.527. [English]
- [20] NEERI, ‘Stratedy Paper on SWM in India’, National Environmental Engineering Research Institute , Nagpur. 1997. [English]
- [21] Dr.Lakshmi T and Rajeshkumar S “In Vitro Evaluation of Anticariogenic Activity of Acacia Catechu against Selected Microbes”, International Research Journal of Multidisciplinary Science & Technology, Volume No. 3 , Issue No. 3, P.No 20-25, March 2018.
- [22]Trishala A , Lakshmi T and Rajeshkumar S,“ Physicochemical profile of Acacia catechu bark extract –An In vitro study”, International Research Journal of Multidisciplinary Science & Technology, Volume No. 3 , Issue No. 4, P.No 26-30, April 2018.

