

**SOLID WASTE MANAGEMENT STUDIES IN ADILABAD TOWN
TELANGANA STATE, INDIA.**

¹G.Prabhaker , ²Jayanth Chapla and T.Anuradha*

^{1,2}Department of Environmental Science O.U,

*Department of Geography O. U. Hyderabad-500 007 Telangana State.India.

ABSTRACT

An approach to the solid waste management study was carried out at Adilabad – A model town , which is 300 kilometers away from Hyderabad city ,with a population of 1 ,40,000. The study was carried out for one calendar year that is 2013. The work is a humble beginning to study the solid waste concentrating on Domestic waste or organic waste related to degradable products and Non degradable recyclable wastes in commercial area or market yards. The solid waste are collected manually, on an average of 70 to 75 metric tons of solid waste is collected per day. And from where the degradable and non degradable material was separated, the degradable areas are sent to the compost yard and the non –degradable material was sent to recycling place.

As urbanization continues to take place the management of solid waste is becoming a major public health and environment concern in urban areas of many developing countries. With regard to the underdeveloped countries there is no proper waste collection system.

Key words: Solid waste, degradable, Non degradable, Recycling Management

Introduction:

Solid waste management (SWM) has been an integral part of every human society (Ashok V.Shekdar. 2008) municipal solid waste management (MSWM) is one of the major environmental problems of Indian cities, causes hazards to inhabitants, creating problems of public health and the environment (Mufeed Sharholy , Kafeel Ahmad, Gauhar Mahmood and R.C Trivedi. 2008) . Urban solid waste management studies were carried out in Kanpur by (Hina Zia and V.Devadas. 2008) . (Arun Kanti Biswas, Sunil kumar, S.Satheesh Babu , Jayanta Kumar Bhattacharyya and Tapan Chakrabarthy. 2010) studied the environmental quality in and around

municipal solid waste dumpsite of Kolkata do evaluated the environmental quality in and around the land fillsite: In Chennai solid waste is assessed under tropical climate condition using land fill lysimeters by (S.Sri Shalini, Obuli P. Karthikeyan and Kurian Joseph. 2009) from Kharagpur Kolkata current solid waste management (SWM) studies were carried out by (Tumpa Hazra and Sudha Goel. 2009) and suggested solutions to some of the major problems. (A.V.Shekdar , K.N.Krishna Swamy , V.G.Tikekar and A.D.Bhide. 1991) proposed long term planning for solid waste management in India, they studied as the households residing in the Bavanagar municipal area within Kolkata metropolitan city. (Ankit Agarwal, Ashish Singhmar, Mukul kulshrasta and Atul K. Mittal. 2008) studied on the municipal solid waste recycling from the capital city of Delhi. An economic analysis was done on the recovering urban solid waste in Bangalore in 1993 by (Pieter van Beukering. 1994) Urban solid waste management studies were carried out by (Hina Zia and V. Devadas. 2007) from Kanpur, (Arun Kanti Biswas , Sunil Kumar , S.Sateesh Babu , Jayantha kumar Bhattacharya and Tapan Chakrabarthy. 2010) evaluated the environmental quality in and around the land fillsite, and physico-chemical characteristics of the landfills at Mathkal dumping ground Kolkata , India . Solid waste management systems analysis techniques the pros and cons of waste management studies were carried out in Europe by (Ana Pires, Graca Martinho and Ni-Bin Chang. 2011). An Analysis was made for the existing problems in MSW collection, separation ,recycling and disposal and some suggestions for improving MSW system in the future in China along with population growths and industrialization the quality of solid waste (MSW) generation has been increasing rapidly. (Dong Qing Soon Keat Tan and Richard M. Gersberg. 2010) and recommendations was also made to improve the (MSW) management system. (Paolo Florucci ,Riccardo Miniciardi, Michela Robba and Roberto Sacile. 2003) described overall management of solid waste at a municipal scale in Italy. (M.C. Chen, A.Ruijs and J. Wesseler. 2005)

Studied on the solid waste management, on small Islands at Netherlands. (Juha-Heikki Transkanan. 2000) gave a strategic planning of municipal solid waste management. A computer model was developed and applied for studying integrated solid waste management (MSWM) in the Helsinki Metropolitan Area –Finland. (Oetoniel Buenrostro and Gerardo Bocco. 2003) analyzed the current situation of the solid waste management systems in Mexico, Solid waste

management in New Zealand was undertaken by (C.A. Boyle 2000) to gain information about the pollution prevention and waste management issues.

A study on the solid waste management was carried out at Adilabad, Andhra Pradesh which is 300kms away from greater Municipal Corporation, Hyderabad. Adilabad notified occupies an area of 30 Sq.kms approximately with 1, 40,000 populations and the literacy rate is 81%. The town is having 36 wards, with 35 slums. It is a very good commercial place for the Soya & cotton, only 60% of the population is literate. This is the first of its kind of study to carry out in this Municipality area.

Material and Methods:

Especially the less developed countries do not have a proper waste collection system. Collection of domestic waste from door to door is collected manually, in to the collection vehicle, and the commercial waste is also collected manually commercial and domestic solid waste and transport to dumping yard (plate-2) was done at regular intervals (Plate-1), between 6AM to 10 AM and 11.00 AM to 3.00 PM .The collected solid waste is separated in to two groups that is degradable and non degradable components. Waste collection methods vary among different countries or regions.

Results and discussions:

An average of 70 metric tons of solid waste is collected per day at Adilabad Town. In Kharagpur the solid waste is generated is 95 metric tons per day (K.Nareshkumar and Sudha Goel. 2009) , but the waste collected by the municipality is about 50 metric tons per day. The solid waste is generated in Kharagpur is 95 metric tons per day , But the waste is collected is about 50 metric tons per day that means 45 metric tons per day is remained un collected which dumped in open and contaminates the ground water, (K.Naresh Kumar and Sudha Goel .2009). An attempt was made to improve the existing system of solid waste management in Phnom city, Thailand (Veasna kum, Alice Sharp and Napart Harnpornchai.2005).As Urbanization continues to take place, the management of solid waste is also becoming a major public health and environmental concern in urban areas of many developing countries. The concern is serious particularly in the

capital city of Hyderabad and Secunderabad .A.P A typical solid waste management system in place like Adilabad has lot of problems such as collection, open dumping and burring without air and water pollution control. The solid waste is dumped in open areas. In china along with urbanization population growth and industrialization the quantity of municipal.Solid waste (MSW) generation has been increasing rapidly, the total (MSW) 212 million tons in the year 2006 ,(Dong Quing Zhang,soon keat tam and Richard M.Gersberg. 2010) (Ana Pires .Graca Martinho and NI-Bin Chang. 2010) studied on solid waste Management in European Countries , Practice and encompassing the pros and cons of waste management. They also made recommendations to improve the (MSW) management system (Paolo Florucci, Riccardo Miniciardi , Michela Robba and Roberto Sacile. 2003), the overall management of solid waste at municipal scale is described. For example Municipalities in small islands like Green-land , Taiwan have limited capacities for waste disposal (M.C.Chan ,A. Ruijs and J. Wesseler. 2005) , (Goram Finnveden. 1999), took care of certain amount of solid waste , many treatment process also provide additional functions ie recycling in to other products. Mexico is faced with environmental and administrative serious challenges with respect to solid waste management just as in other developing countries. (Otoniel Buenrostro and Gerardo Bocco. 2003).

The public sanitation system is laks because of inadequate planning even in Adilabad as well as unsustainable solid waste management like in Mexico. (Alessandro Lombrano. 2009) says that extension of collection areas should be increased and also the system may gradually evolve towards higher environmental standards and lower management costs. (C.A Boyle. 2000) showed the interest for current waste management, and pollution prevention frame work in New Zealand. He says it is a local policy particularly with regard to consistency and waste minimization also, he says that the New Zealand waste arrangement and pollution prevention programme was found to be vogue. (Hina Zia and V. Devadas. 2007). Indian cities are often characterized by poorly rendered services including waste management. In Roorkee India the city is found to be highly inefficient in collection of waste, transportation and dumping are the only activities practiced. Istambul with population of around 13 million people a biggest city in turkey produces 14,000 tons of solid waste per day (Gurdal Kanat. 2010).

Urban solid waste in Tanzania, Dar es Salaam city is a serious environmental problem (Michael Yhdego. 1995). Turkey where a total of approximately 750 tons per day of waste is generated and an effective MSW management system is needed in this city (Mufide Banar, Zerrin Cokaygil and Aysun Ozkan. 2009). The collection efficiency is around 60-70% (Tumpa Hazra and sudha Goel. 2009) in Kolkata. About 90% of MSW is dispersed of unscientifically in open dumps and landfills creating problems to public health and the environment (Mufeed Sharholly, Kafeel Ahmad, Gauhar Mahmood and R.C.Trivedi. 2007).

Conclusions:

Poorly designed or poorly managed landfills will create adverse environmental impacts well managed land fill can be a hygienic and relatively inexpensive method for disposing waste material. Incineration is controversial method of waste disposal, due to emini as of gaseous pollutants. Adilabad a town which needs a proper dumping yard and the collected solid waste should be properly handled or managed to see that ground water should not be contaminated with degradable or Non-degradable waste. A treatment plant is required for recycling. The municipality should have a proper plan and implement the system keeping in view of increasing population in the area. Public participation and co-operation awareness for the clean environment will be a successful operation in Adilabad. Education and Awareness in the area of waste and waste management is an important aspect from a global perspective of sources management. Every urban domestic household be provided with bins for recyclable waste. House hold waste be segregated, recyclables be made in to new products and general waste be dumped in landfill area It is a common practice in most of the countries that the disposing of waste involves dumping of waste in landfills in abandoned areas. Poorly managed landfills leads to a number of environmental impacts for example the wind current will carry the litter to different clean places, attracting different types of insects, animals and also leads to the formation of methane gas and carbon dioxide. This creates a filthy odor problem for the near-by residential areas; forms waste material that is organic in nature can be recycled. The waste gases from the process, such as methane can be used for generating heat and electricity.

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Plate-1



Door to Door Manual Collection of Solid Waste

Plate-2



Collection and transport of Solid waste by Municipal Authority.

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9. Topo sheet of Adilabad Town.

