

Literature Review of Stakeholders in Solid Waste Management

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There are various researches which have identified factors determining waste management in developed and developing countries. (Louis, 2004), (Melosi, 1981) (Worrell & Vesiland, 2012) Concern towards availability and optimum utilization of resources, safety and health of public major driven SWM policy framework and its effective implementation. Factors determining Solid Waste Management is studied according to stakeholders involved.

Households

According to (Sujauddin, 2008) demographic factors like gender, number of members in a family, access to education for citizens, income determine quantity of waste generated. Waste collection fees charged on the basis of waste volume or weight also determines waste segregation attribute. (Scheinberg, 2011). If waste segregation is done at source preparation of compost at home is possible using kitchen and garden waste. In India preparation of compost at home is not much in practice unlike west (Goel, 2008). Concern and awareness among citizens of a country also drives its SWM practices and its effectiveness In a few developing countries people are concerned about hazardous effect due to garbage but have a “Not In My Backyard” NIMB attitude (Schubeler, 1996).

Role of Municipalities

Primary Garbage Collection Facilities

It has also been studied by many researchers (Moghadam, Mokhtarani, & Mokhtarani, 2009) that SWM is also influenced by infrastructure facilities like no of vehicles available for garbage collection, route planning by these vehicles, quality of roads, bin collection system (Tadesse, Ruijs, & Hagos, 2008) has analyzed a families decision of waste management, and found that if frequency of waste collection from communal waste containers is regular and its distance from the house is less, then there is less disposal of waste in open areas or at road side. Size of a collection container and there number also has a impact on SWM, highest and lowest density of garbage generated per million population should be the criteria to determine size of container (Goel, 2008). The number of vehicles allocated for transportation of garbage should consider possibility of breakdown of vehicles repairs required, off route taken by vehicles and days when there are insufficient drivers for these vehicles. Accordingly budget allocation should be done for vehicles In India at any given point of time average 60% of the vehicles of total fleet are operational. (Goel, 2008).

Manpower Allocation

Lack of worker also disturbs SWM practices in a city. If workers are not employed according to the requirement there will be high absenteeism due to discipline, injury, illness diseases etc. (Goel, 2008). Regular capacity building programs should be conducted for labors directly involved in waste handling (Pandey & Malik, 2015)

Fund Allotment

In India the financing and allotment of funds for SWM is a complete mismatch with countries having effective waste management. In India major source of funds for municipalities is property taxes and grants received. Property taxes is comparatively quite low due to huge public and political causes. Thus most municipalities in India face scarcity of funds. Moreover share of SWM is majorly consumed in payment of salaries, which in western world is utilized for development of technology for treatment and disposal of waste. In India market for products manufactured from recycled waste is not strong to provide funds to local bodies. There has to be a incentive to households and commercial for reduction in waste generated. (Pandey & Malik, 2015) (Zhu, Asnani, Zurburgg, Anapolsku, & Mani, 2008).

Governance and Legal guidelines

In developing countries environmental risk due to improper SWM is still low on agenda (Wilson, 2007). Policies and strategies enhancing household to reuse, recycle, home composting etc are required for effective SWM (Wilson, 2007). Climate change has acted as a another important driver for SWM. Land filling is a major source of methane emissions (UN_HABITAT, 2010) (Wilson, 2007) This driver leads to formation of policies and laws related to garbage management for household and commercials, setting targets for composting

and it also highlights that land fills is not a solution to waste management. (UN_HABITAT, 2010) (Wilson, 2007) suggests a ban on biodegradable goods moving to land fills. Optimum usage of any natural resource(air, water or land) in all countries is attractive for people with power and politics, there is a conflicting interest to grab the most advantageous resources.

Conclusion

With growth and development of economies, population has also increased in urban India. For most countries modern lifestyle has a byproduct, increased waste. Type of waste generated by fast growing cities is also quite diversified. All this has resulted into high expectations from local municipalities, in terms of technical skills, manpower and financial budget. At this stage it is necessary that all the stakeholders in solid waste management understand their role at various stages, right from waste generation to its reuse, recycle or disposal. So as to develop a effective system which ensures a balance between economic growth and environment protection.

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