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"PROPER ALLOCATION AND CHALLENGES FOR DOMESTIC WASTE MANAGEMENT"

Dr. Ranjeeta Bhandari
Astt. Professor (Guest Faculty)
BFE Department
Jai Narayan Vyas University
Jodhpur

Introduction

For betterment and welfare of household in developing countries, a large number of groups and committees of the public remain dependent on the old and traditional way of eradication of waste. It is complementary with other goals of development such as improving health and education. The waste management has positive effects on the external environment by reducing outdoor air pollution. This process requires a high level of safety and reliability which is maintained by strict regulatory procedures. The implementation of strong safety culture within the public is pre - requisite. The negligence towards these procedures may lead to catastrophic consequences for the plant or machinery, human life and environment.

The waste management process systems exhibits a complicated and dynamic behavior with various time - dependent effects such as seasonal changes , aging of process equipment , physical, resident response time etc.

A strong safety system should only consist of process and associated units but also to create a culture of thorough safety which has been predominately critical. The entire waste management receives a great deal of public awareness and concern regarding their potential hazardous impact on people , environment ans society.

The operating machinery typically involves a number of stages of inter - related activities .A small mishap in this process operation might escalate to a catastrophic event due to limited space , compact geometry of area of operation, less ventilation and difficult escape routes. The past case history has proven that incidents of aggregation of waste lead to significant losses on mankind. The time-dependent response is involved both physical/engineering process and co-operative movement's performance. The technical and economic information help these practitioners meet daily challenges of planning, managing and operating Municipal waste (MSW) programs and facilities.

Objective

The decision maker in the waste management process involves local government officials , facility owners , operators , consultants and regulatory agency specialists. This machinery keeps struggling to meet control - over ever increasing waste again, no one else but changes at local level needs to be imposed on citizens. The main objective is to develop a practical and systematic risk assessment method starting from the conceptual design on optimal resources allocation solutions . This methodology will improve understanding of operational risk associated with dynamic process of waste management. Government keeps on paying more to fulfil the requirement of environment laws that leads to revenue loss , maintenance and profit. The purpose is to assist waste managers and key decision - makers in municipalities to decide whether to involve private sector in waste services and if so , how this should be done which is based on a wide range of case studies and examples from experience. The following issues are involved in waste management process:-

- **Who is bearing the costs?**
- **Who is reaping the benefits?**
- **What strategy is to adopted?**
- **What are the costs and benefits?**

Problems Statement

There is an unprecedented rise in waste in Bangalore city . A large number of challenges are involved that includes increasing affordability , ensuring adequate removal supply and accessibility , effective policies and reach to people etc.

1 . Increasing Affordability

Keeping financial burden aside , the lack of awareness about hazardous effects of waste on health ; hinder people from making efforts to make their surroundings cleaner and efficient.
The following points can be considered :-

- Higher initial costs : It constitutes a large number of upfront costs. In number of cases , it becomes difficult for household to afford initial expenditure on managing household waste.
- Sensitivity : Citizens are availing benefits of higher discount rates in daily life; future savings would be less valuable than current expenditure. The low - income households are selective and concentrate less on waste management.
- Difficulty in Repayment : Waste Management companies have implemented micro - programs for eradicating waste in urban household. People pay for some conveniences ; beyond this level , there needs to be some productive outcomes to justify the expenses.

2. **Ensuring Adequate transport availability**

- The adequacy of supply is obviously directly related to the magnitude. To ensure the availability and accessibility of transport facility in Bangalore requires the adequate storage installations and transport systems , a reliable distribution system and avoidance of infrastructure bottlenecks . The storage and treatment plant facilities outside urban centers are at a higher demand which has been limited instead of government willing to invest and following additional aspects need to be looked into :
- Issues of removal : In number of occasions , government machinery is not disclosing facts and figure due to strategic reasons.
- Shortage in present waste management removal : Looking upon the present requirement , there is shortage which leads to an ever - increasing imbalances as waste management is on an increasing trend.
- Increasing demands : An effective mandatory norm is required on waste management, as the existing regulation will help in balance between demand and supply and reducing the gap.
- Infrastructure : The movements of collecting waste is undertaken through by road ; which is hazardous and polluted.
- Citizen problems : The large number of population is located far from these centers and users have to pay for this. Moreover , for small and remote locations , up - upliftment of waste often takes more time and lack of information on standby arrangement.
- Problems with facilitator : For waste management facilitators , the smaller staff , machinery and lower rate of waste payment leads to poor economies of scale i.e. poor infrastructure make it difficult to establish a viable waste eradication networks.

Safety : The waste management requires on liquid and semi solid waste that ultimately leads to more burdens on handling agencies.

3. Policies

- Subsidies on transportation : The agencies / segments associated enjoy subsidies that need to re - scheduled and upgraded.

Misuse of subsidies : The averages use calculated on the basis of the total quantity of waste segregated , transported and delivered at respective center.

4. Poverty Issues :

- Alternate waste disposal options.
- Impact on the poverty alleviations by improving life standard.

Benefit to poor by benefits schemes.

For policy makers and professional staff of urban government agencies and non - government organizations in low - income , it covers social , environmental , technical factors around waste disposal that also include guidance on the appropriate landfilling.

Observation

The role of associated organizations in waste management is as under : -

- Role of micro - enterprises in waste management recognizing livelihoods.

Recognizing gender issues in management of waste success sustainability indicators for primary collection of waste.

From citizen perspective, the following points are observed : -

- The raise of awareness among donors and researchers is essential in municipal staff dwelling in low - income countries.
- The initiatives must be well integrated , process of change and power structures are often the product of social and economic context.
- A direct use of training skills because of existing environment in local authorities and some of the adverse factors exist organizational structure , financial constraints and the political context.
- In integrated waste management , professionals from a number of backgrounds are expected to be involved and it is not possible for single body to imitate networking activities. In low - income countries , often networks around solid waste management are weak or non - existent. The objective could be achieved through the following phase :-

Phase I :

Design conceptual framework applicable to dynamic waste management process that should be able to characterize process dynamics governed by laws of the environment protection.

Phase II :

Design algorithms by integrating discrete events , Simulation , Monte Carlo simulations etc. followed by implementing algorithms and subsequent programming to a practical process.

Phase III :

Establish a probabilistic approach that should be able to characterize the uncertainty associated with risk analysis.

Phase IV :

Optimize resources allocation for risk reduction . Develop uncertainty reduction strategies to improve QRA (Quantitative Research Analysis) study.

Conclusion

Every government is offering all sort of necessary facility for households dwelling in rural as well as urban sector for effective controls on waste management ; yet they found them costlier. There are many important aspects viz. needs assessment , knowledge products, dissemination pathways, up - take of knowledge and its impact has to be looked after by government agencies. Initiatives like, success and sustainability indicators should be taken as new key result areas on integrated waste management. Establishing a distribution system of waste for households is expensive , but worth considering as same possess many advantage ; aside from waste management technique generating the cleanest and commercially viable environment .Slums and squatter settlements are characterized by a gross deficiency of basic services such as proper housing, provision and supply of safe potable water, sanitation facilities such as Washroom and disposal of human excreta ,drainage of sewage water, paved roads and often rain water does not get drained off from there. In the absence of these facilities , the quality of life in slums and squatter settlements is highly miserable ; hence essential for local government to provide effective waste management services.

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