

13. Sustainability in Practice: Exploring Innovations in Domestic Solid Waste Management in India

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In recent decades there has been significant growth in urban population, paving enough space for related problems to confront with. One such problem is about improving environmental conditions, particularly through solid waste management. Solid waste is defined as the organic and inorganic waste materials generated by household, commercial and institutional establishments. A solid waste management system is the framework within which all activities regarding solid waste take place. Solid waste management is further defined according to the process administered and/or carried out by the local government, i.e., collection, transport and disposal. The associated activities are generation, storage, collection, transfer and transport, processing and disposal of solid wastes. The prime objective of the project was to gain insights into the 'alternatives' or 'innovations' within the formal and informal solid waste management to reduce waste, in terms of minimising waste, maximising re-use and recycling activities, and to promote ecological sustainability. One of the approaches formulated to examine the project objectives was through a sample study of five cities/ towns in each of the three selected states in India and one city/ town in each state for an in-depth case study.

Key Observations and Findings

1. The impact of macro-level structural reform, economic liberalisation and reduction in the role of public sector in infrastructure development has been gradually trickling down to the grass-roots levels.
2. The conventional and traditional approach to 'public service' by the government at the urban local government level is slowly changing, and it is now being realised that community participation and private sector partnership are more appropriate to develop the urban local services.
3. Unfortunately, it is found that the initiatives are coming from the top (higher level government) in the form of policy advice, programme guidelines, recommendations and instructions through government orders. In very few instances are attempts being made to improve the standard of urban service management and delivery systems at the local government level.
4. It is observed that in all the case studies on SWM there are two common features:
 - i. Partial privatisation of garbage collection and transportation; and
 - ii. Inviting private sector to install waste recycling plants or produce fertilisers from solid waste.

5. Even though partial private participation (contracting out some components of services) is in vogue in some municipalities, this was treated as a means of convenience rather than reducing the responsibilities of municipality. Hiring of trucks or tractors by the municipality from private parties to transport solid waste is a case in point.
6. Any attempt to 'change' or 'modernise' or introduce advanced techniques is generally viewed as unnecessary and perceived as no better alternative, additional risk and resisted by a large section of elected representatives as well as the municipal staff.
7. It is observed that if the chief executives, administrators and elected chairpersons make a serious attempt to revamp the traditional methods of SWM and decide to introduce new and innovative approaches, there is sufficient scope for success. For example, in Anantapur Municipality, the young, dynamic and forward looking chairperson, with the support and co-operation of the Municipal Commissioner, succeeded in introducing new and innovative approaches in SWM ever since he assumed office.
8. There are also a large number of legislative, legal and administrative hurdles to the introduction of new approaches. Every part of municipal functions is coded in the form of municipal Acts, Laws and bye-laws which remain unchanged over decades. For example, public health and sanitation rules, regulations and specifications restrict the appointment of the required sanitary staff, purchase of materials, revision of rates and charges.
9. Even though decentralisation in all respects has been preached, in reality there has been no impact on the urban local bodies, as is evident from the fact that they do not administer as per the aspirations and needs of the local people.
10. Although solid waste management is the responsibility of the municipality, as enshrined in the Act, the latter has been seeking the support of non-governmental organisations like EXNORA, CBOs (Community Based Organisations) and workers' societies. This points to the emerging trend of networking between the municipality and other local organisations for managing solid waste.
11. Studies reveal that there are always some operational problems and financial and other constraints, lack of political support and lack of wholehearted support from the citizens, which hinder the promotion of meaningful, effective and responsive waste management endeavours.
12. Discussions with the households indicate that the local organisations are willing to come together to shoulder the responsibility of waste collection and disposal provided the municipality supports their initiatives.
13. The case studies developed on the workers of the informal sector show that their contribution to solid waste management is on an equal footing with the efforts of the

formal sector. They, in a way, are responsible for the re-use and recycling of the waste generated, which is used by different establishments.

14. There is increasing public awareness of the need for collection and proper disposal of garbage. While solid waste management is becoming more and more an important function of the municipalities, the latter are constrained by the lack of funds to perform this function effectively.
15. Owing to financial constraints and ban on recruitment of sanitary workers, the municipalities have been forced to manage the existing personnel more economically but also to evolve innovative methods of collecting and disposing garbage more effectively. As part of this strategy, the municipalities have (a) gone in for methods that effectively use the existing staff, (b) resorted to privatisation of garbage collection and disposal, and (c) encouraged NGOs and CBOs to voluntarily undertake solid waste management in selected areas of the city.