Dive into position, issue, and possible intervention of solid waste management: through governance, agencies, and waste pickers

Background

In recent times, with rapid globalization, urbanization, and development, the world is headed toward extreme waste generation. From a global perspective, the world is expected to generate around 3.88 billion tons of waste by 2050 while each person leaving 0.79 kilograms of footprint per person per day rates leading to 73% growth (World Bank, 2022). This has led to developing countries adding their municipal budget expenses to about 20-50% burden for making their cities livable and sustainable. India is one such country with the major challenge of its issue associated with waste generation and the linked burden of waste collection, transport, treatment, and disposal. Megacities of India lading in waste generation include Bangalore, Ahmedabad, Kolkata, Delhi, etc. (Kumar et al., 2017). Rapid population growth and industrial expansion damage urban environments and severely deplete natural resources, which undermines sensible and justifiable development. Unsystematic handling and disposal of solid waste is a blatant contributor to environmental deterioration in the majority of developing country cities.

Position

Focusing specifically on Ahmedabad as one of the fast-growing megacities of India, the solid waste generation, collection, processing, and disposal is a big challenge, however being the most important issue to be priorities at governance, policy, planning, and CSR levels. According to recent studies and statistics, Ahmedabad generates around the highest waste at household levels and industrial levels making up to 57-60% of total waste generated through various sources in the city (Sheth et al., 2016). The collection of same is highest collected by AMC on a daily and monthly basis of adding approx. 1,10,000 MT monthly. The same waste in the current position in Ahmedabad is either sent to processing and recycling facilities followed by about 97,591 tonnes per month being added to dumping sites adding to the burden of waste management. About 97,500 MT/month is just added to Pirana which is an open dumping site covering 84 acres of the city demographic.

Issue

The biggest issue of solid waste management in Ahmedabad city is posed due to the unplanned waste management which adds a huge pile of waste to its open dumping site of Pirana making it responsible for the emission of GHGs. Overall emission in Ahmedabad for GHGs is second due to the waste sector adding 3-4% as per 2011 records followed by industrial sectors in the emissions (Sheth et al., 2016). At the Pirana landfill site, the majority of the waste (about 90 percent) is currently dumped in the open. Of the remainder, about 8% of MSW is recovered, while 2% of inert material is disposed of in the Gyaspur scientific landfill site (Ahmedabad Municipal Corporation & United Nations Centre for Regional Development, n.d.). Out of 110,667 MT every month, 97,000 MT of MSW are dumped at the scientific landfill.

Possible interventions

With the current position of the global issue of waste management and the position of Ahmedabad in waste generation and processing, there is a radical paradigm shift needed to find a way forward. A sustainable, preventive and comprehensive system is needed which is circular while being parallel functioning. Creating a zero-waste ecosystem needs municipal corporations as its core center, followed by policymakers and regulatory enforcers, which are followed side by side by waste management companies like Nepra which can provide support for significant scientific processing and disposal solutions. It can be followed by other circular levels like educators, change agents, foundations, CSRs, collaborators, and lobbyists being at the most exterior circle in this ecosystem creating a role spiral. Strategic action therefore can be planned based on key focus areas which can be education and awareness, environmental protection, community ownership, regulatory and institutional framework, waste segregation, partnership, and technology.

Who can help other than the government and agencies?

The issue, position, and possible interventions can only be implemented with there is the third pillar of support followed by governing authorities and external agencies in this ecosystem

which in this case consist of waste pickers. Waste pickers make this zero-waste ecosystem more resilient, shockproof, and sustainable (Noda, 2022). This needs focused help to them and provide their social protection, opportunities, and dignified livelihood status for existence in society for their contributions. Therefore, agencies and governments can focus on providing policy support, showing social responsibility towards them, breaking the social and economical traps they are in, providing them with better futures and opportunities, and focusing on their health and the second generations of these families.

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