

Integrated solid waste management- issues, challenges and opportunities – an Indian experience

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In India, the State of Kerala, has been implementing an Integrated Solid Waste Management program being implemented through microlevel planning involving all relevant stakeholders, evolved through a series of process involving the state, local self-government institutions, self-help groups, technical and academic institutions, private and business entities, and the local community

The new approach and programs on waste management in Kerala is built upon the principle of Decentralised and Participatory Development Planning Process evolved and implemented at the Local Self Government Institutions (LSGIs) in the state and is quite unique in India. The above background has largely helped Kerala in implementing the Participatory and community oriented solid waste management in all urban and rural local self-government institutions in the state.

The process of solid waste management involves segregated collection, efficient transportation, processing of various types of wastes using appropriate technologies, refuse management with focus on 4-R principle of Reduce, Reuse, Recycle and Replace concept. In Kerala, our basic approach is being focussed on these 4-R principle and segregation of about 90% of the wastes is done at the source itself. The Biodegradable wastes thus separated in processed at the source itself by the generators to the maximum extent. There are Resource Recovery Centres and Material Recovery Facilities in different part of the LSGIs, atleast one at one kilometre; mainly to collect the non-Degradable wastes, which also is collected separately. The separated non-degradable wastes are regularly taken to the recycling units.

The plastic carry bags are totally banned, and the community has changed over to other materials like cloth bags, paper bags, etc. Small and Micro-enterprises are emerged to produce alternate items and a number of “Green Jobs” are evolved-both technical and non-technical.

We tried to alter the challenges faced by the LSGIs and local community into many opportunities by developing “Microbusiness Enterprises and Start Ups” and also generating many “Green Technology Back Up Institutions and Green Jobs”

Social engineering is more important along with engineering in Solid waste management. The present paper tries to describe the issues and challenges we faced, and the opportunities evolved during the implementation of Participatory Integrated Solid Waste Management System in Kerala, India