

'Garbage is money, handle it properly'

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Mumbai-based National Solid Waste Association of India is active in solid waste management and biomedical waste. The association also collects data on municipal and hazardous waste. Dr. Amiya Kumar Sahu spoke to MadhuChittora.

How does one define solid waste and which laws govern its treatment and management?

First of all we have to define waste. Waste definition differs from person to person and the waste generated by you may be useful for me and waste generated by me may be useful for you, secondly, the physical nature of the waste should be solid. Broadly, solid waste is classified into two - hazardous and non-hazardous. Hazardous waste is generated from the industries and is toxic in nature. Non-hazardous is the municipal waste comprising the waste generated from households like kitchen waste, hotels, corporate office etc.

Even in the municipal waste there is hazardous waste like batteries, retired electronic goods, but not in that volume which is being generated by the industries. Biomedical waste, a special category of solid waste, is generated from the hospitals, dispensaries and pharmacies. Another special category is the electrical and electronic waste comprising computers, televisions, expired cell phones etc. All these four types of waste are governed by different laws and policies as the nature of the waste differs. Hazardous waste is governed by Hazardous & Toxic Waste Handling Rule of 2001 Act, non-hazardous that is municipal solid waste is governed by MSW Rule 2000; bio-medical waste is governed by Bio-Medical Waste Management Rule 1998. The electrical and electronic waste policy is yet to be formed. As India is a large country, national rule for waste treatment may not be feasible. As per local conditions modification of rules and regulations is necessary because waste has to be managed.

How much solid waste is generated in India and what are major sources?

Generally, considering economic zones (high, low and moderate) at least 200 to 250 gm per capita of municipal solid waste is generated per day. Industrial waste differs from industry to industry. In India, agriculture waste is not yet recognised as real waste. Waste from the field itself is used as manure in the same field. Large agriculture fields generate huge amount of waste that can be converted into green compost food processing industries, juice centres, wineries, etc generate huge amount of agriculture waste and this waste has to be treated to form green compost.

What are the hindrances in solid waste management?

The will to manage the waste will bring in understanding for the rule. With respect to waste, the problem is attitudinal. There is resistance towards scientific treatment and disposal of waste. The existence of rules reflects that the government is serious in their act, but, implementation is still an issue. For policy making, implementation and regulation, the bodies are different and there is no integration between them. In the waste management public participation is also important.

When planning for any city or industrial sector, first you have to see if there is any capacity to accommodate industries in case of industrial sectors, or houses for housing sector. For a comfortable life of a single individual carrying capacity of a particular place has to be studied.

Our system is wrong. A personal concern is very important. The municipal commissioner responsible for solid waste management comes for three years; afterwards, another municipal commissioner comes in. In our system there is interference of politicians, corporators, bureaucrats and NGOs. The administrator should not be an IAS officer but a technically sound person. This is lacking in our system. In mostmunicipal corporations there is no civil engineer.

Instead of mechanical engineers, we should have more of civil engineers. The design is being done by civil engineers. The regulatory body should be highly educated. In our system, everything is governed by the cost. Government planning is bad and none of the municipalities has earmarked the space for garbage disposal.

What measures then do you suggest?

Around 50 years ago, Singapore was the dirtiest country of the world. Today it is the cleanest. Severe penalty on littering is a threat that ensures cleanliness. Solid waste management is an attitudinal problem and to manage it, there has to be some sort of threat to the public. For proper solid waste management, city fathers, politicians and administrators are responsible. General public should also cooperate. Strict implementation of the rule is important.

There are four types of treatment for toxic and hazardous waste - direct disposal at the sanitary landfill, physio-chemical treatment, solidification and incineration. Industries, particularly the large ones, aim to be profitable and hence if the waste treatment is expensive, they modify the manufacturing process, change raw materials, etc. In some cases, industry has to pass the zero waste discharge tests. But the small and medium industries face problems, and hence are mainly responsible for improper waste management.

For the municipal solid waste management, segregate the waste into dry and wet; it is mandatory so that appropriate processing is easily possible. Education and awareness amongst public is very important, so is technical knowledge amongst municipal engineers. Financing is not a problem. One can evolve entrepreneurship for solid waste management through administrative support and incentives. After all, garbage is money, if you handle it properly.

[May 19-25, 2008]

Reference: Projectmonitor – The Newspaper

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