

ACTS, RULES, REGULATIONS AND LEGISLATION REGARDING MUNICIPAL SOLID WASTE MANAGEMENT IN INDIA

Dr Nabanita Sarkar

Department of Geography, Visva Bharati, Santiniketan, 731235

Abstract: Solid waste management in India is an acute problem now a day. The life of people became very fast and formulated these days. In the present society the food habit of people changed abruptly. The people became depended more on package food which in return increases the amount of solid wastes. The amount of household solid waste is increasing day by day in city life as well as in rural areas too. Various policies, acts, rules and regulations were made regarding proper solid wastes managements in the municipalities and corporation in various cities and towns of India. These policies, rules and regulations are implemented through municipal authorities and corporations. Central pollution control board and state pollution control, board in every state of India play the most important role in this aspect. They are the controlling authority who frames various policies and rules. They imply their significant role regarding policy making and decision making for the betterment and proper solid waste management system to give a healthy and pollution free life to the citizen.

Key words: Solid waste management, package food, household solid waste, policy, rules and regulations, corporation. Central pollution control board, state pollution control board.

Regulations, Legislation and Policy Measures in India:

Various policy measures are being taken to check the nuisance caused by plastic waste in India, through there is no definite policy and legislation framed in respect of mitigating the plastic waste in the country. These are:

(a) Until recently there has been no definite environmental policy and legislation framed in respect of plastic waste in India. The plastics waste gets generated, collected, traded, and reprocessed by known methods into useful products, thereby supplementing supply of raw materials, and at economic price. However, a HP Non-biodegradable Garbage (Control) Act, 1995, has been introduced by the Government of Himachal Pradesh. The Act appropriately envisages prohibition of throwing or depositing plastic articles in public places and to facilitate the collection through garbage in identifiable and marked garbage receptacles for non-biodegradables, placed at convenient places. Haryana State has announced a Bill (1997) on Non-biodegradable Garbage on similar lines as that of Himachal Pradesh. The National

Plastics Waste Management Task Force of the Ministry of Environment and Forests, Government of India, has recommended a strategy and action programme of Plastics Waste Management in India.

(b) Ministry of Environment and Forests, Government of India has issued criteria for labeling 'plastic products' as 'Environmental Friendly' under its 'Ecomark' Scheme, in association with the Bureau of Indian Standards. One of the requirements for plastic products is that the material used for packaging shall be recyclable or biodegradable.

(c) The Bureau of Indian Standards, New Delhi (BIS) has issued guidelines on recycling of plastics waste including code of practices for collection, sorting through conventional practices continue to be adopted and accepted, need has been voiced to upgrade these, both by the authorities and NGOs. However, while formulating Indian standard specifications for various plastic products, used for critical applications like plastic piping system, water-storage tanks, packaging for food articles, a clause is included which reads "no recycled plastics waste shall be used". An exercise has also been carried out by the Ministry of Environment and Forest in association with Bureau of Indian Standards to include use of recycled plastic waste wherever appropriate in the manufacture of plastic products and this should be specified accordingly in the relevant Indian Specifications.

(d) The Prevention of Food Adulteration Department of the Government of India, has issued directives to various catering establishments to use only food-grade plastics, while selling or serving food items. Rules have specified use of 'food grade' plastic, which meets certain essential requirements and is considered safe, when in contact with food. The intention is to check possible contamination, and to avert the danger from use of recycled plastic. The Scheme announced in February, 1995 is being implemented in cooperation with Bureau of Indian Standards (BIS) which has formulated a series of standards on this subject.

The Bureau of Indian Standards Sub-committee PCD 12.17 has been given the charge of formulating guidelines, codes and specifications for recycling of plastics. Two documents, viz., "Guidelines for Recycling of Plastics" and "Recycled Plastics for Manufacture of Products, Designation" have been finalised.

(e) The Central Pollution Control Board, New Delhi had assigned a study on "Status of Waste Plastics Recycling in NCR Delhi" to Shri Ram Institute for Industrial Research Delhi.

There is need to formulate and enforce code of good practice both for the processor and the consumer. In particular, standards need to be laid down for products from various plastics waste including the co-mingled one. Directives should be imposed for a periodic air quality and health/hygienic check in the reprocessing units.



Figure: Dumping ground of waste disposal, Bolpur Municipality of Birbhum District, West Bengal

(f) During September 1996, (and earlier during September, 1994) a National Conference on 'Plastics and Environment' was organised at New Delhi, by FICCI. It was during the Conference that the Ministry of Environment and Forests, Government of India announced the setting up of National Plastics Waste Management Task Force, with representations of Department of Chemicals and Petrochemicals, Ministry of Urban Affairs, Municipal Corporation of Delhi. The All India Plastics Manufacturers Association, All India Federation of Plastics Industry, NOCIL, IPCL, and experts from BMTPC, FICCI and CII. The Task Force has submitted its report (August 1997) and drawn Strategy and Action Programme for Plastics Waste Management in India.

(g) A National Association of PET industry has recently been formed by PET manufacturers and users in India which is expected to look after the organised collection and recycling of PET bottles/containers waste.

Government of India, along with its recommendations, whereas the draft of the Municipal Solid Wastes (Management and Handling) Rules, 1999 were published under the notification of the Government of India in the Ministry of Environment and Forests number S.O. 783(E), dated, the 27th September, 1999 in the Gazette of India, Part II, Section 3, Sub-section (ii) of the same date inviting objections and suggestions from the persons likely to be affected thereby, before the expiry of the period of sixty days from the date on which the copies of the Gazette containing the said notification are made available to the public on the 5th October, 1999. And whereas the objections and suggestions received from the public in respect of the said draft rules have been duly considered by the Central Government.

Now, therefore, in exercise of the powers conferred by section 3, 6 and 25 of the Environment (Protection) Act, 1986 (29 of 1986), the Central Government hereby makes rules to regulate the management and handling of the municipal solid wastes.

National Laws:

- 1974 The Water (Prevention and Control of Pollution) Act.
- 1977 The Water (Prevention and Control of Pollution) Cess, Act.
- 1981 The Air (Prevention and Control of Pollution) Act.
- 1986 Environmental Protection and Amendments.
- 1986 Hazardous wastes management and handling rules, manufacture storage and import of hazardous chemicals rules.
- 1992 National Environmental Tribunal Bill.
- 1995 The National Environmental Tribunal Act.
- 1996 Chemical Accidents Rules.
- 1998 Bio-Medical Waste Rules.
- 1999 Recycled Plastic Manufactured and Usage Rules.
- 1999 Solid Waste Management in Class-1 Cities in India- Guidelines by Supreme Court of India.
- 2000 Municipal Solid Waste Rules of MSW Rules 2000, amended in 2003
- 2000 Ozone Depleting Substances (regulation) Rules.
- 2001 Batteries (management and handling) Rules.
- 2000 The Noise Pollution (Regulation and Control) Rules.
- 2002 Bureau of Energy Efficiency.
- 2003 Corporate Responsibility for Environmental Protection chapter (CREP), “which encourages companies to go beyond existing regulations, undertake reduction of waste production and adopt clean technologies”.
- 2006 Environmental Impact Assessment (EIA).
- 2008 The Hazardous Waste (Management, Handling and Trans-boundary Movement) Rules.
- 2010 (Under Review) E-Waste (Management and Handling) Rules 2010.

Management Regulations for Solid Waste Disposal and Recycling issued by the Municipal Level Solid Waste Management Monitoring Committee:

A) Municipal Level Administration:

Management Regulation relating to solid waste disposal and recycling would be adopted by the respect Municipal Boards after exhaustive discussion with all concerned and the board of councilors meetings in due time.

B) Institutional Strengthening & Human Resources Development:

It is necessary to provide adequate training to all the levels of staff engaged in SWM services. The lower level staff such as sweepers, sanitation supervisors up to the level of Sanitary sub-inspectors would be given training locally in various aspects like storage, segregation of waste and primary collection of waste etc. whereas the Sanitary Inspectors (SI) and above will be given training in modern technologies of waste management, transportation, planning, personnel management programme within and outside the town, city or state. The senior officers of SWM department would be given adequate training through workshops and visits to various parts of the country and abroad.

C) Decentralization of Administration:

SWM services can be performed effectively only if the Ward level, second at the Zone level and third at the city or Town level. For creating a competitive environment in regard to performance of SWM systems “Cleanliness Awards” would be given each year to the best performing wards.

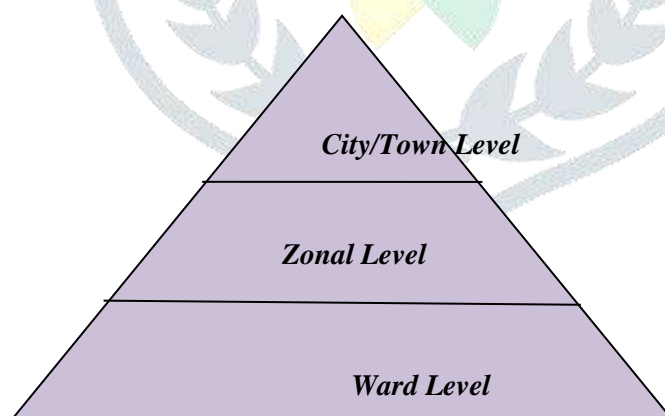


Figure: Decentralization of Administration

i) Ward Level Administration:

The ward level administration would be fully responsible for ensuring storage of segregated waste at source, primary collection of waste, street sweeping and taking the waste to the bulk community waste storage site etc. The cleaning of each street, lane, by lane, markets etc. would be regularly supervised by the ward level

supervisors. Presence of all SWM officers of the Ward in the field during morning hours is most essential. Besides grievance redressal system has to be in place in each ward.

ii) Zonal Administration:

Administrative zones will be made for a group of wards. The zonal administration would effectively supervise and support the work of the ward administration and also provide zonal level support such as construction and upkeep of flooring under the communal waste storage sites transportation of waste from the communal storage sites to the transfer station, processing plant or to the disposal sites as will be determined by the local body. If the zones are not allotted adequate vehicles for the transportation of waste due to paucity of vehicles, the transportation of waste will be coordinated centrally for the optimum utilization of the fleet of vehicles in 2 or 3 shifts



Figure: Scattered duping at the road side, Suri Municipal area, Birbhum District, west Bengal

iii) City / Town Level Administration:

The city / town level administration would supervise and support the zonal administration and in cases where the fleet of vehicles is not decentralized at the zonal level, the central SWM Department would look after the transportation of waste from the community waste storage sites on a daily basis. The Central SWM Department would be responsible for construction and upkeep of transfer stations, setting up and maintenance of processing plants, incineration plants and vehicles as well as for managing the disposal of waste at the landfill sites in an environmentally acceptable manner.



Figure: Animals are grazing over the dumping ground, Bolpur Town, Birbhum district, West Bengal

The central SWM department would also be responsible for the procurement of vehicles, equipment and land for processing and disposal of waste. As a head office it would take policy decisions and co-ordinate the activities of all the zones and the wards and be answerable to the Chief Executive and elected body for the efficient functioning of the department. It would look after the recruitment of manpower, human resources development, training etc.



Figure: Waste carrying vehicle to the dumping ground, Sainthia Municipality, Birbhum District, West Bengal

iv) **Interactive meets and communication:**

State Governments would organize interactive meets for the subordinate officers in charge of SWM in various local bodies for exchange of information and sharing of experiences.

D) Planning and monitoring unit for Municipal Towns:

The provision of SWM infrastructure like waste collection, temporary storage, transfer, processing and disposal of waste would be made mandatory precondition in urban planning.

So there would be continuous planning and monitoring activity within solid management programme. A planning unit headed by a person having qualification and experience in Public Health Engineering under the control of Municipal Engineering Directorate, Department of Municipal Affairs, Govt. of India, and State Govt. would be created to perform this activity. Planning Unit would analyze and compare various level of mechanization and labour involvement and feed back the analyzed data to the municipalities for implementations and / or modification. This unit will also monitor the production and quality control compost manure and also render necessary help for marketing the product for the municipalities.

State Level Regulation and Monitoring

Background:

The Management of municipal solid waste is one of the burning issues faced by the society at large. The generation of solid waste is dependent upon the economy of the people and the per capital generation of Solid Waste increases with the level of income of family. Studies have shown that with every Rs. 1,000/- increase in income the generation of solid waste goes up by a kilogram per month. Growth and waste generation has been in league in both the developing and the industrialized world.

The urban population stood up to 27.39% of the total population in 1991 census report as against 25.70% for the entire country. The Kolkata Metropolitan Area (KMA) is one of the largest and most densely populated areas in India. There has been about 140% increase in the municipal populations in KMA in the last decade. There are 126 Municipal bodies in the entire state including 41 within the KMA. The waste management problem of the municipal bodies outside the KMA is also of similar nature.

The Committee on the SWM in Class I cities set up by the Hon'ble Supreme Court, in the recommendations for improvement of the municipal solid waste management system in 1999 laid stress on the following issues:

- Waste Segregation and storage at Source
- Waste Collection
- Temporary Waste Storage
- Transportation, Waste Processing and Disposal
- Institutional Systems

Applicable Laws for Waste Disposal

Waste Types	Laws in India	Action By	Enforcement Authority
Municipal Solid Waste	Municipal Waste Management and Handling Rules-2000	City Municipality	State Pollution Control Board
Industrial Waste	Hazardous Waste Management and Handling Rules-1989	Industry	State Pollution Control Board
E-Waste	E-Waste Rules-2011	All Electronic users and Manufacturers	State Pollution Control Board
Bio Medical Waste	Bio Medical Waste Rules-1998	Hospitals	State Pollution Control Board

Source: State Pollution Control Board



Figure: Constructional work going on at Suri Municipality, Birbhum District, West Bengal

Roles and Responsibilities of Institutions in SWM

Sl No	Responsible Institutions	Roles and Responsibilities of Institutions in SWM
1	Government of India and State Government	Roles and responsibilities in SWM make Central/State level laws and rules, prepare guidelines, manuals and technical assistance, and provide financial support.
2	Municipal authorities and State Government	Plan for MSWM treatment facilities.

3	Municipal authorities	Collect, transport, treat and dispose of wastes.
4	Municipal authorities with State Government approval	Frame bylaws, levy and collect fees.
5	Municipal authorities, State and Central Government	Capital investment in SWM system.

Source: IMaCS analysis

- 74th Amendment Act for empowered municipalities to implement SWM scheme
- Municipal Solid Wastes (Management and Handling) Rules, 2000 by MoEF
- The Water (Prevention and Control Pollution) Act, 1974
- The Water (Prevention and Control Pollution) Cess Act, 1977

The Municipal solid Waste (Management and Handling) Rules, 1999 has clearly laid down the action that need to be taken by the ULBs for scientific management of solid waste Effective implementation of the Municipal SW (Management and Handling) Rules, 1999 in a sustainable manner in all municipal bodies is important to achieve perceptible result. However, the municipal bodies have been unable to implement the provisions within the stipulated time owing chiefly to lack of resources and technical skills.

Initiations:

State Govt. has already laid down the implementation schedule for Municipal Solid Waste (Management and Handling) Rules, 2000 and the municipal bodies have already taken initiatives to implement the provisions but the target dates could not be achieved for a number of reasons which are given below. The result and thrust towards sustainable development and implementation of scientific Solid Waste Management System appears to be very encouraging. A good number of municipalities in the state have achieved remarkable success in this field.

- **Availability of land especially in the KMA area:** The Municipal bodies in the KMA are contiguous areas on both banks of the river Hoogly and very little land is available in most of the municipal areas for sanitary landfill and waste processing facilities. The municipal bodies especially in KMA have, by and large, been unable to find land for landfill sites which can last even five years. Moreover the available lands are mostly low lying or water bodies and therefore would not get environmental clearance.
- **Technical Know-how:** The municipal bodies are constrained of the lack of technical knowledge and sufficient engineering staff to develop modern scientific waste management system. Most of the Municipal bodies have only one Assistant Engineer looking after a variety of activities.
- **Resources:** The municipal bodies are already starved of fund for meeting the existing conservancy programmes. Therefore setting up of modern scientific waste management system without fund support is not possible.

- **Management:** Modern sanitary landfill and compost plants require a proper system of operation and maintenance and skills in management and marketing. The necessary manpower including technically skilled persons for the purpose is not available in the municipal bodies.

The primary level programmes would be completed within a year in a few towns and this is expected to lay a strong foundation for the 'Macro Level' programmes to flourish, with an economic solution to the urban municipal bodies for the next few decades to come.

The managerial works of municipal solid wastes get less importance among the other developmental works in the municipality. The wards are not properly clean from the wastes and terrible smell spread all over the area. The cattle graze where and there around the community waste collection bins and eat those poisonous materials from the dumps. The wastes materials come over the road which creates problems for the residents.

The main objective is to raise awareness among the people through segregations at source from 'door-to-door collection' at primary level, followed by construction of compost plants and sanitary landfill plants. The organic and green wastes capable of producing vermi compost manure would be segregated and treated separately, while the 50% of the solid waste would be disposed of in the scientific compacted dumping at sanitary landfill sites for a capacity of hardly 8 to 10 years.

Several reasons are given, in order to explain, the poor status of the municipal solid waste management programmes. A lack of financial and human resources as well as organizational inefficiency within municipal bodies are said to cause a lot of trouble. Transportation arrangements are generally inadequate due to the unavailability of proper vehicles as well as the low productivity of the related personnel. There are also policy gaps that need to be addressed (e.g. to desist people from throwing garbage in public areas). In addition, the municipalities find it hard to raise resources to acquire suitable land, and they often lack the technical capability to design a proper sanitary landfill facility. Municipal Authority, State Government and the Central Government are giving much more emphasis in these issues than earlier to give a healthy and pollution free environment to the citizen all over the country.

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