UTTAR PRADESH STATE
SOLID WASTE MANAGEMENT POLICY

URBAN DEVELOPMENT DEPARTMENT
GOVERNMENT OF UTTAR PRADESH

Contents

BRIEF PROFILE OF UTTAR PRADESH

Embedded in the heart of India, Uttar Pradesh is the land where cultures and religions have evolved. The greatness of Uttar Pradesh lies not only in this confluence, but also in the emergence of cultural and religious traditions along some of the greatest rivers in the Indian sub-continent – the Ganga and the Yamuna. Throughout history, great cities have emerged and established along great rivers. The plains of Ganga and the Yamuna have nurtured diverse religious faith, rituals, culture and intellectual enlightenment.

Uttar Pradesh is the 4th largest state in terms of geographical area covering 9.0 per cent of the country's geographical area.

It is also the most populous state in India consisting of 19.96 crore (199.6 million) inhabitants as per 2011 Census, out of which 15.51 crore live in rural areas and 4.45 crore in urban areas.

There has been a net addition of about 1.09 crore persons in the urban areas during 2001-2011. Thus, about 16.50% of the total population and 11.80% of the urban population of India reside in Uttar Pradesh. Out of 4041 statutory towns of India 648 (i.e. 16%) exist in Uttar Pradesh.

- Percentage of urban population to total population of the State stands at 22.28 as per 2011 Census whereas; this percentage was 20.78 in 2001. In absolute terms the urban population of Uttar Pradesh is second highest only next to Maharashtra.
- Thus, an increase of 1.50 percentage points has been recorded in the urban population during 2001-2011.

- However, the level of urbanization (22.28%) in the State is quite low as compared to all India figures of 31.16%.
- The decadal growth of urban population during 2001-2011 has been 28.82 per cent as against 31.80 per cent during 1991-2001.

- AdministrativelyUttar Pradesh is divided into 75 districts under 18 divisions which are Agra, Aligarh, Azamgarh, Allahabad, Kanpur, Gorakhpur, ChitrakootDham, Jhansi, Devi Patan, Faizabad, Bareilly, Basti, Vindhyachal (Mirzapur), Moradabad, Meerut, Lucknow, Varanasi and Saharanpur.
- **At present there are 653 Urban Local Bodies in the state with total area of 6264.57 sq km.** Urban Local Bodies consists of 17 Nagar Nigams (NN), 198 Nagar PalikaParishads (NPPs) and 438 Nagar Panchayats (NPs).

MAJOR SECTOR

The major sector of Uttar Pradesheconomy is agriculture. Wheat, pulses, oilseeds, rice, sugarcane, and potatoes are the main crops grown here. Sugarcane is an important cash crop grown here. Tourism, computer hardware and software, information technology products and handicraft are other major contributors to the state's economy.

AT A GLANCE STRATEGY OF SOLID WASTE MANAGEMENT

1. Urban Local Bodies up to 100000 Population

- Segregation of waste at household level/ establishment level- two bin system (organic and recyclable).
- Door to door collection- by private party or the ULB; collection vehicles/ carts to have two bin systems.
- At secondary collection point two bins to be kept.
- Transportation to be in different vehicles.
- Bio-degradable waste to be sent to vermi-composting unit- to be established at ward level and managed by local NGO's or RWAs.
- Local rag-pickers and kabariwalas to be roped-in for segregation and paid out of the sale of recyclables.
- If no nearby Industry is available than RDF material to be sent to nearest big ULB to be further sent to Industry.
- Balance inert waste to be sent to nearest Landfill site (Not more than 10%).

2. Urban Local Bodies from 100000 Population to 1000000 Population

- Segregation of waste at household level/ establishment level- two bin system
- Door to door collection- by private party or the ULB; collection vehicles/ carts to have two bin systems.
- At secondary collection point two bins to be kept.
- Transportation to be in different vehicles.
- Bio-degradable waste to be sent to composting unit- to be established at City level and managed by Private Party/ Civil Society Organizations (CSO).
- Local rag-pickers and kabariwalas to be roped-in for segregation and paid out of the sale of recyclables.
- RDF material to be sent to nearest Industry.
- Balance inert waste to be sent to Landfill site (Not more than 10%).

3. Urban Local Bodies above 1000000 Population

- Segregation of waste at household level/ establishment level- three bin system
- Door to door collection- by private party or the ULB; collection vehicles/ carts to have three bin systems.
- At secondary collection point two bins to be kept.
- Transportation to be in different vehicles.
- Bio-degradable waste to be sent to composting unit - to be established at City level and managed by Private Party or CSOs or RWAs.
- Local rag-pickers and kabariwalas to be roped-in for segregation and paid out of the sale of recyclables.
- RDF material to be sent to Waste to Energy Project.(PPP Mode)
- Balance inert waste to be sent to Landfill site (Not more than 10%).

All Urban Local Bodies should make By Laws regarding:

- Segregation of Waste at Source and imposition of User Charges.

- Prohibiting Littering of Waste.
- Burning of Waste.
- Open Defecation.

VISION OF THE POLICY

The vision which this Policy seeks to pursue is:

A healthy, prosperous and resource-efficient society, in which wastes are prevented, reduced, reused and recycled wherever feasible and beneficial, and disposed-off in environmentally safe manner.

GOALS & OBJECTIVES OF THE POLICY

THE OVERALL GOAL OF THIS POLICY IS TO ENSURE

The primary objectives of this Policy are to:

1. Achieve high standards of cleanliness in the towns and cities of Uttar Pradesh for healthy, hygienic and liveable environment.
2. Emphasis will be on waste reduction, reuse, recycling, recovery and optimum utilization of various components of Municipal Solid Waste (MSW) to ensure minimization of waste going to the landfill and its impact on human health and environment. The strategy will inter alia include technology options for waste to compost and waste to energy.
3. The Policy for managing solid wastes is developed to facilitate preparation, implementation and operation of a decentralized / integrated and cost-effective Solid Waste Management System in the state with adequate revenue flow from SWM fee and other sources.

"The system for Managing Solid Wastes in Uttar Pradesh should be financially and environmentally sustainable, and contributes to improved quality of life."

4. Ensuring end-use or treatment of recovered waste resources (high value recyclables, low value recyclables, compost, combustible material (RDF) to waste to energy users, either through partnerships, sale or reuse.
5. Available data and information on the sources, nature, quantities and fate of wastes, and SWM facilities, is sufficiently comprehensive and reliable

to be able to regulate and manage wastes effectively helping in waste prevention, recovery and recycling.

6. Stakeholders, institutions and organisations must have a sufficient awareness and understanding of their roles, duties and responsibilities in achieving an optimal development and operation of a decentralized/ integrated and cost-effective solid waste management system.

GUIDING PRINCIPLES FOR SOLID WASTE MANAGEMENT APPROACH IN UTTAR PRADESH

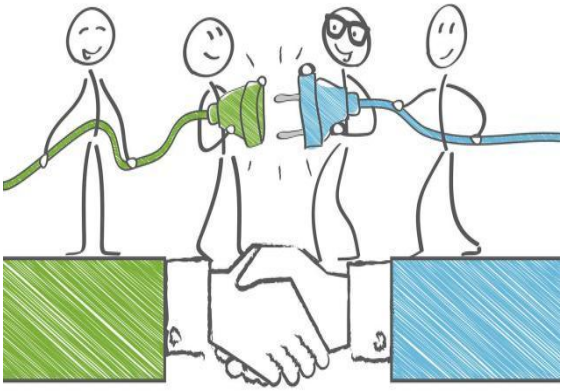
With increasing population and urbanization, the waste management has emerged as a huge challenge in the State. Not only the waste has increased in quantity, but the characteristics of waste have also changed tremendously over the period with the introduction of new products, gadgets and equipments.

Scientific disposal of solid waste through segregation, collection, treatment and disposal in an environmentally sound manner minimises the adverse impact of waste on the environment. The urban local authorities are responsible for development of infrastructure for collection, storage, segregation, transportation, processing and disposal of MSW. The Uttar Pradesh Solid Waste Management Policy is based on following principles:

- **Reduction and reuse at source**: Urban Local Bodies will promote the options for Solid Waste Management for prevention of waste generation and promoting reuse. It will be helpful in reducing the handling, treatment, and disposal costs and specially reduce various environmental impacts such as leachate, air emissions and generation of greenhouse gases.
- **Waste recycling**: Recovery of recyclable material resources through a process of segregation, collection and re-processing to create new products shall be the next preferred alternative.
- **Waste to composting**: As far as possible the organic portion of waste shall be composted and used to improve soil health and agricultural production.
- **Waste-to-Energy**: Where material recovery from waste is not possible, energy recovery from waste through production of heat, electricity or fuel may be preferred. Bio-methanation, plastics to oil, waste to pellets, waste incineration, production of Refuse Derived Fuel (RDF) and co-processing of the sorted dry rejects from municipal solid waste are to be commonly adopted "Waste to Energy" technology.
- **Waste disposal**: Remaining residual waste, which are ideally comprised of inerts, shall be disposed in sanitary landfills constructed in accordance with stipulations of the Solid Waste Management Rules, 2016. It should be targeted that minimal waste reaches to Landfill site (not more than 10%).
- **Effective segregation at source**- Two bin and segregation at sources and also at the processing units. The domestic hazardous wastes like battery, blade, razors etc. should be collected and handled separately.
- Implementation of effective ban on production, sale and use of plastic carry bags with thickness less than 50 microns.
- Integration of informal sector.
- The integrated Solid Waste Management system shall be environment friendly. Waste minimization, waste recycling, waste-to-energy strategies and landfill gas capture and

use which are promoted in the Solid Waste Management Rules, 2016 are strategies for reduction of greenhouse gases.

- Adequate decentralized waste management system to be promoted.
- 100% collection at fixed time 365 days in a year and ensuring that it does not touches the ground once it is collected from the household.
- Timely transportation.
- Maximum resources recovery – establishing material recovery centres in wards.
- Polluters to pay – the ULBs should sufficiently raise the fine amount say for littering Rs. 1000 and for manufacturing, sale and use of banned polythene bags Rs. 50,000.
- Daily Road sweeping-preferably night sweeping on main roads and market areas.
- Social and health insurance for rag pickers.
- Effective IEC and Capacity Building.



ROLES & RESPONSIBILITIES OF STAKE HOLDERS

I. Roles & Responsibilities of Waste Generator: -

1. Every waste generator shall:
   - Segregate and store the waste generated by them in three separate streams namely biodegradable, non-bio-degradable and domestic hazardous wastes in suitable bins and handover segregated wastes to authorised waste pickers or waste collectors as per the directions or notification by the local authorities from time to time. For this purpose ULB shall notify three colour schemes for the dust bins.
   - Wrap securely the used sanitary waste like diapers, sanitary pads etc., in the pouches provided by the manufacturers or brand owners of these products or in a suitable wrapping material as instructed by the local authorities and shall place the same in the bin meant for dry waste or non-bio-degradable waste;
   - Shops, commercial establishments and businesses should store segregated waste onsite.
   - Store separately construction and demolition waste, as and when generated, in own premises and ULB shall dispose-off as per the Construction and Demolition Waste Management Rules, 2016 ; and
   - Store horticulture waste and garden waste generated from premises separately in own premises and dispose of as per the directions of the local body from time to time.
2. No waste generator shall throw, burn or burry the solid waste generated by him, on streets, open public spaces outside his premises or in the drain or water bodies.
3. All waste generators shall pay such user fee for solid waste management, as specified in the bye-laws of the local bodies.
4. No person shall organise an event or gathering of more than one hundred persons at any unlicensed place without intimating the local body, at least three working days in advance and such person or the organiser of such event shall ensure segregation of waste at source and handling over of waste to waste collector or agency as specified by the local body.

5. Every street vendor shall keep suitable containers for storage of waste generated during the course of his / her activity such as food waste, disposable plates, cups, cans,wrappers, leftover food, vegetables, fruits, etc., and shall deposit such waste at waste storage depot or container or vehicle as notified by the local body.
6. All resident welfare and market associations shall in partnership with the local body ensure segregation of waste at source by the generators as prescribed in rules, facilitate collection of segregated waste in separate streams, handover recyclable material to either the authorised waste pickers or the authorised recyclers. The bio-degradable waste shall be processed, treated and disposed-off through composting or bio-methanation within the premises as far as possible. The residual waste shall be given to the waste collectors or agency as directed by the local body.
7. All gated communities, institutions, hotels and restaurants with more than 5,000 sq. mt. area shall in partnership with the local body, ensure segregation of waste at source by the generators as prescribed in rules, facilitate collection of segregated waste in separate streams, handover recyclable material to either the authorised waste pickers or the authorised recyclers. The bio-degradable waste shall be processed, treated and disposed-off through composting or bio-methanation within the premises as far as possible. The residual waste shall be given to the waste collectors or agency as directed by the local body.

II. Roles & Responsibilities of District Magistrate:-

1. Facilitate identification and allocation of suitable land as per clause (f) of rules 11 of Solid Waste Management Rules, 2016 for setting up solid waste processing and disposal facilities to local authorities in his district in close coordination with the Secretary-in-charge of State Urban Development Department.
2. The arrangement for land for processing or disposal of solid waste in every local body should be arranged as per the provisions of the Government Order No: 4520 / Nau-8-2017-153 J / 2017 dated 10th October, 2017 in next six months.
3. Review the performance of local bodies, at least once in a quarter on waste segregation, processing, treatment and disposal and take corrective measures in consultation with the Commissioner or Director of local bodies and Secretary-in-charge of the State Urban Development.

III. Roles & Responsibilities of Urban Local Bodies:-

- **By Laws to be made and strengthening of the organisational structure:**

1. ULB should prepare a byelaw to prohibit littering and burning of waste with penalty. This penalty for littering should be minimum Rs.1000 and for manufacturing, sale and use of prohibited polythene bags (thickness less than 50 micron) to Rs. 50.000.
2. ULB should prepare a byelaw for collection and segregation of waste, specifying user charges.
3. The ULBs can also engage private operators for waste collection and processing, where the operator can negotiate the user charges with the household owners or establishments.
4. Constitute Ward Swachhata Protsahan Committee in all Nagar Nigam and Nagar Palika Parishad.

5. Prepare a solid waste management plan as per State policy within six months from the date of notification of State policy and submit a copy to the State Government.
6. Register and issue photo I-cards to all rag pickers.

- **Primary Collection:**

1. Will ensure source segregation of waste, to channelize the waste to wealth by recovery, reuse and recycle. Three bin System shall be followed (Green Waste, Dry Waste, Hazardous Waste).
2. Arrange for door to door collection of segregated solid waste from all households including slums and informal settlements, commercial, institutional and other non-residential premises. In case of multi-storage buildings, large commercial complexes, malls, housing complexes, etc., this may be collected from the entry gate or any other designated location;
3. Establish a system to recognise organisations of waste pickers or informal waste collectors and promote and establish a system for integration of these informal waste-pickers and waste collectors to facilitate their participation in solid waste management including door to door collection of waste;
4. Facilitate formation of Self Help Groups, and thereafter encourage integration in solid waste management including door to door collection of waste;
5. Directions and education to safai karmi and others not to burn solid waste, tree leaves collected from street sweeping and store them separately and handover to the waste collectors or agency authorised by local body;
6. Collect waste from vegetable, fruit, flower, meat, poultry and fish market on day to day basis and promote setting up of decentralised compost plant or bio-methanation plant at suitable locations in the markets or in the vicinity of markets ensuring hygienic conditions;
7. Establish a system to collect waste from mandis, vegetable and fruit market for taking it to kanha gaushalas. Develop a linkage with agricultural and horticultural institutes of Government of India or State Government with kanha gaushals for supply of manure to these institutions in lieu of fodder and feed for animals.
8. Collect horticulture, parks and garden waste separately and process in the parks and gardens, as far as possible;
9. Used sanitary waste like diapers, sanitary pads should be wrapped securely in pouches provided by manufacturers or brand owners of these products or in a suitable wrapping material and shall place the same in the bin meant for domestic hazardous waste
10. Bulk and institutional generators, market associations, event organizers and hotels and restaurants will be made directly responsible for segregation and sorting the waste and manage the same in partnership with local bodies.
11. All hotels and restaurants should segregate biodegradable waste and set up a system of collection or follow the system of collection set up by local body to ensure that such food waste is utilized for composting / bio-methanation.
12. All Resident Welfare and market associations, gated communities and institution with an area >5,000 sq. mt. should segregate waste at source in to valuable dry waste like plastic, tin, glass, paper, etc. and handover recyclable material to either the authorized waste pickers or the authorized recyclers, or to the urban local body. The bio-degradable waste should be processed, treated and disposed of through composting or biomethanation within the premises as far as possible. The residual

waste shall be given to the waste collectors or agency as directed by the local authority.

13. New townships and Group Housing societies should be made responsible to develop in-house waste handling, and processing arrangements for bio-degradable waste.
14. Every street vendor should keep suitable containers for storage of waste generated during the course of his activity such as food waste, disposable plates, cups, cans, wrappers, coconut shells, leftover food, vegetables, fruits etc. and deposit such waste at waste storage depot or container or vehicle as notified by the local authority.
15. Relaxation should be given by local body on property tax if zero waste is executed by any households, integrated township and hi-tech township.
16. Develop a mechanism that Safai karamchari collecting waste should again segregate at household level, they should be allowed to sell the recyclables and keep the amount with them. This will ensure proper segregation.
17. ICT technologies should be used for monitoring and maintaining attendance of Safai Karamcharis.

- **Secondary Collection:**

1. Will ensure two bins at every Secondary Collection Point.
2. Setup material recovery facilities or secondary storage facilities in wards with sufficient space for sorting of recyclable materials to enable informal or authorised waste pickers and waste collectors to separate recyclables from the waste. Provide easy access to waste pickers and recyclers for collection of segregated recyclable waste such as paper, plastic, metal, glass, and textile from the source of generation or from material recovery facilities.
3. Establish waste deposition centres for domestic hazardous waste and give direction for waste generators to deposit domestic hazardous wastes at this centre for its safe disposal. Such facility shall be established in a city or town in a manner that one centre is set up for the area of twenty square kilometres or part thereof and notify the timings of receiving domestic hazardous waste at such centres;
4. Set up covered secondary storage facility for temporary storage of street sweepings and silt removed from surface drains in cases where direct collection of such waste into transport vehicles is not convenient. Waste so collected shall be collected and disposed of at regular intervals as decided by the local body;

- **Transportation of Waste:**

1. Transport segregated bio-degradable waste to the processing facilities like compost plant, bio-methanation plant or any such facility. Preference shall be given for on-site processing of such waste.
2. Transport non-bio-degradable waste to the respective processing facility or material recovery facilities or secondary storage facility;
3. All waste to be transported in segregated form in covered vehicles.
4. ICT technologies should be used for monitoring of vehicle being used in solid waste management like Global Positioning System Technology.

- **Processing of Waste:**

1. Facilitate construction, operation and maintenance of solid waste processing facilities and associated infrastructure on their own by RWAs or with private sector participation or through any agency for optimum utilisation of various components of solid waste adopting suitable technology including the following technologies and adhering to the guidelines issued by the Ministry of Urban Development from time to

time and standards prescribed by the Central Pollution Control Board. Preference shall be given to decentralised processing to minimize transportation cost and environmental impacts such as-

a) bio-methanation, microbial composting, vermi-composting, anaerobic digestion or any other appropriate processing for bio-stabilisation of biodegradable wastes;

b) waste to energy processes including refused derived fuel for combustible fraction of waste or supply as feedstock to solid waste based power plants or cement kilns;

2. Facilitate setting up of waste to energy projects; plastic to oil projects.

- **Disposal of Inert Waste:**

1. Stop dumping of mixed waste. Disposal only at designated sanitary landfill site;
2. Allow only the non-usable, non-recyclable, non-biodegradable, non-combustible and non-reactive inert waste and pre-processing rejects and residues from waste processing facilities to go to sanitary landfill. However, every effort shall be made to recycle or reuse the rejects to achieve the desired objective of zero waste going to landfill;
3. Investigate and analyse all old open dumpsites and existing operational dumpsites for their potential of bio-mining and bio-remediation and wheresoever feasible, take necessary actions to bio-mine or bio-remediate the sites;
4. In absence of the potential of bio-mining and bio-remediation of dumpsite, it shall be scientifically capped as per landfill capping norms to prevent further damage to the environment. Abandoned landfills to be developed in to green areas or parks.
5. Local body shall ensure that their landfill sites are incorporated in master plan prepared by Town and Country Planning Department.
6. ULBs to develop their Sanitary Land Fill sites.

- **Other Activities:**

1. Annual action plan made for IEC activities and promote IEC in educational institutions.
2. Ban on use of prohibited plastics in daily activities and whatever Plastic wastes generate will be utilized in road construction.
3. Construction and demolition waste should be stored, separately disposed-off as per the Construction and Demolition Waste Management Rules, 2016.
4. Bio Medical waste to be disposed as per Bio Medical Rules. The ULB shall ensure that no bio medical waste is mixed in municipal waste.
5. The developers of Special Economic Zone, industrial estate, industrial park to earmark at least 5% of the total area of the plot or minimum 5 plots / sheds for recovery and recycling facility.
6. All manufacturers of disposable products such as tin, glass, plastics packaging etc. or brand owners who introduce such products in the market shall provide necessary financial assistance to local authorities for the establishment of waste management system.
7. Phase out the use of chemical fertilizer in two years and use compost in all parks, gardens maintained by the local body and wherever possible in other places under its jurisdiction. Incentives may be provided to recycling initiatives by informal waste recycling sector. Encouraging the utilization of compost generated from compost plant in agriculture and parks.

8. ULBs will try to maximize E-Intervention in Monitoring of Solid Waste Management activities.

IV. Roles & Responsibilities of State Pollution Control Board

1. State pollution control board shall:
   a) Enforce these rules in their state through Local Bodies in their respective jurisdiction and review implementation of these rules at least twice a year in close coordination with the Directorate of Municipal Administration or Secretary-in-charge of State Urban Development Department;
   b) Monitor environmental standards and adherence to conditions as specified under the Schedule -I and Schedule- II for waste processing and disposal sites;
   c) Examine the proposal for authorization and make such inquiries as deemed fit, after the receipt of the application for the same in Form -I from the local body or any other agency authorized by the local body;
   d) While examining the proposal for authorization, the requirement of consents under respective enactments and views of other agencies like the State Urban Development Department, the Town and Country Planning Department, District Planning Committee or Metropolitan Area Planning Committee, Airport or Airbase Authority, the Ground Water Board, Railways, power distribution companies, highway department and other relevant agencies shall be taken into consideration and they shall be given four week time to give their views, if any;
   e) Issue authorization within a period of sixty days in Form -II to the local body or an operator of a facility or any other agency authorized by local body stipulating compliance criteria and environmental standards as specified in Schedules -I and II including other conditions, as may be necessary;
   f) Synchronize the validity of said authorization with the validity of the consents;
   g) Suspend or cancel the authorization issued under clause (a) any time, if the local body or operator of the facility fails to operate the facility as per the conditions stipulated; provided that no such authorization shall be suspended or cancelled without giving notice to the local body or operator, as the case may be;
   h) On receipt of application for renewal, renew the authorization for next five years, after examining every application on merit and subject to the condition that the operator of the facility has fulfilled all the provisions of the rules, standards or conditions specified in the authorization, consents or environment clearance.
2. The State Pollution Control Board shall, after giving reasonable opportunity of being heard to the applicant and for reasons thereof to be recorded in writing, refuse to grant or renew an authorization.
3. In case of new technologies, where no standards have been prescribed by the Central Pollution Control Board, State Pollution Control Board, as the case may be, shall approach Central Pollution Control Board for getting standards specified.
4. The State Pollution Control Board, as the case may be, shall monitor the compliance of the standards as prescribed or laid down and treatment technology as approved and the conditions stipulated in the authorization and the standards specified in Schedules -I and II under these rules as and when deemed appropriate but not less than once in a year.
5. The State Pollution Control Board may give directions to local bodies for safe handling and disposal of domestic hazardous waste deposited by the waste generators at hazardous waste deposition facilities.

6. The State Pollution Control Board shall regulate Inter-State movement of waste.

V. Roles & Responsibilities of Housing & Urban Planning Department:-

1. To ensure that a separate space for segregation, storage, decentralized processing of solid waste is demarcated in the development plan for group housing or commercial, institutional or any other non-residential complex exceeding 200 dwelling or having a plot area exceeding 5,000 square meters;
2. ensure that master plan of every city in the State provides for setting up of solid waste processing and disposal facilities and are clearly earmarked;
3. Shall incorporate landfill sites demarcated by the ULBs in their master plan;
4. Will ensure proper implementation of Government Order No. 563/8-3-12-27 Misc./08 dated 02.03.2012;
5. Will provide space for sanitary landfill site in Regional Plans;
6. Will provide space for waste to energy plants in their plans as per requirement of ULB.

VI. Roles & Responsibilities of Housing Board, Development Authorities and Private Builders:-

1. All will ensure that while planning for commercial and residential colonies a place is marked for waste management.
2. And they should try to become "0" waste producing communities.

VII. Roles & Responsibilities of the Department of Industry

1. Will notify all the Industries of the State to take back the packing material as far as possible, for re use by enforcing extended producers responsibility.
2. Will also direct the Industries of the state, where RDF can be used, to collect RDF material from the nearest ULBs.(100 km radius)

VIII. Roles & Responsibilities of State Urban Development Agency (SUDA) and District Urban Development Agency's (DUDA):-

1. Shall ensure that all the SHG's, urban poor localities & urban poor are supporting the initiative of the ULB for Solid Waste Management.
2. Shall try and form groups of poor for door to door collection, segregation and running vermi composting plants. For the purpose they shall use the funds under NULM and other schemes for training and loan to the poor.

IX. Roles & Responsibilities of manufacturers or brand owners of disposable products and sanitary napkins and diapers

1. All such brand owners who sell or market their products in such packaging material which are non-biodegradable shall put in place a system to collect back the packaging waste generated due to their production.

2. Manufacturers or brand owners or marketing companies of sanitary napkins and diapers shall explore the possibility of using all recyclable materials in their products or they shall provide a pouch or wrapper for disposal of each napkin or diapers along with the packet of their sanitary products.
3. All such manufacturers, brand owners or marketing companies shall educate the masses for wrapping and disposal of their products.

X. Roles & Responsibilities of the industrial units located within one hundred km from the refused derived fuel and waste to energy plants based on solid waste

1. All industrial units using fuel and located within one hundred km from a solid waste based refused derived fuel plant shall make arrangements within six months from the date of notification of these rules to replace at least five percent of their fuel requirement by refused derived fuel so produced.

CAPACITY BUILDING AND TRAINING

In context of this policy, it is recognized that there is a need to improve the efficiency of the State departments and the ULBs across the state through a systematic approach, of which training is an important component. It is understood that capacity development is a long-term process that requires systematic and continuous effort at State as well as ULB level, both from the demand and supply perspective of service delivery.

The approach to capacity building in SWM shall not only be about technology and economics but also should cover:

- Understanding the administrative systems for waste management and related activities (multidisciplinary and cross-sectoral).
- Understanding the need for human resource development to achieve better results in SWM.
- Focus on building sound institutions, promoting good practices and good governance for attaining improved SWM.
- Delineating strategies for sustenance of achievements.

IEC (INFORMATION, EDUCATION AND COMMUNICATION)

Solid Waste Management is an activity in which public participation holds the key to success. Implementation of better solid waste management can be achieved only if there is active and effective community participation. Information, Education and Communication (IEC) activities play major role in achieving the success of the implementation of modern SWM. Awareness amongst the community and different stakeholders to meet the demands of the new system for a cleaner environment requires a detailed and thorough understanding at every stage. Involvement of community is going to be the main thrust of the programme. Awareness and education campaigns should target municipal authorities, elected representatives, schools, non-governmental organizations (NGOs), media, trade associations, families and the public at large.

The main objectives of IEC are to make people understand:

- The concept of and need for source segregation,
- The need to store waste at source in two separate receptacles - one for bio degradable and another for recyclable,
- The role of citizens in primary collection of waste from the household and handing over to waste collectors,
- The need to pay for waste collection and disposal services,
- The need to use litter bins on road sides and public places,
- The impact of solid waste on public health and the environment.

The following methods can be used to generate awareness among the public.

- Door to Door awareness and motivation programmes using Pamphlets, brochures, hoardings, banners, handbills, posters etc.,

- Organising rallies,
- Celebration of major occasions (e.g. Environment day),
- Conducting Street plays,
- Mass cleaning-'Clean up drive,
- School Programmes
  - Formation of 'eco clubs' in schools, organization of competitions
  - Involvement of NCC, NSS, Scouts Involvement of cine artists, political and religious leaders
- Presenting Awards through Competitions (e.g. Best performing Ward level Swachhata Protsahan Samiti, Eco house, Clean house)
- Incentives to households, commercial establishments
- Mass communication methods
  - Print media (advertisements at regular intervals)
  - Television, Cable TV, Radio and Websites
  - Cinema theatres (display of slides)
- Sensitization Workshop of Community Volunteers for Behaviour Change Communication (BCC) on SWM.
- Interpersonal Communication (IPC), contacting every household through Community Volunteers and supporting organizations Volunteers. These volunteers shall tale the message to each and every household and take their feedback as well. Convergence theory for the message dissemination and BCC by involving religious leaders, SHGs, Youth Clubs, Mahila Mandals, RWA and with pre-recorded religious & Cultural programme.
- Involvement of RWAs, CBOs, NGOs/SHGs and Market Associations is imperative to ensure the success of segregation at source. Regular meetings between the ULB staff and representatives of RWAs, Market associations, NGOs/ SHGs and other stakeholders would be conducted so that the community becomes used to this practice.
- Involvement of Ward Swachhata Protsahan Committee comprising of Volunteers or Natural Leaders in each ward who will act as SBM ambassadors and take oath for Waste free Uttar Pradesh and each committee shall have minimum 10 members.

IEC activities shall be taken up, with the involvement of leading NGOs/advertising agencies. Materials required for the IEC campaign like manuals, flipcharts and other media communication could be designed by these agencies.

RECLAMATION OF OLD DUMPS

The MSW is being dumped at the dump yard without any processing over many years by the ULBs. Hence, apart from setting up of processing plant and scientific landfill facility, the ULBs shall reclaim the dump yard in a time bound manner. The SWM project also includes reclamation of dump yard as a key component.

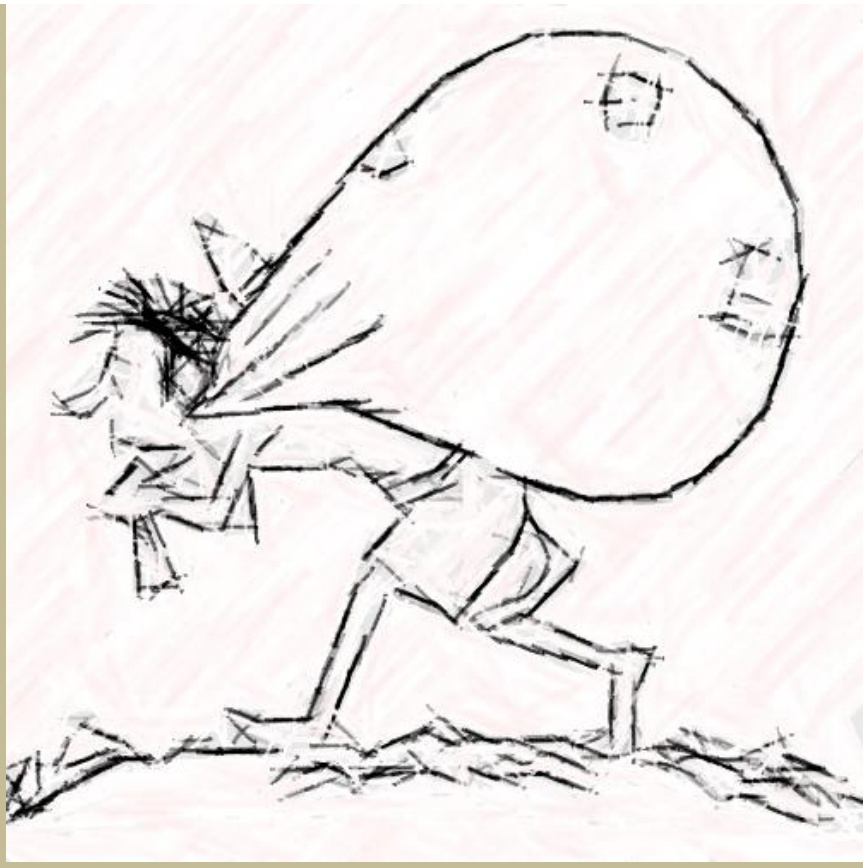
In old dump sites compacted old waste is loosened and scraped off in layers by a tractor-harrow. Composting bio-culture is sprayed from a tanker-truck with high-pressure pump. It is formed into windrows & turned weekly by JCB.At each turning, hired rag-pickers retrieve buried recyclables, which partly cover their labour cost. After 3-4 weekly turnings, the waste is dry, volume-reduced & ready to sieve by either manual or motorized simple portable sieves. The reclamation process shall be completed within one year from setting up of processing plant and scientific land fill facility.

This process of bio-mining may not be economical in many cases. So, in such abandoned waste dump sites its scientific capping and development of landscape, gardens and green areas will be taken up with the help of the Forest and Environment Department of the State.

PROVISION OF SAFETY EQUIPMENT

The MSW project shall also include provision of necessary tools and tackles, adequate protective clothing and safety gears to sanitary workers. Further, ULBs should provide adequate protection and health care facilities to its sanitation workers.

INVOLVEMENT OF RAG PICKERS AND KHABADI WALLAHS

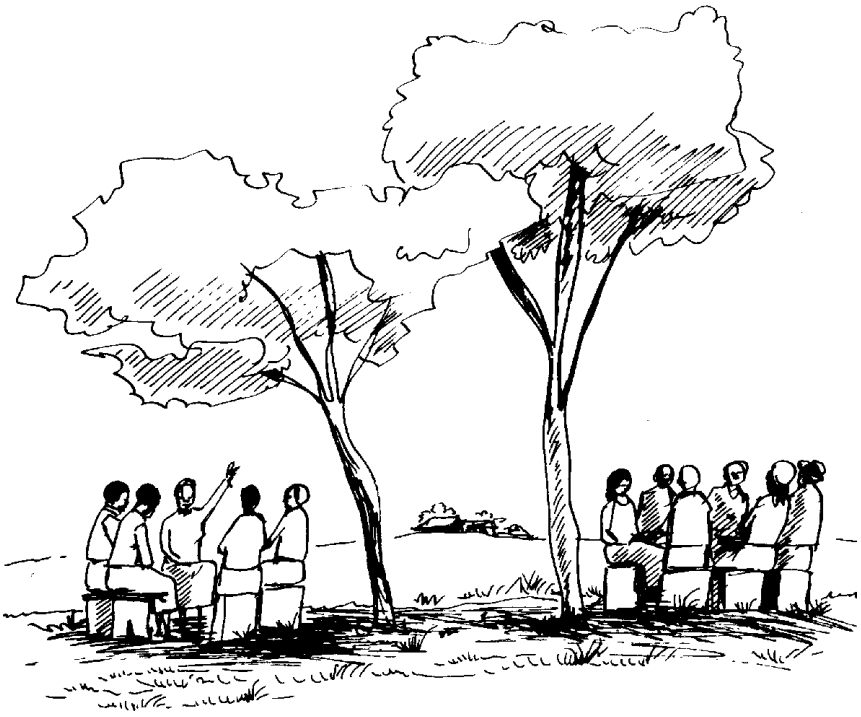


The rag picker plays a very important part in collection and segregation of waste. In India, only 30-60% waste is collected by the ULBs, whereas waste collection by the rag pickers is estimated at 15-25%. About 1 million urban poor are engaged in informal waste management sector. However, majority SWM initiatives in the country somehow side-line the informal sector in solid waste management. This is in spite of the fact that this sector, if integrated in to the mainstream SWM system of cities and towns can lead to a win-win situation of providing secured livelihoods to the urban poor and reducing expenditure on setting-up high cost energy intensive processing plants.

Moreover, in states like Uttar Pradesh where large numbers of small sized ULBs are dispersed across the state and density of urban population is very high there is a need to go for decentralized composting of bio-degradable waste and recycling of the non-biodegradable waste through the network of rag pickers. Thus networking Rag Pickers and Kabadiwalas in to the municipal solid waste management system in the state becomes imperative. Issuance of I-card and their health insurance should be taken up on priority.

INVOLVEMENT OF NGOS, SELF HELP GROUPS AND COMMUNITY PARTICIPATION

Solid Waste management suffers from lack of adequate community involvement. Existing Municipal laws provide for punitive action against house / building owner in case of letting out waste impacting local environment. The provisions are there for fines for violations like littering etc. The Nationa Green Tribunals and Hon'ble Courts have also laid down the principles of charging environmental compensation in case of violations and environmental damages. However, punitive action so far has not proven a major deterrent. The reasons are laxity in enforcement and very small amounts of fines. Also, publicity of provisions should be made in places frequented by public (eating places, shopping areas).



The successful implementation and management of MSW is dependent to a large extent on strict enforcement of laws related to littering and SWM. The ULBs should revise the amount of fines in their bye-laws adequately to make it deterrent and ensure its implementation immediately

SUPPORT BY STATE GOVERNMENT: POLICY INSTRUMENTS

1. The State Government shall extend support to those Urban Local Bodies who take timely and effective measures to solve the problem of Solid Waste resulting in achieving the objectives of this policy. The State will make the releases of funds to ULBs under State Finance Commission, XIVth Finance Commission, and Infrastructure dependent on performance of ULBs in dealing with solid waste and their revenue generation / collection:

The support/Incentive could be in the following forms:

(i) Incentive for waste reduction.
(ii) Making the wards and ULB ODF.
(iii) Incentive for making rules on Door to Door collection, Segregation, Prohibition of Littering, and introduction of User Charges.
(iv) Incentive for 100% collection of user charges.
(v) Incentive for achieving "0 waste" producing ULB.
(vi) Incentive to ULB for formalizing the informal sector like Kabadiwala, rag pickers & SHGs etc. into SWM activities.
(vii) Incentive to ULBs for use of E-Governance tools in Monitoring of Solid Waste Management i.e. attendance and geo-tagging of cleaning operations, GPS enabled transportation of waste.

2. Promotion of Private participation and investment in Solid Waste Management (collection, segregation, transportation, processing and disposal).

    (a) In cases where the private investor or partner's requirement is only the land on long term lease (25-30 years) and the solid waste from the Urban Local Body:

    Any proposal from Private Entity / Investor / NGO / Organization received in the Government / Directorate or Urban Local Body for Solid Waste Management activities in any ULB area or group of ULBs in the State, without asking for any financial assistance, whether one time or recurring, the proposal will be scrutinized by the State Level Committee constituted for the purpose, and permissions for implementation of the project will be granted based on the recommendations of the Committee by the authority competent to approve the grant of long term lease of the ULB land. The approval will be with the following conditions: (i) The land required for the implementation of the project available with the ULB will

be given on lease with lease rent @Rs. 1 per sq. mt. /year; (ii) the land assigned to the developer would not be used for any other activity expect for approved project activities; (iii) the project proponent is not allowed to mortgage the land; (iv) access road / electricity / water / street light / drainage / sewer will be provided by the ULB up to the Plot. The developer will be entitled to sale or charge for the products and by-products produced in the process of solid waste management.

(b) In cases where the private investor or partner's requirement is of Viability Gap Funding up to 35% of CAPEX or tipping fee per ton of solid waste consumed or charges per unit of electricity produced or charges per unit of compost produced.

The projects of waste to energy, waste to pellets, waste to compost, plastic to oil etc. will generally fall in this category. The process for selection of developers for a public-private-partnership projects as laid down in the Government orders will be followed. The Department will facilitate clearances from the other departments and power purchase agreement with the Power Department.

(c) In cases where door to door collection of municipal waste is involved and the applicant organization is not charging any fund from the ULB.

In cases where the applicant organization is willing to undertake the door to door collection of solid waste and negotiate the user charge with the house or establishment owner without charging any fund from the ULB or the State, the ward or a number of wards or entire town / city can be assigned to the applicant for a period of maximum five years. This can be further renewed with mutual agreement of the parties for another three years. The Committee constituted at State level as in Para 2 (a) above will take final decision in the matter. For taking a decision at ULB level a Committee will be constituted for the purpose. The ULBs will make available land in parks, landfills or any other suitable site for composting, segregation, and processing of collected waste on lease rental of Rs. 1 per square meter for a period of three years. The ULB may have more than one agency in its area for working on Solid Waste Management.

3. Management of abandoned landfill sites

The Department or the ULB can take up this work of scientific capping and development of abandoned landfill sites with the help of the Forest and Environment Department. The list of such landfills will be made available by the Urban Development Department to the Department of Forest and Environment, who will develop a project for scientific capping and development of the area as landscape, garden or green areas. The project after approval of State Level Committee competent to approve such projects under Swacchh Bharat Mission (Urban) will be financed for implementation.

IMPORTANT FACTS ABOUT SOLID WASTE:

S.N	Category of waste	Amount generated per annum in India	Amount generated per annum in Uttar Pradesh
1	Solid Waste	6.2 crore tons	5.47 lac tons
2	Plastic Waste	56 lac tons	
3	Bio-Medical Waste	1.7 lac tons	
4	Hazardous Waste	79 lac tons	
5	e- waste	15 lac ton	

Status of Waste Collected and Treated in India

S.N	Category of Waste	Annual Amount
1	Waste Collected by Agencies	4.3 crore tons
2	Treated	1.19 crore tons
3	Being dumped in low lying areas	3.10 crore tons
4	Share of Urban Local Bodies in collection of waste	75-80%
5	Treated waste out of total collected by ULBs	22-28%

Time taken in decomposition of different wastes

S.N	Category of Waste	Time in Years
1	Plastic bag	20-1000
2	Plastic Bottles	400
3	Polystyrene cup	50
4	Plastic coated paper cup	30
5	Glass Bottle	1000000
6	Disposable Napkins	450
7	Aluminium cans	80-200
8	Cigarette but	1-5
9	Milk carton with wax coating	3 months
10	Paper towel	2-4 weeks

ANNEXURE-1

Definitions

Some important definitions which are mentioned in Solid Waste Management Rules, 2016are as follows:

1. **Aerobic composting -** means a controlled process involving microbial decomposition of organic matter in the presence of oxygen;
2. **Anaerobic digestion** - means a controlled process involving microbial decomposition of organic matter in absence of oxygen;
3. **Authorisation** - means the permission given by the State Pollution Control Board or Pollution Control Committee, as the case may be, to the operator of a facility or urban local authority, or any other agency responsible for processing and disposal of solid waste;
4. **Biodegradable waste** - means any organic material that can be degraded by micro-organisms into simpler stable compounds;
5. **Bio-methanation** - means a process which entails enzymatic decomposition of the organic matter by microbial action to produce methane rich biogas;
6. **Brand owner** - means a person or company who sells any commodity under a registered brand label.
7. **Buffer zone**- means zone of no development to be maintained around solid waste processing and disposal facility, exceeding 5 TPD of installed capacity. This will be maintained within total and area allotted for the solid waste processing and disposal facility.
8. **Bulk waste generator** - means and includes buildings occupied by the Central government departments or undertakings, State government departments or undertakings, local bodies, public sector undertakings or private companies, hospitals, nursing homes, schools, colleges, universities, other educational institutions, hostels, hotels, commercial establishments, markets, places of worship, stadia and sports complexes having an average waste generation rate exceeding 100kg per day.
9. **Bye-laws** - means regulatory framework notified by local body, census town and notified area townships for facilitating the implementation of these rules effectively in their jurisdiction.
10. **Census town** - means an urban area as defined by the Registrar General and Census Commissioner of India.
11. **Combustible Waste**- means non-biodegradable, non-recyclable, non-reusable, non hazardous solid waste having minimum calorific value exceeding 1500 kcal/kg and excluding chlorinated materials like plastic, wood pulp, etc.
12. **Composting** - means a controlled process involving microbial decomposition of organic matter.
13. **Contractor** - means a person or firm that undertakes a contract to provide materials or labour to perform a service or do a job for service providing authority;

14. **Co-processing** - means use of non-biodegradable and non-recyclable solid waste having calorific value exceeding 1500k/cal as raw material or as a source of energy or both to replace or supplement the natural mineral resources and fossil fuels in industrial processes.
15. **Decentralised processing** - means establishment of dispersed facilities for maximizing the processing of biodegradable waste and recovery of recyclables closest to the source of generation so as to minimize transportation of waste for processing or disposal;
16. **Disposal**- means the final and safe disposal of post processed residual solid waste and inert street sweepings and silt from surface drains on land as specified in Schedule I to prevent contamination of ground water, surface water, ambient air and attraction of animals or birds;
17. **Domestic Hazardous Waste** - means discarded paint drums, pesticide cans, CFL bulbs, tube lights, expired medicines, broken mercury thermometers, used batteries, used needles and syringes and contaminated gauge, etc., generated at the household level;
18. **Door to door collection** - means collection of solid waste from the door step of households, shops, commercial establishments , offices , institutional or any other non-residential premises and includes collection of such waste from entry gate or a designated location on the ground floor in a housing society , multi storied building or apartments , large residential, commercial or institutional complex or premises;.
19. **Dry waste** - means waste other than bio-degradable waste and inert street sweepings and includes recyclable and non-recyclable waste, combustible waste and sanitary napkin and diapers, etc;
20. **Dump sites** - means a land utilised by local body for disposal of solid waste without following the principles of sanitary land filling;
21. **Extended Producer Responsibility (EPR)** - means responsibility of any producer of packaging products such as plastic, tin, glass and corrugated boxes, etc., for environmentally sound management, till end-of-life of the packaging products;
22. **Facility** - means any establishment wherein the solid waste management processes namely segregation, recovery, storage, collection, recycling, processing, treatment or safe disposal are carried out;
23. **Fine** - means penalty imposed on waste generators or operators of waste processing and disposal facilities under the bye-laws for non-compliance of the directions contained in these rules and/or bye- laws.
24. **Form** - means a F8orm appended to these rules;
25. **Handling** - includes all activities relating to sorting, segregation, material recovery, collection, secondary storage, shredding, baling, crushing, loading, unloading, transportation, processing and disposal of solid wastes.
26. **Inert** - means wastes which are not bio-degradable, recyclable or combustible street sweeping or dust and silt removed from the surface drains;

27. **Incineration**- means an engineered process involving burning or combustion of solid waste to thermally degrade waste materials at high temperatures.
28. **Informalwastecollector** - includes individuals, associations or waste traders who are involved in sorting, sale and purchase of recyclable materials.
29. **Leachate** - means the liquid that seeps through solid waste or other medium and has extracts of dissolved or suspended material from it.
30. **Local body** - for the purpose of these rules means and includes the municipal corporation, Nagar Nigam, municipal council, Nagarpalika, Nagar PalikaParishad, Municipal board, Nagar Panchayatand town panchayat, census towns, notified areas and notified industrial townships with whatever name they are called in different States and union territories in India.
31. **Materials Recovery Facility (MRF)** - means a facility where non-compostable solid waste can be temporarily stored by the local body or any other entity mentioned in rule 2 or any person or agency authorised by any of them to facilitate segregation, sorting and recovery of recyclables from various components of waste by authorised informal sector of waste pickers, informal recyclers or any other work force engaged by the local body or entity mentioned in rule 2for the purpose before the waste is delivered or taken up for its processing or disposal.
32. **Non-biodegradable waste** - means any waste that cannot be degraded by microorganisms into simpler stable compounds;
33. **Operator of a facility** - means a person or entity, who owns or operates a facility for handling solid waste which includes the local body and any other entity or agency appointed by the local body.
34. **Primary collection** - means collecting, lifting and removal of segregated solid waste from source of its generation including households, shops, offices and any other non-residential premises or from any collection points or any other location specified by the local body.
35. **Processing** - means any scientific process by which segregated solid waste is handled for the purpose of reuse, recycling or transformation into new products.
36. **Recycling**- means the process of transforming segregated non-biodegradable solid waste into new material or product or as raw material for producing new products which may or may not be similar to the original products.
37. **Redevelopment** - means rebuilding of old residential or commercial buildings at the same site, where the existing buildings and other infrastructures have become dilapidated;
38. **Refused Derived Fuel (RDF)** - means fuel derived from combustible waste fraction of solid waste like plastic, wood, pulp or organic waste, other than chlorinated materials, in the form of pellets or fluff produced by drying, shredding, dehydrating and compacting of solid waste ;
39. **Residual solid waste** - means and includes the waste and rejects from the solid waste processing facilities which are not suitable for recycling or further processing;

40. **Sanitary land filling** - means the final and safe disposal of residual solid waste and inert wastes on land in a facility designed with protective measures against pollution of ground water, surface water and fugitive air dust, wind-blown litter, bad odour, fire hazard, animal menace, bird menace, pests or rodents, greenhouse gas emissions, persistent organic pollutants slope instability and erosion;
41. **Sanitary waste** - means wastes comprising of used diapers, sanitary towels or napkins, tampons, condoms, incontinence sheets and any other similar waste;
42. **Schedule** - means the Schedule appended to these rules;
43. **Secondary storage** - means the temporary containment of solid waste after collection at secondary waste storage depots or MRFs or bins for onward transportation of the waste to the processing or disposal facility.
44. **Segregation** - means sorting and separate storage of various components of solid waste namely biodegradable wastes including agriculture and dairy waste, non-biodegradable wastes including recyclable waste, non-recyclable combustible waste, sanitary waste and non-recyclable inert waste, domestic hazardous wastes, and construction and demolition wastes;
45. **Service provider** - means an authority providing public utility services like water, sewerage, electricity, telephone, roads, drainage, etc.
46. **Solid waste** - means and includes solid or semi-solid domestic waste, sanitary waste, commercial waste, institutional waste, catering and market waste and other non-residential wastes, street sweepings, silt removed or collected from the surface drains, horticulture waste, agriculture and dairy waste, treated bio-medical waste excluding industrial waste, bio-medical waste and e-waste, battery waste, radio-active waste generated in the area under the local authorities and other entities mentioned in rule 2.
47. **Sorting** - means separating various components and categories of recyclables such as paper, plastic, cardboards, metal, glass, etc., from mixed waste as may be appropriate to facilitate recycling.
48. **Stabilising**- means the biological decomposition of biodegradable wastes to a stable state where it generates no leachate or offensive odours and is fit for application to farm land ,soil erosion control and soil remediation.
49. **Street vendor** - means any person engaged in vending of articles, goods, wares, food items or merchandise of everyday use or offering services to the general public, in a street, lane, side walk, footpath, pavement, public park or any other public place or private area, from a temporary built up structure or by moving from place to place and includes hawker, peddler, squatter and all other synonymous terms which may be local or region specific; and the words “street vending” with their grammatical variations and cognate expressions, shall be construed accordingly.
50. **Tipping fee** - means a fee or support price determined by the local authorities or any state agency authorised by the State government to be paid to the concessionaire or operator of waste processing facility or for disposal of residual solid waste at the landfill.

51. **Transfer station** - means a facility created to receive solid waste from collection areas and transport in bulk in covered vehicles or containers to waste processing and, or, disposal facilities;
52. **Transportation** - means conveyance of solid waste, either treated, partly treated or untreated from a location to another location in an environmentally soundmanner through specially designed and covered transport system so as to prevent the foul odour, littering and unsightly conditions.
53. **Treatment** - means the method, technique or process designed to modify physical, chemical or biological characteristics or composition of any waste so as to reduce its volume and potential to cause harm.
54. **User fee** - means a fee imposed by the local body and any entity mentioned in rule 2 on the waste generator to cover full or part cost of providing solid waste collection, transportation, processing and disposal services.
55. **Vermin-composting** - means the process of conversion of bio-degradable waste into compost using earth worms.
56. **Waste generator** - means and includes every person or group of persons, every residential premises and non-residential establishments including Indian Railways, defence establishments, which generate solid waste.
57. **Waste hierarchy** - means the priority order in which the solid waste is to should be managed by giving emphasis to prevention, reduction, reuse, recycling, recovery and disposal, with prevention being the most preferred option and the disposal at the landfill being the least.
58. **Waste picker (Rag picker)** - means a person or groups of persons informally engaged in collection and recovery of reusable and recyclable solid waste from the source of waste generation the streets, bins, material recovery facilities, processing and waste disposal facilities for sale to recyclers directly or through intermediaries to earn their livelihood.