एम॰ रामाचन्द्रन
Dr. M. RAMACHANDRAN

सचिव, भारत सरकार
Secretary to the Government of India

शहरी विकास मंत्रालय
निर्माण भवन, नई दिल्ली-110011
MINISTRY OF URBAN DEVELOPMENT
NIRMAN BHAVAN, NEW DELHI-110011
Tel. : 23062377, Fax : 23061459
E-mail : secyurban@nic.in

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Dear Shri

You are aware that rapid urbanization and industrialization in India has resulted in over-stressing of urban infrastructure services including Municipal Solid Waste Services. Due to budgetary constraints, lack of equipment and planning, the house-to-house collection, transportation, treatment and disposal of municipal solid waste in most of the Urban Local Bodies (ULBs) are very poor. The wastes are strewn all over the streets & drains and the cities resort to indiscriminate dumping of domestic, commercial, industrial and hospital wastes in low lying areas. This leads to deterioration of the city environment and contamination of surface and ground water. There are some cities where even finding landfill sites are increasingly becoming difficult due to fast urbanisation and citizens not wanting such sites close to their habitations.

As per the Municipal Solid Waste (Management & Handling) Rules, 2000 every municipal authority is responsible for collection, segregation, storage, transportation, processing and disposal of municipal solid wastes. The deadline for implementation of Rules was December 2003, but hardly any ULB could implement these rules in letter and spirit.

Looking at the pathetic situation of solid waste management practices being adopted by urban local bodies in the country and lack of action plan to solve the problem and to provide technical and financial assistance to the urban local bodies in management of municipal solid waste in a scientific and hygienic manner, Government of India has undertaken several initiatives to address the problem. However, much larger coordination and initiatives are needed to be taken by the concerned ULBs, especially the Class-I Cities, which have more than two-third of urban population, so that the municipal solid waste is handled properly in order to reduce the pollution and contamination in the urban environment and to improve the health and well-being of the community.

You may be aware that the Ministry (Central Public Health Environment Engineering Organization) has brought out the Manual on Municipal Solid Waste Management in May 2000, which is a guidebook for planning, design and implementation of solid waste management facilities in the cities and towns. The manual inter-alia gives an account of the typical urban waste in India such as, per capita generation of waste, its composition, physical and chemical characteristics, collection efficiency, transportation, processing and disposal of the wastes.

You may be also aware that the Ministry constituted the 'Technology Advisory Group' in August 1999 and it submitted its report in May 2005. This report gives information relating to various proven technologies on waste processing / treatment, waste handling equipment and vehicles, financial resources, sectoral lending by financial institutions and potential for private sector participation in this endeavor. The report also highlights the support rendered by the Central and State Govts. to the ULBs in capacity building, R&D and the role of NGOs, CBOs and public in the management of urban wastes.

Pursuant to the affidavit filed by the Union Of India In the Honourable Supreme Court of India in February 2003, the Ministry also constituted the 'Inter-Ministerial Task Force on 'Integrated Plant Nutrient Management using City Compost' to prepare a policy, strategy and action plan for promoting 'Integrated Plant Nutrient Management using City Compost' along with synthetic fertilizers in the areas of agriculture, horticulture and plantation crops etc. The task force has given its report in which many valuable recommendations have been made. The recommendations include action points pertaining to various Central Ministries, State Govts., ULBs, chemical fertilizer companies, role of the private entrepreneurs, funds required in setting of compost plants, quality of the organic fertilizers/ compost, design of compost plants of different sizes etc. the recommendations have been accepted by the Supreme Court and they have desired that all the stakeholders should implement these recommendations in toto.

All the aforesaid manual, TAG Report and the Task Force reports have been uploaded in the Ministry's web-site, viz. ***www.urbanindia.nic.in*** for wide publicity and usage.

Just like matter is indestructible, the municipal solid waste is not really a waste, but it can be transformed into other forms of wealth. The waste needs to be properly segregated into organic and inorganic components at source/ household level. The organic portion consisting of paper, plastic, rubber etc. can be recycled; the remaining wet waste can be subjected into useful compost which can be used as soil conditioner in the gardens, etc. the inorganic portion having metals, glass etc can be recovered and recycled. The bulky and heavy building material and debris can be separately collected and used in the low lying areas or to cover the landfills. Some of the ULBs have adopted some good practices in source segregation, collection etc. details of which are given at **Annex-I.** Likewise, transportation of solid waste also has been effectively managed by some of the ULBs with the involvement of private contractors, who has brought in efficiency and economy in management of solid waste. The details are at **Annex-II.**

Treatment of Municipal Solid Waste is almost absent in many cities and towns except composting in a limited way in some cities. The main method of disposal of solid waste is by crude dumping in about 94% of the cases. The cities resort to indiscriminate dumping of domestic, commercial, industrial and medical wastes in low lying areas. This leads to contamination of surface and ground water by the leachate.

The problem of urban waste management is significant, not only because of large quantities involved, but also its spatial spread across 5161 cities and towns and enormity and variety of problems involved in setting up and managing systems for collection, transportation and disposal of waste.

Therefore, it is enjoined upon the ULBs to implement Solid Waste (Management & Handling) Rules, 2000 for management of municipal solid waste. The deadline for implementation of Rules was December 2003, but hardly any ULB could implement these rules in letter and spirit (these rules are under revision at present by the Ministry of Environment and Forests).

Information received from Central Pollution Control Board (CPCB, M/o Environment & Forests) reveals that:

(i) Local bodies in States have taken initiatives to organize waste collection, segregation, storage and transportation.

(ii) Regarding setting up of waste disposal (landfilling) facilities, landfills have been constructed in 38 towns, is under construction in two towns and 20 States have taken initiatives to set up such facilities in 90 towns. In 23 States, ULBs have identified the sites for landfilling

(iii) Several ULBs have established waste processing particularly composting facilities and many more are in process of doing so.

(iv) State Pollution Control Boards (SPCBs) have made efforts to undertake monitoring of standards for waste processing and disposal facilities including those for ground water and ambient air. SPCBs of Andhra Pradesh, Chhattisgarh, Delhi, Gujarat, Karnataka, Tamil Nadu, Maharashtra, Punjab, Orissa, Assam and Kerala have indicated for undertaking /planning for monitoring studies.

(v) CPCB has also undertaken studies on assessment of ground water quality around a few landfill sites through National Environmental Engineering Research Institute (NEERI). Studies have been executed at Kolkata, Delhi, Chennai, Jammu, Srinagar, Thiruvananathapuram, Coimbatore, Kochi and Hyderabad

(vi) As per the compliance report of MSW Rules furnished by CPCB, door-to-door collection is being carried out in some zones of Delhi. The Municipal Corporation of Delhi (MCD) has already implemented transportation of the MSW through private concessionaires in six zone of MCD, namely, Central, South, West, West, S.P. and City,. Now, the MCD is likely to implement the door-to-door collection of waste in various parts of Delhi in phased manner. In first phase EOI is likely be called for Civil Line Zone and Rohini Zone, Dwarka, Vasant vihar, ward No.164, 165 of South Zone. Thus the city shall be free from dust bins/dhalao.

Some of the major issues concerning waste management are:

(a) Absence of segregation of waste at source
(b) Lack of funds with ULBs for waste management
(c) Lack of technical expertise and appropriate institutional arrangement
(d) Unwillingness of ULBs to introduce proper collection, segregation, transportation and treatment / disposal systems
(e) Indifference of citizens towards waste management due to lack of awareness
(f) Lack of community participation towards waste management and hygienic conditions

The following are the possible waste management options:

At least 50% to 55% of municipal solid waste is a valuable resource, which can be recovered profitably using different technologies through following processing options:

- Recyclable materials like paper, cardboards, plastics, polythene bags, pieces of metals and glass are recycled to recover useful resource.

- The Organic fraction of municipal solid waste contains bio-degradable matter ranging from 30% to 55%, which can be profitably converted into useful products like compost (organic manure), methane gas (used for cooking, heating, lighting, production of energy) etc. through the following processes:-

(a) Waste to Compost

(i) Aerobic / Anaerobic Composting
(ii) Vermi-Composting

(b) Waste to Energy

(i) Refuse Derived Fuel (RDF) / Pelletization
(ii) Bio-methanation
(iii) Incineration (but difficult due to low calorific value and high moisture)
(iv) Pyrolysis / Plasma Gasification (energy intensive)

- Rejects from compost plants, recycling and other inorganic materials like construction debris in Municipal Solid Waste are sent to scientifically engineered landfills.

However, the success of the above mentioned options largely depends on segregation of waste at source.

Some of the ULBs have adopted a few good practices for treatment and disposal and awareness campaign including PPP arrangement, the details are given at **Annex-III**

The Ministry of Urban Development on its part has made unstinted efforts to persuade the States and ULBs for effective solid waste management in urban areas. Under the Urban Infrastructure and Governance (UIG) component of the Jawaharlal Nehru Urban Renewal Mission (JNNURM), so far 31 projects for SWM for 30 cities have been sanctioned at a total cost of Rs.2123.96 crore and Additional Central Assistance (ACA) to the tune of Rs.762.83 crore has been released for the sanctioned schemes. List of these projects is enclosed at **Annex-IV.** The Ministry has also formulated and circulated Service Level Benchmarks in water supply and sanitation sector including SWM for guidance and adoption which has been circulated vide D.O. No. N-11025/33/2008-UCD dated the 12th September, 2008. Further, it has also brought out the National Urban Sanitation Policy (NUSP) which was circulated vide D.O. No. Q-11011/2/2007-PHE II dated the 25th November, 2008 needs to be kept in view. Support for Solid Waste Management Projects is available under JNNURM and UIDSSMT (Urban Infrastructure Development Scheme for Small and Medium Towns). Under the NUSP, support is available for drawing up the City Sanitation Plan and Detailed Project Reports (DPR). Support is also available under the 12th Finance Commission grants.

Keeping all the above in view and in order to bring about a total change in approach and attitude to waste collection and disposal, thereby aiming at litter free/sanitary cities across the country, I would request you to direct all the ULBs of your State to undertake the following measures to improve the situation of SWM in the urban cities/ towns:

1. The recovery of recyclables presently being done in an unorganized manner needs to be replaced with informal arrangements of rag pickers and NGOs/CBOs also being involved for effective door to door collection. The case of Kudumbshree in Kerala could serve as an example (**Annex – V**)

2. Appropriate collection vehicles such as push carts, tricycles should be introduced for effective primary collection

3. Street sweeping/ non-organic wastes should be collected and kept in separate containers and transported to the landfill site without mixing with organic waste

4. The secondary collection receptacles, such as easily liftable dumper placer etc (to avoid manual handling of waste) should be kept at strategic locations and the wastes should be regularly removed/placed/transported to the bigger vehicles to be transported to the transfer stations or disposal/landfill sites.

5. Manual handling of solid waste should be eliminated.

6. The workers should be provided with uniforms, shoes, gloves and other implements etc., for their safety and easy working. They should be subjected to periodical health checks and health insurance.

7. PPP may be explored / introduced for functions such as door to door collection, street sweeping, transportation, treatment etc.

8. Acquisition/earmarking of land required for the project should be facilitated by proactive guidelines/direction from the State level. Master Plan process should actively address this requirement.

9. Waste characterization has to be done properly taking representative samples from the city for various types of wastes and the treatment process should be selected accordingly.

10. Appropriate technology options for treatment of the organic content of the wastes should be chosen based on the physical and chemical characteristics of the wastes and local conditions etc.
11. IEC (Information, education, and Communication) in order to educate households, municipal staff as well as personnel engaged in collection and management of waste about need for segregation at source and improved sanitation is the most important element in success of a SWM project. This must be accorded due and adequate priority.
12. Polluter Pay Principle should be implemented in a calibrated manner in order to instill a sense of discipline with respect to throwing of litter by people without any concern for cleanliness. The examples of Ahmedabad and Surat in Gujarat and Suryapet in Andhra Pradesh could serve as a reference. **(Annex - VI)**

I hope with the intervention of various stakeholders at the helm of affairs related to SWM in your state, it would be possible to bring about positive transformation in bringing a clean environment in the cities/ towns. I would like to request you to undertake review of existing solid waste management practices in Urban Local Bodies of your State and chalk out a programme for better management. The cities should draw a city sanitation plan in accordance with the National Urban Sanitation Policy and make an attempt to move towards National Benchmarks in respect of solid waste management. A proactive role on behalf of the States is critical to galvanizing various stakeholders in this endeavor. The Ministry of Urban Development can provide support for drawing up of the city sanitation plan and can also support projects under JNNURM and UIDSSMT. I shall also like to emphasize that the states themselves need to

provide greater support for achieving these objectives. A review at your level would be desirable to impart necessary momentum to this process. I shall be grateful if you could revert to me within three months about action taken in this regard.

With regards,

Yours sincerely,

(M. Ramachandran)

To

All Chief Secretaries of States /Administrators of UTs.

Annex-I

Some good practices carried out by certain ULBs in Source segregation and collection:-

- ◊ **Chandigarh** Municipal Corporation has started a novel 'dial-a-debris-removal scheme'. It is mandatory for citizens to get their debris removed through this helpline system. For this, the debris generators are charged Rs. 400-500 per truck.
- ◊ **Navi Mumbai** has been using debris to fill up low lying areas which are prone to breeding of mosquitoes. It has helped in reducing incidence of malaria in the city. Bricks and tiles are manufactured from demolition debris with the help from an NGO (Yuva). Such bricks can be used for surfacing pavements.
- ◊ In **Mumbai**, 5 tonne of organic wastes from Dadar Market is processed by vermi-composting. The Corporation has allotted one acre land to a private company which brings segregated waste and processes the same through vermi-composting. It has the right to sell the compost. This is one of the four demonstration projects in Mumbai for popularizing vermi-composting at the point of bulk generation.
- ◊ **Suryapet town in Andhra Pradesh** has achieved a zero garbage status. The municipality undertakes collection of segregated waste from the doorsteps and processes wet garbage while recycling dry waste and selling it. This not only covers the cost of sanitation services but also earns the municipality some income.
- ◊ **Namakkal town in Tamil Nadu** has got the distinction of clean and green city under the Japan Eco-city programme. The city has achieved 100% door to door collection, segregation at source through an NGO and has set up a vermi compost plant of 2 MT capacity through a private operator. The project has been formulated and implemented with the help of NPC.
- ◊ **Mahabaleshwar** Municipal Council collects plastic bottles and prepares granules using a crusher through people's participation.
- ◊ **Surat** city gets its roads cleaned at night and keeps close vigilance on cleanliness during the day too. Surat has earned a reputation of the cleanest city in country.
- ◊ In **Amravati**, road sweeping, nalah cleaning and public toilet cleaning contracts have been given out to private contractor.
- ◊ **Kalyan** has constructed a facility for processing of biodegradable waste collected from vegetable markets, hotels and marriage halls. This is run by a NGO (Stree Mukti Sangathan). An advance of Rs. 1 lakh was given for procurement of equipments and wages. The workers segregate plastics and other non-biodegradable material before spraying the waste with a culture and water. NGO has repaid the advance from the Corporation.

- In **Kodagu (Coorg) district of Karnataka**, a very successful drive required school children to bring all the dry recyclable waste from their homes to the school (plastic bags, rags, glass) once a week. Class wise sale to kabadi-walas is organized every week and the funds are used for Eco-Club activities. This has resulted in substantially increased segregation of dry and wet waste in the town.
- In **Nagpur**, hotel owners initially agreed to pay for bulk waste collection from their premises, but later went to the court challenging the levy of this charge. This is because the awareness drive was not sustained. The High Court finally directed the Corporation to frame byelaws before forcing the hoteliers to pay the service charges.
- In **Rajasthan**, the government has issued orders to Municipal bodies to give contracts for door to door collection, where preference is given to rag pickers.
- In **Akola**, the Corporation provided tricycles to local CBO's who undertake to collect household waste. They cover the houses from 7.00 a.m. to 2.00 p.m. and empty the waste into community bins. They are allowed to sell the recyclables. The beneficiary households pay Rs. 10-15 per month as service charge. A part of this is used to repay the loan for the tricycle. Each volunteer earns approximately Rs. 1200-1500 per month under the scheme.

Annex-II

Some good practices carried out by some ULBs on Transportation

- In **Latur**, SJSRY groups have procured a vehicle for transporting the waste. The vehicle design is such that it can be used for transporting other goods in the evening, thus providing the group additional means to generate income. The group members have also been given identity cards.
- In **Nashik**, since the contractor directly takes the garbage to the dumping ground, almost all the dustbins were removed. This reduced the menace of cattle, dogs and pigs. It has also freed space, earlier occupied by these dustbins, for the pedestrians and vehicles.
- **Nanded** has allowed the Contractor a complete freedom in deciding the quantum of manpower to be deployed. This allows the contractor to choose his own technology and gives him scope to improve efficiency and thus bring down costs (which finally get passed on to the local body).

Annex-III

Some good practices on Treatment & disposal and Awareness campaign including PPP arrangement

- **Akola** has signed a 20 year contract with a private operator who is making investments of about Rs. 1.15 crore for setting up a plant to process waste. The Corporation is responsible to supply 50 MT of waste daily (about 40% of the city waste). The operator sells the compost and pays a royalty of 4%. The rejects are lifted by the corporation and taken for land filling.
- **Bangalore** Municipal Corporation has entered into a composite contract with a private operator to process and then land fill the rejects to an engineered sanitary landfill. The operator developed the facility on land provided by the corporation. The operator was given freedom to adopt any suitable technology to process municipal waste. He is to ensure that the project conforms to the relevant laws and has to obtain and maintain all necessary clearances from the authorities. The operator shall try to obtain carbon credits by adopting greenhouse gas mitigation measures and share the benefits of such carbon credits with the Corporation, if and when available.
- **Kalyan Dombiwali** Municipal Corporation invited tenders for a private operator to set up a plant for treatment and disposal of bio-medical waste on BOOT basis. The contract period is of ten years and the services provided by the contractor include collection, transportation, treatment and disposal as per **BMW** Rules in the corporation area.
- In **Bhopal**, a bio compost plant treats 100 tonnes of rich organic waste from weekly haats, bazaars and sabzi mandis. An operator is responsible for running the plant and also sale of compost. The Corporation receives 4 per cent royalty every three months (between Rs. 20,000 and Rs. 40,000) from the sale of compost.
- Foliage and green waste from gardens is converted into vermi-compost by **Pimpri Chinchwad** and **Pune Municipal Corporations**.
- In **Mumbai,** Advance Locality management program is implemented in over 200 residential complexes. Wet waste is processed into manure which is used in the gardens, pots within the complex. Corporation allows composting pits on top of municipal drains for decentralized composting by resident associations.
- **Kamptee** has developed a facility for composting 21 tonnes of waste before landfill. The total cost of the project is approximately Rs. 12.5 lakh. This includes provision of roads, electric and water supply, a platform to segregate the waste and 15 windrows (of size 10'x3'x2') for composting. An underground-interconnected drainage system is provided to avoid leachate formation. Fencing to prevent stray animals and tree plantation/landscaping has been done.

- **Panvel** Municipal Council has set up 19 small decomposting plants in the city. These decentralized plants are able to substantially reduce transportation costs as well as reduce the amount of waste reaching the land fill site.
- **Yavatmal** Municipal Council engaged the services of the private operator who is providing similar BMW management service to Amravati Municipal Corporation, thus saving the cost of separate set up. Both cities' BMW is managed at the common facility set up by this operator entirely at his own cost.
- In **Mumbai**, the corporation appointed 102 of its own employees as nuisance detectors giving them a mandate to fine people spitting, littering public places and causing such other nuisance.
- **Singapore** uses an innovative system to create awareness amongst tourists, school children and local people by organizing shows in various tourist destinations like night safaris, bird parks, etc. for stopping littering of waste.
- Awareness campaigns are being taken up in **Bangalore** through participation by the Corporation, Bangalore Agenda Task Force, Swabhiman and other NGOs.

Annex - IV

Sl.No.	Sector	State	City	Project Name	Date of approval by CSMC	Approved Cost (Rs. in Lakh)	ACA committed (Rs. in lakh)	Funds released	% of release	Release date
1	Solid Waste Management	Arunachal Pradesh	Itanagar	Setting up of Municipal Solid Waste Management in a scientific way for capital complex	22-Feb-07	1194.38	1074.94	268.74	25	6/28/2007
2	Solid Waste Management	Assam	Guwahati	Solid Waste Management for Guwahati	22-Jan-07	3516.71	3165.04	791.26	25	5/8/2007
3	Solid Waste Management	Bihar	Patna	Municipal Solid Waste Management for Patna town	26-Mar-07	3695.40	1847.70	461.93	25	5/8/2007
4	Solid Waste Management	Gujarat	Rajkot	Strengthening of Solid Waste Management (Phase-I)	14-Jul-06	867.00	433.50	325.14	75	04/01/2008 & 17.03.08 & 21/07/06
5	Solid Waste Management	Gujarat	Surat	Upgradation of Solid Waste Management in Surat	26-Mar-07	5249.72	2624.86	656.22	25	5/8/2007
6	Solid Waste Management	Gujarat	Vadodara	Solid Waste Management for Vadodara	20-Jul-07	3098.54	1549.27	387.32	25	8/29/2007
7	Solid Waste Management	Haryana	Faridabad	Solid Waste Management Scheme for Faridabad	20-Jul-07	7650.00	3827.00	956.75	25	8/29/2007
8	Solid Waste Management	Himachal Pradesh	Shimla	Solid Waste Mangement for Shimla	9-Mar-07	1604.00	1283.20	320.80	25	28/03/2007 & 31/03/07
9	Solid Waste Management	Kerala	Cochin	Solid Waste Management for Kochi	5-Mar-07	8812.00	4406.00	1101.50	25	3/31/2007
10	Solid Waste Management	Kerala	Thiruvanant hapuram	Solid Waste Management in Thiruvananthapuram	18-Jan-08	2456.00	1964.80	491.20	25	7/18/2008
11	Solid Waste Management	Madhya Pradesh	Indore	Solid Waste Management for Indore	28-Dec-07	4324.66	2162.33	540.58	25	1/4/2008
12	Solid Waste Management	Maharashtr a	Greater Mumbai	Solid Waste Management Project ,Greater Mumbai	23-Nov-07	17879.00	6257.65	1564.41	25	5/29/2008
13	Solid Waste Management	Maharashtr a	Nashik	Solid Waste Management for Nashik	22-Dec-06	5999.23	2999.62	2249.73	75	10/08/2007 & 31/01/07, 01.10.08
14	Solid Waste Management	Maharashtr a	Pune	Solid Waste Management - Pimpri-Chinchwad	22-Dec-06	4240.80	2120.40	530.10	25	1/31/2007
15	Solid Waste Management	Manipur	Imphal	Solid Waste Management for Imphal	18-May-07	2580.71	2322.64	580.66	25	12/20/2007
16	Solid Waste Management	Rajasthan	Jaipur	Solid Waste Management for Jaipur	8-Dec-06	1319.74	659.87	329.94	50	20/12/2006, 26.9.08
17	Solid Waste Management	Tamil Nadu	Chennai	Solid Waste Management for Chennai	2-Feb-07	25532.00	8936.20	2234.05	25	21/03/2007 & 31/03/07
18	Solid waste Management	Tamil Nadu	Chennai	Solid Waste Management of Alandur, Pallavapuram and Tambaram Municipality	19-Jun-08	4421.25	1574.43	386.85	25	15-Jul-08
19	Solid Waste Management	Tamil Nadu	Coimbatore	Solid Waste Management for Coimbatore	2-Feb-07	9651.00	4825.50	1930.19	40	10/08/2007 & 22/02/07&31/03/07

Sl.No.	Sector	State	City	Project Name	Date of approval by CSMC	Approved Cost (Rs. in Lakh)	ACA committed (Rs. in lakh)	Funds released	% of release	Release date
20	Solid Waste Management	Tamil Nadu	Madurai	Solid Waste Management for Madurai	2-Feb-07	7429.00	3714.50	929.00	25	2/22/2007
21	Solid Waste Management	Uttar Pradesh	Agra	Municipal Solid Waste Management in Agra	5-Mar-07	3083.99	1542.00	385.50	25	29/08/2007 & 31/03/07
22	Solid Waste Management	Uttar Pradesh	Allahabad	Solid Wate Management for Allahabad	22-Feb-08	3041.49	1520.74	380.18	25	3/25/2008
23	Solid Waste Management	Uttar Pradesh	Kanpur	Municipal Solid Waste Management in Kanpur	26-Mar-07	8483.87	2811.90	702.98	25	29/08/2007 & 31/03/07
24	Solid Waste Management	Uttar Pradesh	Lucknow	Municipal Solid Waste Management in Lucknow	5-Mar-07	8717.06	2146.19	536.55	25	29/08/2007 & 31/03/07
25	Solid Waste Management	Uttar Pradesh	Mathura	Municipal Solid Waste Management in Mathura	8-Dec-06	8950.26	793.28	198.32	25	1/23/2007
26	Solid Waste Management	Uttar Pradesh	Meerut	Municipal Solid Waste Management	8-Dec-06	9183.46	1129.70	282.43	25	1/23/2007
27	Solid Waste Management	Uttar Pradesh	Varanasi	Solid Waste Management of Varanasi	26-Oct-07	9416.65	2433.87	608.47	25	12/20/2007
28	Solid waste Management	Uttarakhand	Dehradun	Integrated Solid Waste Management in Dehradun	16-May-08	9649.85	1968.00	492.00	25	30-Jun-08
29	Solid Waste Management	West Bengal	Asansol	Municipal Solid Waste Management in Asansol Urban Area	8-Jan-07	9883.04	2178.64	1089.32	50	23/01/2007, 24.10.08
30	Solid Waste Management	West Bengal	Kolkata	Municipal Solid Waste Management of Municipal Towns	22-Jan-07	10116.24	1980.49	495.12	25	14/02/2007 & 31/03/07
31	Solid Waste Management	Andhra Pradesh	Vijayawada	Solid Waste Management Improvement Scheme	14-Oct-08	10349.43	29.02	0.00	0	
						212396.48	76283.25	22207.24		

Annex – V

Rough estimates indicate that Kerala generates about 2,800-3,000 tonnes of solid waste every day. It is estimated that only 50% of the Waste generated is collected for disposal. To overcome the problem of poor solid waste management and promote segregation and primary collection at source, the State Poverty Eradication Mission-KUDUMBASHREE –has initiated an innovative enterprise namely, 'Clean Kerala Business' under which women from the financially backward families who are the members of the Community Based Organizations (CBOs) of Kudumbashree are engaged in door to door household waste collection and transportation to the transit points fixed by the Urban Local Bodies. The initiative provides a means of livelihood to the urban poor especially women, apart from better waste management and reduction in pollution. For collecting waste from the households, the entrepreneurs charge Rs 30/- per month from each household. The women entrepreneurs engaged in solid waste collection are earning Rs 3,000 to Rs 5,000 per month. Now 155 Kudumbashree solid waste management groups are in operation in 18 urban local bodies in the State.

Annex – VI

Polluter pays/Penalty for indiscriminate littering

Following the principle of 'Polluter Pays', the Municipal Corporation of Ahmedabad & Surat have passed a resolution vide which they levy cleaning charges on the spot for littering. These charges can be collected by the Sanitary Inspector on administrative charges ranging from Rs.500 – Rs.5000/- (higher for commercial establishments). The word 'penalty' is not used here since there is no legal provision for the ULB penalizing residents.

Similarly, another town 'Suryapet' in Andhra Pradesh has passed a resolution of collecting penalty from Rs.100-500/- from the defaulter who will be throwing the waste on streets.