

**CONSOLIDATED ANNUAL REVIEW REPORT ON
MUNICIPAL SOLID WASTES
(MANAGEMENT AND HANDLING) RULES, 2000**

ANNUAL REVIEW REPORT: 2008-09

(Consolidated Annual Review Report prepared in compliance to
the provision 8(2) of the Rule)



CENTRAL POLLUTION CONTROL BOARD
(Ministry of Environment & Forests)
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Key Words: * MSW (Municipal Solid Waste)
* MSW Rule (Municipal Solid Wastes Management and Handling)
Rules, 2000
* ULBS (Urban Local Bodies)
* SPCBs (State Pollution Control Boards)

1. ANNUAL REPORT AS PER MSW RULES

In accordance with the Provision (8) of Municipal Solid Wastes (Management and Handling) Rules, 2000, the Central Pollution Control Board (CPCB) is required to prepare the consolidated Annual Review Report on Management of Municipal Solid Waste (MSW) and the same is to be forwarded to the Central Government that is, Ministry of Environmental and Forests (MoEF) along with its recommendations before 15th December every year. However, report of CPCB is to be based on the annual report to be prepared by the State Pollution Control Boards (SPCBs) and Pollution Control Committees (PCCs) which is required to be forwarded by them to CPCB before 15th September every year.

2. MECHANISM OF REVIEW

Based on the receipt of annual consolidated report from SPCBs/PCCs, the status of implementation of MSW Rules is reviewed. During the year, regular interaction with SPCBs/PCCs through Meetings and Workshops is made to facilitate implementation of rules. Review of status of implementation of rules is based on following observations;

- (i) Number of application received and number of authorizations granted by SPCBs/PCCs during the reporting year to the local bodies.
- (ii) Initiatives taken by local bodies to implement Schedule-II relating to collection, Segregation, Storage and Transportation (CSST) of waste including mass awareness programme
- (iii) Initiatives taken to implement Schedule-III with regard to setting-up waste disposal facilities; and
- (iv) Efforts made to set-up waste processing plants in accordance with Schedule-IV of the rules.

3. LOCAL BODIES

There are a large number of local bodies in the country and MSW rules are applicable to all of them. As per 2001 census, there are 384 Urban Agglomerations (UA) and 5161 towns; but the fact is that the numbers of multiple towns are considered within a city under the coverage one or more ULBs. For example in Delhi, 60 towns are considered within the coverage of 3 ULBs (MCD, NMDC & Delhi Cantonment Board). The actual numbers of cities/ towns during 2007-08 was as under;

Population	Class	No. of Cities/towns
>1,00,000 and above including 35 Metros	Class I	393
50,000 – 99,999	Class II	401
20,000 – 49,999	Class III	1,151
10,000 – 19,999	Class IV	1,344
5,000 - 9,999	Class V	888
> 5,000	Class VI	191
Unclassified	-	10
Total		4,378

4. ANNUAL REPORT: 2008-09

Local bodies are required to forward Annual report for each year to SPCBs/PCCs before 30th June every year and SPCBs in turn, will send their consolidated report for the year before 15th September to CPCB. However, in terms of adhering with stipulated schedule, delay has been observed. As on 31st December, 2009, CPCB could receive Annual Reports only from 10 SPCBs/PCCs, subsequently on follow up, Annual Reports received from 25 SPCBs/PCCs by June 30, 2010. The present Annual Report: 2008-09 is prepared based on information received from 25 SPCBs/PCCs.

5. STATUS OF IMPLEMENTATION OF MSW RULES

5.1 Authorizations

- Details on authorization granted by SPCBs is given in *Annexure-I*.
- Except SPCBs of Andhra Pradesh, Gujarat, Himachal Pradesh, Karnataka, Kerala, Madhya Pradesh, Meghalaya, Orissa, Pudduchery, Rajasthan, Tamil Nadu, Uttarakhand and West Bengal, other State Boards have not issued authorizations to the majority of local bodies in their respective states.
- Out of 3434 urban local bodies (ULBs) reported by SPCBs, 1118 applications were received from ULBs and 908 ULBs were granted authorization during 2008-09. Thus the cumulative number of authorizations issued so far to ULBs is 2038 till the reporting time.
- There are cases of 219 extensions of authorization in Karnataka by stipulating the conditions to comply with the MSW Rules.

5.2 Implementation of Schedule-II

- Efforts are being made by many local bodies for creating awareness in the citizens for ensuing proper management of waste including systematization of procedures relating to waste collection, segregation, storage and transportation. However, such efforts are either restricted to a few localities/ wards within the town or a few ULBs taken up such efforts at entire town level.
- The effort made by local bodies for bringing improvement in waste collection, segregation, storage and transportation is given in *Annexure-II*. Effort to their effect have been widely practices in states /UTs of Andaman Nicobar, Andhra Pradesh, Chandigarh, Goa, Gujarat, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Himachal Pradesh, Orissa, Rajasthan and West Bengal.
- Cleanliness varies from town-to-town depending on the initiatives taken by that local body. It has been observed that collection of waste from door-step is the most critical issue in the entire management of MSW.

5.3 Implementation of Schedule-III (Landfilling)

- Disposal of waste is still continued through open dumping.
- As per information of State Boards, landfills have been reported as 'constructed' at Vizianagaram (AP); Anjar, Bhachau, Halvad, Morbi & Wankaner (Gujarat);

Bangalore, Mangalore, Ullal, Karwar, Udupi, Puttur & Ankola (Karnataka); Surat, Alang, Nashik, Sonpeth, Ambad (Maharashtra), Gwalior (MP), Jodhpur (Raj) and at Bhadreswar & Chandernagore (WB). At other places, landfills are under construction or planning stage.

- A status indicating information on landfill is given at *Annexure-III*. As many 39 landfills have been constructed so far in the country, some of them are common landfill for sharing among two or more ULBs. For example, the landfill at N. Dum Dum shared by N. Dum Dum and New Barrackpore municipality, the Ahmedabad landfill shared by 12 towns, etc. Moreover, effort continues to construct second landfill for a city where earlier landfill has been exhausted such as in Bangalore. In addition, initiative has been taken for construction of landfill at 146 towns and other 780 sites have been identified in the country for landfill construction in the country.

5.4 Implementation of Schedule-IV (Waste Processing)

- There has been a positive movement on setting up of waste processing facilities as compared to the efforts made in the previous years. In many States, several towns have responded that there is partial composting/vermi-composting facilities. Local bodies have not so far preferred waste-to-energy projects except in the State of Andhra Pradesh. 5 W-to-E Plants including 3 RDF plants (one with 6MW PP & one with Biogas plant), Gujarat has established 3 RDF plants and proposed for another 4 RDF plants and one each RDF plant having by Chandigarh & Chattisgarh state. Maharashtra has 19 Biogas plant (Nisargruna) & proposed 8, Kerala has 2 Biogas plants operational and proposed 7 Biogas plants and one incinerator plant. The details are given in Annexure –IV (b)
- State-wise information on existing/proposed waste processing plants or where some initiatives have been taken is given at *Annexure-IV(a)*. As many as 282 compost plants have been set up in the country, out of which 53 are windrow compost plants and 229 vermi-compost plants.
- Eight SPCBs are monitoring the air/ water monitoring at landfill sites
- It has been observed that ‘composting’ and ‘vermi-composting’ is preferred as easy technological option by local bodies and other options like thermal processing (incineration, pyrolysis etc.) are not attempted due to non-availability of operating experiences.

6.0 INITIATIVES AT NATIONAL LEVEL

CPCB and MoEF and other Central Ministries such as Ministry of Urban Development (MoUD) and Ministry of Non-Conventional Energy Sources (MNES) have taken initiatives to facilitate implementation of MSW rules. Some of the initiatives taken are briefly summarized as under:

6.1 Demonstration Projects

MoEF and CPCB have instituted a scheme for setting up of demonstration project for solid waste management in accordance with MSW Rule. Objective of the scheme is to demonstrate implementation of MSW Rule in an integrated manner. The scheme is based on cost sharing basis where concerned local body is required to contribute 50% of the total cost of the project. The following projects have been taken up.

S.No	State	Town
1	West Bengal	North Dum-Dum New Barrakpore
2	UT Chandigarh	Chandigarh
3	Tamil Nadu	Udumalpet
4	Kerala	Kozhikode (MoEF)
5	Himachal Pradesh	Mandi
6	Andhra Pradesh	Suryapet
7	Nagaland	Kohima
8	Maharashtra	Jalna
9	Arunachal Pradesh	Itanagar
10	Sikkim	South West District
11	Tripura	Agartala
12	Gujarat	AUDA (MoEF)

Salient features of the Demo-schemes are placed at [Annexure-V](#)

6.2 Utilisation of Grants Under 12th Finance Commission

The Twelfth Finance Commission has recommended devolution of grants for Urban Local Bodies to the tune of Rs.5000 crores for the period 2005-2010 of which Rs.2500 crores have to be devolved upon local bodies exclusively for setting-up of solid waste management systems in Urban areas to ensure management of MSW in accordance with MSW Rules. Ministry of Urban Development on 6th October, 2005 has circulated guidelines for preparation of DPRs and selection of technologies for processing and final disposal of MSW for different categories of towns for the benefit of State Government/ Local bodies. The emphasis has also be given to implement various activities of solid waste system through private sector participation.

State Governments and Pollution Control Boards have been requested to participate in the process of utilizing the grants and provide assistance to local bodies in preparing DPR for cities and towns

7.0 RECOMMENDATIONS/PROPOSALS FOR CONSIDERATION

7.1 At Central level a Technical Cell may be set up to provide assistance to the State governments/UT administrations and Local bodies enabling them to take decisions on implementation of MSW Rules particularly relating to setting up of waste processing and disposal facilities. Indicative guidelines on selection of waste processing and disposal technological options, model agreements for Private sector participation in solid waste management, etc., need to be widely circulated to the local bodies.

At State level, similar type of Group may be set-up to assist local bodies. States may evolve Plans and Policy to provide technological and financial assistance to the local bodies.

7.2 MoEF and CPCB may continue the on-going scheme on Demo-Pilot Projects for at least one to two towns in each State in addition to the recommended grants

under Twelfth Finance Commission /JNNURM to the States. However, smaller towns preferably having population < 5 lakh could be preferred for pilot projects.

- 7.3 Central Ministries such as Ministry of Urban Development (MoUD), Ministry of Agriculture and Ministry of New and Renewable Energy (MNRE) may continue to provide assistance to the States in terms of technical assistance and in selection of appropriate technologies relating to waste processing and disposal including facilitating States in seeking private sector participation. The proposed action will help States in proper utilization of grants under the schemes like Twelfth Finance Commission, etc.
- 7.4 Ministry of Urban Development may follow-up on implementation of the report of an Inter-ministerial task force on integrated plant nutrient management using city compost which has been filed in the Hon'ble Supreme Court on 06.05.2005 (in the matter of WPC 888/96). This report has brought out various relevant issues on composting particularly technical and financial requirements for setting up of compost plant and will be useful to State Governments, local bodies and other concerned agencies to refer before taking final decisions.
- 7.5 A report of the expert committee for inspection and evaluation of the project for energy recovery from MSW at Lucknow; 2005 (brought out with reference to MNRE Order dated 19.05.2005) may be circulated to State Governments for their reference. The recommendations of Expert Group will be useful to States while taking decisions on selection of waste processing technologies and particularly with reference to waste-to-energy projects. In accordance with Hon'ble Supreme Court directives, MNRE may consider to set-up waste-to-energy demo projects.
- 7.6 MoEF may consider to suitably amending the Schedule-I of MSW rules while taking view on funds being provided under the Twelfth Finance Commission (TFC)/JNNURM, which are to be utilized during 2005-2010
- 7.7 Specific issues requiring consideration while amending MSW rules may include;
- Promotion of regional facilities (common facilities) for setting-up of waste processing and disposal facilities.
 - Aviation authorities may issue appropriate guidelines to States while deciding for identification of sites for waste processing and disposal.
 - Stipulation of new time schedule in Schedule-I of MSW Rules.
 - Indicating buffer zone around landfill and waste processing sites.
- 7.8 Pollution Control Boards/Local Bodies/ State Governments who have taken initiatives in preparing action plans for solid waste management in metro cities and State Capitals (in pursuance with Supreme Court order dated 04.10.04, WPC 888/96), may get Detailed Project Reports (DPRs) formulated for each metro city and State Capital and initiate implementation.

During the Eleventh Plan period, States may target to achieve for covering major local bodies in ensuring their compliance to MSW rules taking benefit of grants released and also meeting balance out of own resources of local bodies through State Plan.

- 7.9 State governments may set up solid waste mission (as set up by Govt. of West Bengal) and evolve state level policies (like Rajasthan, Andhra Pradesh, Karnataka, Maharashtra and others) and providing technical/ financial guidance to local bodies in their State/UT.
- 7.10 Dissemination of information through Electronic media including mass awareness campaigns and seeking private sector participation in solid waste management should be continued activity. Pollution Control Boards/ State Urban Development Departments may place consolidated status on solid waste management (may also include other sanitation issues of state), Annual reports of local bodies and initiatives taken on web site for public benefit.
- 7.11 Specific attention is required on;
- (a) Setting up of waste processing and disposal facilities at hilly states and particularly at Defense bases.
 - (b) Providing prescription of packages for waste processing and disposal in Defense/Railway and other set-up like Cantonment Boards.
 - (c) Special technical and financial support to Tourists and religious places for solid waste management and particularly to Hill states, Islands (Andaman & Lakshadweep).
 - (d) Identification of sites in states for setting up of common waste processing and landfill facilities.
 - (e) Selection of towns and solid waste management plans for towns located on river banks and preferably starting from river Ganga (could be covered under Ganga River Basin Authority).

SUMMARY OF ANNUAL REPORT: 2008-09

1. Observations/ Findings of Annual Report: 2008-09

1.1 Authorizations

State-wise response of local bodies for seeking authorizations from SPCBs and PCCs varies from State to State. Majority of local bodies existing in the state of Andhra Pradesh, Gujarat, Himachal Pradesh, Karnataka, Kerala, Madhya Pradesh, Meghalaya, Orissa, Rajasthan, Tamil Nadu, Uttarakhand and West Bengal have been covered for authorizations by the respective SPCBs.

1.2 Implementation of Schedule-III

“Setting up of Waste Processing Facilities”

- States like Andhra Pradesh, Gujarat, Kerala, Karnataka, Himachal Pradesh, Maharashtra and West Bengal have taken steps to set up compost plants, State level policies have been formulated by the States of Andhra Pradesh and West Bengal for setting up of compost plants.
- Regarding waste-to-energy projects, except at four locations in Andhra Pradesh, and a few projects in Gujarat, Karnataka and Kerala, no other States have reported for setting-up of such Plants.

1.3 Implementation of Schedule-IV- ‘Landfilling’

- As per information provided by SPCBs, maximum landfill facilities have been constructed in Gujarat (05), Karnataka (06) and West Bengal (11). Name of operational and completed landfills are Bangalore, Mangalore, Karwar, Puttur, Ankola, Surat, Alang, Nashik, Ambad, Sonpeth, Vizianagaram, Gwalior, Jodhpur, Sirsa, Ambala, Anjar, Bhachau, Halvad, Morbi, Bhadreswar, Chandernagore, N. Dum Dum, Baranagar, Gurulia, Barrackpore, bansabera, Hoogly, etc.
- Regional/common landfill facilities are under construction at Ahmedabad, North Dum-Dum and New Barrackpore and Chandigarh.
- Eight states involved in air and groundwater quality monitoring at landfill sites are Assam, Andhra Pradesh, Himachal Pradesh, Meghalaya, Mizoram, Kerala, Madhya Pradesh and Karnataka. Only Kerala and Madhya Pradesh have monitored VOC emissions at the landfill site. Details enclosed at Annexure II(A).

2.0 Overall Implementation Status

Unless, Guiding Groups/Cells are set-up at Central, State and District Level to assist local bodies in organizing themselves to comply with the Rules, it will be difficult to achieve satisfactory compliance. There is need to develop good and adequate private entrepreneurship to participate in waste management to cover the country.

Status of Authorizations granted by SCPBs/PCCs

Sl. No	States/UTs	No. of local bodies	Authorizations granted during 2008-09		Cumulative valid authorization
			Applications Received	Authorization Granted	
1	Andaman Nicobar	INR	INR	INR	01
2	Andhra Pradesh	125	23	14	64
3	Arunachal Pradesh	07	Nil	Nil	Nil
4	Assam	INR	INR	INR	23
5	Bihar	122	60	Nil	Nil
6	Chandigarh	01	01	01	04
7	Chhatisgarh	138	17	03	61
8	Daman Diu	INR	INR	INR	Nil
9	Delhi	INR	INR	INR	03
10	Goa	14	14	14	27
11	Gujarat	172	40	26	168
12	Haryana	INR	INR	INR	Nil
13	Himachal Pradesh	56	41	09	82
14	Jammu & Kashmir	INR	INR	INR	INR
15	Jharkhand	INR	INR	INR	INR
16	Karnataka	219	219	219#	223
17	Kerala	58	35	26	34
18	Lakshadweep	INR	INR	INR	Nil
19	Madhya Pradesh	342	323	323	408
20	Maharashtra	252	108	100	446
21	Manipur	INR	INR	INR	Nil
22	Meghalaya	5	5	2	4
23	Mizoram	INR	INR	INR	01
24	Nagaland	09	02	01	01
25	Orissa	14	32	14	39
26	Puducherry	15	2	2	5
27	Punjab	137	04	-	27
28	Rajasthan	189	20	20	35
29	Sikkim	INR	INR	INR	Nil
30	Tamil Nadu	723	116	77	201
31	Tripura	13	13	13	39
32	Uttar Pradesh	628	INR	INR	43
33	Uttarakhand	68	42	42	43
34	West Bengal	127	1	2	56
	TOTAL	3434	1118	908	2038

INR-Information not received

Authorizations extended

Implementation Status of Schedule-II

Sl. No	States/UT	Local bodies taken initiatives for improving collection, segregation, storage and Transportation of waste
1	Andaman Nicobar	At Port Blair covering 21000 houses
2	Andhra Pradesh	House-to-house collection started in all the local bodies. Almost 16% house hold covered for segregation. RDF plant established at Hyderabad, Guntur & Vijaywada (with 6MW -PP), 1 compost plant & 1 Biogas plant at Vijaywada & 1 vermi-compost at Suryapet. Other compost/ vermicompost plant established at 17 places. Landfill constructed only at Vizianagaram. 5 landfills in Hyderabad (4) & Vijayawada (1) are being developed under JNNURM.
3	Arunachal Pradesh	Initiative taken in Itanagar-Naharlagun. Estimated total 186 TPD of MSW generation in 18 towns of the state.
4	Assam	Guwhati, Silchar
5	Bihar	Out of 122 ULBs, 60 have submitted annual report. 55 ULBs are following collection segregation & transportation; but no treatment /disposal facility. Initiative taken at Muzafferpur, Narkatiaganj & Patna.
6	Chandigarh	House-to-house collection of waste widely practiced. 380 TPD of MSW generated. One RDF processing plant operational. The old landfill has been capped and developed new landfill. Another new landfill site is being identified.
7	Chhatisgarh	33 local bodies have taken good initiative. 68 ULBs have identified landfill sites. 4 ULBs are improving existing landfill (Korba, Dipka, Kathgora & Raigarh). Monitoring done at Domnalla & Bade Rampur.
8	Daman Diu & DNH	Yet to be started
9	Delhi	On-going in some of the zones and transportation also
10	Goa	3 towns have partially complied the MSW Rules, Initiatives taken by 8 ULBs- Sanquulim, Bicholim, Mormugao, Quepem, Cuncolim Canacona, pernem & Panjim. 3 waste processing plants operational & 3 proposed. No landfill available & being constructed at 3 places.
11	Gujarat	172 ULBs have taken initiative to implement MSW Rules schedule II, 154 towns have partially complied and 18 towns not reported. The ULBs have taken good initiatives are Ahmedabad, Surat, Rajkot, Vadodara & Gandhinagar. 152 ULBs were granted authorization for 5 years and 40 ULBs have applied for authorization and granted to 26 ULBs.
12	Haryana	Faridabad, Ambala, Bhiwani, Fatehbad, Gurgaon, Hisar, Jind, Jhajjar, Kaithal, Karnal, Kurikshetra, Manindergarh, Panchkula, Panipat, Rewari, Rohtal, Sirsa, Sonapat, Yamuna Nagar.
13	Himachal Pradesh	Initiated at Shimla, Mandi and Hamirpur All 56 towns have partially collected and complied. Estimated 276 TPD MSW generated in the state, with major MSW generation of 65 TPD in Shimla followed by 25 TPD in Solan and 22 TPD in Mandi town.
14	J&K	INR
15	Jharkhand	INR

16	Karnataka	<p>Landfill: Initiated by 70 ULBs (door-t-door collection), Total 6,515 TPD MSW generated in 219 ULBs and Bangalore alone generates 3500 TPD of MSW. BBMB established landfill for storing 800TPD at Rajarajeswari nagar, Chmmachandra, Doddabidrakallu, Bommanahalli, Mandur; and constructing at 4 locations in Bangalore with 800 TPD.</p> <p>MSW Processing: BBMP established MSW processing plant with Ranky E & E Ltd. (600TPD), Srinivasa Gayatri Resources Recovery (1000TPD), Terrafirma Biotechnologies (1000TPD) & KCDC (300TPD). Vennar Organic Fertilizer Pvt. Ltd.established 200TPD in Mysore.</p>
17	Kerala	MSW is collected by all 58 ULBs. Annual Report in Form II received from 24 Municipal Authorities.
18	Lakshadweep	Kavarati
19	Madhya Pradesh	Only 2 ULBs have complied the schedule II, and 19 LBs have partially complied. Gwalior city has made effort to achieve "Zero Garbage". Gwalior have 1 landfill site and 5 other towns (Gwalior, Ujjain & Sheopur, Rewa and Khajuraho) have taken initiative for setting up landfill. Bhopal and Gwalior have Bio-compost plant.
20	Maharashtra	There are 252 ULBs in the state. State Govt. directed ULBs to utilize 56.5% of total grant in MSW management. Local bodies at several places have organized collection of MSW by house-to-house collection by using Ghanta Gadies and collection bins. Total MSW generation is 19,204 TPD. Source segregation at the vehicle itself into organic & inorganic.. the organic fraction is composted. Two ULBs provided landfill facilities at selected sites. Initiatives have been taken in Pune, Nasik, Nagpur, Mumbai and other places.
21	Manipur	Process started for 5 districts
22	Mizoram	Initiated for Aizwal.
23	Meghalaya	Initiated partially in some Wards at Shillong, Jowai, Tura, Williamnagar, Baghmora, Resubelpara. Out of 16 towns, only 5 ULBs have been constituted. Shillong town have one mechanical compost plant, but no landfill.
24	Nagaland	Good initiatives taken at Kohima and Dimapur. DPR prepared for 12 towns (Dimapur, Mokokchung, Wokha, Zunheboto, Mon, Longleng, Phek, Kiphire, Jalukie, Peren, Tuli and Tuensang towns.
25	Orissa	Initiative taken in 64 ULBs. Good initiative taken in 13 Municipalities. Action started in 10 Municipalities under schedule II. Waste processing and landfill facility is yet to be initiated in the state.
26	Punjab	The state is divided into seven clusters for integrated MSW management. Authorization applied by 4 ULBs- Jalandhar, Amritsar, Ludhiana & Greater Mohali. Common facility is being developed for Adampur, Allwapur & Sham Churasi. Also proposed for Govindgarh & Kartarpur.
27	Puducherry	Door-to-door collection done in Puducherry and will be started soon in other areas. NGOs are involved in implementation of schedule II. 23 acre area is developed at Kurumbapet for integrated MSW management under JNNRUM.
28	Rajasthan	Out of 14 Class I ULBs, Jodhpur have developed SLF. Other remaining 13 ULBs are in the process of implementing schedule II. 7 ULBs have prepared DPR and obtained EC. Total 11129 TPD MSW generation estimated in 189 ULBs.
29	Sikkim	Gangtok and S-W Districts
30	Tamil Nadu	Two bin system introduced at Tambaram, Pallavaram, Udthagamandalam, vengadamangalam, chengalpattu, Kanchipuram.

31	Tripura	House-to house collection initiated in 11 towns and segregation practiced only in Agartala town. Good initiative taken in Agartala, Udaipur, belonia & Kailashahar.
32	Uttar Pradesh	Some good initiatives have been taken for collection, segregation, storage and transportation of MSW in Ghaziabad, Greater Noida, Gorakhpur, Basti, Balia, Varanasi and raebareli. Implementation of MSW rules being done at Lucknow and Kanpur (in selected wards) under JNNURM.
33	Uttarnachal	Pithoragarh
34	West Bengal	All of 127 local bodies have taken initiative and partially complied with the implementation of Schedule-II (collection, segregation, storage, transportation). Some good initiative has been observed at Kolkata, Noth Dum Dum, New Barrackpore, Maheshtata, Chandemagore, Bhadreswar, Kalyani and Cooch Behar. Out of 42 ULBs within Kolkata Metropolitan Area (KMA), MSW management system including waste processing & landfill facility has either developed or being developed in 39 ULBs under JNNURM, Megacity scheme, State fund, JBIC Assistance, etc. Most of the processing plants are vermin-composting.

Annexure-III

SETTING UP OF LANDFILL FACILITIES FOR WASTE DISPOSAL

S. No.	States/UTs	Landfill constructed	Initiatives taken	No. of sites identified	Name of Landfill sites constructed
1	Andaman Nicobar	INR	INR	INR	-
2	Andhra Pradesh	01	05	61	Vizianagaram
3	Arunachal Pradesh	Nil	Nil	Nil	
4	Bihar	Nil	55	02*	*Narketiaganj & Muzaffarpur (Patna yet to finalize)
5	Chandigarh	01	01	-	Dadumajra
6	Chhatisgarh	Nil	07	68	
7	Daman Diu	INR	INR	INR	
8	Delhi	INR	INR	INR	
9	Goa	Nil	03	Nil	
10	Gujarat	08*	08	26	Anjar, Bhachau, Halvad, Morbi & Wankaner. Earlier landfills –Surat, Alang, Ahmedabad (AR:2007-08).
11	Assam	INR	INR	INR	
12	Haryana	2*	INR	INR	Sirsa & Ambala (AR: 2007-08)
13	Himachal Pradesh	Nil	INR	41	-
14	Jharkhand	INR	INR	INR	
15	J & K	INR	INR	INR	
16	Kerala	Nil	24	24	
17	Karnataka	08*	04 (Mysore, Bellary, Mangalore & Belgaum)	132	Mangalore +Ullal, Karwar, Udupi, Puttur & Ankola. Landfills reported earlier- Yelahanka & Byataryanpura (AR: 2007-08)
18	Lakshadweep	INR	INR	INR	
19	Madhya Pradesh	01	05	331	Gwalior
20	Maharashtra	05*	INR	249	Nashik, Sonpeth, Ambad, Pune & Navi-Mumbai (AR:2007-08)
21	Manipur	INR	INR	INR	
22	Mizoram	Nil	09	Nil	INR
23	Meghalaya	Nil	01	01	INR
24	Nagaland	INR	INR	INR	
25	Orissa	Nil	03	64	NIL (using 103 open dumpsites)
26	Punjab	01	04	INR	Adampur (AR:2007-08)
27	Puducherry	nil	01	INR	-
28	Rajasthan	01	07	68	Jodhpur
29	Sikkim	INR	INR	INR	
30	Tamil Nadu	INR	INR	INR	INR
31	Tripura	Nil	01	13	Initiative taken at Agartala
32	Uttar Pradesh	Nil	18	19	Agra, Aligarh, mainpuri, Badam, Firozabad, Etawah, Sambhal, Kanpur nagar, Kannij, Moradabad, Gorakhpur, Basti, Balia, Varanasi, Raebareilly, Allahbad, Ghaziabad, Lucknow and Bareilly. .
33	Uttarakhand	INR	INR	INR	INR
34	West Bengal	11	60	-	Bhadreswar & Chandernagore are operational. Landfill facility is ready for N. Dum Dum, N. Barrackpore, Dum Dum, S. Dum Dum, Baranagar, Gurulia, N. Barrackpore, Barrackpore, Bansbera & Hoogly-Chinsurah.
	Total	39 landfills	216	1099	

*Annual Report: 2007-08

Annexure-III (A)

MONITORING PROGRAMME OF MSW DISPOSAL SITES (LANDFILL/ DUMPSITE)

S. No.	States/UTs	Ambient Monitoring	Air	Groundwater Monitoring	VOC/ Methane/ Leachate	Remarks
1	Andaman Nicobar	INR		INR	INR	-
2	Andhra Pradesh	INR		INR	INR	CPCB sponsored for monitoring
3	Arunachal Pradesh	INR		INR	INR	INR
4	Bihar	Nil		Nil	Nil	None
5	Chandigarh	01		01	01	Being done
6	Chhatisgarh	01		01*	INR	Domnalla & Bade Rampur*
7	Daman Diu	INR		INR	INR	
8	Delhi	INR		INR	INR	
9	Goa	INR		INR	INR	
10	Gujarat	INR		INR	INR	Not done
11	Assam	INR		INR	INR	CPCB sponsored for monitoring
12	Haryana	INR		INR	INR	
13	Himachal Pradesh	INR		INR	INR	CPCB sponsored for monitoring
14	Jharkhand	INR		INR	INR	
15	J & K	INR		INR	INR	
16	Kerala	6 (Wayanad, Kozokode, Ottapalam, Palakkad, Chittor Thadamangalam)		10*	01 (Laloor)	*Chavakkad, Guruvayur, Chalakkudy, KodungalurLLaloor, Wayanad, Kanhangad, Kasaragod, Kannur, Njeliyanparamba,
17	Karnataka	INR		INR	INR	SPCB is monitoring Groundwater, ambient air & leachate in all places.
18	Lakshadweep	INR		INR	INR	
19	Madhya Pradesh	01		01	01	Monitoring at Gwalior
20	Maharashtra	2		2	-	Nashik & Navi Mumbai
21	Manipur	INR		INR	INR	
22	Mizoram	Nil		3	Nil	Monitored ground water
23	Meghalaya	INR		INR	INR	CPCB sponsored for monitoring
24	Nagaland	INR		INR	INR	
25	Orissa	INR		INR	INR	INR
26	Punjab	Nil		Nil	Nil	Not done
27	Puducherry	INR		INR	INR	
28	Rajasthan	INR		INR	INR	Not done
29	Sikkim	INR		INR	INR	
30	Tamil Nadu	INR		INR	INR	
31	Tripura	01		01	INR	Agartala
32	Uttar Pradesh	INR		INR	INR	
33	Uttarakhand	INR		INR	INR	INR
34	West Bengal	INR		INR	INR	INR
	Total	12		19	03	11 states monitoring

Implementation Status of Schedule IV

S. No	States	Compost Plants		Vermi compost	
		Commissioned	Planned/ proposed	Commissioned	Planned
1	Andaman Nicobar	INR	INR	INR	INR
2	Andhra Pradesh	1 (Vijaywada)	Nil	16 (Bapaytla, Diwan cheruvu, Kothagudem, Sathyampeta, Suryapet, Kurnool and Dulapalli)	15
3	Arunachal Pradesh	Nil	Nil	Nil	Nil
4	Assam	INR	INR	1* (Kamrup)	INR
5	Bihar	Nil	03	Nil	Nil
6	Chandigarh	Nil	Nil	Nil	Nil
7	Chhatisgarh	11 Chirmiri, Korba, Durg, Bhillai, Rajnandgaon, Jagdaipur, Raigarh, Dhamtari, Badebacheli, Ratanpur & Shakti nagar	INR	04 Durg, Rajnandgaon, Bhillai & Dhamtari	INR
8	Daman Diu	INR	INR	INR	INR
9	Delhi	2*	INR	INR	INR
10	Goa	03	05	70*	INR
11	Gujarat	10*	Nil	76	78
12	Haryana	2* (Sirsa & Ambala)	INR	1*	INR
13	Himachal Pradesh	10	3	INR	INR
14	J & K	INR	INR	INR	INR
15	Jharkhand	INR	INR	INR	INR
16	Karnataka	5	1	-	-
17	Kerala	19	24	8	6
18	Lakshadweep	INR	INR	25*	INR
19	Madhya Pradesh	2 (Bhopal & Gwalior)	5	INR	INR
20	Maharashtra	87	6	39	INR
21	Manipur	INR	INR	INR	INR
22	Meghalaya	1	1	1	-
23	Mizoram	INR	INR	INR	INR
24	Nagaland	Nil	Nil	Nil	Nil
25	Orissa	2 (Puri & Paradeep)	13	1	-
26	Puducherry	Nil	1	Nil	Nil
27	Punjab	01	INR	01	INR
28	Rajasthan	1	2	1	-
29	Sikkim	1* (Gangtok)	INR	INR	INR
30	Tamil Nadu	3* (Tirupur, Namakkal & Udumalpet)	INR	INR	INR
31	Tirpura	01	01	2* (Belenia & Kumarghat)	INR
32	Uttrakhand	Nil	INR	Nil	INR
33	Uttar Pradesh	Nil	2 (Agra & Aligarh)	Nil	Nil
34	West Bengal	-	-	16	58
	Total	161	64	162	157

*data based on Annual report of 2007-08

SETTING UP OF WASTE-TO-ENERGY PROJECTS

S.No	States/UTs	Waste to Energy Projects		
		Commissioned	Planned/being constructed	Technology
1	Andaman Nicobar	INR	INR	-
2	Andhra Pradesh	04	Nil	3 RDF plants with one 6.6MW PP, one 6MW PP)+ 1 BG & 1 Windrow compost plant. The RDF plants at Hyderabad (700TPD), Vijaywada (275 TPD), Guntur (285 TPD), & BG-Vijaywada(20 TPD)
3	Arunachal Pradesh	Nil	Nil	Nil
4	Assam	INR	INR	
5	Bihar	Nil	Nil	None
6	Chandigarh	01 *	Nil	RDF
7	Chattishgarh	01	Nil	Dhamtari (Pallet)
8	Daman Diu	INR	INR	
9	Delhi	INR	INR	
10	Goa	INR	INR	
11	Gujarat	02	05	All are RDF plants- operational at Surat and Rajkot & being constructed at Rajkot. Under plan at Junagarh, Jamnagar, Bhavnagar & Vadodara.
12	Haryana	INR	INR	
13	Himachal Pradesh	NIL	01	Electric Incinerator
14	Jharkhand	INR	INR	
15	Jammu & Kashmir	INR	INR	
16	Karnataka	INR	INR	
17	Kerala	02 (BG at Manjeri & Thalassery)	07^+01*	^BG proposed for 3 Nos. at Pathanamthitta, one each at Adoor, North Parur, Irinjalakuda, Ponnani & Kodungallur. *one Incinerator plant proposed at Neyyattinkara.
18	Kohima	INR	INR	
19	Lakshadweep	INR	INR	
20	Madhya Pradesh	INR	INR	INR
21	Maharashtra	19 (16*+3^)	8*	*NISARGRUNA ^Biogas at Jaysingpur, Matheran, Thane
22	Manipur	INR	INR	
23	Mizoram	Nil	Nil	INR
24	Meghalaya	Nil	Nil	-
25	Orissa	INR	INR	INR
26	Punjab	INR	INR	
27	Puducherry	Nil	Nil	INR
28	Rajasthan	INR	INR	
29	Sikkim	01	INR	Incinerator
30	Tamil Nadu	INR	INR	
31	Tripura	INR	INR	
32	Uttarakhand	Nil	Nil	INR
33	Uttar Pradesh	INR	INR	
34	West Bengal	INR	INR	INR
	Total	30	22	

INR - Information not received

BG - Biogas Plants

SUMMARY OF DEMO PROJECT ON IMPLEMENTATION OF MSW RULES

S. No	City/Town	Area of City/Town (sq. km)	Population	Quantity of waste generation (MT/day)	No. of Wards	Project components for Demo-Project	Date of start & Duration	Remarks
1	North Dum Dum & Barrackpore (West Bengal)	26.45 16.89	220000 83000	70 25	30 19	<ul style="list-style-type: none"> ▪ <u>Phase-I</u>: Waste Collection, Segregation, Storage and transportation (Schedule-II) ▪ <u>Phase-II</u>: Waste Processing and Disposal 	22.4.03 18 mths --	Completed Phase-II Completed and awaited for completion Certificate & Final Report.
2	Chandigarh (UT)	114	9,00,000	300	20 (61 sectors)	<ul style="list-style-type: none"> ▪ <u>Phase-I</u>: Waste collection, segregation, storage and Transportation (Schedule-II) ▪ <u>Phase-II</u> 	16.04.03 18 mths --	Completed Phase-I and Phase -II. Waited for completion certificate & Final Report.
3	Udumalpet (Tamil Nadu)	7.41	58,893	30	33	<u>Total Project</u> : Waste collection, segregation, storage, transportation, Processing and disposal	10.10.04 24 mths	Waste collection and transportation covered for 100% wards. Installed compost plant and landfill site is under plan.
4	Kohima (Nagaland)	30	78,584	35	19	<ul style="list-style-type: none"> ▪ <u>Phase-I</u> : Waste collection, segregation and transportation ▪ <u>Phase-II</u> : DPR to be received on disposal 	12.09.05 36 mths	Completed procurement of tools/equipment for implementing schedule II (collecton, segregation, storage & transportation). Waste processing & landfill yet to be implemented.

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S. No	City/Town	Area of City/Town (sq. km)	Population	Quantity of waste generation (MT/day)	No. of Wards	Project components for Demo-Project	Date of start & Duration	Remarks
5	Mandi (Himachal Pradesh)	4.26	35,000	24	13	<ul style="list-style-type: none"> ▪ Phase-I: Waste collection, segregation, storage and transportation. ▪ Phase-II: DPR for Processing and disposal to be prepared 	14.09.05 36 mths	Completed Phase-I for implementing Schedule-II. DPR yet to be approved for waste processing and landfill construction.
6	Suryapet (Andhra Pradesh)	34	1,03,000	32	34	Total Scheme: Waste collection, segregation, storage, transportation, processing and disposal	22.09.05 24 mths	Work relating to waste collection, segregation, storage and transportation has been completed. Vermi-composed plant has been set up. Landfill yet to be constructed.
7	Itanagar (Arunachal Pradesh)	135	100000	42	59 (35+24)	Total scheme:	12.01.06 24 mths	No progress in project execution. Proposed for withdrawal.
8	South –West Districts of Sikkim	50	1,16,000	42	--	Total Scheme:	08.02.06 24 mths	Completed procurement for implementing schedule-II (collection, segregation, storage, transportation). Landfill site developed. Construction of waste processing and landfill facility yet to be provided.
9	Jalna (Mahaashtra)	70.87	2,35,000	50	18	Total Scheme	12.01.06 24 mths	Revised Action Plan prepared for the project. Completed procurement for schedule II, landfill site developed and fenced. Compost plant and landfill facility yet to be constructed.
10	Agartala (Tripura)	58.84	3,67,822	200	35	<ul style="list-style-type: none"> ▪ Phase-I: Waste collection, segregation, storage and transportation ▪ Phase-II: DPR to be prepared for waste processing and disposal 	07.02.06 36 mths	Completed procurement of Tools/equipment under phase-II for collection, segregation, storage & transportation. Landfill site identified. DPR ready for construction of waste processing and landfill facility. (

