

Annexure I
Guidelines for Planning and Implementation of Solid Waste Management Systems in Rural Areas.

1. Introduction:

- 1.1 Establishment of a sustainable solid waste management system in all our villages in a phased manner is an essential need. Initially, a proper solid waste management system with recycling and waste disposal facilities will be established in 2,000 select Village Panchayats.
- 1.2 Solid Waste Management (SWM) activities in the Village Panchayats will include collection, removal and safe disposal of wastes with the participation of every member of the Village Community.

2. Strategy:

- 2.1 Village Panchayats that have the potential of generating maximum waste such as those with population more than 10,000, Peri-urban Panchayats, Village Panchayats having Tourist/Pilgrim/Industrial Centers, Village Panchayats abutting National Highways, etc., will be covered on a priority basis. Other Panchayats will be covered in a phased manner.
- 2.2 Developing Habitation/Cluster based action plan with the involvement of local community.
- 2.3 The Gram Sabha should resolve to take up Solid Waste Management with the support of local people.

3. Identification of villages: Though it has been proposed to have Solid Waste Management systems in all the Village Panchayats, initially about 2,000 Village Panchayats fulfilling any one or more of the following criteria have been selected for implementation of the scheme on pilot basis.

- i. Village Panchayats with more than 10,000 Population;
- ii. Village Panchayats in Peri-Urban areas (Adjacent to Corporation / Municipality / Town Panchayats);
- iii. Village Panchayats of Tourism and Pilgrimage importance;
- iv. Village Panchayats with major Bus stands and Railway stations handling floating population;
- v. Village Panchayats with larger Industrial / Commercial establishments / Educational institutions;

- vi. Village Panchayats along 4 way lane roads, OMR, ECR and National highways;
- vii. Village Panchayats with Big Shandies; or
- viii. Village Panchayats functioning as Block & Taluk head quarters.

3.1 The district wise number of Village Panchayats identified for implementation of Solid Waste Management systems based on the above criteria is given in **Annexure II**.

4. Planning at Habitation / Cluster level:

4.1 For planning purpose, **Village Panchayat** will be the unit for implementation, wherever there is **only one habitation**.

4.2 In the case of Village Panchayats that consist more than one habitation, instead of considering the Village Panchayat as a single unit, it is proposed to **plan for each habitation**.

4.3 In some cases habitations will be too small to handle with. In such cases **cluster approach** similar to Mahatma Gandhi National Rural Employment Guarantee Scheme pattern may be adopted. However, suitable modifications of clusters could be done, wherever necessary, depending upon the **quantum of waste generated, no. of habitations, no. of households, etc.**

4.4 It is also important to involve the Village Poverty Reduction Committees (VPRCs) which are active Community Based Organizations in each Village Panchayat (or in the case of Village Poverty Reduction Committee being dormant, the Panchayat Level Federations) to be involved in the following activities to assist the Village Panchayat:-

- (a) Motivating and supervising the workers involved in carrying out the works
- (b) Paying the workers for the work done out of funds received from Village Panchayat.

5. Identification of sites for Segregation cum Storage spots and dumping pits:

5.1 Final disposal of solid waste should be done without contaminating groundwater, surface water and ambient air quality.

5.2 Therefore, solid waste should be segregated into organic (biodegradable) , inorganic, recyclables and hazardous waste before disposal.

- 5.3 Ideally, **segregation at source** should be done so that processing and disposal of waste is easier. It will save time, space and reduce cost of handling. However, Solid Waste Management systems should ensure that waste is segregated before final disposal. This requires **space for storage of collected waste, segregation and also space for storage of segregated waste** till finally disposed. Hence, **segregation cum storage spots should be identified and earmarked** at habitation level. Any unused Government building in the proposed area may also be used as Segregation cum storage spot.
- 5.4 Similarly, sites should be identified for dumping the segregated wastes. Normally it requires three pits. **Two pits for composting** the Bio-degradable waste and one for dumping the residual solid waste (**sanitary landfill**) with suitable protective measures against pollution. All the 3 pits should be dug up under Mahatma Gandhi National Rural Employment Guarantee Scheme.
- 5.5 As far as possible, the waste generated in a habitation should be disposed off in the **same habitation** itself. Wherever it is not feasible to do so due to **scarcity of land** or in the case of proximity to neighbouring habitations which makes it advantageous to create **common facility**, disposal could be planned at cluster level.

6. Construction of pits for dumping & Sanitary landfill:

6.1 As discussed above, segregation of waste before disposal is utmost important. The main purpose is to segregate the waste into biodegradable and non-biodegradable.

1) Biodegradable Waste:

- Waste that are completely decomposed by biological processes by micro-organisms either in presence or in absence of air are called biodegradable. e.g. **kitchen waste, animal dung, agricultural waste**, etc. **This type of waste should go to the compost pit.**

2) Non-biodegradable:

- Waste which cannot be decomposed by biological processes is called non-biodegradable waste. Recyclable Waste such as plastic, paper, old cloth etc., have economic value and hence can be recovered. **This can be sold as Scrap.** Non-recyclable Waste which do not have economic value of recovery i.e., tetra packs, carbon paper, thermocoal, etc., should go to the **sanitary landfill sites.**

- 6.2 **Excavation of Compost pits:** Pit dimensions may vary depending upon the quantum of waste generated and land availability. Compost pits of various dimensions will be communicated by Director of Rural Development and Panchayat Raj. However, the Technical persons concerned are permitted to alter the dimensions of the pits while preparing estimates based on the local requirement.
- 6.3 The traditional method of composting i.e., depositing a layer of biodegradable waste topped with local soil / sand mixed with cow-dung and repeating the process till the pit becomes full may be adopted. Wherever possible, Vermi-Composting can also be taken up.
- 6.4 One compost pit can be used for 3 to 6 months based on the quantum of deposit of waste. A minimum of 2 compost pits shall be excavated in a habitation/cluster. The size of the pit should be such that it is sufficient to hold the waste generated for atleast 3 months, and after the first pit becomes full, another 3 months composting time should be given. During the 3 month composting period, bio-degradable waste will be dumped into the second pit. By the time the second pit gets filled, the bio-degradable waste in the first pit would have turned into compost manure. The cycle should be repeated.
- 6.5 **Pits for Sanitary Landfill for disposing non-recyclable wastes:** The non-recyclable inorganic solid wastes like glass, broken tiles, building waste materials, etc., that is not suitable for any further processing is transported and disposed by secured land filling operation. For this purpose, a sanitary landfill sites like low yield lands, No risk of ground water pollution etc, has to be identified and developed.

7. Manpower Requirements: Thooimai Kaavalar (தூய்மை காவலர்)

- 7.1 **Involving Mahatma Gandhi National Rural Employment Guarantee Scheme workers in Solid Waste Management activities:** In every habitation Mahatma Gandhi National Rural Employment Guarantee Scheme workers may be selected and involved in Solid Waste Management activities depending upon the need. In any case the total number of workers should not exceed the ratio of one worker per 150 households.
- 7.2 These workers should be involved in the entire process of Solid Waste Management activities such as door to door collection of waste, segregation, transporting to dumping site, etc.

- 7.3 **Thooimai Kaavalar (தூய்மை காவலர்)** will be provided with a jacket, a cap and a pair of gloves every year as per guidelines to be given by the Director of Rural Development and Panchayat Raj.
- 7.4 A simple training may be given to the workers on various aspects of Solid Waste Management activities.
- 7.5 Mahatma Gandhi National Rural Employment Guarantee Scheme workers may be rotated to different habitation/cluster based on need, but within the same Village Panchayat.
- 7.6 Each worker should be paid wage rate as notified from time to time under Mahatma Gandhi National Rural Employment Guarantee Scheme.

8. Village Poverty Reduction Committee / Panchayat Level Federations to act as a Nodal agency to supervise the Thooimai Kaavalars:-

- 8.1 The Village Panchayat with the assistance of Village Poverty Reduction Committee/Panchayat Level Federations should form the Solid Waste Management Workers Group comprising of these workers.
- 8.2 Wages for each household engaged under Solid Waste Management activity will be met out from Mahatma Gandhi National Rural Employment Guarantee Scheme funds for the first 100 days. For beyond 100 days, wages will be paid from Solid Waste Management funds.
- 8.3 The Village Panchayat should transfer funds from its Solid Waste Management Account to Village Poverty Reduction Committee / Panchayat Level Federations for monitoring and disbursement of wages to workers. (The President is also the ex-officio Chairman of Village Poverty Reduction Committee). Mahatma Gandhi National Rural Employment Guarantee Scheme wage rate shall be adopted for payment during this period also.
- 8.4 The involvement of Village Poverty Reduction Committee / Panchayat Level Federations will ensure participation of women Self Help Groups and this will also ensure a convergence of Panchayat Raj system with Community Based Organisations.

9. Collection and transporting the waste: For proper implementation, the following facilities have to be ensured in each of the identified Village Panchayat:

- One tricycle for every 300 households, taking into consideration the vehicles already available.
- To have proper implements and equipments required for cleaning & collection of garbage.
- To have fixed days and timings for streets & habitations for garbage collection.
- Details of the above timing have to be displayed in respective streets & Habitations for proper follow up.

10. Provision of Shredding Machine and Cleaning Machine: One Shredding Machine and Cleaning Machine per District based on the requirement can be provided under this Scheme. This Machine can be given to the biggest Panchayat in the Block in which Solid Waste Management system is implemented. This Panchayat shall maintain and use this machine for processing waste plastic so that they get higher scrap value. Anyone including other Village Panchayats can sell plastic waste to the Panchayat which is operating shredding machine.

11. Regular Cleaning activities: The Sanitary workers/Sweepers already working in the Village Panchayat and Mahatma Gandhi National Rural Employment Guarantee Scheme workers engaged for Solid Waste Management activities, shall be allotted specific roads/streets/lanes for the regular activities like sweeping, Drain cleaning, street cleaning, etc. These workers should keep the allotted roads/streets/lanes clean and tidy with no stagnant water.

12. Information Education and Communication activities:

- 12.1 To implement the scheme effectively, suitable training and awareness programmes shall be organized at the District, Block and Village Panchayat level for officials, Panchayat Raj Institution functionaries & other stake holders.
- 12.2 Intensive Information Education and Communication activities should be carried out in the Village Panchayat selected for Solid Waste Management activities atleast for 15 days prior to commencement of actual implementation of the Programme.
- 12.3 Special Grama Sabha shall be conducted during this preparatory period to explain the modalities of implementation of Solid Waste Management activities in the Panchayat. Gram Sabha should also

resolve to take up Solid Waste Management with the support of local people.

12.4 The funds required for this may be met out from the Information Education and Communication fund of Swachh Bharat Mission(Gramin).

13. Solid Waste Management Plan and Budget requirement:

13.1 The following items of expenditure shall be permissible under Solid Waste Management Scheme funds as per these guidelines and under Mahatma Gandhi National Rural Employment Guarantee Scheme.

- i) **Purchase of tricycles:** One Tricycle for every 300 households will be provided from Solid Waste Management Scheme funds at the rate of Rs. 20,000 per Tricycle. The total number of tricycles required will be arrived at after taking into account the tricycles already sanctioned.
- ii) **Purchase of Shredding and Cleaning Machines:** One Shredding Machine and Cleaning Machine will be provided for each district at the rate of Rs.3 lakh each from Solid Waste Management Scheme funds.
- iii) **Implements requirement for cleaning:** Rs. 25,000 will be provided as one time grant for each identified Village Panchayat for purchase of implements for Solid Waste Management activities from Solid Waste Management scheme funds.
- iv) **Cost of Manpower:** Wages for the first 100 days will be provided from Mahatma Gandhi National Rural Employment Guarantee Scheme funds. In respect of the actual number of days worked over and the above 100 days during the remaining period of the first year of implementation, wages can be paid from Solid Waste Management Scheme funds. This provision for wages from Solid Waste Management scheme fund will be provided only for the first year of implementation for which the workers are engaged. In subsequent years, the Village Panchayat may use its own revenue generated from Solid Waste Management activities and shortfall can be met out from General Funds / O&M component of Swachh Bharat Mission(G).

- v) **Jacket, gloves, cap, etc., for the workers:** A jacket, a cap and a pair of gloves will atleast be provided from Solid Waste Management Scheme funds.
- vi) **Contingency expenditure:** Rs.10,000 will be provided as contingency expenditure for each Village Panchayat as one time grant from Solid Waste Management Scheme funds.
- vii) **Excavation of Dumping pits from Mahatma Gandhi National Rural Employment Guarantee Scheme fund:** These works to be executed under Mahatma Gandhi National Rural Employment Guarantee Scheme.

As per the above, it is estimated that on an average each identified Village Panchayat may require Rs.5.50 lakh and the total amount required for 2,000 Village Panchayats is estimated to be Rs.110 crore as given below:

Component wise Fund requirement for 2,000 Village Panchayats

Sl. No.	Details	Amount (Rs. in crore)
1.	Wages for Solid Waste Management workers (for 200 days for the first year of implementation)	80.00
2.	Tricycle (One Tricycle per 300 Households)	17.00
3.	Jacket and other items	5.00
4.	Implements required for Solid Waste Management	5.00
5.	Shredding & Cleaning Machines (one per District)	1.00
6.	Other contingencies	2.00
Total		110.00

However, Director of Rural Development and Panchayat Raj is permitted to make necessary changes in the component wise allocation based on the contingencies and within the above overall budget requirement.

13.2 In respect of the Village Panchayats where Solid and Liquid Waste Management is implemented in Project mode as per G.O.Ms. No. 116, Rural Development and Panchayat Raj (CGS-1) Department, dated

4.9.2013, the fund allocation under these guidelines will be restricted to allocation for Manpower requirement only. These Village Panchayats will be permitted to involve Mahatma Gandhi National Rural Employment Guarantee Scheme workers as provided under para 13.1. (iv) since separate funds for O&M is not provided under the above guidelines.

In case of major Panchayats that require **treatment of waste** through installation of **Bio-gas plants, Bio-methanation plants, etc.**, for producing and using energy, manure, etc., such works can be taken up under any other ongoing schemes as per the respective scheme guidelines.

14. Funds: The Government have allocated Rs. 200 crore during 2014-15 for implementation of Solid Waste Management in rural areas. The Government have already sanctioned Rs.44.10 crore for purchase of 17,638 Tricycles in 12,524 Village Panchayats. Out of the balance amount of Rs.155.90 crore, approximately, Rs. 110 crore will be required for implementation of Solid Waste Management Systems in the identified 2000 Village Panchayats. Director of Rural Development and Panchayat Raj shall release funds to the District Collectors concerned based on the proposals received from the districts.

15. Implementing Agency: Village Panchayat will be the implementing agency for creation of facilities like Compost pits and dumping pits (under Mahatma Gandhi National Rural Employment Guarantee Scheme), procurement of Tri-cycles, implements for cleaning, Jacket, etc., for workers and Operation & Maintenance of Solid Waste Management activities. Existing Financial code procedures should be duly followed by the implementing agency in the procurement of above items.

16. Maintenance of Accounts:

16.1 The Village Panchayat shall maintain funds in a separate Savings Bank account in order to monitor the fund flow under Solid Waste Management activities and to ensure the sustainability of the scheme. The operation of this account will be similar to the operation of Scheme fund Account No.3 of Village Panchayat. The District Collectors shall release the funds to the newly opened Solid Waste Management Scheme Fund Account of the Village Panchayats concerned.

16.2 In respect of the Village Panchayats where Solid and Liquid Waste Management is implemented in Project mode as per G.O.Ms. No. 116, Rural Development and Panchayat Raj (CGS-1) Department, dated 4.9.2013, the fund allocation under these guidelines will be restricted to allocation for Manpower requirement only.

17. Solid Waste Management Committee at the Panchayat level

In order to monitor the day to day activities, Solid Waste Management Committee shall be constituted in the Village Panchayat concerned with the following members:

- 1) President
- 2) Vice-President
- 3) Ward Member concerned
- 4) One Local Village Poverty Reduction Committee/Panchayat Level Federations representative for every Habitation and
- 5) Sanitation Mate/Worksite Supervisor engaged under Mahatma Gandhi National Rural Employment Guarantee Scheme.

The Ward Member and the Village Poverty Reduction Committee/Panchayat Level Federations representative of the Habitation concerned will monitor the Solid Waste Management activities in their respective areas.

18. Social Audit: Grama Sabha shall conduct the Social Audit of Solid Waste Management activities in the respective Village Panchayat. The entire operations with budget and expenditure should be placed in all the Grama Sabha meetings to ensure transparency and also for suggestions and improvements.

19. Monitoring:

The implementation of Solid Waste Management Projects shall be periodically monitored during inspections undertaken by State level, District level senior officials and by Block level officials. Performance of the Solid Waste Management systems shall be regularly monitored by the **Solid Waste Management Committee** in the Village Panchayat and Grama Sabha.

The Secretary to Government, Rural Development and Panchayat Raj Department is empowered to modify any of the above guidelines in consultation with the Director of Rural Development and Panchayat Raj based on the exigencies that may arise from time to time in the implementation of the Scheme.

GAGANDEEP SINGH BEDI
SECRETARY TO GOVERNMENT

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K. Saravanan
Section Officer
[Signature]

ANNEXURE II

NO. OF VILLAGE PANCHAYATS PROPOSED FOR ESTABLISHMENT OF SOLID WASTE MANAGEMENT SYSTEM (SWMS)

SL.No	DISTRICT NAME	NO.OF BLOCKS	NO.OF VILLAGE PANCHAYATS	NO.OF VILLAGE PANCHAYATS PROPOSED
1	KANCHEEPURAM	13	633	198
2	TIRUVALLUR	14	526	130
3	CUDDALORE	13	683	64
4	VILLUPURAM	22	1099	120
5	VELLORE	20	743	140
6	TIRUVANNAMALAI	18	860	86
7	SALEM	20	385	58
8	NAMAKKAL	15	322	74
9	DHARMAPURI	8	251	44
10	KRISHNAGIRI	10	333	30
11	ERODE	14	225	68
12	TIRUPPUR	13	265	90
13	COIMBATORE	12	228	100
14	THE NILGIRIS	4	35	11
15	THANJAVUR	14	589	80
16	NAGAPATTINAM	11	434	56
17	TIRUVARUR	10	430	40
18	TIRUCHIRAPPALLI	14	404	88
19	KARUR	8	157	22
20	ARIYALUR	6	201	25
21	PERAMBALUR	4	121	20
22	PUDUKKOTTAI	13	497	74
23	MADURAI	13	420	56
24	THENI	8	130	20
25	DINDIGUL	14	306	60
26	RAMANATHAPURAM	11	429	44
27	VIRUDHUNAGAR	11	450	60
28	SIVAGANGAI	12	445	38
29	TIRUNELVELI	19	425	42
30	THOOTHUKKUDI	12	403	50
31	KANNIYAKUMARI	9	95	12
Total		385	12524	2000

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