

25/4/15 42 P
8274
25/4/15
KARNATAKA
ep

IN THE HON'BLE NATIONAL GREEN TRIBUNAL
AT NEW DELHI

ORIGINAL APPLICATION NO. 199 OF 2014

BETWEEN:

Almitra H. Patel and another PETITIONERS

AND:

Union of India and others RESPONDENTS

**AFFIDAVIT FILED BY THE SECRETARY TO GOVERNMENT,
URBAN DEVELOPMENT DEPARTMENT,
GOVERNMENT OF KARNATAKA – RESPONDENT**

I, T.K Anil Kumar, S/o Sri T.K. Krishna Das, aged 44 years, working as Secretary to Government, Urban Development Department, Government of Karnataka, Vikasa Soudha, Bengaluru, Karnataka State, do hereby solemnly affirm and State on oath as follows :-

1. I submit that I have been working as Secretary to Government, Urban Development Department (UDD), Vikasa Soudha, Bengaluru since 9th July 2013 and know the facts of the case and hence I am swearing to this Affidavit.

2. I have great respect for the orders passed by this Hon'ble Tribunal and I have been complying with the orders passed by this Hon'ble Tribunal whenever I have been called upon to do so.



No. of Corrections:

4/2

[Handwritten signature]

8275

3. I respectfully submit that, as per the directions of this Hon'ble Tribunal, the judgment passed by this Hon'ble Tribunal with respect to Appeal No. 70 of 2012 in the case of "Capt. Mall Singh & others Vs. Punjab PCB & others" has been examined and most of the directions issued by this Hon'ble Tribunal are being adopted/followed in the State of Karnataka. The Compliance Report of the same is enclosed herewith and marked as **ANNEXURE-R1**.

4. I respectfully submit that there are 219 Urban Local Bodies (ULBs) in the State of Karnataka. These ULBs generate approximately 8500-9000 tonnes of Municipal Solid Waste (MSW) every day; of which, Bengaluru City itself generates 50% of the total waste and remaining City Corporations (CCs) generate approximately 2000 tonnes, City Municipal Councils (CMCs) approximately generate 1500 tonnes, Town Municipal Councils (TMCs), Town Panchayaths (TPs) and Notified Area Commands (NACs) approximately generate 1000 tonnes per day.

5. I respectfully submit that the State Government has brought out Solid Waste Management (SWM) State Policy in the year 2004 and the same is enclosed herewith and marked as **ANNEXURE-R2**.

6. I respectfully submit that the following is SWM

Status Report in the State;

No. of Corrections:



100

False

8276

Total no. of ULBs in Karnataka (Excluding BBMP & 5 NACs)	213
No. of ULBs possessing landfill sites	207
No. of ULBs which are yet to procure landfill sites (Devanahalli, Vijayapura, Dandeli & Kolar)	4
No. of landfill sites under dispute / public opposition (among the 207) (Tumkur, Kumta, K.R. Pet & Yelandur)	4
No. of ULBs having common landfill sites (Ullala TMC in Mangalore CC & Saligrama TP in Udupi CMC)	2
No. of ULBs in which basic infrastructures at landfill sites are established (basic infrastructure includes compound wall, approach road, tree plantation, bore well, watchman shed & electrification)	180
No. of ULBs in which composting facilities such as Windrow platforms / vermi sheds are constructed	129
No. of ULBs having 100% processing facility in place	17
No. Of ULBs having partial processing facility in place	112
No. of ULBs in which sanitary landfill facilities are developed (Mangalore, Belgaum, Udupi, Shimoga, Karwar, Puttur, Kundapur, Gulbarga, Bellary, Bagalkot, Mudhol, Chitradurga and Mysore)	13
Number of ULBs in which Door to Door collection of waste is carried out	205 (5 ULBs 100% and rest are partial)
Number of ULBs in which segregation is started partially	106

7. I respectfully submit that Mangalore City Corporation, Kundapuara and Moodabidri have 100% door to door waste collection, transportation, processing & disposal facilities as per the provisions of Municipal Solid Waste (MSW) Rules 2000.

8. I respectfully submit that through 'Clean Our City Programme', 100% door to door waste collection is being implemented at Raichur, Kolar and Chamarajanagar CMCs

No. of Corrections:

106

[Handwritten Signature]



8277

along with source segregation. This Clean Our City programme with suitable modifications will be adopted in other ULBs too.

9. I respectfully submit that out of the data received by the Deputy Commissioners of the State, 40 ULBs have 100% door to door waste collection in place, 132 ULBs have 60-90% door to door waste collection in place, Kolar & Moodabidri have 100% source segregation and 159 ULBs practice partial source segregation.

10. I respectfully submit that out of approximately 4000 tonnes of waste generated in the State, for about 1,635 tonne capacity waste, processing facilities have been developed in the State (excluding Bruhat Bengaluru Mahanagaraplike (BBMP)) and 16 ULBs have individual sanitary landfill facility. 207 ULBs (excluding BBMP) in the State has already procured 2,138 acres of land waste processing & disposal of Municipal Solid Waste (MSW).

11. I respectfully submit that since there was a major focus on door to door waste collection and transportation, considerable progress is achieved in systematic waste collection & transportation, but waste processing & disposal require some more handholding. Aerobic composting, vermin-composting & bio-methanisation are preferred technologies for waste processing. Sanitary landfill facility preferred for CCs &

No. of Corrections:



Handwritten initials

Handwritten signature

8278

CMCs. While engineering pit with High Density Polyethylene (HDPE) liner for disposal of inert waste is being constructed in TMCs & TPs. Irrespective of waste processing technology followed, instructions have been given to all the ULBs to restrict the quantity of inert waste going for land filling to be less than 20% so that, processing & recovery/recycling become invariable options & burden on landfill can be minimised.

12. I respectfully submit that processing of wet waste by adopting composting/vermin-compost/Bio-methanisation should be done locally in the available landfill sites & output can be used locally and only dry waste/recyclable waste can be sent to clustered Refuse Derived Fuel (RDF) or cement kilns or other industries which can use the dry waste as fuel.

13. I respectfully submit that the State of Karnataka is bound by directions of the Hon'ble High Court of Karnataka in a waste management related Public Interest Litigation. Already, the Deputy Commissioners of the State have submitted the site specific action plans in the form of Affidavits in the year 2013. The Hon'ble High Court is reviewing & monitoring the progress achieved through conducting regional Lokadalath. ULBs have developed necessary infrastructure (112 partial and 17 full-fledged) required for decentralised management of Municipal Solid Waste Management (MSWM). So retraction at this point



of Corrections:

Handwritten signature/initials

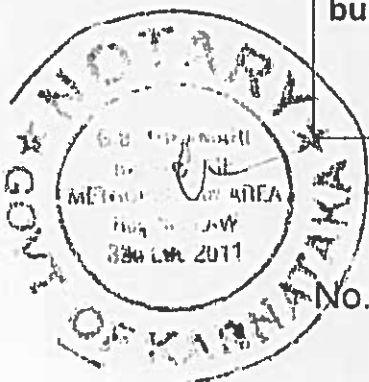
Handwritten signature: Falke

of time leads to wastage of financial resources as well as time spent on development of the same.

14. I respectfully submit that instructions have been given to ULBs to develop a green fence along the compound wall would be made of 5 rows of trees of type given below. The rows would be separated by 1.5 m. Trees proposed are Row 1: Polyanthia; Row 2: Flowering plants; Row 3: Pongamia; Row 4: Smell absorbing plant; Row 5: Local / other commercially valuable species.

15. I respectfully submit that the State of Karnataka vide Government Order No. UDD 23 TCT 2004, Bangalore, dated 6.1.2005 has fixed SWM user fee based on the plinth area of the building which was revised on 7-9-2009 through Circular No. DMA:SWM:SHG:CR:13:08-09. The details of existing user fee structure are as follows;

Type of building	Type of ULB	Built-in Area		
		Built-in Area less than 1000 sq ft		Built-in Area more than 1000 sq ft
Residential buildings	City Corporation & City Municipal Councils	Rs.15/-		Rs.30/-
	Town Municipal Councils & Town Panchayaths	Rs.10/-		Rs.15/-
Type of building	Type of ULB	Built in area		
		Area less than 500 sq ft	Area between 500 -1000 sq ft	Above 1000 sq ft



No. of Corrections: *4/2*

F. J. J. J.

8280

Commercial establishments	City Corporation & City Municipal Councils	Rs.30/-	Rs.40/-	Rs.50/-
	Town Municipal Councils & Town Panchayaths	Rs.20/-	Rs.25/-	Rs.30/-
Bulk waste generators (Hotels, Kalyana mantapa and nursing home or others)	City Corporation & City Municipal Councils	Rs. 125/-	Rs.250/-	Rs.500/-*
	Town Municipal Councils & Town Panchayaths	Rs. 75/-	Rs. 150/-	Rs.300/-*

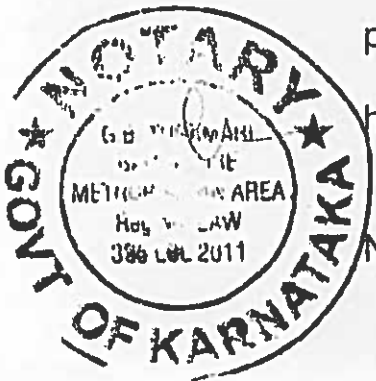
- In addition, ULBs can collect additional Rs.200 for each marriage, functions

16. I submit that based on the instructions given by the Hon'ble Lokadalath vide Circular Nos. DMA/NN/SWM/27/2004-05 dated 8-4-2008, DMA/SWM/Lokadalath/CR-10/2010-11, dated 14-9-2011, DMA/SWM/Lokadalath/CR-10/2010-11 dated 6-2-2012 and DMA/SWM/RagPickers/CR-25/2012-13 dated 12-10-2012, instructions have been given to all ULBs to take steps to integrate rag pickers in waste management to give identity cards and to provide them with safety gears.

17. I respectfully submit that Affidavit submitted by the BBMP regarding SWM implementation status in BBMP along with proposed action plan for compliance of MSW Rules 2000 is enclosed herewith and marked as **ANNEXURE-R3**.

18. I respectfully submit that the State's tentative action plan as proposed by Central Pollution Control Board is enclosed herewith and marked as **ANNEXURE-R4**.

No. of Corrections:



[Handwritten Signature]

8201

19. I respectfully submit that this Affidavit has been prepared based on the Affidavits submitted by the Deputy Commissioners of all the districts.

WHEREFORE, I respectfully pray that this Hon'ble Tribunal may be pleased to take this Affidavit on record in the above case in the interest of justice and equity.

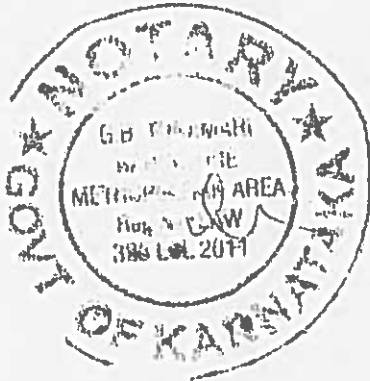
[Signature]
DEPONENT

VERIFICATION

I, the above named Deponent do hereby verify that all the facts stated in the affidavit are true to the best of my knowledge and nothing material in concealed there from.

[Signature]
DEPONENT

Verified at Bengaluru on 24th April, 2015.



SWORN TO BEFORE ME

[Signature]
G.B. TURAMARI
ADVOCATE & NOTARY
No. 46/1, Behind Binny Mill
1st Main Road, Ganganagar Extn.
BANGALORE - 560 032

Notary Stamps Not Available in Karnataka State, Since...

[Signature]
Bengaluru

No. of Corrections:

[Handwritten '0']

2292

Urban Development Department

Government of Karnataka



State plan for implementation of Municipal Solid Waste
(Management & Handling) Rules 2000

(In compliance with Hon'ble National Green Tribunal
original application no 199 of 2014)

April-2015

8284

<p>Contracting the collection of wastes to a competent organization.</p> <p>-Privatizing through ragpickers and kabaris or any suitable agencies.</p> <ul style="list-style-type: none">• Procedure of collection: <p>The entire city should be divided into zones and the zones should be further divided into beats. Each of the beats should be manned with adequate number of sanitary workers with adequate required facilities Cycle rickshaws or similar vehicle should be provided to each of the sanitary workers.</p> <p>The rickshaw should be equipped with 4 and 8 bins of about 60 and 80 litre capacity. Each of the sanitary workers should be made responsible for 200 and 400 houses depending on the workload. These workers should go to the houses on pre determined time to collect the waste.</p> <p>Community bins should be installed, if no door to door collection is possible in certain areas like congested narrow lanes or slums and residents should be made aware of putting their wastes into the bins in segregated manner as specified.</p>	<p>Department for outsourcing the SWM activities.</p> <p>The ULBs earmark sufficient funds for operation & maintenance of obligatory functions such as street lighting, SWM, water supply in their annual budget.</p> <p>State releases grants for procurement of tools, equipment & vehicles required for providing SWM services as well as for creation of infrastructure for centralised/decentralised waste processing & disposal facilities.</p> <p>Comprehensive circulars have been issued vide circular No: DMA/SWM/CESS/CR03/07-08 dated 15-7-2008, circular no. DMA/SWM/LOKADALATH/CR-10/2010-11, dated 14-9-2011 & circular no DMA/12/SWM/2014-15, dated 10-10-2014 and review meetings have been conducted to emphasize on the need for source segregation in order to achieve effective processing and disposal of MSW. The circular instructs, a) the ULBs to divide the city into Command Areas (CA) and the ULBs have been asked to prepare micro level plan for each command area which has details regarding the waste generators in the CA, vehicle/push cart number deployed for that CA, route map for the primary collection and secondary collection vehicles and details of the person who is deployed in that CA b) collect the</p>
-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

	<p>preferably in bags or sacks.</p> <ul style="list-style-type: none"> • Wet wastes should not be disposed of in plastic carry bags. • Keep domestic hazardous waste listed above separately, for disposal at the place may be as arranged for by the ULB. • A private society, association of flats/multistoried buildings etc. shall provide a community bin i.e. a being large enough to hold the waste generated by the members of their society/association for storage of wet domestic wastes and instruct all residents to deposit their domestic waste in this community bin to facilitate collection of such waste by the local body from the designated spot. • In case of multi storied buildings where it may be difficult for the waste collector to collect recyclable waste from the doorstep, the association of such buildings may optionally keep one more community bin for storage of recyclable material. • In slums, where because of lack of access or due to narrow lanes, it is not found convenient to introduce house-to-house collection system, community bins of suitable sizes should be placed at suitable locations by the local body to facilitate the storage of waste generated by them. They may be directed to put their waste into community bins before the hour of clearance each day 	
5	<p>Vegetable/Fruit Markets Waste</p> <p>These markets produce large volumes of</p>	<p>DMA/SWM/ LOKADALTH/CR-10/2010-11, dated 14-9-2011 & circular no DMA/12/SWM/2014-15,</p>

	<p>performed at these places and unhygienic conditions are created. Suitable containers with lids which may match with the primary collection or transportation system of local bodies should be provided by these establishments at their cost and the sites of their placement should be finalized in consultation with urban local bodies to facilitate easy collection of waste. On-site bio-digesters for food waste should be encouraged.</p> <ul style="list-style-type: none"> • The special arrangement should be made for collection of waste from marriage halls, kalyan mandaps, community halls, etc. daily on a full-cost recovery basis. The cost of such collection could be built into the charges for utilizing such halls. This service may be provided preferably through a contractor or departmentally as the local bodies deem fit. On-site, processing of food wastes by bio-methanation and composting may be encouraged 	
7	<p>Hospitals/Nursing Homes/Pathological Laboratories/Health Care Centres These establishments produce bio-medical as well as ordinary waste. They should be directed that:</p> <ul style="list-style-type: none"> • They shall refrain from throwing any bio-medical waste on the streets or open spaces, as well as into municipal dust bins or domestic waste collection sites. • They shall also refrain from throwing any ordinary solid waste on footpaths, streets or open spaces. • They are required to store waste in 	<p>As per the provisions of Bio-medical Waste (Management & Handling) Rules 1998, biomedical waste generators are responsible for handling the bio-medical waste. However in a circular no DMA/SWM/BIOMEDICAL WASTE /CR-13/10-11, dated 29-12-2011, ULBs have been asked to take appropriate measures so that bio medical waste does not mix with MSW and to direct all the primary health care centres (both Government & private) to dispose</p>

Containers could be provided at such locations and small collection charge levied for receiving such waste at such sites and for its onward transportation. Rates may be prescribed for such collection by local bodies. Contracts could also be given for managing such sites.

- Local bodies should prescribe the rate per tonne for the collection, transportation and disposal of construction waste and debris and notify the same to the people.
- Every person who is likely to produce construction waste may be required to deposit with the concerned local body an approximate amount in advance at the rates as may be prescribed by the local body from time to time, for the removal and disposal of construction waste from his premises by the local body. Such amount may be deposited at the time when the building permission is being sought and in cases where such permission is not required, at any time before such waste is produced.
- The charges for removal of construction waste to be doubled for those who fail to deposit the amount in advance.
- Large local bodies may provide skips (large containers) to the waste producers on rent for the storage of construction waste so that double handling of the waste can be avoided or use front end loader & trucks to pick up such waste. In small towns this may be done manually using trucks, tractors and manpower.

8292
8302

	<p>enable them to trim the trees and lawns accordingly and keep the waste ready. This waste may be got collected through a contractor or departmentally as deemed appropriate by the urban local authorities. Cost recovery may be insisted upon, based on the volume of waste collected.</p>	
10	<p>Dairy and Cattle-Shed Waste</p> <p>The dairies and cattle breeders having sheds within the city limits should be asked to move the cattle sheds outside the city limits and until this is implemented they should be directed not to stack the cow dung, grass or other stable wastes within their premises or on the roadside. They must transfer the waste produced by them daily into the specified municipal storage containers nearby, which should be collected at regular intervals by local bodies for which they should pay based on quantity.</p>	<p>This is not a significant waste stream in the State, in fact cowdung slurry has got huge market potential as ULBs require it for spraying on windrows.</p>
11	<p>provision of litter bins on streets and public places</p> <ul style="list-style-type: none">• With a view to ensure that streets and public places are not littered with wasted materials such as used cans, cartons of soft drinks, used bus tickets, wrappers of chocolates on empty cigarette cases and the like generated while on a move, litter bins may be provided on important streets, markets, public places, tourist spots, bus and metres of 250 metres depending on the local condition. Similar bins for disposal of animal droppings could be placed in posh areas.	<p>This has been addressed in State policy and most of ULBS are placing litterbins in commercial areas, important streets and public places where floating populations litter. These bins will be cleaned during street sweeping activities.</p>

8294

8204

	<ul style="list-style-type: none"> • Designated to be easy to operate, handle, transfer and transport. 	mantaps/other public places .
13	<p>Transportation of waste</p> <p>Transportation of the waste stored at waste storage depots at regular intervals is essential to ensure that no garbage bin/container overflows and waste is not seen littered on streets.</p> <p>Waste should be transported in covered vehicles. These vehicles must be designated as below:</p> <ul style="list-style-type: none"> • Multi- container vans. • Covered, as the waste must not be visible to the eyes or be exposed to the open. • Bins or containers of wastes must be cleared and transported at regular intervals. <p>Transportation should be done:</p> <ul style="list-style-type: none"> • Daily at community bins. • Before they start overflowing, if required, twice or thrice a day. • Depending on the characteristic of waste, they should follow different routes, as the disposable site is different for the different type of wastes. 	<p>ULBs are using compactors/tipper trucks/tractor trailers/dumper placers/tractor placers for Transportation of waste depending upon their requirement and prevailing waste management process.</p>
14	<p>Disposal of waste (at cluster level, as proposed)</p> <ul style="list-style-type: none"> • ULBs shall adopt suitable technology or combination of such technologies to make use of wastes so as to minimize the burden on landfills. • The biodegradable wastes shall be 	<p>All the municipalities are directed to initially develop basic infrastructure like compound wall, approach road, water supply, electrification and watchman shed at landfill sites. They have been directed to consequently develop composting facility for treating wet waste and</p>

It is a controlled combustion process for burning solid wastes in presence of excess air (oxygen) at high temperature of about 1000 oC and above to produce gases and residue containing non-combustible material. One of the most attractive features of the incineration process is that it can be used to reduce the original volume of combustible MSW by 80-90%. In some of the newer incinerators designed to operate at temperatures high enough to produce a molten material before cooling it may be possible to reduce the volume to about 5% or less. A complete sterilization is achieved due to burning of even biologically hazardous waste, thus avoiding epidemics. MSW can also be co-fired as an additional source in coal-based power plants.

Incineration with Heat recovery

The incineration process, which is used for volume reduction, may also lead to heat recovery. With existing incinerators, waste heat boilers can be installed to extract heat from combustion gases without introducing excess amounts of air or moisture.

Pelletisation / Refuse Derived Fuel (RDF)

Pelletisation is a process of producing fuel pellets from MSW. The raw MSW is processed for concentrating the combustible fraction of it by segregating the non-combustible portion. The complete process involves drying, removal of non-combustibles by air separation (density separation), grinding or shredding of combustible fraction usually by a hammer mill, mixing and production of pellets under high pressure. The pellets

methanogenic bacteria. In anaerobic process, the organic compounds are converted to methane and carbon dioxide.

Vermicomposting

Vermicomposting involves stabilization of organic waste through the joint action of earthworms and aerobic microorganisms. Initially, microbial decomposition of biodegradable organic matter occurs through extra cellular enzymatic activity (primary decomposition). Earthworms feed on partially decomposed matter consuming 5 times their body weight of organic matter per day. The ingested food is further decomposed in the gut of the worms resulting in particle size reduction. The material or worm cast excreted is a fine, odorless, granular product. This can be used serve as a bio-fertilizer in agriculture. Besides providing micro and macro nutrients this is also a rich source of beneficial microorganisms and exudates of worms, which can stimulate plant growth and enhance productivity.

Ultimate Disposal of MSW

Landfilling

Landfilling is the most simple and economical measure as far as natural decomposition occurs at the disposal site. Unscientific and ordinary Landfilling is the common practice for MSW disposal in most of the towns. This is causing serious environmental degradation in the area. Compaction and leveling of waste and final covering by earth are rarely observed practices at disposal sites, and these low-lying disposal sites, being devoid of a leachate collection system. As, no segregation of MSW at source takes

8300

~~8310~~

agencies assign a low priority to this work resulting in poor services. Today, there is an urgent need to overhaul the system by making substantive changes in management & technology, which would inevitably require capital investment far beyond the current budgetary capacity of the municipal agencies. Any solid waste management system will require provision of financial resources for its smooth running. The present structure of revenue does not contain any instrument specifically dedicated to the needs of SWM. It is also obvious that in future the municipal agency will find it increasingly difficult to draw the required amounts from the existing revenue resource. As per the Manual on Solid Waste Management by the Ministry of Urban Development, 2000, the annual requirement of funds for efficient SWM reveals that when the principle of Full Cost Pricing is applied the Total Annual requirements are often 2-3 times the amount being allocated at present. Thus, it is important that the beneficiaries also share the responsibility of waste management following the 'Polluters pay principle'. The SWM will have to provide SWM Tax/Cess, and to cover not only the annual cost of operation, required to be repaid but also the indirect costs. This alone will assure the financial viability of the effective solid waste management in the cities. The concerned ULBs should work out the SWM Tax/Cess to be charged from the beneficiaries depending upon their economic status. A provision of cross-subsidy should be included in such exercise. The present solid waste cleansing

	burden on the local body.	,parks and other premises of Public Utility , non segregation of waste, irregular deposit of rubbish or filth or any solid waste, deposit of carcasses of animals or filth in improper places, dumping of building waste irregularly.
18	<p>Redressal of Public Grievances</p> <p>The local body should draw up a citizen's charter clearly stating what level of service it proposes to provide to the citizens and how soon citizens can expect their grievances to be attended. Sanitation being very vital for health and environment, efficient machinery should be organized by the local body to receive public complaints and attend to them expeditiously. Formats may be prescribed for receiving such complaints, replying to the applicants as soon as the complaints have been redressed and for monitoring the pending complaints.</p>	<p>The Government of Karnataka, as part of its reforms process, introduced the computerized Public Grievance Redressal System in the ULBs of Karnataka to enable citizens to easily register and track their complaints/ suggestions with the ULB providing multiple access channels - Internet, Phone, Email and Paper Form for registration of complaints. It is functional in all ULBs. Also public can submit complaints through the ULB websites</p>
19	<p>Management Aspects</p> <p>With a view to avoiding the problems of lack of coordination and passing of the responsibility on others, it is necessary to have one person exclusively in charge of SWM in the city. The overall control in relation to collection, transportation, processing and disposal of all waste, including workshop facilities, should lie with him. He should also be responsible for the cleaning of open drains under 24 inches depth, collection of silt, construction waste and debris and vehicle deployment and maintenance. There should be work allocation norms for the sweepers, transport system and other</p>	<p>SWM normative standards has been prescribed in SWM State policy, based on practical requirement, certain parameters has been revised vide GO NO DMA/SWM/ TECHNICAL COMMITTEE /CR17/08-09, DATED 27-2-2009 Based on these normative standards ULBs prepare city specific action plans and estimates for outsourcing the SWM activity.</p>

21	<p>Management Plan</p> <p>Rules for operation and maintenance of the solid waste management system must be established in the form of a handbook together with a legal requirement to keep honest records of specified parameters that refer to the performance of the system including the quality of work performed by each individual. Apart from the enhancement of capacities of ULBs, there should also be additional checks by a local committee of qualified civil society representatives, health officers and officers from other departments who should be empowered to visit and issue a note of caution when any component of SWM system is not working or inadequately working.</p>	<p>All the ULBs have been directed to update the existing status of SWM implementation online through monthly information booklet hosted by Municipal Reforms Cell, GOK.</p>
22	<p>Standardised Procedures</p> <ul style="list-style-type: none"> • A manual of standardised procedures should be established for the activities of the entire MSWM system. • These procedures should be mandatory and penalties established for each default. The same penalties should apply whether the system is operated directly by a ULB or by an external contractor. • A surveillance mechanism should be created to investigate every instance of non-compliance reported to the ULBs using fast and modern communication means such as SMS by mobile to the authorities. • The staff responsible for solid waste management should be professionally qualified and trained. 	<p>Instructions have been given to ULBs with regard to certain aspects mentioned in the paragraph.</p>

communicated to State Pollution Control Board within 15 days of the meeting.

- There should be a separate cell in the State Pollution Control Board for monitoring management of MSWM System in the State.
- This cell should constantly interact with the Nodal Officer on performance of MSWM System and other related issues.
- The cell should also conduct vigilance monitoring of the MSW System atleast once in a month.
- The monitoring should include checking of ward wise records of the MSW System and their functioning to evaluate their performance and compliance of MSW Rules.
- In case of unsatisfactory observations, the cell should issue notice to the Nodal Officer under EPA, 1986.
- An annual report on the performance of city wise MSW System record should be prepared city-wise and submitted to the State Boards highlighting all the important points including deficiencies and annual expenditure.
- It may be useful to involve local communities in monitoring the functioning of the entire MSWM System.
- It is necessary to have a cadre of professional staff in municipalities headed by technically qualified chief executives for planning and implementation of MSWM System.”

Karnataka State Policy on Integrated Solid Waste Management

1. Introduction

8 307

The most pressing problem faced by any urban centre in India today is Municipal Solid Waste Management (MSWM). Rapid urbanisation and changing lifestyles have led to the generation of huge amounts of garbage and waste in the urban areas, so much so, over the past few years, just the handling this Municipal Solid Waste (MSW) has assumed the proportion of a major organizational, financial and environmental challenge.

Despite MSWM being a major task of the local governments, typically accounting for a sizeable portion of the municipal budget - about 20% to 50%, yet the Urban Local Bodies (ULBs) are unable to provide effective services. Most of the ULBs do not even have reliable MSW generation estimates.

An unfortunate fallout of rapid urbanization without the adequate infrastructure backup is that in all Indian cities/towns, disposal of waste is done indiscriminately, leading to stray animal menace, clogged drains and spread of diseases. The process of collection, transportation and disposal of MSW is not complete in most of the cities/towns with garbage heaps remaining unattended until the severity reaches unmanageable proportions. Also, the high organic content of Indian MSW, compounded by the hot and humid tropical climate leads to the rapid decomposition of the uncollected waste and is an ever-present health hazard. In addition, the contamination of MSW by bio-medical and industrial hazardous waste is a growing concern. Brief Statistical Details of Generation, Collection & Disposal of Waste in ULBs are indicated in **Appendix-1**

Most ULBs spend nearly 60%-70% of their total overall budgetary allocation on collection, another 20%-30% on transportation, and often less than 10% on the treatment and final disposal of MSW. Also, even today, the disposal of wastes is being carried out in an unscientific manner, with crude open dumping in low-lying areas being the prevalent practice followed by most ULBs. MSW is also commonly deposited at dump-yards without ascertaining the suitability of the land for waste disposal. The results of these are foul smell,

- 27.8.09
- d. Other technologies for treatment such as Pelletisation, Gasification, Incineration etc. require clearance from Pollution Control Board before planning and implementation.
 - e. Landfilling should be the waste disposal method for non-biodegradable, inert waste and other waste that is not suitable either for recycling or for biological processing.

3. Objective

The goal of effective MSWM services is to protect public health, the environment and natural resources (water, land, air). An effective MSWM service can be achieved only by improving the efficiency of MSWM activities, thereby leading to the reduction of waste generation, separation of MSW and recyclable material, and recovery of compost and energy.

The objectives of this State Municipal Solid Waste Management Plan are:

- a. Providing directions for carrying out the waste management activities (collection, transportation, treatment and disposal) in a manner, which is not just environmentally, socially and financially sustainable but is also economically viable.
- b. Establishing an integrated and self-contained operating framework for MWSM, which would include the development of appropriate means and technologies to handle various waste management activities.
- c. Enhancing the ability of ULBs to provide effective waste management services to their citizens.

4. Touchstone Principles

The touchstone principles, which govern the future approach to provision of MSWM services, include the following:

- d. Defining the role of NGOs: The MSW Rules, 2000, stipulate for extensive involvement of the community in SWM. In order to educate the community and bring awareness regarding the modernization of SWM program, the involvement of an intermediary, by way of a Non-Governmental Organisation is very much necessary. NGOs would help in the effective propagation of the complete awareness regarding SWM among various stakeholders so that Waste Management would take place as per the State Policy. The IEC activity would be carried out by NGOs as per the specified terms.
- c. ULBs would allow RWA / SHG to enter into contracts with private operators for various waste management activities, under specified guidelines and structures.

5. **Information, Education & Communication Activity (IEC)**

IEC is the key to the success of the modernization of MSWM. As stated, awareness amongst 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 program.

As a prelude to implementation, this IEC activity is going to be taken up, which would involve the participation of some leading NGOs, who would be appointed after a careful selection process. Materials required for the IEC campaign like manuals, flipcharts and other media communication are designed by State Resource Center, Mysore. A detailed Terms of Reference has been prepared for NGO activity (ToR is enclosed in the Appendix-2)

6. **Primary Collection**

Where Primary collection, or first stage collection is concerned, the principle of reducing manual handling and doorstep collection would be promoted. For this purpose, the various activities proposed include the following:

- a. Residents would be encouraged to segregate, store and deliver the MSW to primary collection staff as per procedures set out by ULBs

8. Secondary Collection and Transportation

- a. Usage of metal containers of specified dimensions and capacity is proposed for secondary storage. The usage of concrete bins would be discontinued as per the mandatory recommendation of the Committee constituted by The Hon. Supreme Court of India.
- b. MSW from the auto tippers (obtained during primary collection) would be directly uploaded into these metal containers
- c. The metal containers would be handled mechanically through dumper placers, or tractors with tipping trailer mechanism. Compactors have a separate system for secondary collection and these vehicles are not recommended for towns with population of less than 20 lakhs.
- d. The transportation vehicles would carry and unload the waste mechanically at treatment plants and landfill sites depending on the type of waste
- e. The procurement of vehicles could either be by ULB concerned or could be arranged with private operators under suitable contractual arrangements

9. Treatment and Landfill Operation

- a. Pursuant to the Supreme Court guidelines and the prevalent market constraints, composting would be the preferred method of treatment.
- b. Landfill, as required under prevailing statutes, would need to be developed to dispose non – biodegradable matter and compost rejects
- c. Development of these facilities, either individually or as integrated unit, could be done under appropriate contractual arrangement (management contract / BOT contracts etc.)

Normative Standards and Procedure for Collection, Storage and Transportation of MSW

1.0 Primary collection of waste:

1.1 From Slums and other BPL settlements:

- Collection of waste to be done predominantly by Pourakarmikas (PKs), who should be positioned at 100% strength at these locations.
- One 40 litre – HDPE bin to be placed for every unit of 100 people of the area. (Approximately 20 house holds)
- Approximate weight of waste per bin would be 15 Kgs.
- **Mode of transportation:**
 - 2 Pourakarmikas to be deployed for a normative area (about 1080 houses / 5400 population).
 - One pushcart / tricycle to be provided for transfer of waste from the bins to push cart.
 - Then the waste from Push Carts / Tricycles or from 40 litre collection bins is to be transferred to nearest secondary container.
- **Normative standard for operation:**
 - a) **Pushcart:**
 - One pushcart (Capacity – 40 to 50 kgs) can hold waste from 3 bins.
 - Approximate time taken for one such operation for delivering to secondary container – 20 minutes.
 - Number of bins handled by Pourakarmikas in a 6-hour shift = 54 bins = 810 kgs = 5400 population = 1080 houses.
Depending on operational distance and travel time, quantity of waste and number of houses handled would vary.
 - If a town has 15000 slum houses, 14 batches or 28 PKs are required for slum operation.
 - b) **Tricycle:**
 - One tricycle (Capacity – 80 to 100 kgs) can hold waste from 6 bins
 - Approximate time taken for one such operation for delivering to secondary container – 40 minutes.

- **Operation of the system:** 8317
 - ❖ The ULB should procure the vehicle in areas where SHGs cannot be formed and should operate on contract basis.
 - Agreement between ULB and Service Provider
Refer agreement document: **Primary Collection Doc-1**
 - ❖ Through RWA/SHG/Urban Stree Shakti etc. under following arrangement:
 - Agreement between ULB, RWA and Service Provider
Refer agreement document: **Primary Collection Doc-2**
 - Agreement between ULB and SHG
Refer agreement document: **Primary Collection Doc-3**
 - Agreement between ULB and RWA
Refer agreement document: **Primary Collection Doc-4**
- **Collection from commercial establishments.**
 - Waste to be collected during afternoon soon after green waste collection from houses.
 - Time duration for collection – 1 ½ hrs approximately (10% Of houses).
 - **Operation of the system:**
 - ❖ Through RWA/SHG/Urban Stree Shakti who manage the waste collection in the specified area.
 - ❖ Private operator hired by ULB
- **Collection from bulk waste generators:**
 - Waste generators to make their own provisions as per specified storage container for storage of waste and to synchronize its collection with transport system.
 - Waste generators may also arrange for storage and transport of waste under contract arrangement.
 - **Operation of the system:**
 - ❖ Through an arrangement with existing system of ULB.
 - ❖ Private operator hired by ULB
Refer agreement document: **Bulk Collection Doc-1**

8319

- Bulk generators like Choultries, large hotels etc to be insisted for procuring and placing secondary container of required capacity as per standard design in their premises to handle their waste.
- The Secondary Containers are placed on a pre-cast cement concrete floor measuring 4.85 m x 3 m
- ULB will procure required number of secondary containers and manage the system

3.0 Transportation of Secondary containers:

- Secondary containers are to be transported either by Dumper Placer or Tractor Placer as per recommendation based on the size of ULB.
- Dumper Placers are to be provided for Cities with population of 1 lakh or more.
- For towns with less than 1 lakh population Tractor Placer is recommended.
- The vehicle to place empty container before lifting filled up container.
- The green waste and predominantly biodegradable waste to be transported to Treatment facility / disposal site as per arrangement.
- The inorganic waste is to be transported directly to landfill site.
- One twin container Dumper Placer would be required to make 5 trips in shift to treatment/disposal site with an average one way lead of 15 km.

Operation of the system:

- ULB to procure the vehicles and operate the system
- ULB procuring the vehicles to operate the system on O&M contract

Refer Agreement Document: Secondary Collection Doc-1

- ULB to operate the system on contract basis with the Operator providing the designated type of vehicle

Refer Agreement Document: Secondary Collection Doc-2

4.0 Street Sweeping:

- The roads need to be divided into three categories.
- Type A: Daily sweeping
- Type B: Four days in the week. (Sun, Tue, Thu, Sat)
- Type C: Three days in the week. (Mon, Wed, Fri)

Guidelines for Establishment and Operations of Treatment and Landfill Facilities

Treatment and Landfill operation is set out under the following process:

In compliance with MSW Rules 2000, Composting shall be the method of treatment. Other technologies like Incineration, Pelletisation can also be used in specific cases. However Municipal Authorities or Operators wishing to employ State-of-the-Art Technologies shall obtain standards specified by CPCB before applying for authorization.

Landfill sites shall be established in conformity with the provisions of MSW Rules 2000. Quality of leachate shall satisfy the standards indicated in the Schedule IV of MSW Rules 2000.

1.0 Composting:

The solid waste management policy states that composting would be the treatment and processing option for municipal solid waste. At present there are concerns on sale of the compost. It has been proposed that the incoming waste shall be composted using aerobic composting technique so that the waste is inertised. If there is a market for the compost then the inertised waste would be sieved and compost sold while the rejects are land filled. If there were no market for compost the inertised waste would be land filled. Vermi compost has a limited market but has a good price. It is proposed that the partially digested aerobic compost can be converted to vermi compost based on the demand. Here the technology proposed for aerobic composting for inertisation, the sieving system and the vermi-composting are described.

1.1 **Aerobic Composting:**

The waste being generated and received at the processing site is composted aerobically. This composting process makes the waste inert. The aerobic composting process involves placing the waste into windrows. Windrows are long heaps of waste

eat the waste and convert them to casting over 4-6 weeks. The castings have to be collected manually at regular intervals. Earthworm requires shade and protection from rain and predators. A pit over ground is preferred for storing the partially decomposed waste and the worms. The pits have to be covered to provide protection from sun and rain. The inorganic portion of waste, which is not eaten by the worms, is sent for landfill and the organic portions are fed back to the worms. The adult worms and the young worms from each cycle are collected back and used again in the next cycle.

2.0 Landfill:

The rejects from the composting process have to be land filled. It is proposed that a sanitary landfill would be developed for Class I towns. For smaller urban local bodies with lower waste generation, it is proposed that progressive development approach to waste management shall be adopted. No treatment of waste is proposed to start with. It is proposed that an Engineered landfill development would take place for all the waste. Progressively the treatment and improved landfill practises shall be implemented. Here the development required for the sanitary landfill and engineered landfill is detailed.

2.1 Sanitary landfill

The Sanitary landfill approach is based on the MSW rules 2000. The landfill is based on concepts of isolation of the landfill from surface water and containment of wastes within the landfill. This would involve development of the landfill site with provision of the basic infrastructure of proper road access, gatehouse with weighbridge, building with record rooms and facilities of storage, washing and toilets for staff. The landfill proper would be developed for isolation of the wastes from surface runoff and containment of the waste to protect against movement of leachate directly to ground. Liner systems with leachate collection would be provided. A leachate treatment facility would also be provided. The waste would be tipped to a plan and covered daily. Monsoon waste placement plans would be made. Once the planned waste levels are reached a cover liner would be provided. The landfill would be developed with 20-25 year perspective. A detailed plan for implementation would be prepared prior to investment.

Additional pits are dug and the above procedure is followed for filling and covering the pit as required on an ongoing basis. In the above process the waste inside the pit is anaerobically composted. If a market for compost exists the waste can be exhumed from the pit sieved in 4 mm sieves and sold. The rejects in the process would be refilled in the subsequent pits or a special pit dedicated to rejects. The pits from which wastes have been removed can be used again for refilling. A complete record of the pit with the number and date of filling and what was filled shall be maintained for future reference.

2.2.2 Landform system:

The construction of a waste landform starts with the construction of soil bund. The site would be excavated to obtain the necessary soil for making the bund. The bund is trapezoidal in cross section with a top width of 0.5 m, with side slopes of 1V:2H and a height of 3.0 m. The initial length of the bund shall be 50 m and the same can be extended or shortened based on waste requirement. The edge of the bund is also trapezoidal. The waste is placed from bund end and progress towards other end as per site conditions. The waste is tipped by the transport vehicle and pushed into shape using a tractor-mounted front-end loader. This process is continued based on waste arrivals. The waste line, which has been filled, would be covered with a plastic sheet made of stitched HDPE cement bags. This would be then covered with 300 mm of soil, which is excavated at location. The soil shall be placed in 15 cm layer to 95 % Procter density. As each line gets filled up, the same shall be covered progressively. During monsoons, plastic sheets shall be used to cover all the open waste lines so that direct rains do not fall on waste. At the end of the landfill a raised platform would be available for use as play ground or other facility.

Guidelines and schedules/specifications for compost plant and landfill facilities have been published.

**Refer: Integrated Solid Waste Management for Treatment and
Landfill Operations in Urban Local Bodies**

1. Details of MSW Generation in Select ULBs

Sl.No.	Name of ULB	Population (2001 census)	MSW Generated (TPD)	Per Capita Generation (gms)
1	Hospet	163,284	39.93	244.54
2	Hassan	116,628	54.51	467.38
3	Shimoga	274,105	85.00	310.10
4	Raichur	205,634	90.68	440.98
5	Chikmagalur	101,022	40.86	404.47
6	Belgaum	399,600	121.90	305.06
7	Gadag	154,849	67.20	433.97
8	Bidar	172,298	42.76	248.17
9	Bijapur	245,946	80.63	327.84
10	Gangavathi	93,249	38.62	414.16
11	Bellary	317,000	123.46	389.46
12	Davangere	363,780	180.00	494.80
13	Chitradurga	122,594	50.00	407.85
14	Bhadravathi	160,392	51.68	322.21
15	Kolar	113,299	52.00	458.96
16	Robertsonpet	141,294	55.30	391.38
17	Holenarasipura	27,018	12.00	444.15
18	Channarayapatna	33,240	10.00	300.84
19	Sakaleshpura	23,201	6.00	258.61
20	Arasikere	45,160	14.00	310.01
21	Alur	6,133	1.00	163.05
23	Belur	20,225	8.00	395.55
24	Moodigere	8,962	4.50	502.12
25	N.R. Pura	7,441	5.00	671.95
26	Shringeri	4,253	1.50	352.69
27	Ullal	49,862	9.90	198.55
28	Tumkur	248,592	54.00	217.22
29	Ramanagaram	79,365	20.00	252.00
30	Channapatna	63,561	20.00	314.66
31	Mandya	131,211	50.00	381.07
32	Maddur	26,456	6.00	226.79
33	Kundapura	28,595	11.34	396.57

The quantity of waste collected and transported by ULBs is approximately 75% of waste generated. The treatment and scientific disposal is almost non-existent.

**Information Educational Communication Programme (IEC) for Solid
Waste Management in the cities / towns of Karnataka**

TERMS OF REFERENCE

OBJECTIVE:

To undertake a detailed IEC campaign, in Solid Waste Management to bring in awareness among citizens, bulk waste generators and agencies involved in handling of Municipal Solid Waste for a modernized and scientific system. The modernized SWM will have to be brought into practice in accordance with MSW Rules 2000.

SCOPE OF WORK AND STRATEGY:

Scope of Work	Strategy & Tasks to be performed	Target Group
<p>To promote MSW Rules and the Supreme Court judgment and put them into practice. It would mean to promote among citizens and bulk waste generators; Reduction in generation of SW Segregation of recyclable waste and Recycling of waste.</p> <p>Compliance with integrated waste management practice to be set up by the ULBs and its benefits. Participation in all components of the project through IEC. Awareness on proper use of SWM facility.</p>	<p>Distribution of campaign materials like flip chart brochures, posters, stickers etc. to target group. Showing audiovisual tapes and CDs, short films, street plays. Pursue with various media including cinema halls in public interest to create awareness Establishing necessary RWA and other supporting net works. Identifying resource persons from the target group (preferably institutions and media) and train them to propagate awareness to citizens and their institutional members</p>	<p>General public, commercial / trade bulk generators like various associations related to trade eg. restaurants, market etc., Educational institutions- primary, secondary, college, university and other institutions, Media Youth clubs, Mahila Mandals, Social clubs like Rotary Club, Lion Club, Round table club etc., RWAs and SHGs</p>
<p>To promote: A change in the mind set of the ULB staff with regard to service orientation and focus on customer satisfaction. Focus on role and responsibilities of the officials in SWM How to make use of manuals and materials. Focus on role of pourakarmikas on SWM starting from generation to disposal</p>	<p>Conducting workshops to staff of ULBs and training them using manuals and other IEC materials. Conducting orientation programme for pourakarmikas Conducting orientation programme for line department staff. Identifying resource person from ULB / any other local organisations and training them to propagate awareness amongst staff on continuous basis.</p>	<p>Municipal staff and officials of ULBs.</p>

8341

Public cooperation in SWM to keep city clean & litter free.

Segregation/storage of waste at house hold level and dedicated primary collection system for bio degradable & recycling waste.

Disposal of house hold hazardous and inorganic waste.

Disposal from commercial area.

Public reaction / views for implementing the new system of SWM.

Cooperation & understanding of ULB employees in SWM activity.

Any other activity needs reporting.

Documentation of the IEC Activity:

NGO is expected to document the IEC activities carried out and submit monthly, quarterly and annual detailed report on the activities conducted by them. This shall include:

List of all activities carried out / proposed.

Expenditure / budget.

List of institutions / organizations / establishments / individual participation in dissemination of awareness programme along with details.

List of the activities and actions carried out to train and empower the employees of ULB.

Any other related activity.

The NGO is expected to have experience, reputation and contacts in the project areas.

The NGO will report to the Managing Director, KUIDFC.

KUIDFC will provide all required communications materials such as manual, posters, leaflets, films etc., for supporting the IEC activities for SWM.

The NGO will prepare the following:

IEC programme within two weeks of signing of the contract.

Monthly and Quarterly reports.

Final Report within two months after completion of the project.

KUIDFC, the Directorate of Municipal Administration (DMA) and the Urban Local Bodies (ULBs) will make available copies of all studies, plans, reports, financial statements and progress reports as may be needed by the NGO for conducting the IEC programme.

8332

ANNEXURE 2

Government of Karnataka
Directorate of Municipal Administration

Normative standards for Municipal Solid Waste Management

Name of the SWM Tools, Equipment and Vehicles	Unit requirements per annum	Unit Manpower required
Door to door collection		
One command area = 1000 house holds / shops		
Push carts with 6 bins	1 no. for 200 households / Shops	1 per pushcart
Tricycle with 8 bins	1 no. for 250 households / Shops	1 per tricycle
Auto Tipper	1 no. for 1000 households / Shops	1 driver + 1 helper per auto tipper
Street Sweeping		
Brooms	4 nos for each sweeper	1 sweeper for every 1000 m of road length
Pushcarts	1 no for every 2 workers	
Metal Tray/ Metal plate	2 nos for every sweeper	
Ghamela	1 no for every loaders/sweepers	
Hand gloves	4 sets for every loader/sweeper	
Face mask	2 nos for every worker	
Gum boots	1 set for every worker	
Uniforms	2 sets for each worker	
Tractor trailers	1 no. for every 25 Kms of street sweeping with 7 years of life	1 driver + 3 loaders (2 to 3 trips/day, 2.0-2.5 tons per trip, 200 Kgs to 300 Kgs of waste / Km)
Tipper Trucks	1 no. for every 40 Kms of street sweeping with 7 years of life	1 Driver+ 4 loaders (2 to 3 trips/day, 4.0-4.5 tons per trip, 200 Kgs to 300 Kgs of waste / Km)
Secondary Collection & Transportation		
3.0 cum Containers (1.2 Tons Cap.)	1 Container for every 1000 households or approx. for 1.0 ton of waste which ever is higher	

BETWEEN:

8334

ALMITRA H PATEL & ANR

PETITIONERS

AND

UNION OF INDIA & OTHERS

RESPONDENTS

AFFIDAVIT FILED BY THE COMMISSIONER, BRUHAT
BENGALURU MAHANAGARA PALIKE, BENGALURU,
KARNATAKA

I, M. Lakshmi Narayana., IAS, S/o Raghavaiah, aged about 56 years, working as Commissioner, Bruhat Bengaluru Mahanagara Palike (BBMP), Bengaluru, Karnataka State, do hereby solemnly affirm and State on oath as follows :-

1. I submit that I have been working as Commissioner, Bruhat Bengaluru Mahanagara Palike (BBMP) Bengaluru, since 1st June 2013 and know the facts of the case and hence I am swearing to this Affidavit.
2. I have great respect for the orders passed by this Hon'ble Tribunal and I have been complying with the order passed by this Hon'ble Tribunal whenever I have been called upon to do so.
3. I respectfully submit that, as per the directions of Hon'ble Tribunal judgements passed by the Hon'ble Tribunal with respect to Appeal no 70 of 2012 "Capt. Mall Singh & Ors. Vs. Punjab PCB & Ors"

36


COMMISSIONER
Bruhat Bengaluru Mahanagara Palike

b) Vegetable/ Fruit Market Waste

8336

- Separate system has been put in place for collection of waste from the Large Vegetable and Fruit markets. The Vendors are directed to store the waste in their premises and is collected by the Pourakamikas and it is ensured that the market waste is transported to Compost plants.

c) Construction Demolition Waste :

- Debris, sand, earth, bricks, building materials, etc. were dumped on roads and footpaths causing hazards to traffic and pedestrians. In order to streamline the Collection of C&D waste, BBMP has identified 7 sites and taken authorization for disposal of Construction and debris waste.
- Draft guidelines on C&D waste have been prepared and objections called and as Central Government is preparing the C&D Policy, the same shall be adopted once finalized.
- Further it is proposed to arrange for collection and transportation of debris through appointed contractors who can be allowed to charge the generators at a predetermined rate. The contractors can also be allowed to recycle or "sell" such debris to other construction sites that require land filling or it can also be used for making brick and tiles. It is mandatory for citizens to get their debris removed through the helpline system. Debris generated from individual home/ office/ school etc will be charged, depending on the quantity. Since new rules of C&D (Management and Handling) Rules are under formulation the same shall be adopted once it is published.

37


COMMISSIONER
Municipal Corporation of Bangalore
Bangalore Mahanagara Palika

2. Segregation of Waste:

8338

- Segregation at source has been emphasized. IEC activities are being intensified and penalties are being levied for non compliance. The households are required to segregate their wastes into two categories namely wet and dry waste. At the later stage, household hazardous waste like discarded medicine, sanitary napkins, diapers, batteries paints etc is proposed to be collected separately.
- Dry waste Management

When access to dry waste is given to the collector, it acts as an inbuilt incentive for them to encourage / coax each generator to segregate their waste. It has to be remembered that not all dry waste is recyclable. Residents are not always able to give away all the dry waste produced by them. While they may be able to sell / hand over plastics, paper, cardboard, metals, etc to waste pickers, etc., there would be some dry waste which has no resale value; this would include thin plastics, broken tube lights & bulbs, small empty bottles, and the like. The dry waste does not decompose and hence it is possible for the generators to store it for a longer period. Thus it is proposed to fix weekly twice / thrice collection frequency in areas generating less waste.
- Recycling of waste is also possible by setting up purchase processing centers for dry waste, like plastics, paper, etc. About 185 Dry Waste Collection Centers (DWCC) have been established BBMP. It is one of its kinds and first time in a metro a DWCC concept is established. These DWCC called "Kartavya" - meaning duty that will remind the public of their duty towards recycling the waste they have created. This will be in their own neighborhood and over a period of time the



also been given for composting of leaf litter in nearby parks and open spaces.

- Amendment has been brought to The Karnataka Municipal Corporation (KMC) Act by amending various sections and inserting new sections enabling levy of penalties for littering and other offence.
- Bruhat Bangalore Mahanagara Palike has authorized the Senior Health Inspector/Junior Health Inspector of respective Wards in addition to the Assistant Executive Engineer/Assistant Engineer of respective Wards to levy and collect penalty as provided in columns (3) and (4) of Schedule-XIII of the Karnataka Municipal Corporations Act, 1976.
- For improving livelihood of Rag pickers SAMARTH Project has been initiated BBMP has taken up waste picker enumeration project under which already 6000 Waste pickers have been identified and ID cards has been issued. They have been involved in the Dry waste collection Centres.
- Plastic carry bags with less than 40 micron in thickness have been banned in the BBMP jurisdiction from 15-03-2011. BBMP has fixed the Minimum price for carry bag depending upon the quality and size. Waste Plastic is being used in the construction of pavement roads as per the Indian Road Congress guidelines for 'The use of waste plastic in Hot Bituminous Mixes (Dry Process) in wearing Courses' under the code: IRC:SP:98-2013.
- A Common Complaint redressal system is maintained in all the Zones in which the SMCW complaints are addressed.


COMMISSIONER
 Bruhat Bangalore Mahanagara Palike

Park, Gandhinagar, West zone by M/s CRPL Resurge Private Limited (CRPL) is commissioned from Dec 2014.

8342

iii. Organic Waste Converter:

Also organic waste converters are being used in a decentralized way to process small quantity of wet waste.

iv. Plastic to Crude oil

In order to recycle the plastic waste the proposal to establish 10 TPD capacity plant to process plastic waste into crude oil has been approved by the Government and the agreement execution is under process.

v. Dry Waste Collection Centers

The dry waste generated in the wards is collected & further segregated & also sent for recycling from Dry Waste Collection Centers.

After taking all these measures, the quantum of waste which is being received at the BBMP processing centers is around 3000 TPD. The same is being presently managed through the following facilities.

Sl. No.	Present Processing/Disposal Sites	Capacity
1.	M/s.Terra-Firma	1000 TPD
2.	M/s.MSGP	500 TPD
3.	Bingipura	750 TPD
4.	KCDC	300 TPD
5.	Mavallipura	100 TPD
6.	Laxmipura	250 TPD
7.	M/s.Maltes	100 TPD

Out of the above facilities, landfill without processing is being done only at Bingipura and Laxmipura site.


COMMISSIONER
Municipal Corporation, Bangalore

7. I respectfully submit, following Action Plan for implementation of MSW Rules 2000

8344

Population	Waste generation in TPD	Survey/ Assessment	Preparation of DPR	Compliance with schedule-I with regard to waste collection secondary waste collection and transportation	Segregation of waste (mass awareness campaign)	Processing of waste (schedule II & IV (Recycling composting vermin composting & Biomethanisation))	Disposal of waste (schedule-III) Sanitary landfill facility
96 Lakhs	3500	30-09-2015	30-09-2015	1-12-2015	31-12-2015	31-12-2018	31-12-2018

8. I respectfully submit that cost for achieving 100% solid waste management will be assessed once the DPR is prepared which shall be met through Central grants, State grants and through PPP mode.

WHEREFORE, I respectfully pray that this Hon'ble Tribunal may be pleased to take this affidavit on record in the interest of justice and equity.

VERIFICATION

I, the above named Deponent do hereby verify that all the facts stated in the affidavit are true to the best of my knowledge and nothing material is concealed there from.

Verified at Bangalore on 11th March, 2015

Identified by me:


DEPONENT
COMMISSIONER
 District Bangalore Mahanagara Palika.

Population range	Waste generation in IPD	Compliance with schedule-II with regard to waste collection, secondary waste collection and transportation	Segregation of waste (mass awareness campaign)	Processing of waste (schedule II & IV) (composting, vermi-composting & Bioremediation)	Disposal of waste (schedule-III) (Sanitary landfill facility for CCs & EMCS & Engineering pit with HDPE liner for EMCS & TPS)
10,000-19,999 (94 ULBs)	2-4	31-12-2016	31-12-2015	31-12-2018	31-12-2018
20,000-49,999 (68 ULBs)	4-10	31-12-2016		31-12-2018	31-12-2018
50,000-99,999 (26 ULBs)	10-20	31-12-2016		31-12-2018	31-12-2018
1,00,000-1,99,000 (12 ULBs)	20-60	31-12-2015		31-12-2017	31-12-2017
2,00,000-2,99,000 (3 ULBs)	70-100	31-12-2015		31-12-2017	31-12-2017
3,00,000-4,99,000 (7 ULBs)	100-200	31-12-2015		31-12-2016	31-12-2016
5,00,000-9,99,000 (3 ULBs)	200-400	31-12-2015		31-12-2016	31-12-2016
Above 10 lakhs (1 ULB)	3500 +	As per the affidavit submitted by the BBMP			

*Availability of funds & site litigations can delay the compliance of development of waste processing & disposal facility and time sought for compliance for schedule -2 (waste collection & transportation) is due to fact that the ULBs should procure equipment/vehicles required for the same through tender process which is time consuming and in the meantime ULBs will be directed to involve in IEC & capacity building