

BHOPAL MUNICIPAL
CORPORATION





- The Present population of Bhopal is 23 lakhs, Municipal area of 413.5 Sq Km, spread across 19 zones and 85 wards.
- The slum population sums up to 8 lakhs.
- **Population** : 1922130 as per 2011
- **Waste Generation**: 800 TPD
- **Composition**: 57.83% biodegradable, 30.95% non-biodegradable and 11.22% inert
- **Segregation in percentage (%)**
 - Segregation started since August 2016
 - Number of wards where segregation is happening: 85 wards (Total no. Of wards 85)

- **Door to Door (DTD) collection:** in all wards

- DTD collection efficiency (in %): 100%

- **Processing (recycling and treatment of waste):**

- Currently 50 TPD waste processing facility is installed at the Bhanpura Dumping site

- Waste to energy and landfill facility at Aadhampur Chawani under construction and currently applying for Environmental clearance for 1000 TPD capacity.

BMC have in place a compliance and monitoring system against littering and fine upto Rs. 1500 per event imposed against the same.

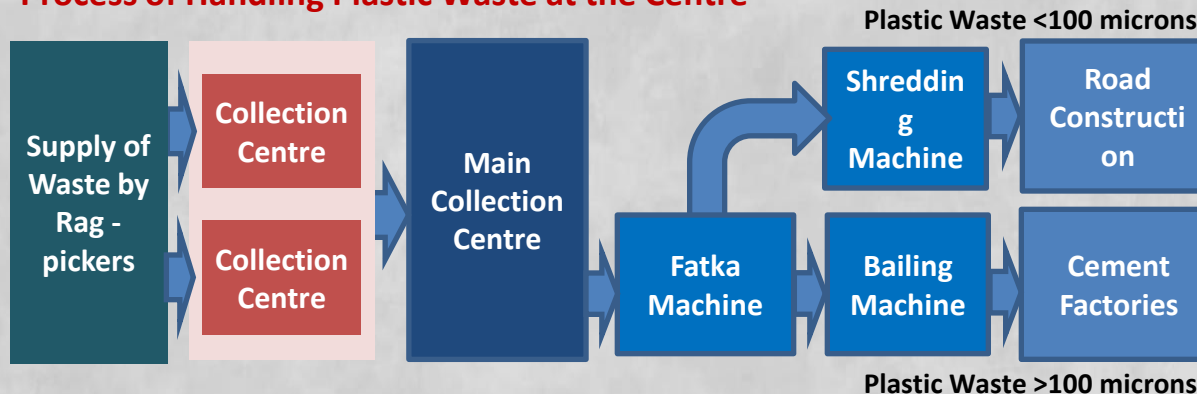
Plastic Waste Collection Centre- Bhopal Model

About the Centre

- **First of the kind Plastic Waste Collection Centre** set up in Bhopal (2008) on a PPP model
- Each center **covers 25 wards/villages (3 lakh population)** and **employs around 50 people** (including waste collectors + employees)
- Generates a **profit of Rs.1000 per day**



Process of Handling Plastic Waste at the Centre



Unit Economics

S.No.	Items	Cost (Rs.)
I	Capital Expenditure	
a.	Construction	4,00,000
b.	Fatka machine	2,00,000
c.	Shredding Machine	3,00,000
d.	Bailing Machine	3,00,000
e.	Tools & Equipment	50,000
	Total*	12,50,000
II	Operational Expenditure	
	Salary (5 people including machine operators, segregators and unit managers)	1,00,000
	Wages for	
b.	Ragpickers/Waste Collectors	6,00,000
c.	Electricity	30,000
d.	Administration Expenses	50,000
e.	Marketing & Publicity	10,000
f.	Local Travel	20,000
	Total (A)	8,10,000
	Cost recovered through sales of plastic to road development authorities by the Municipal Corporation(s)	8,40,000
	Profit per month (B - A)	30,000

*Capital Expenditure borne by the Municipal Corporation(s)

Door To Door Segregated Dry & Wet Waste Collection

- 250 MINI GARBAGE TRUCKS
- 1800 RAG PICKERS HOUSEHOLDS



Morning Sweeping And Night Sweeping



Morning
Sweeping



Morning
Sweeping



Evening
Sweeping



Evening
Sweeping

- 4000+ employees are engaged for road sweeping in all residential and commercial areas and at major roads.
- Swachhta Commando Squad – average response time less then 4 hours.

Municipal Solid Waste Processing And Disposal

- Biogas Plant installed at Bitten Market, Bhopal.
- Plant Capacity is 5 ton per day
- Produces biogas – 300 cu MTR per day
- The plant can produce 450 units electricity per day with generator capacity 50 Kva.



EFFECTIVE STEPS TOWARDS SEGRATION



INTEGRATED SOLID WASTE MANAGEMENT (CLUSTER BASIS)



Collection- Door to Door waste collection

Transportation – Primary and Secondary Transportation

Waste processing – Installing processing plants for Composting and Waste to Energy conversion.

Disposal/Sanitary Landfills – Scientific Disposal of Inert in sanitary landfill

IEC Activity



Construction And Demolition Waste

- Dedicated C&D trucks deployed.
- User fees and penalty charges notified by council.
- Processing plant to come up at Adampur Chawni



Public Toilets And Community Toilets



Public Toilets Constructed – 250

Public Toilets Under Construction – 20

Community Toilets Under Construction - 25

MoU With BSNL For Citizen Satisfaction Survey

Smart Feedback Poll: Instant Feedback Station

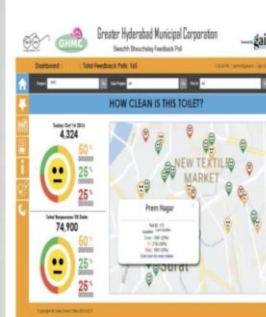


- MEASURE
- IMPROVE
- INCREASE USAGE

- Gather User feedback on Toilet cleanliness
- Communicate 'Feedback' back to the SBM City and National Command Centre
- Display real-time feedback data on Dashboard
- Input to Swachh Survekshan for City Ranking



Real-Time Dashboard: Area, Zone, City, State, National



- Total number of responses
- Response sentiment
- Grouping by area, zone, city, state
- GIS map view
- Reports

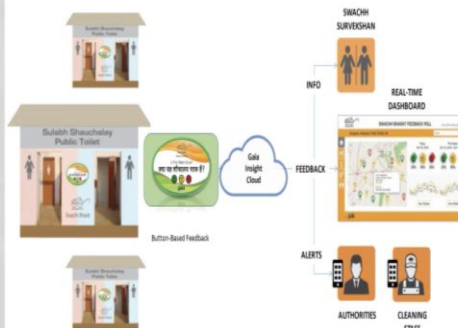
Smart Feedback Poll: Instant Feedback Station



Measure . Improve . Increase Usage

- Easy to Setup
- Wall Mount or Stand Unit
- 3 Touch Light Button
- Direct Internet Connectivity
- Custom Design Printing
- 24 x 7 Usability
- Custom Dashboard
- Alerts to Authorities & Cleaning Staff
- Sends Feedback in real-time
- Reporting module with downloadable reports

Response, Feedback, Info & Alerts



She Lounge



- She Lounge houses – A female utility shop, rest room, ATM, Water dispenser, washroom with facilities like – sanitary napkin vending machine and incinerator, baby changing corner etc.
- Functional She Lounges at 10 No. Market, Polytechnic square.
- Five more She Lounges are being developed.

Our Goal – Garbage Free City – Technology Interventions



- All Municipal Corporation vehicles are equipped with GPS devices and fuel sensors.
- All public bins and vehicles are geo fenced.
- Centrally monitored through command center.

New Initiatives



- Smart Bins – Establishing IoT base GPS enabled Smart Bins across the city are in the process.
- In first phase 200 vehicles and 2000 no of Garbage bins are being connected.
- Pneumatic Waste Collection pilot project based on high suction technology
- Establishing Under Ground Bins in all the markets.

DOCTOR APKE DWAR - FOCUS AREAS



- 📍 **Make Bhopal ODF:** Prime objective was to make Bhopal open defecation free city. In many slum areas people used to defecate in open, and were unaware about the health risk caused by open defecation.
- 📍 **Behavioral Change:** People have been practicing open defecation since long time, and education, Motivation and rigorous follow up were needed to make a behavioral change.
- 📍 **Women safety and sanitation:** Open defecation was not only an issue of hygiene, but it is also associate with women sanitation, health and safety.
- 📍 **Menstrual hygiene management:** It is widely accepted that a per-requisite for healthy families is provision of safe sanitation facilities, especially for women. This would include not only toilet facilities for safe Disposal, but also facilities for menstrual hygiene management (MHM), This topic is often remain Unconsidered and undiscussed, especially to adolescence girls.



MY CITY MY WALL



- First Phase of My City My Wall:** First phase was for students, where 134 schools/institutes from Bhopal had participated, Each institute's group was consist of five students, who painted on given dedicated wall. Later a panel of experts has evaluated each paintings and awarded them.
- Second Phase of My City My Wall:** Opened for all and professional painters, They painted a long wall, which later become a drive through art gallery.
- My City My Wall:** "My City My Wall" activity played a vital role in beautification of Bhopal city and attracted a huge public participation towards make Bhopal clean and beautiful.





TRIGERRING FOR OPEN DEFECATION FREE CITY



Various triggering activities are being conducted by
Bhopal Municipal Corporation to make Bhopal Open Defecation Free

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Hanging/Pit Composting





इज्तिमा से ढाई दिन में निकला 21 हजार किलो प्लास्टिक वेस्ट

आयोजन समिति की सार्वजनिक पहल : इज्तिमा से निकले कचरे का पहली बार होगा वैज्ञानिक पद्धति से निपटारा, 72 लाख पक्की की बोतलें रिसाइकल होंगी

निराकर सैनी / बंगलूर

कलकत्ता आसपास इज्जिमा के आयोजन में इस साल 21 मेट्रिक टन यानी 21 हजार किलो प्लास्टिक का कचरा निकला है। इसमें पॉलिथिन, जूनी की बोतलें, ट्यू की खाली थैलें, कपड़े के कटौन और डिस्कोन आदि शामिल हैं। यह कुलम इज्जिमा आयोजन समिति द्वारा इस का प्लास्टिक कचरे के निपटारे के लिए प्रिंट प्लास्टिक अक्षरों प्रयोग इसी की स्टडी में हुआ है। यह इसी इस कचरे का निपटारे वैज्ञानिक तरीके से कर रहा।

यह पहली बार है जब इज्जिमा के दौरान निकले प्लास्टिक वेस्ट का निपटारा वैज्ञानिक तरीके से होगा। इज्जिमा से निकले प्लास्टिक वेस्ट को जमा करने से लेकर उसके

निपटारे तक की प्रक्रिया में तकनीकी सहायता दे रहे सार्वक संस्था से जुड़े इज्जिमा आने के अनुसार इस साल इस धार्मिक आयोजन में करीब 15 लाख लोग शामिल हुए। इनमें लोगों की उपस्थिति के कारण सब ढाई दिन में ही 21 हजार किलो प्लास्टिक वेस्ट निकला है। इसी ही संख्या बीते साल में भी रही। आने का कहना है कि इस तरह के धार्मिक आयोजन में एक सप्ताह पर लाखों लोगों के जुटने पर कचरा प्रयोग सबसे बड़ी चुनौती होती है। पिछले पांच सालों में लगातार इस धार्मिक आयोजन की स्टडी की जा रही थी। बीते सालों में यह देखने में आया है कि ज्यादातर प्लास्टिक कचरे को बिना किसी तकनीकी सहायता से खोले में से जबरन जला दिया जा रहा था।

8.5

मेट्रिक टन पॉलिथिन किलो 50 लाखों से कम बोतलों की

72

लाख पक्की की बोतलें किलो

225

कॉन्टेनर्स की टीम अक्षरों पर कचरा कोलेक्शन के लिए



वॉलेंटियर्स की टीम

इस बार इज्जिमा आयोजन समिति ने प्लास्टिक अक्षरों प्रयोग इसी की स्टडी में हुआ है। यह इसी इस कचरे का निपटारे वैज्ञानिक तरीके से कर रहा।

यहां होगा इस्तेमाल

इज्जिमा आने के बाद यह कचरा रिसाइकल के लिए दूर ले जाया जाएगा, जहां इसका उपयोग टैक्स्टाइल इंडस्ट्री में धागा, टैग और बॉक्सेट बनाने में किया जाएगा। वहीं जूनी पॉलिथिन का उपयोग लकड़ बनाने में होगा।

भास्कर स्टैंड

उम्मीद है अन्य संगठन भी आगे आएंगे

कचरा को प्रकृता मुक्त करने की दिशा में इज्जिमा की आयोजन समिति ने एक-एक करके सार्वजनिक पहल की है। समिति ने आयोजन के 21 मेट्रिक टन कचरा इकट्ठा करवाया। अगली बार यह कचरा वहीं तक ली जा रहा है या फिर जला दिया जाता है। समिति के इस कदम से हजारों परिवारों को दुर्द्विहा होने से बचाने में मदद मिलेगी है। उम्मीद है कि कचरा की अन्य तकनीक-पॉलिथिन लकड़ा इसके जेराज लगे और अन्य आयोजनों से ऐसे पर्यावरण हितकारी कदम उठाएंगे।



BHOPAL

MADHYA PRADESH

INDIA'S SECOND CLEANEST CITY

Bhopal is the capital of **Madhya Pradesh** in India, famously known as the City of Lakes, and is one of the greenest cities in India. In Swachh Survekshan 2017, Bhopal secured the **2nd rank among** participant cities and was awarded **India's Second Cleanest City**.

Rankings

Overall Rank	2
State Rank/ State Capital Rank	2
Zonal Rank	2

Key Statistics

Total Score	1800.43
Municipal Documentation	829.58
Direct Observation	483.00
Citizen Engagement	487.84