Action Plan

Maharashtra State,
India

Friday, 28 September 2018
Location Details: Maharashtra State, India

Maharashtra State, India

Urban Local Governments in Maharashtra

With 54 million Urban Population

Maharashtra State: Urban Local Bodies (ULBs)

- 27 Municipal Corporations
- 357 Small and Medium ULBs
Solid Waste Management

Waste Generators
- Stakeholder identification
- Quantities & Types of waste generation
- Geo tagged information

Segregation
- Awareness among all stakeholders
- Wet, dry & hazardous waste segregation at source
- Maximum Segregation
- Follow up and tracking

Collection
- Route map finalization
- Compartmentalized Collection vehicles
- Collection of segregated solid waste
- Maximum collection
- Capacity building of SWM staff
- Follow up and tracking

Processing
- Establishing required processing infrastructure
- Wet waste processing
- Dry waste processing
- Centralized processing
- Decentralized processing
- Minimum dumping
- Capacity building of processing unit staff
- Follow up and tracking
Solid Waste Composition

- Collection vehicles with GPS
- Route map
- Assistant with driver
- Segregation IEC activities
- Processing Wet waste: windrow and pit composting, bio-methanization
# Wet Waste Processing: Nutrient Cycle

<table>
<thead>
<tr>
<th>Pit Composting</th>
<th>Bio-methanization</th>
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<tr>
<td><img src="image1" alt="Pit Composting" /></td>
<td><img src="image2" alt="Bio-methanization" /></td>
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- **Pit Composting**
  - Image: Pit Composting Plant
  - Details: Capacity 11 Ton
  - Details: 露天堆肥産業

- **Bio-methanization**
  - Image: Bio-methanization Plant
Key Takeaways from Japan

Following are the key takeaways from Japan workshop:

• Recycling policies from Japan Government
• Working effectively with private sector
• Ecotown concept from Kitakyushu model
• IEC policies from Kitakyushu model
SWM: Accomplishments

Collection
- Million plus cities: 70%
- Small medium towns: 80%
- Door to door Collection

Segregation
- Million plus cities: 60%
- Small medium towns: 75%

Processing
- Wet waste
  - Million plus cities: 60%
  - Small medium towns: 70%
- Dry waste: 40%

Infrastructure
- Lack of land / infrastructure for dry waste fine segregation and processing

Achieve Targets: 100% collection, 100% segregation and 100% processing
# SWM Tasks: Who and When?

## Milestones

- **Short terms**: Designing next generation "Vision" / MSW program / policies (6-12 months) for Maharashtra / On-field training / ULBs to act & monitor
- **Medium terms**: Complete land acquisition / initiate infrastructure development including landfill sites/ enter into PPP contracts (2-5 years)
- **Long terms**: 5-10 years Achieve MSW targets for cities in Maharashtra

## ULBs and State

- MoUs with Government of India
- Private sector / NGOs / SHGs
- Informal sector partners
<table>
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<tr>
<th>SWM: Challenges / Problems</th>
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<tr>
<td><strong>Dry waste processing</strong></td>
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<tr>
<td>No successful model available to demonstrate waste to energy</td>
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<td>Processing of dry waste lack appropriate technologies</td>
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<td><strong>Land fill site</strong></td>
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<td>25% of ULBs don’t have land fill site</td>
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<td><strong>Social issues / pressures</strong></td>
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<td>People opposes dumping sites / land fill sites</td>
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<td><strong>Sanctions</strong></td>
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<td>Pollution control board doesn’t sanction certain SWM projects</td>
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<td><strong>Resource constraints</strong></td>
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<td>Lack of financial resources</td>
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Technical Assistance & Finance

Proposed Technical Assistance & Financial Requirements:

- Policy advice required for a comprehensive MSW program / policies in the state to move to the next level;
- Advice on technologies, PPP models, engineering designs and models
- Financial assistance needed to meet funding short-fall in MSW in cities of Maharashtra
Request to World Bank:

- Take forward the dialogue with Govt. of Maharashtra for engagement in MSW sector in the state leading to both policy advice / technical inputs as well as project for financial assistance for the state;

- Organizing a high-level conference in Mumbai, Maharashtra with support from TDLC to discuss Global MSW experience as well discuss findings of “What a Waste” report.

- On-going technical assistance from TDLC and learning from Japan’s experience on MSW for cities in Maharashtra

- Global ranking of clean cities by World Bank…?
Thank you...

Presented by:

Yashwant Dange
Chief Officer

State Government of Maharashtra,
India