CHALLENGES AND OPPORTUNITIES IN NON NETWORKED SANITATION SYSTEM WITH SPECIAL REFERENCE TO FINANCING OPTIONS

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<table>
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<tr>
<th>National Scenario - Faecal Sludge Management</th>
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<td>✗ Only 32% of all the urban households having access to sanitation are connected to a sewerage network.</td>
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<td>✗ 48% of urban households depend on on-site facilities.</td>
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<td>✗ The rest are dependent upon septic tanks and pit latrines.</td>
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<td>✗ Only 30% of the sewage generated is actually treated.</td>
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<td>✗ The rest 70% flows untreated into its rivers, lakes and ponds, making the water sources extremely polluted.</td>
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<td>✗ Up to 80% of water bodies could be polluted due to this.</td>
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<td>✗ About 17 million urban households lack adequate sanitation facilities in India, with 14.7 million households having no toilets</td>
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<td>✗ Around five million (7.1%) urban households have pit latrines that have no slabs or are open pits</td>
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<td>✗ As many as 30 million urban households (38.2%), of the 79 million households with septic tanks, have no clear method for sewage disposal</td>
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<td>✗ Among the 18% of urban household that don’t have access to individual toilets, more than 12% resort to open defecation and 6% use community toilet</td>
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Source: FSM study by WaterAid India 2015
India has been rapidly shifting from an agriculture based economy to an industrial and service oriented economy with about 31.2% population now living in urban areas. Total urban towns/cities - 7935. As per 2014 - 62 million tonne solid waste generated.
100% Door-to-Door Collection
79% Wards

Waste-to-Energy Production
88.4 Mega Watts

Waste-to-Compost Production
1,506,501 Metric Tonnes

Source: MoHUA, Govt. of India
**Urban**
- 100% Door to door waste collection.
- Waste to energy – yet to start.
- Waste to compost - 1040 metric tonne
- Open defecation free - 96 cities/towns

**Rural**
- No. of ODF Districts - 13 (self declared)
- No. of ODF village - 15473 (self declared)
- No. of ODF Gram Panchayat - 7542 (self declared)

*Source: swatch Bharat Abhiyan GOI*
Non networked Sanitation System – Challenges and Opportunities

Inner city areas & planned urban areas
Non networked Sanitation System – Challenges and Opportunities
Non networked Sanitation System – Challenges to provide sanitation facilities to EWS and LIG population
Non networked Sanitation System – Challenges and opportunities

Lack of sanitation facilities
Open defecation
Solutions

Providing toilet /sanitation facilities densely populated areas with common community or common septic tanks
Solutions

Providing toilet /sanitation facilities in densely populated areas with common community or common septic tanks
Solutions

Providing toilet/sanitation facilities in densely populated areas with common community or common septic tanks using it form of manure for farming purpose.
NON NETWORKED SANITATION SYSTEM – CHALLENGES

- Litter disposed off untreated or partially treated in water bodies and drainage networks further choke the natural floodplains and leading to urban floods and water pollutions.
- The ULB,s primary responsible for management are ill equipped financially and technologically.
- In the absence of technology driven disposal is leading to various disease, lack of hygiene and other health issues.
NON NETWORKED SANITATION SYSTEM – CHALLENGES

- Improper method of disposal and non collection of waste have resulted in deterioration of soil quality, accumulation of toxic elements and breeding ground for rodents and insects, resulting in increasing cases of vector borne diseases.
- Gradual seepage of leachate in soil affects the water quality and plants characteristic in the area.
- Carcinogenic and fatal toxins bio-accumulate and bio magnify within the edible flora and fauna.
Citywide assessment of FSM is the first key step for IFSM planning.
Non networked Sanitation System – Challenges and Opportunities

Decision criteria for appropriate sanitation systems

Proper Sewerage management ensures safe resource recovery and reuses it with nutrients and energy. Concept of generation energy from waste.
Preparing a Plan for Clean Environment - 5 dimensions of inclusive city sanitation

- Governance & Institutional Strengthening
  - Ensure accountability, transparency
  - Efficient monitoring & evaluation

- Finances
  - Financial sustainability
  - Enhanced service delivery of the existing infrastructure

- Capacity Enhancement & Awareness
  - Improve capacity to plan, implement, operate, maintain & monitor the sanitation infrastructure

- Inclusiveness
  - To ensure complete sanitation & absence of health hazards in the un-served areas
  - Gender sensitivity

- Technology
  - To ensure that the required infrastructure for effective sanitation is in place
Realising the urgent need for addressing the environmental problems such as fast deterioration of air, water, land, public hygiene and depletion of natural resources, HUDCO decided to promote waste management initiatives through both financial and technical assistance.

HUDCO’s Role:

- Financing (debt)
- Projectization-Phasing
- Financial technical Tie-ups
- Awareness Generation
- Monitoring

❖ In the Waste Management sector, HUDCO has sanctioned 21 projects for a total project cost of Rs. 63455 lakhs and loan assistance of Rs. 265.22 Lakhs.
The waste management components which could be considered for HUDCO Financing are:

- Overall streamlined management of Municipal Waste (solid and liquid) comprising storage, collection, treatment/resource recovery and ultimate disposal.
- Hazardous and toxic waste like hospital waste, industrial waste generated within municipal/urban/semi urban areas.
- Resource recovery e.g. Compost, fuel, energy etc.
- Recycling which forms part of an integrated waste management project.
ELIGIBLE AGENCIES

- Urban Local Bodies
- Development Authorities
- Health Care Establishment in Public Sector
- Public Sector Companies
Prime Security:
- Government Guarantee or
- Bank Guarantee of a Scheduled Bank or
- Mortgage of land and building

Collateral security:
- Hypothecation of plant and equipment
- Corporate Guarantee
- Escrow account in a scheduled bank
Thank You!