

Swachh Bharat Mission

Dr. Shyamala Mani

Professor

NIUA

Swachh Bharat Mission in Urban areas

SWACHH
BHARAT



my
GOV
मेरी सरकार



Prime minister launches
Swachh Bharat Mission



एक कदम स्वच्छता की ओर

भारत सरकार

पेय जल एवं स्वच्छता मंत्रालय



The Mission will
be in force till
2nd October 2019



- **Swachh Bharat Abhiyan/Mission** (SBM, स्वच्छ भारत अभियान) is a national campaign by the Government of India, covering **4041 statutory towns**, to clean the streets, roads and infrastructure of the country.
- The estimated cost of implementation of SBM (Urban) based on unit and per capita costs for its various components is ₹**62,009 Crore**.

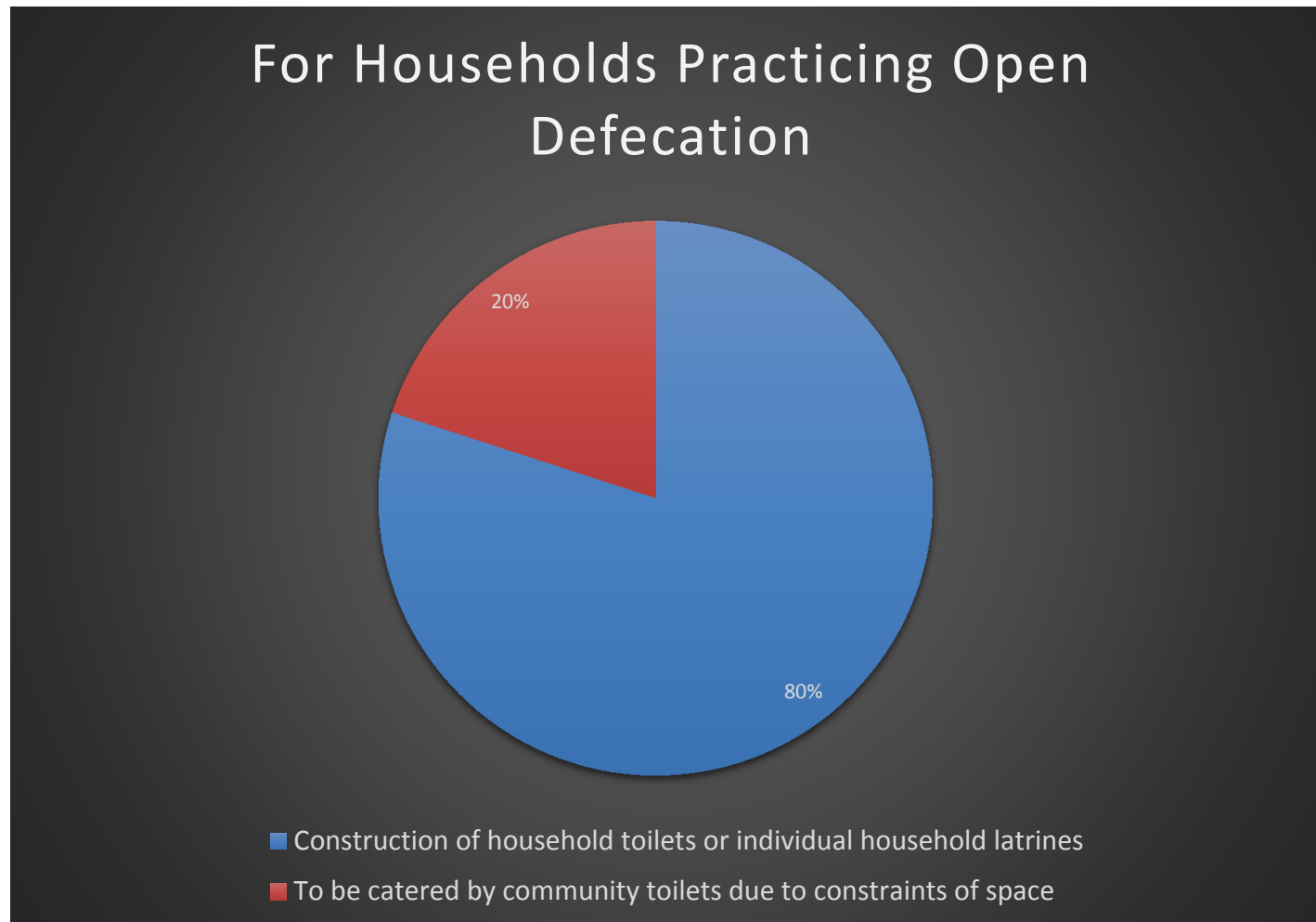




CLEAN INDIA PROJECT

- Overall objectives of the mission are:
 1. Elimination of open defecation
 2. Conversion of insanitary latrines into pour-flush latrines
 3. Eradication of manual scavenging
 4. Prevention of pollution of water sources
 5. Ensuring cleanliness and hygiene in public places
 6. Awareness creation
 7. Capacity building

Sanitation under SBM



Swachh Bharat Abhiyan

- Swachh Bharat Abhiyan or Swachh Bharat Mission (SBM) has earmarked funds for
 - construction of toilets in urban and rural areas
 - entire chain of solid waste management by inviting states, local self government institutions, corporate houses and philanthropic organizations to participate
 - target of complete sanitation, is scheduled to be achieved by 2019.
- Ministry of Urban Development (MoUD) has
 - published guidelines and requested states to submit their concept note on state sanitation strategies (SSS)
 - their proposals to the MoUD and also start preparing the city sanitation plans (CSP) for each of their cities
 - MoUD has given detailed guidelines with cost estimates for different technologies for toilets and onsite septage management.

- Central government incentive for the construction of household toilets will be ₹4,000 per household toilet for each identified beneficiary household.
- 50% of the Central Government incentive (Rs. 2,000/-) will be released to the identified beneficiary household by the ULB as 1st instalment on approval by the ULB along with share of the state government.
- The remaining 50% of Central Government incentive as 2nd instalment should be released to the identified beneficiary household along with the State Government's incentives upon verification of physical progress of construction of the household toilet.
- The actual process of verification will be as per the directions of the respective State Government.

Home Toilets: AGRA

Customized to Space, Affordability, Technology

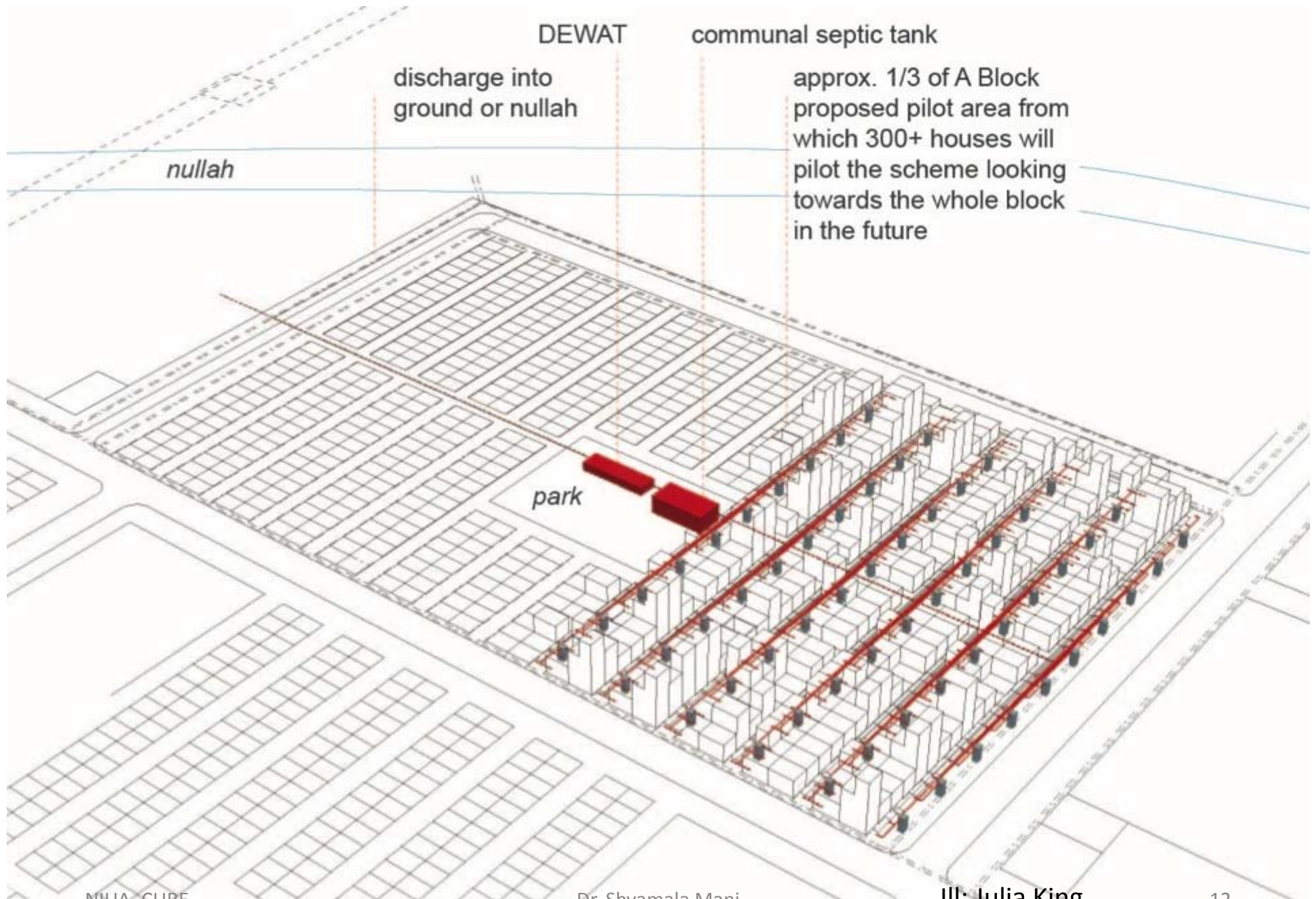




Pipe Teams:

Cluster Septic Tank Connects 320 houses to Toilets

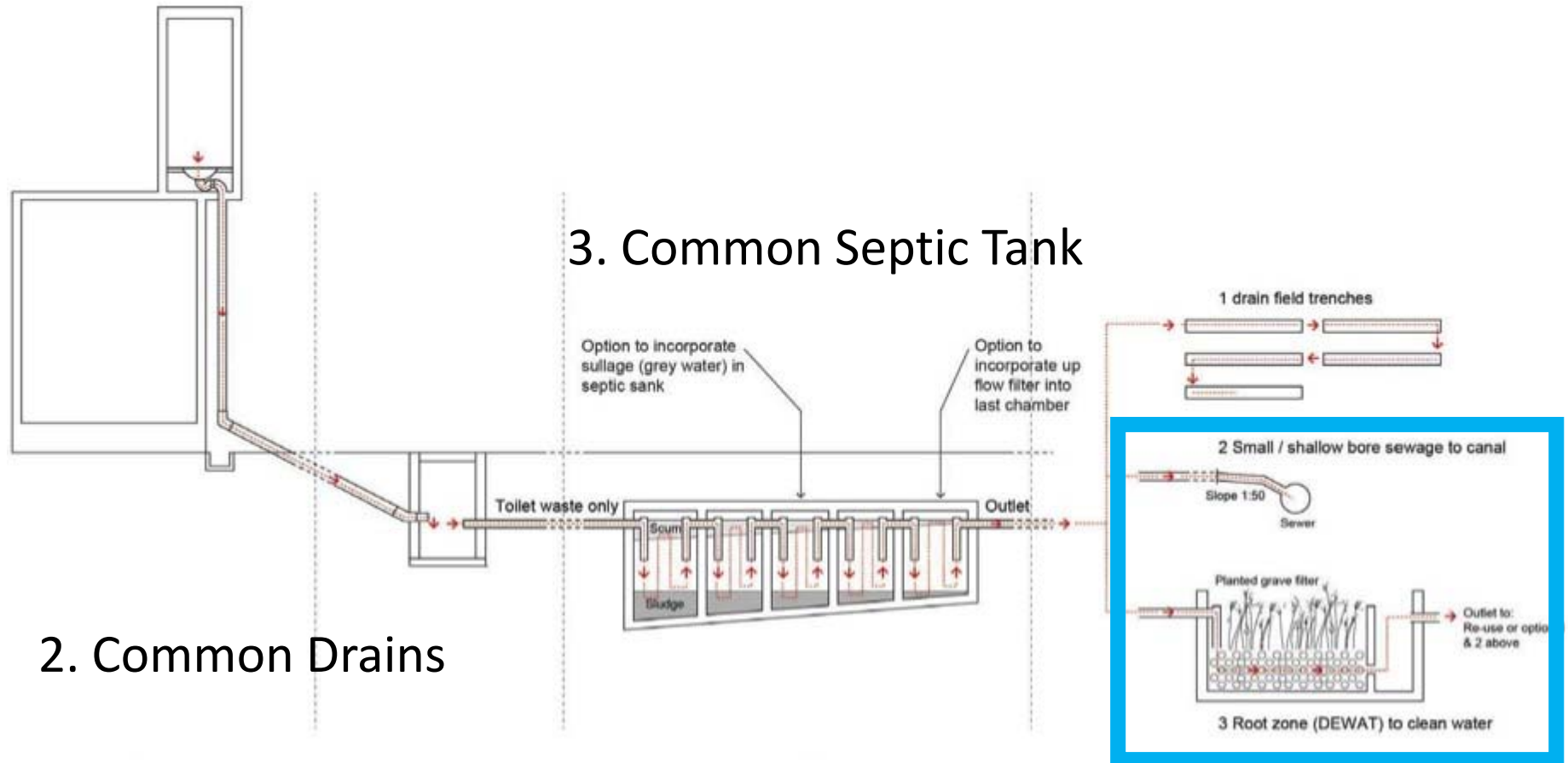




1. In House Toilets

2. Common Drains

3. Common Septic Tank



4. DEWAT with Reed Bed and Outlet

Making the Last Mile Connect

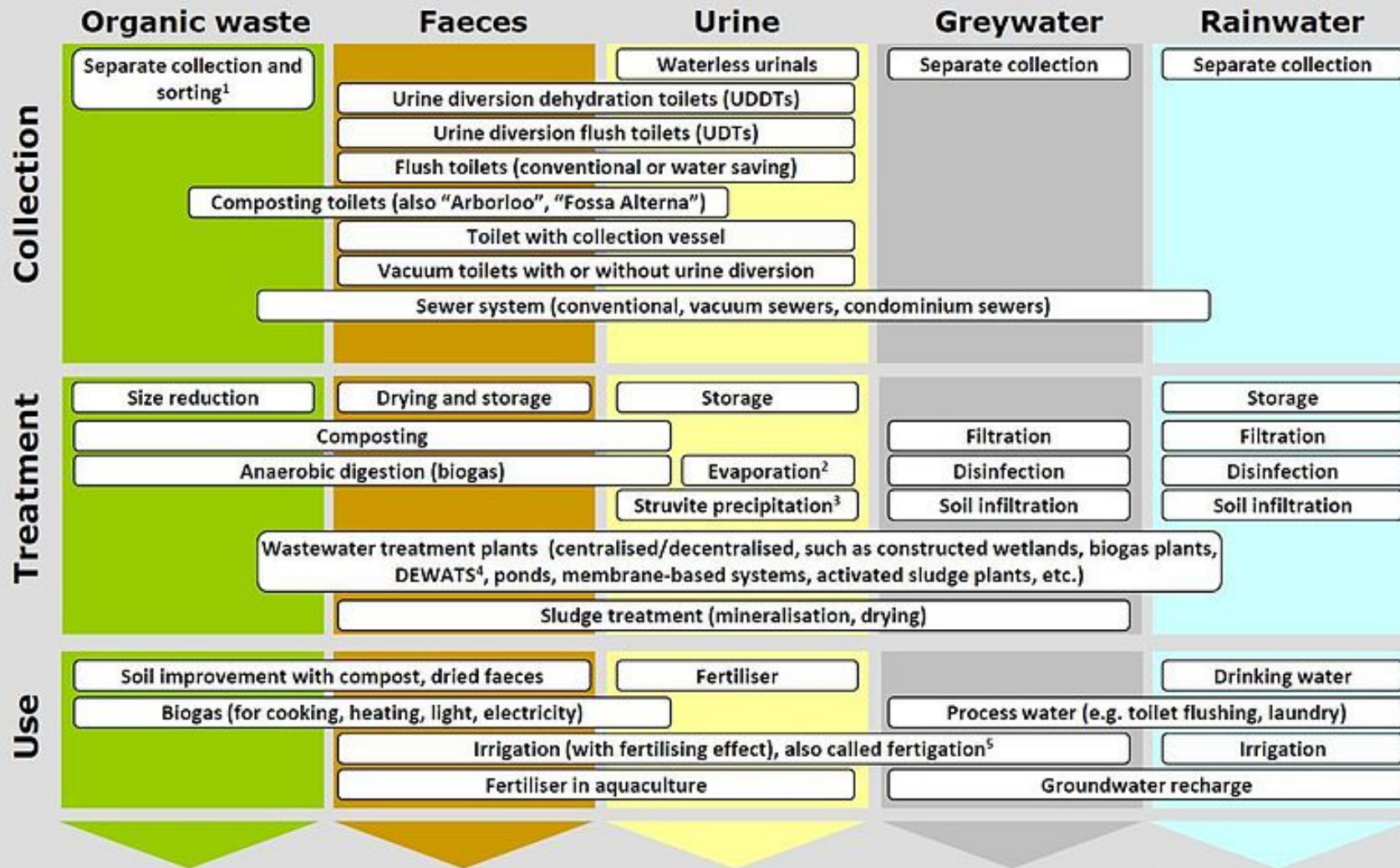
Savda Ghevra, Delhi



DEWAT Cleaning



Possible technology components for sustainable sanitation



Published by:
Deutsche Gesellschaft für
Technische Zusammenarbeit (GTZ) GmbH
Eschborn, Germany
E: ecosan@gtz.de
I: www.gtz.de/ecosan

¹ Elimination of plastics and other non-organic materials

² Only in laboratory so far (odour problems)

³ Retentate has high ammonium concentration (removable by stripping)

⁴ DEWATS is a name coined by NGO BORDA (decentralised wastewater treatment systems)

⁵ Water is from flush water and greywater

gtz Sustainable sanitation
ecosan

SBM (Urban) Component IV: Solid Waste Management

- SWM is waste segregation and storage at source, primary collection, secondary storage, transportation, secondary segregation, resource recovery, processing, treatment, and final disposal of solid waste
- The Manual on Municipal Solid Waste Management, 2000 published by M/o UD and revised from time-to-time, may be referenced for DPR formulation and implementation.

SBM – SWM component

- ULB's are to prepare DPR for Solid waste management of their city in consultation with state governments
- Smaller cities can form clusters to become viable entities to attract private investment.
- The DPR's should be bankable, having a viable financial model.

SBM – SWM component contd...

- DPRs should be aligned with Govt. of India's goals outlined in the NUSP 2008, SWM rules, advisories, CPHEEO manuals (including cost-recovery mechanisms), O&M practices and Service-level Benchmark advisories released by M/o UD from time to time.
- In order to promote projects of waste to energy, it is clarified that the central government Grant / VGF may also be used for such projects, either upfront or as generation based incentive for power generated for a given period of time

SBM – SWM Component ...

- The State Level high power committee will approve the DPR as well as the financial model of solid waste management.
- The implementation of SWM projects will be as per directions of State Level High Power Committee.
- Central government incentive for the SWM projects will be in the form of a maximum of 20% Grant / VGF for each project.

SBM – SWM component contd...

- SWM projects will be sanctioned by the State level HPC which shall include a representative of the MoUD
- The entire approval procedure for MSW projects except for release of Central funds will end at the State Level.
- The States shall be free to choose the technology for SWM projects, toilets and street sweeping.

SBM – SWM component contd...

- The Ministry of Urban Development shall, from time to time, **bring to the notice of the States, through advisories and manuals, and other consultative mechanisms**, various options available in these fields.
- States will contribute a **minimum of 25% funds for SWM projects to match 75% Central Share**.(10% in the case of North East States and special category states).

SBM - IEC

- States shall prepare an **annual action plan**, with details of State funding commitment, for **Public Awareness & IEC** and State HPC shall approve it.
- At least **50% of the IEC fund** in each annual plan, as approved by State HPC, must go to the ULB's for **IEC activities at the grass root level**

SBM - IEC

- 2% of the total Central Government allocation under the mission will be utilized at MoUD level for capacity building, convening national and regional workshops, various awards and best practice recognition, programme research, studies, international cooperation for capacity building and technology development, A&OE and various eligible purposes in consultation with the Integrated Finance Division (IFD) of the M/o UD

SWM Exposure Workshops

- **Swachh Bharat Mission** (SBM) was **launched** by the **Hon. Prime Minister of India** on **October 2, 2014**.
- SBM **Exposure Workshops** for ULBs being **conducted** by National Institute of Urban Affairs (**NIUA**) along with Ministry of Urban Development (**MoUD**).
- To help ULBs NIUA will **organize 12 exposure visits** in **New Delhi**, starting with **participants** drawn from the **list of 75 priority ULBs** in 31 states and UTs.

SWM Exposure Workshops

- The **exposure-cum-training workshops** will be conducted for **12 batches** of **about 40 participants**, with **each batch** comprising **3-4 senior and mid-level officials from 10-15 cities and officials from state-level SBM directorates**.
- The **first batch** of participants **from Delhi NCR** and **some cities from UP**, underwent orientation and exposure, from **May 2nd -5th, 2016 at** United Service Institution of India **(USI)**, New Delhi.

SWM Exposure Workshops

- The workshop would mainly **involve exposure visits** to different **SWM locations in Delhi** with **some classroom sessions on first and last days**.
- The **purpose** of the **SWM Exposure Workshops** is to:
 - **Recognize the issues, challenges and constraints of SWM**
 - **Understand the SWM Rules 2016**
 - Be **aware** of the **various approaches, technologies** and their financial implications
 - **Plan to implement solutions** in their city

Challenges to Solid Waste Management

- **Excessive littering** by citizens and **lack of pride among the city dwellers for cleanliness**
- **Inability of ULBs to provide appropriate bins** in public places for waste deposition and collection
- **Inability of ULBs to establish systems and technologies** required **for segregated collection and processing of different categories of solid waste** like, households, commercial establishments etc.
- **Outdated systems** of primary and secondary **collection** and **inefficient transportation**

Challenges to Solid Waste Management

- **Inability to meet revenue expenses** including salaries of staff, consumables, safety equipment and personal protective equipment (PPE)
- **Lack of motivation among staff** and lack of will and skill among staff to implement
- **Financial crunch for modernizing SWM** and adopting innovative and appropriate technologies
- **Poor or no collection of user charges** because of poor services and hence cannot meet day to day expenses leading to a vicious cycle of poor performance.

Solid Waste Management Rules and Manual

- **MoEFCC has notified the SWM Rules in April 2016.**
- It has **made citizens more accountable for their actions**, requiring them to be **more responsible** towards their environment by :
 - **Reducing generation of waste**
 - **Segregating** what they generate into various categories and

Solid Waste Management Rules and Manual

- Handing them over as such to door to door waste collectors so that the different categories can be **reused, reprocessed and recycled** rather than only dumped first on the roadside and thereafter outside the cities.
- **To operationalise the SWM Rules**, the MoUD manual would incorporate the necessary specification and actions for ULBs to implement them in their cities.

Need for Capacity Building

- **To draw maximum advantage of these changes** and the **financial support** being infused **into the system** by the Central Government
- **To develop capacity** and the **will to implement** so that by 2019 for state governments and local self governments
- All cities are able to bring about **visible changes SWM and improve their environment**

SWACHH BHARAT MISSION EXPOSURE WORKSHOPS June 20th to 23rd, 2016 AGENDA

Day I, June 20th, 2016

Inauguration

Timings	Topics	Speakers
12.00 p.m.	Introduction & Welcome	Dr. Shyamala Mani, NIUA
12.05 p.m.	Lighting the lamp	
12.10 p.m.	Inaugural address	Mr.Saurabh Jain, Addl. Mission Director, Swachh Bharat Mission, MoUD*
12.25 p.m.	Solid Waste Management Rules 2016 – An inclusive approach to Waste Management	Ms. Sanchita Jindal, Director, MoEFCC
12.55 p.m.	Vote of thanks	NIUA

Panel Discussion

Chair person: Dr. Shyamala Mani, NIUA

Timings	Topics	Speakers
2:00 p.m.	Responsibilities of generators and segregation at source - experiences	Ms. Priti Mahesh, Chief Programme Coordinator, Toxics Link
2:20 p.m.	Not in my Backyard – Issues and Challenges	Ms.Swati Sambyal, CSE
2:40 p.m.	Environmental Education for sustainable waste management	Dr.B.C.Sabata, Sr.Scientific Officer, Department of Environment, Govt. of NCT of Delhi
3:10 p.m.	Q&A	
3.30 p.m.	Tea	

Technical session 1

Timings	Topics	Speakers
3:45 p.m.	Integrating waste pickers for sustainable solid waste management	Ms.Richa Chaturvedi, Manager, A voice for waste programme, Chintan
4:15 p.m.	Decentralized Solid Waste Management by ITC at Saharanpur	Mr. Giresh Mohan, ITC
4:45 p.m.	Biomethanation	Mr. D.C.Pant, Fellow, TERI

Field Trips

Day II –June 21st 2016

Timings	Locations
09.00 a.m.	Ghazipur landfill site, Ghazipur
10.00 a.m.	Ghazipur Waste to Energy
11.00 a.m.	Gulmeher – CSR supported Recycling
12.00 noon	Chintan Material Recovery Facility, Bhopura
01.00 p.m.	Lunch at Haldirams, Dilshad Garden
02.00 p.m.	C&D Waste Recycling Plant at Shastri Park
03:30 p.m.	Composting and Paper Recycling at Miranda House

Day III – June 22nd 2016

Timings	Locations
08.30 a.m.	Door to Door waste collection system at a South Delhi Colony
10.30 a.m.	Decentralised waste processing at GPRA, New Motibagh
11.30 p.m.	Biomethanation at Delhi Gymkhana
12:30 p.m.	Waste water recycling at IHC
1:30 p.m.	Lunch at NIUA
03.00 p.m.	Okhla Timarpur WTE plant by Jindal
04:00 p.m.	Okhla Composting Plant by IL&FS

Day IV – June 23rd, 2016

Technical session 2

Timings	Topics	Speakers
09.00 a.m.	Recap (Assisted Discussion) & Quiz	Dr.Shyamala Mani, NIUA
10:00 a.m.	Decentralised C&D waste management and recycling	Dr.K.Vijayalakshmi, V.P., Development Alternatives
10:15 a.m.	Waste to Energy - Learnings	Mr.Sandip Dutt, Jindal Ecopolis
10:30 a.m.	Nisarga Runa and Containerised Biomethanation	Mr.Sandeep Garg, Green Bricks Eco Solutions
10:45 a.m.	Q&A	
11:00 a.m.	TEA BREAK	

Technical session 3

Timings	Topics	Co-ordinator
11:15 a.m.	Making wealth from waste- Some Business Models	Prof.R.J.Masilamani, BIMTECH, Greater NOIDA
11.45 a.m.	Group activity I	Dr. Shyamala Mani, NIUA & Prof.R.J.Masilamani, BIMTECH
12.15 p.m.	Presentation of group activity	
01.00 p.m.	LUNCH	

Technical session 4

Timings	Topics	Coordinator
02.00 p.m.	Group Activity II	Dr.Shyamala Mani, NIUA & Prof.R.J.Masilamani, BIMTECH
03.00 p.m.	Presentation of group activity	
03.30 p.m.	TEA BREAK	
04.00 p.m.	Filling Feedback form by participants	NIUA team
04:30 p.m.	Valedictory and Certificate Distribution	Shri. Praveen Prakash, J.S. and Mission Director, SBM*

SBM Exposure Workshop Participants List

S.N.	State	City	Name	Designation	Corporation
1	Delhi	New Delhi	Mr. O. P. Vimal	Executive Engineer	East Delhi Municipal Corporation
2	Delhi	New Delhi	Mr. Jitender Singh	Assistant Engineer	
3	Delhi	New Delhi	Mr. Meva Ram	Assistant Director Horticulure	
4	Delhi	New Delhi	Mr. Vijay Pal Sharma	Assistant Director Horticulure	
5	Haryana	Faridabad	Mr. Radhey Sham	Assistant Engineer	Municipal Corporation of Faridabad
6	Haryana	Faridabad	Mr. Ram Prakash	Executive Engineer (Building)	
7	Haryana	Gurgaon	Wing Commander K. K. Yadav	Secretary Zila Sainik Board, Gurgaon	Gurgaon Municipal Corporation
8	Haryana	Gurgaon	Mr. Shyam Sundar	Secretary Red Cross, Gurgaon	
9	Haryana	Gurgaon	Ms. Teresa Sharma	Social Worker (Indian red cross society), Director: Agrim Welfare Foundation	
10	Haryana	Yamuna Nagar	Dr. Vijay Pal Singh	Executive Officer	Municipal Corporation of Yamunanagar
11	Haryana	Rohtak	Mr. Harish Kumar	JE Swachh Bharat Mission	Municipal Corporation Rohtak
12	Haryana	Sonepat	Mr. Rohtash Bishnoi	Executive Officer	Municipal Corporation Sonepat
13	Uttar Pradesh	Kanpur	Mr. Ashok Kumar Bhati	Municipal Commissioner	Municipal Corporation of Kanpur
14	Uttar Pradesh	Firozabad	Mr. Ajay Ram	Assistant Engineer	Firozabad Municipal Corporation
15	UP	Aligarh	Dr. Kuldeep	NSA	Aligarh Municipal Corporation
16	UP	Lucknow	Mr. Pankaj bhushan	Environment Engineer	Lucknow Municipal Corporation
17	UP	Lucknow	Mr. Ashish Pandey	Sanitary & Food Inspector	

SBM Exposure Workshop Participants List

18	Uttar Pradesh	Allahabad	Mr. Jitendra Kumar Gandhi	Chief Sanitary & Food Inspector	Allahabad Municipal Corporation
19	Uttar Pradesh	Allahabad	Mr. Rajiv Kumar Rathi	Environment Engineer	
20	Uttar Pradesh	Jhansi	Dr. Rakesh Babu	MOH	Jhansi Municipal Corporation
21	Uttar Pradesh	Meerut	Mr. Munish Kumar	Sanitary & Food Inspector	Meerut Municipal Corporation
22	Uttar Pradesh	Agra	Mr. R. K. Singh	Executive Engineer	Agra Municipal Corporation
23	Uttarakhand	Haridwar	Mr. Rajiv Kumar	Sanitary Inspector	Nagar Palika Manglor, Haridwar
24	Uttarakahnd	Roorkee	Ms. Mansa Negi	Sanitary Inspector	Municipal Corporation of Roorkee
25	Uttarakahnd	Roorkee	Mr. Mridul Kumar	Sanitary Inspector	
26	Uttarakahnd	Roorkee	Mr. Amit Kumar	Sanitary Inspector	
27	Uttarakhand	Kashipur	Mr. Vikas Chhachhar	Sanitary Inspector	Municipal Corporation Kashipur
28	Uttarakhand	Haldwani	Mr. Neeraj Joshi	Deputy Municipal Commissioner	Haldwani Municipal Corporation
29	Uttarakhand	Mussoorie	Mr. D. S. Rana	Executive Officer	Nagar palika Parishad, Mussoorie
30	Uttarakhand	Mussoorie	Dr. R. K. Singh	Sr. Municipal Health Officer	
31	Uttarakhand	Mussoorie	Mr. Virender Singh Bist	Sanitary Inspector	

SBM Exposure Workshop Participants List

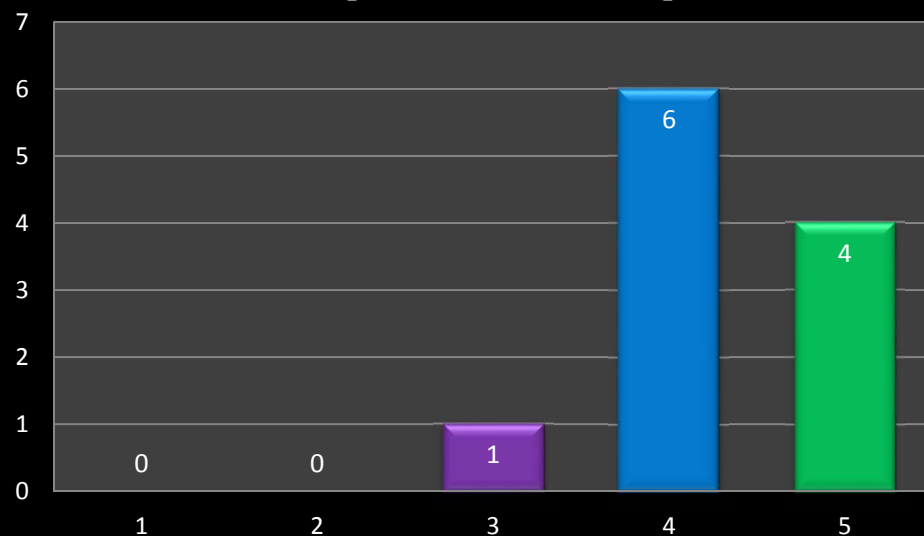
32	Punjab	Chandigarh	Mr. Gulshan Kumar	Executive Engineer, Public Health Division No.4	Chandigarh Municipal Corporation
33	Punjab	Chandigarh	Mr. Vijay Premi	S.D.E., Public Health Division No. 7	
34	Punjab	Chandigarh	Dr. P.S. Bhatti	Medical Officer of Health-cum-Nodal Officer, SBM(U)	
35	Punjab	Ludhiana	Mr. Harpal Aujla	Sr Assistant Manager	Municipal Corporation Ludhiana
36	Punjab	Moga	Mr. Pankaj Upadhaya	Sr Assistant Manager	Municipal Corporation Moga
37	Punjab	Bathinda	Mr. Sandeep Kataria	Chief Sanitary Inspector	Municipal Corporation Bathinda
38	West Bengal	Durgapur	Dr. Ishani Dasgupta	Medical Officer	Durgapur Municipal Corporation
39	West Bengal	Durgapur	Mr. Sujay Kumar Banerjee	Sub Assistant Engineer	
40	West Bengal	Durgapur	Mr. Mrityunjoy Mahato	Sanitary Inspector	
41	West Bengal	Durgapur	Mr. Atanu Rudra	H.A.	
42	West Bengal	Siliguri	Mr. Ganesh Bhattacharya	S.I./F.S.O.	Siliguri Municipal Corporation
43	West Bengal	English Bazar	Mr. Dulal Sarkar	Vice- Chairman	English Bazar Municipality
44	West Bengal	English Bazar	Mr. Sachin Saliur Zaman	Urban Planner & Nodal Officer SBM	
45	Jharkhand	Dhanbad	Mr. Pankaj	Social Development Officer	Dhanbad Municipal Corporation

SBM Exposure Workshop Participants List

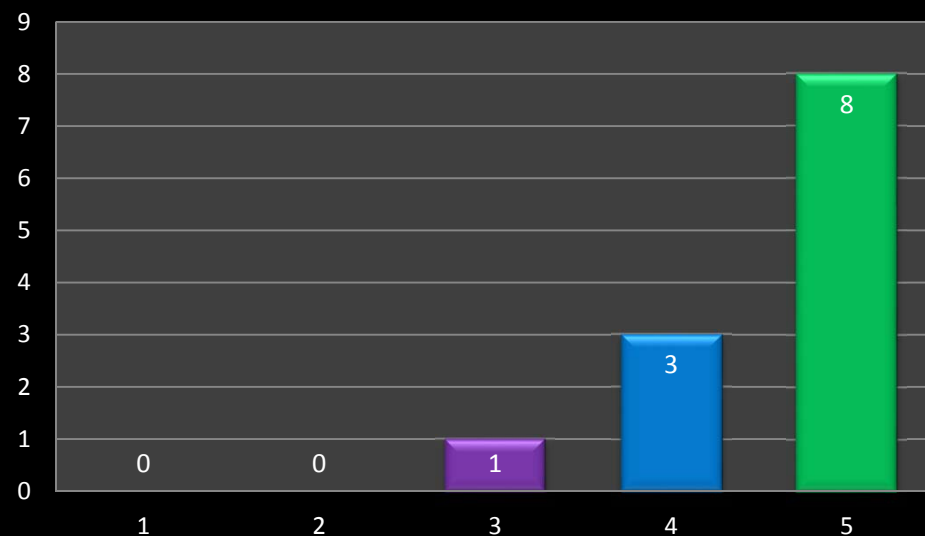
46	Jharkhand	Deoghar	Mr. Sudhanshu Shekhar	City Manager	Deoghar Municipal Corporation
47	Bihar	Patna	Mrs. Shubhanjali Saxena	Environment Specialist	Urban development & Housing Department, Government of Bihar
48	Jammu & Kashmir	Udhampur	Mr. K.K.Chalotra	Chief Executive Officer	Municipal Council Udhampur
49	Rajasthan	Bikaner	Ms. Dipika Gajraj	Revenue Officer (Second)	Municipal Corporation of Bikaner
50	Rajasthan	Bikaner	Mrs. Alka Burdak	Executive Officer	
51	Rajasthan	Bikaner	Ms. Suman Saharan	Junior Engineer	
52	Rajasthan	Bikaner	Ms. Geeta Yadav	Junior Engineer	
53	Himachal Pradesh	Dharamshal	Mr. Naresh Kumar	Tehsildar Nagrota Bagwan	District Administration office, Dharamshala
54	Himachal Pradesh	Mandi	Mr. Amit Kumar Singh	Head of City RPMC Mandi, Department of Urban Development	Municipal Council Mandi
55	Maharashtra	Pimpri Chinchwad	Mr. Dilip Gawade	Joint Commissioner	Pimpri Chinchwad Municipal Corporation (PCMC)

Exposure Visit Locations

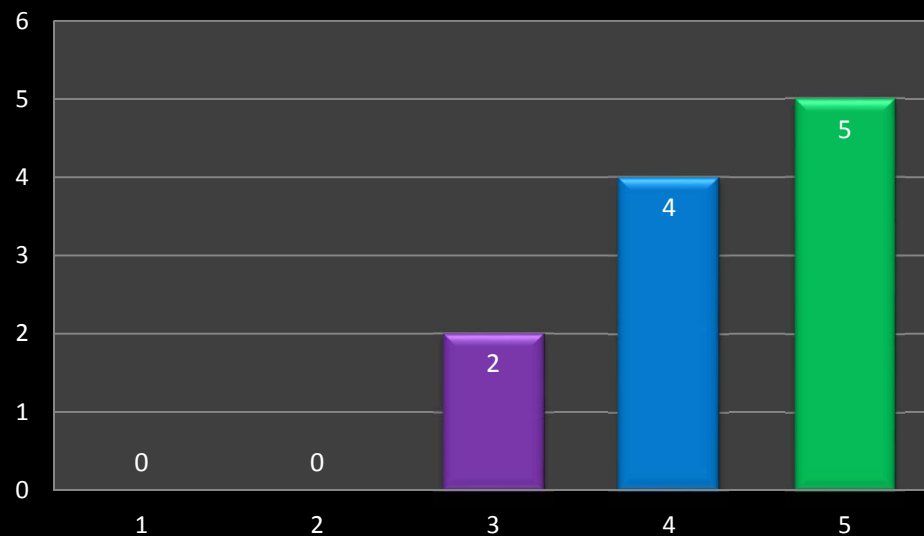
Ghazipur landfill site, Ghazipur



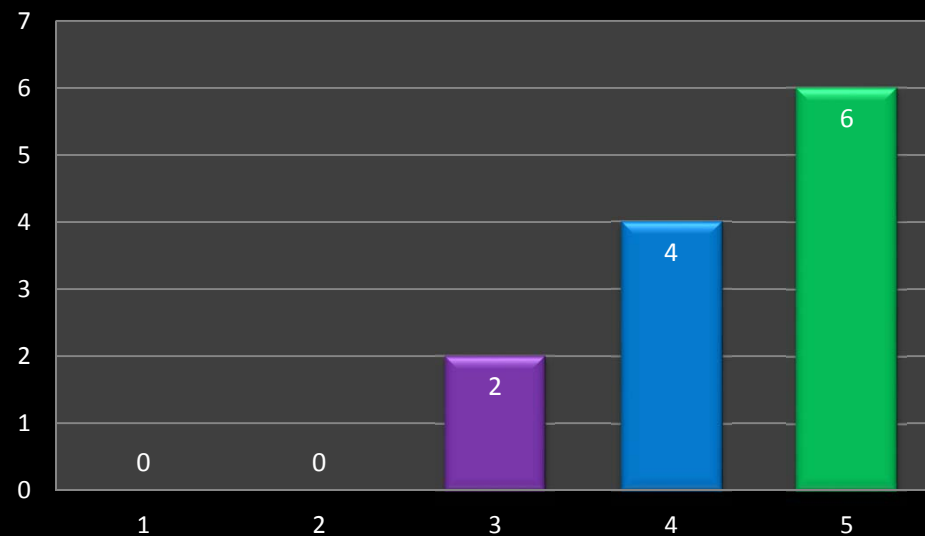
Ghazipur Waste to Energy



Gulmeher – CSR supported Recycling



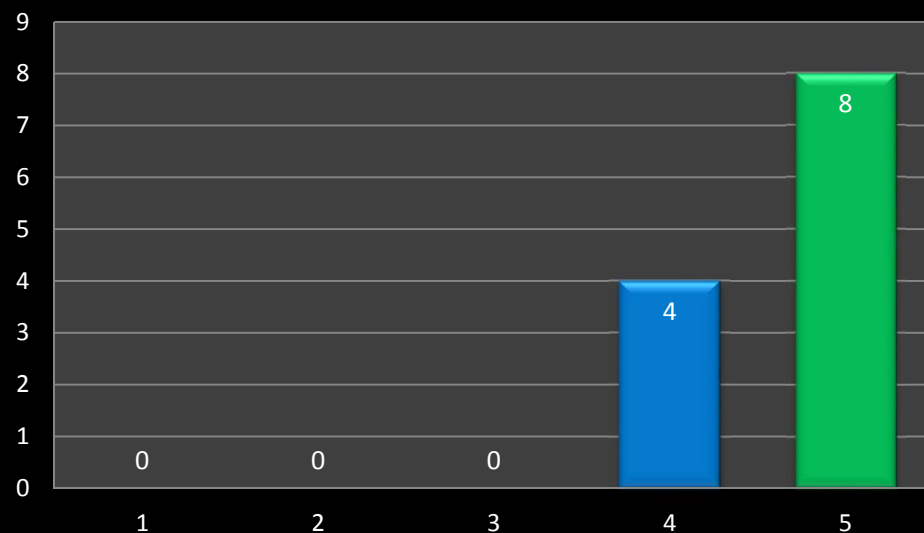
Chintan Material Recovery Facility, Bhopura



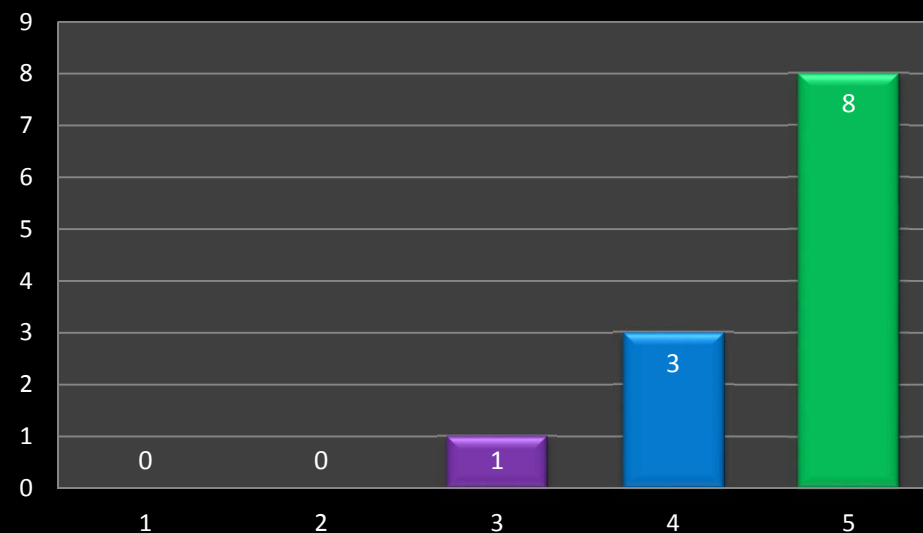


Exposure Visit Locations

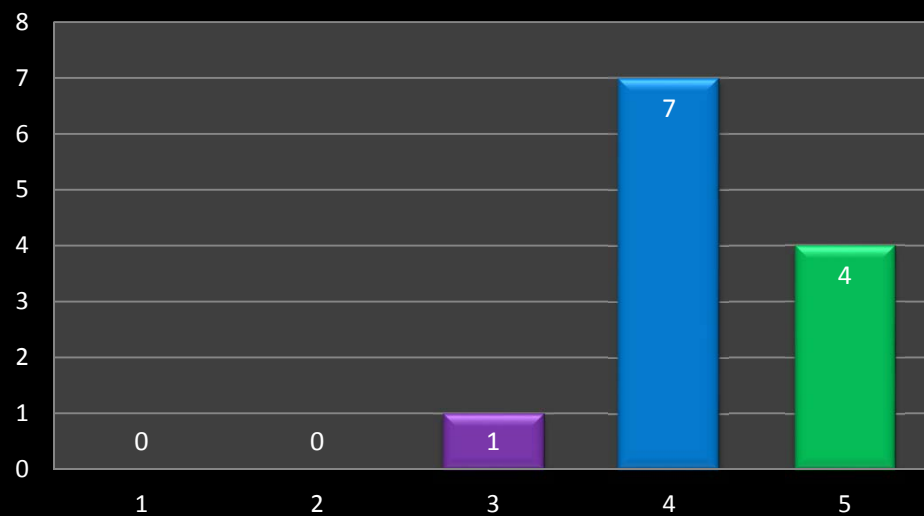
C&D Waste Recycling Plant at Shastri Park



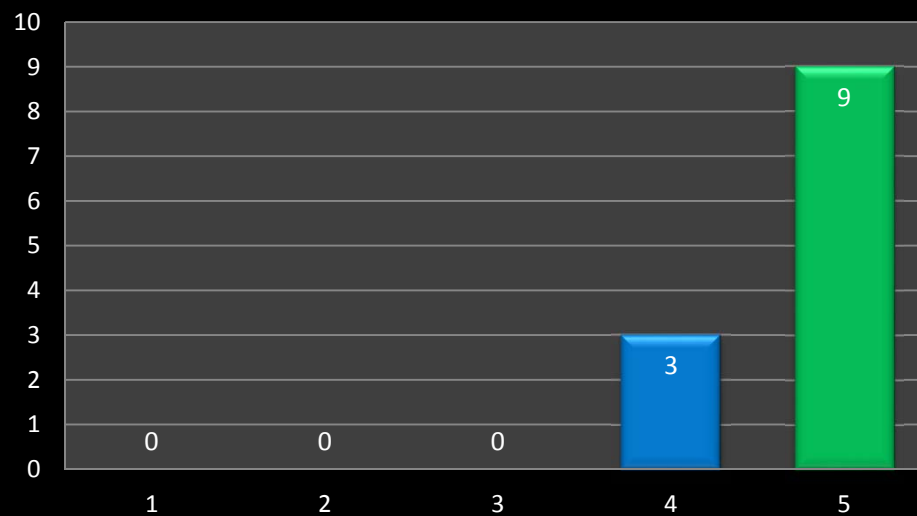
Composting and Paper Recycling at Miranda House



Door to Door waste collection system at South Delhi Colony



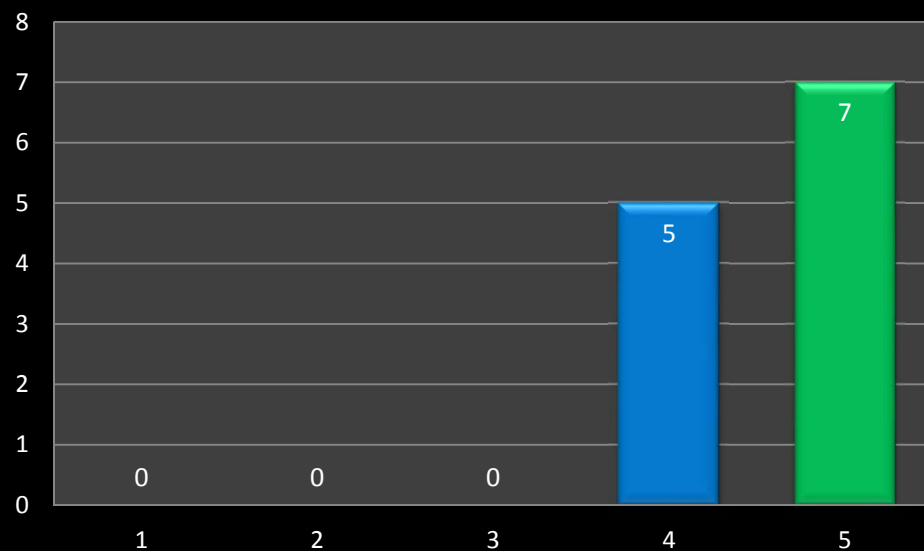
Decentralized waste processing at GPRA, New Motibagh



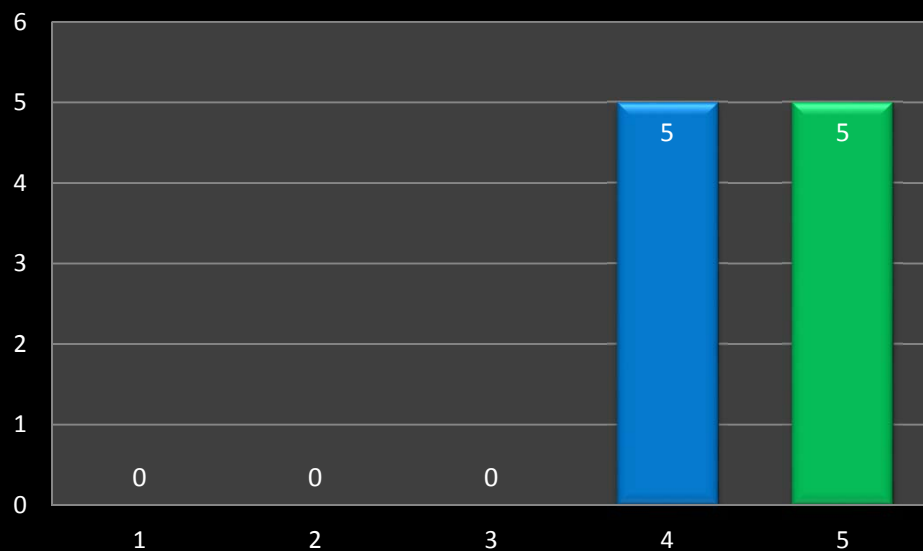


Exposure Visit Locations

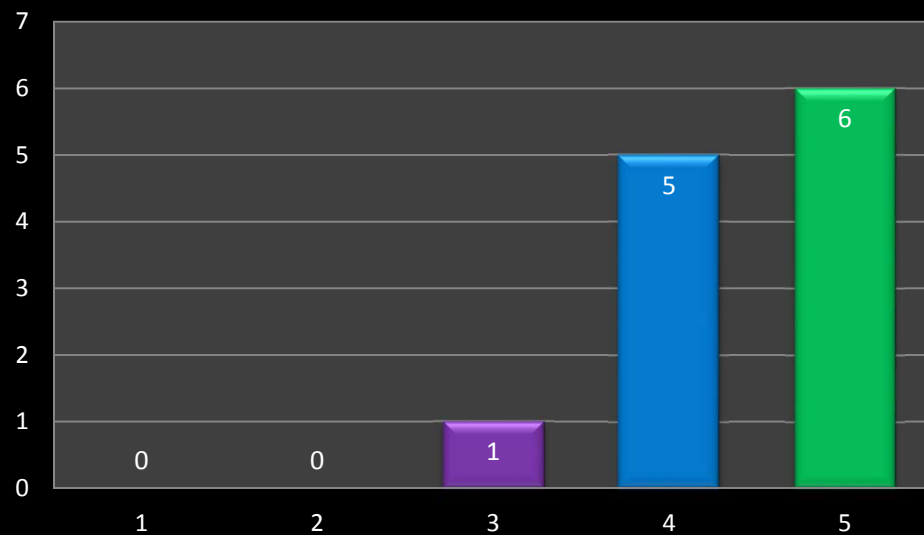
Biomethanation at Delhi Gymkhana



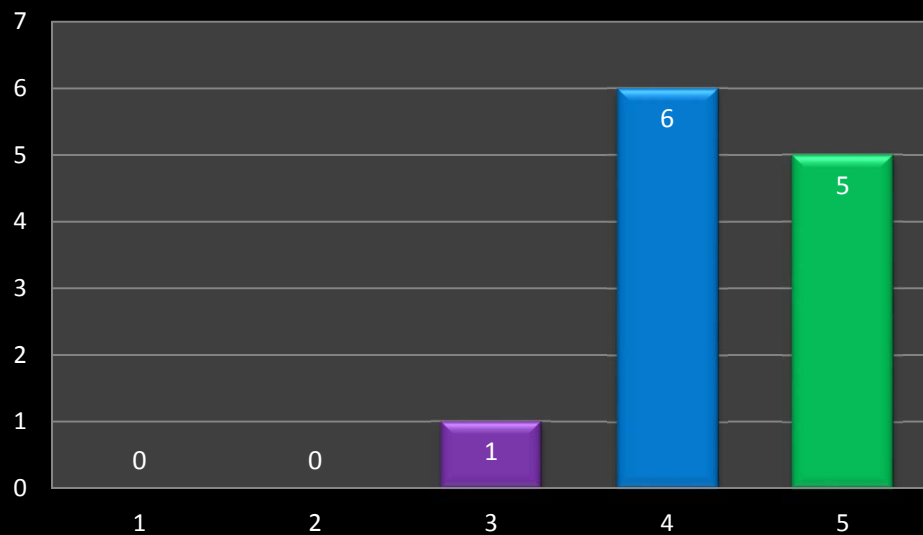
Waste water Recycling at IHC



Okhla Timarpur WTE plant by Jindal



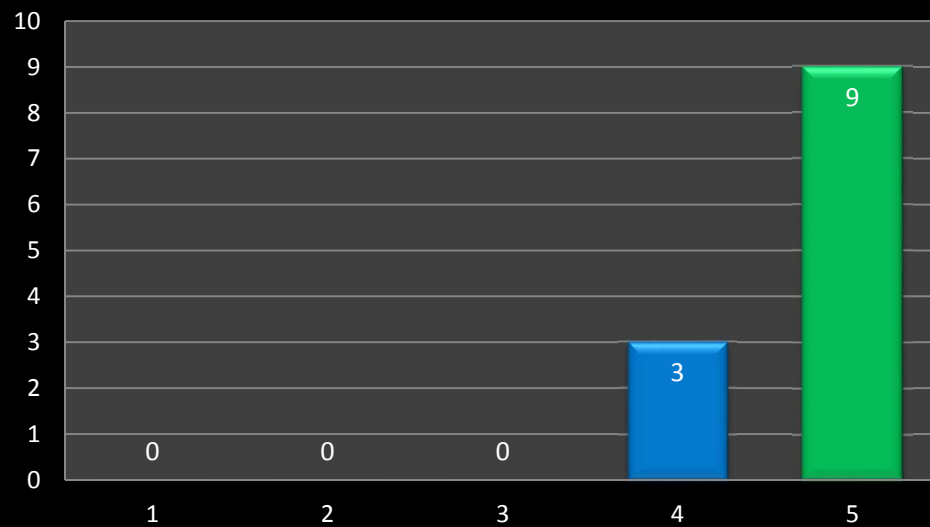
Okhla Composting Plant by IL&FS



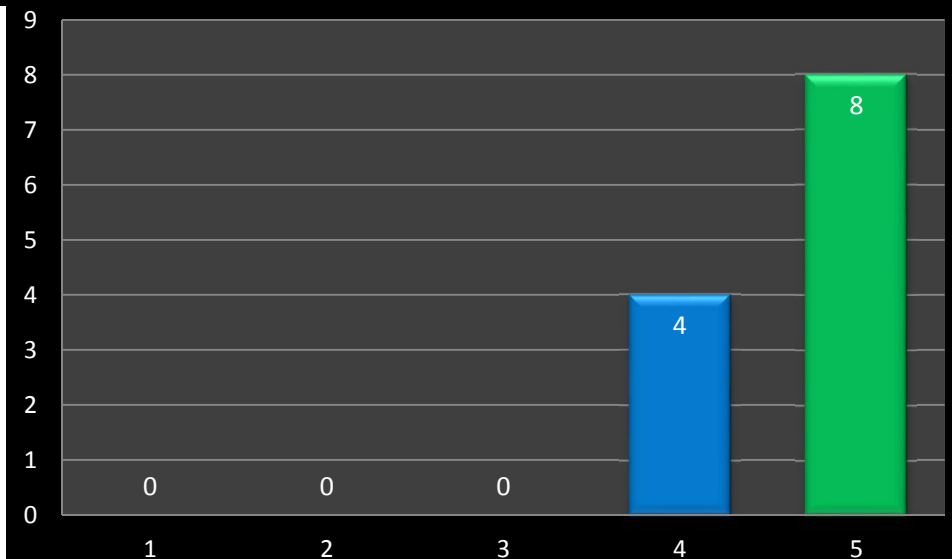


Group Activities

Identificatio of Challenges and Issues and discussing
problable solution



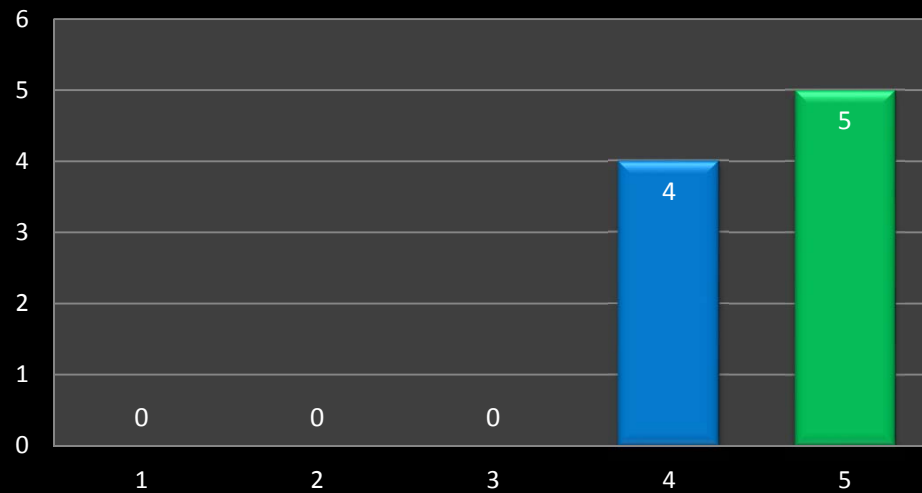
Mitigating Strategies: A planning approach



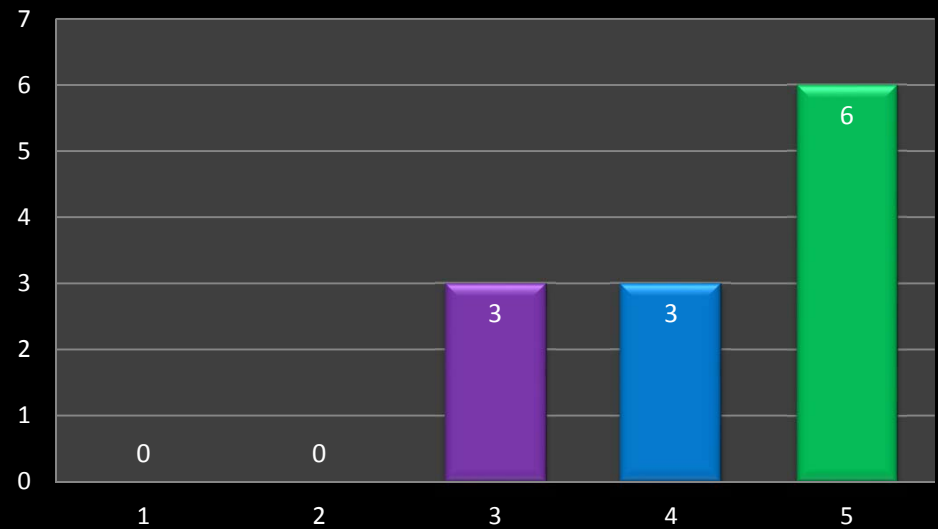


Speakers

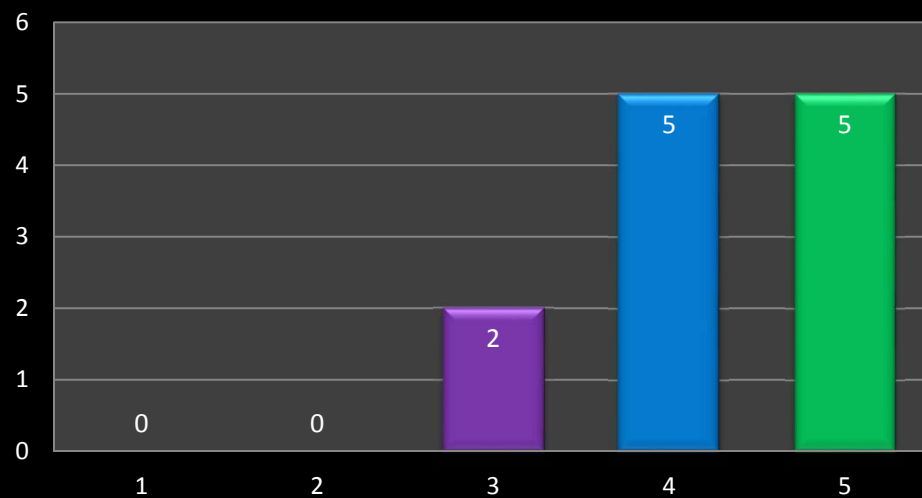
Solid Waste Management Rules 2016- An Inclusive Approach to Waste Management



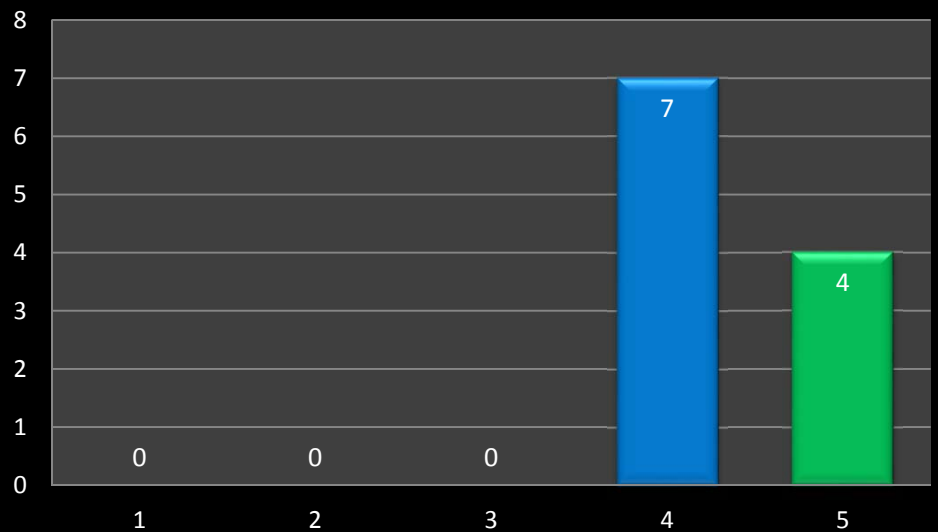
Dry Waste Recycling



Responsibilities of generators and segregation at source- experiences

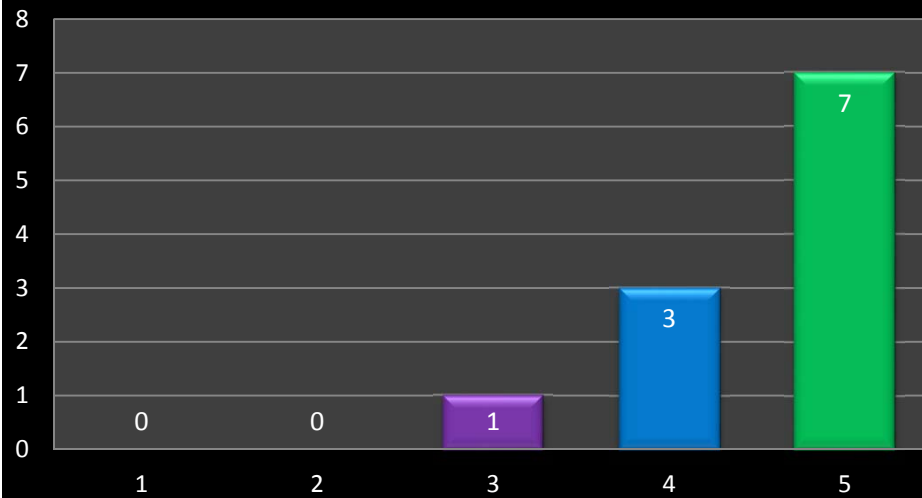


Not in my backyard- Issues and Challenges

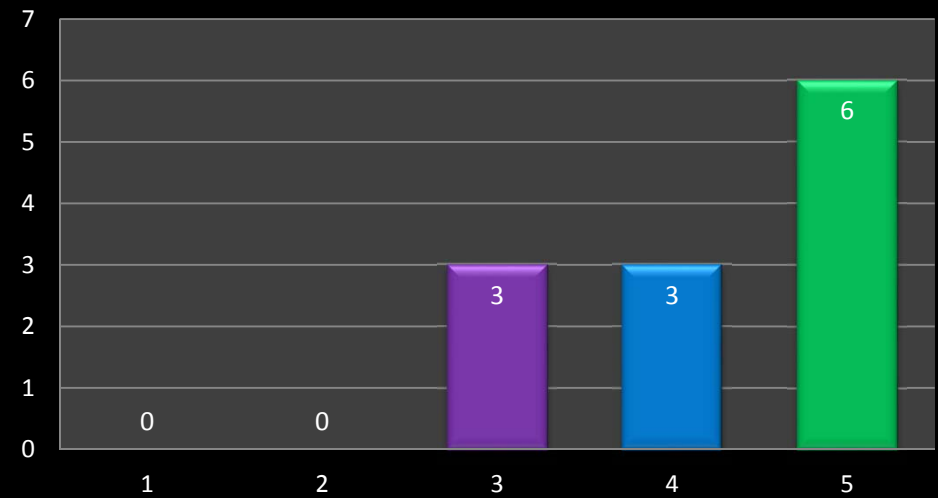


Speakers

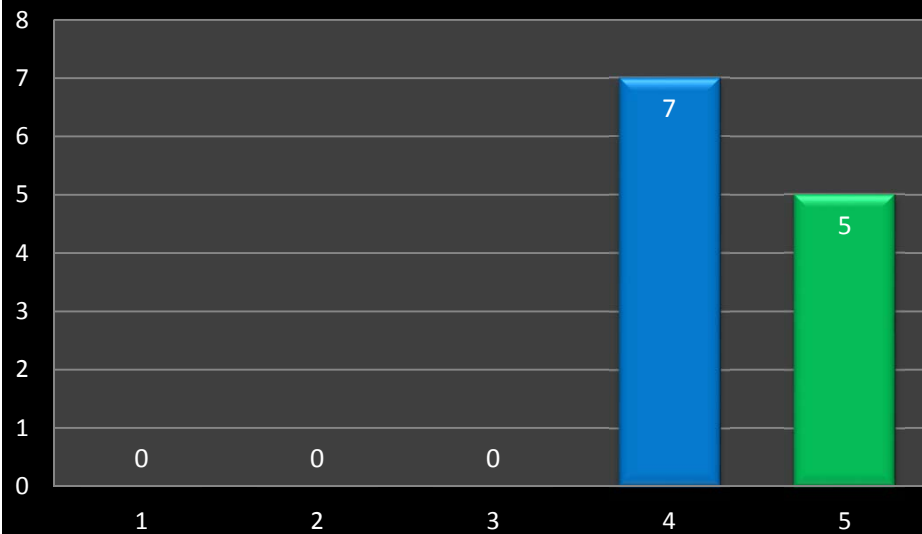
Integrating waste pickers of sustainable solid waste management



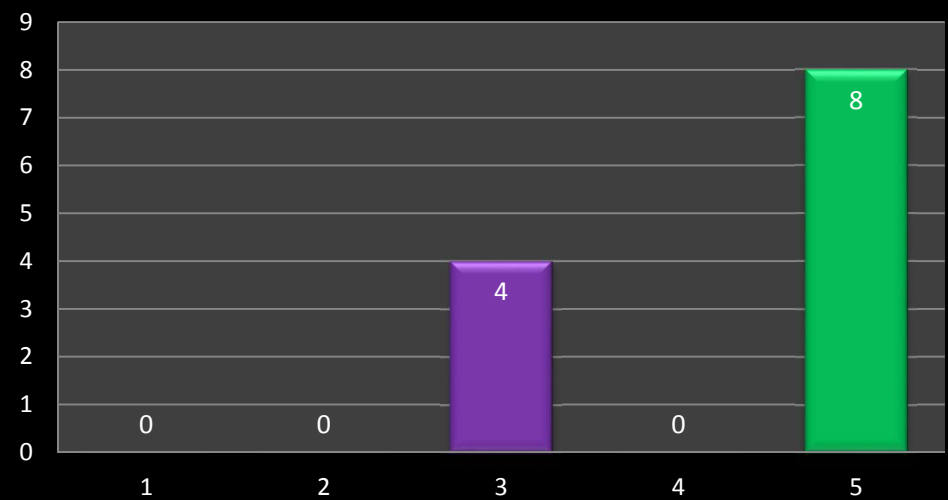
Public Private Partnership in Solid Waste Management



Biomethanation

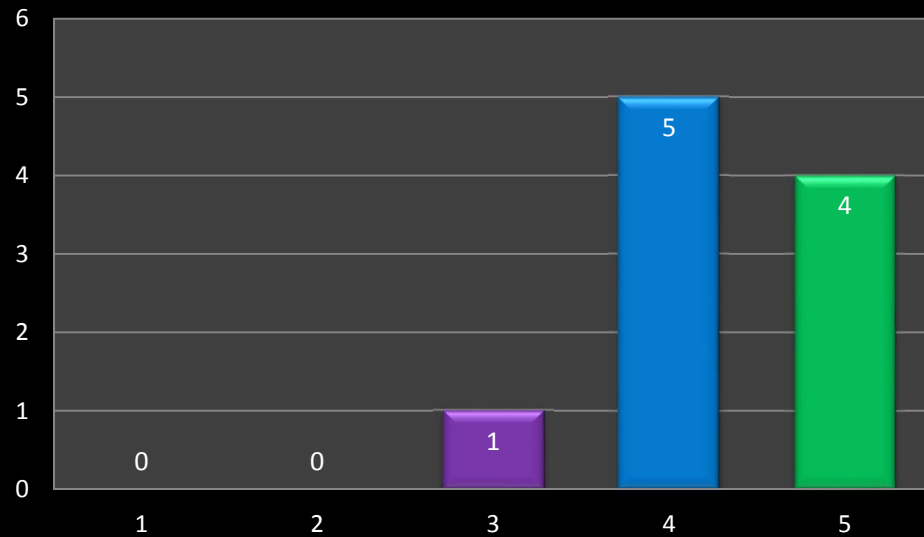


Decentralized C & D waste management and Recycling

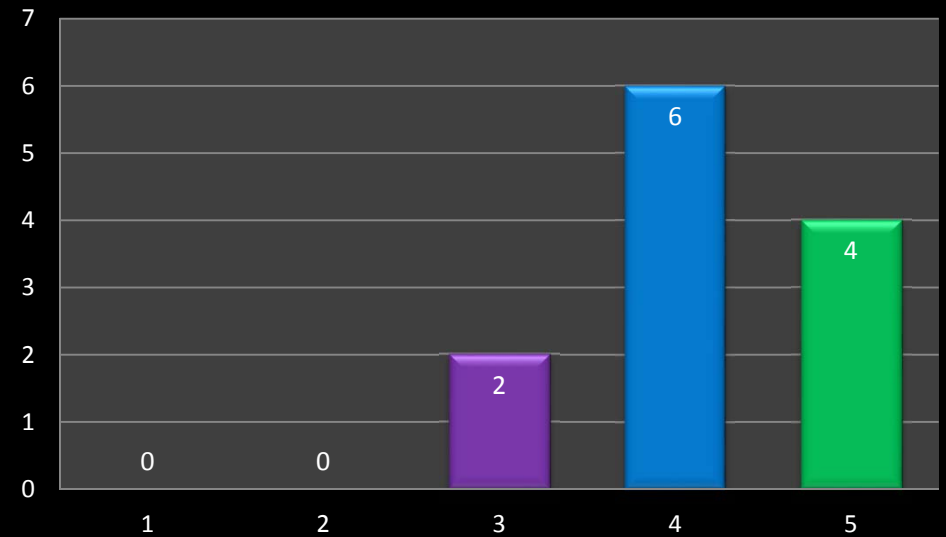


Speakers

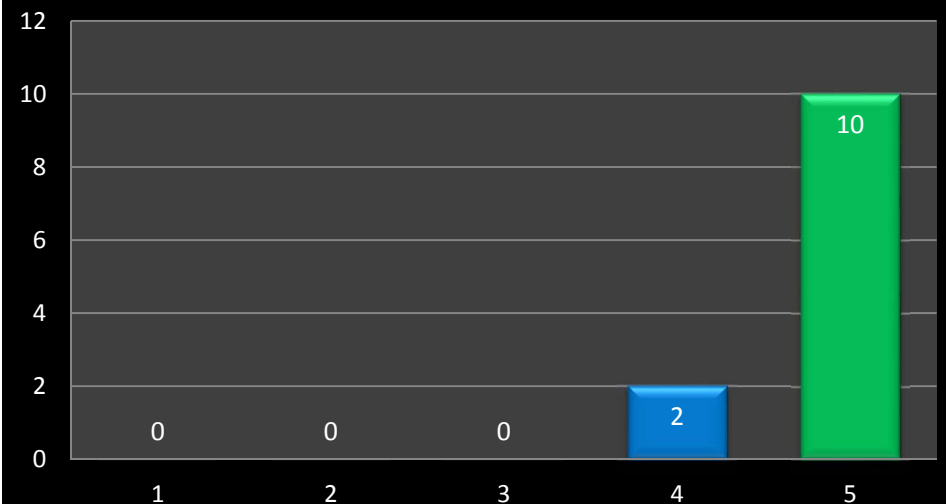
Waste to Energy- Learning



Nisarga Runa and Containerized Biomethanation



Making wealthy from waste- Some Business Models



Thank you

smani@niua.org