“Municipal Solid Waste”
An Urban nuisance.....

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India generates around 70 million tons of MSW annually.
SWM System – the way it should be...

- DTD Collection
- Secondary C&T
- Transfer Stations/points
- Treatment & Disposal Facility
- MRF
- Compost
- Scientific landfill

- Moving towards 3R paradigm
- Decentralised waste management
- Zero Landfilling
- Regional approach for waste processing and landfilling
- Biomining
- Community engagement
MSW TREATMENT OPTIONS

- Biomethanation
- Incineration
- RDF
- Recycling
- Windrow composting

Source: JNNURM SWM Toolkit
Waste in TPD.
Thus, waste ends up in landfill, polluting the water, air and soil.
AROUND 80% OF INDIA’S MSW IS DUMPED IN UNCONTROLLED MANNER
NEARLY 3.5 – 4 BILLION PEOPLE ARE SERVED BY OPEN DUMPSITE, GLOBALLY…..

THERE ARE MORE THAN 50,000 DUMPSITES IN THE WORLD

%% age population of developing countries without access to regular waste collection & disposal
• Our dumpsites are generating around 35 million tCO₂e Green House Gases (Methane),

• Open burning emits smoke, black carbon, toxic fumes: CO, NOₓ, SOₓ, PM, low levels of Dioxins, Furans......
Leachate, soil and water contamination, vector borne diseases, odour, littering, health and safety issues....
Addressing the issue....

- Close the existing dumpsites
- Create facilities for waste treatment
- Create Sanitary Landfills
Closure Options for Existing Dumpsites

Simple Closure

Closure with Land Recovery

Closure with Landfill Gas Recovery

Closure with bio mining and land reclamation
Waste Disposal Options

Environmental Benefit vs. Technology

- Open Dumping
- Closure with Flare
- Closure with Utilization
Landfill Closure at Gorai, Mumbai
Challenges....

- Enforcement of Regulations
- Poor Governance at City level
- Lack of technical and Financial capacity of ULBs
- Lack of planning to identify suitable alternative site
- Operational & Sustainability issues related to waste treatment facilities
Thank you