



**Dr. S. & S.S. Ghandhy College of
Engineering & Technology, Surat**

Report on

**EXPERT TALK “ZERO WASTE FOR SUSTAINABLE
DEVELOPMENT”**

07/03/2024

Venue: Seminar Hall, Administrative Building

Dr. S.& S.S.Ghandhy College of Engineering & Technology, Surat

Organised Under

Mission Life Program and IGBC Student Chapter



Expert Talk on “Zero Waste for Sustainable Development” was organised by Dr. S.& S.Ghandhy College of Engineering & Technology, Surat under Mission Life Program and IGBC Students Chapter on 07/03/2024 at Seminar Hall, Administrative Building of the Institute. The Resource person and Expert for the Talk was Shri Nishank Shah – Founder and CEO of Durogreen Waste Management Pvt. Ltd.



Expert talk on
Zero Waste for Sustainable Development

07 March 2024 : 11 :00 a.m. onwards

Seminar Hall, Administrative Building,
Dr. S.& S.S.Ghandhy College of Engineering & Technology, Surat

Mr. Nishank Shah
Founder and CEO,
Durogreen

Registration Link : <https://forms.gle/HDqSVCxJRzVks6Pu5>

Total 115 students from the various branch registered to attend the session.

The expert talk on "Zero Waste for Sustainable Development" provided a comprehensive insight into the principles, strategies, and benefits of adopting a zero-waste approach. The discussion emphasized the importance of addressing waste management as a critical component of sustainable development initiatives.

Key Points Discussed:

- Definition and Concept of Zero Waste
 - The presentation began by defining zero waste as a philosophy and goal aimed at minimizing waste generation and maximizing resource efficiency.
 - Emphasis was placed on the holistic approach of zero waste, which involves redesigning systems and processes to eliminate waste at its source.
- Principles of Zero Waste:
 - The talk highlighted the key principles of zero waste, including waste prevention, product redesign, material recovery, and extended producer responsibility.
 - The importance of adopting a circular economy model, where materials are continuously recycled and reused, was underscored.

Types of solid waste



- Strategies for Achieving Zero Waste:
 - Various strategies and tactics for implementing zero waste practices were discussed, including source reduction, composting, recycling, and promoting reusable products.
 - Mobile waste management Concept was discussed at length for managing waste.

Collection

Collection crew of 2 workers and 1 driver

QR code scanning for seamless monitoring

Cleaning and sanitising the collection point

Waste loaded onto truck after weighing

Data managed and records maintained



Logistics

GPS enabled tracking

Regular vehicle maintenance for uninterrupted service

RTO compliant vehicles and KYC

Using GMaps for route optimisation

Clean and hygienic vehicles



Process



Initial shredding of all waste using a shredder machine

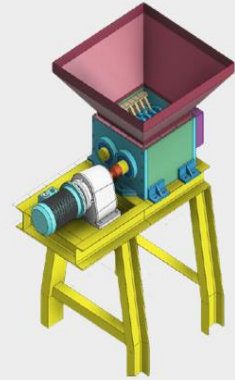
Addition of carefully calculated amounts of saw dust and bioculture

Homogenous mixing using specialised mixing machinery



Batch wise storage for aerobic decomposition and curing

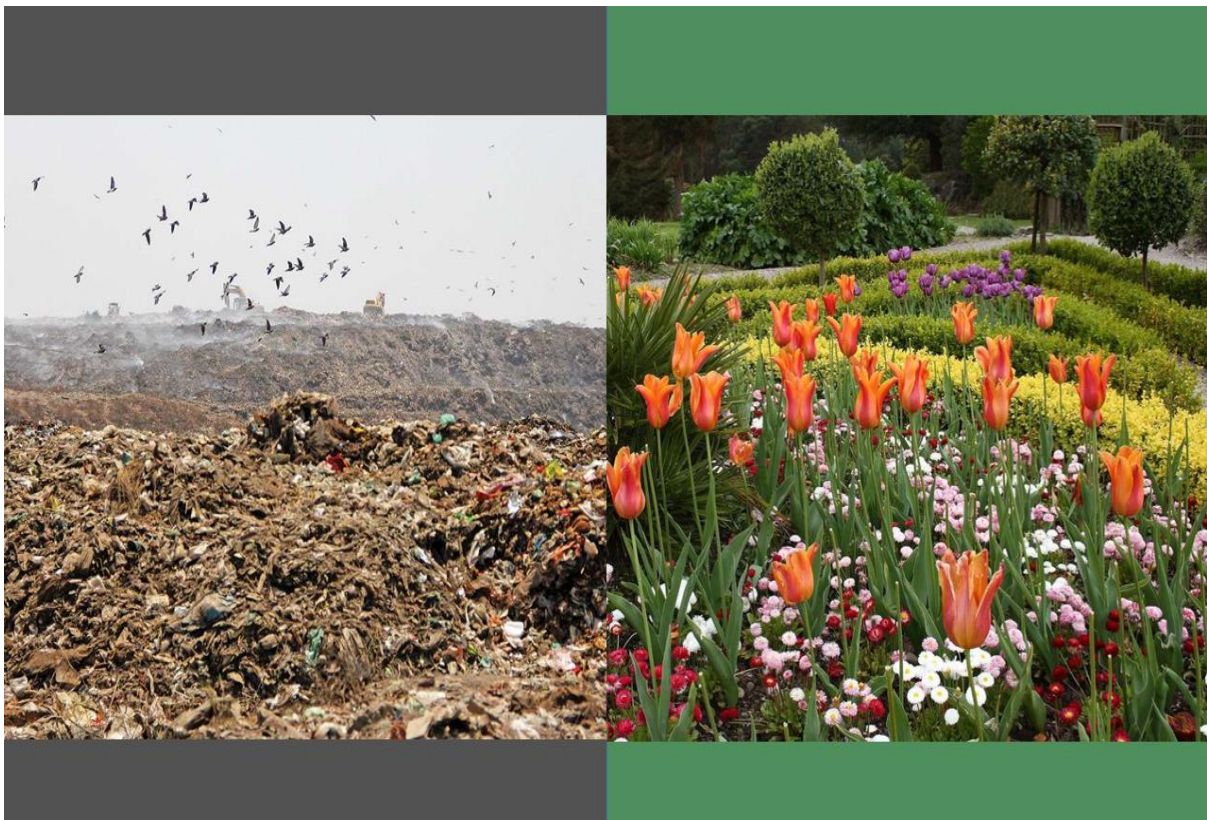
Production of chemical free organic manure at the end of 20 days



- Case studies and examples of successful zero waste initiatives from different industries and communities were shared to illustrate practical implementation strategies.

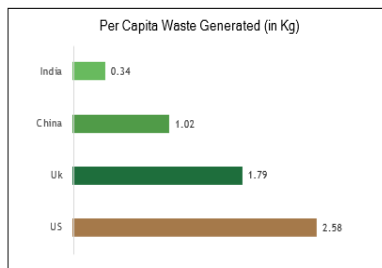
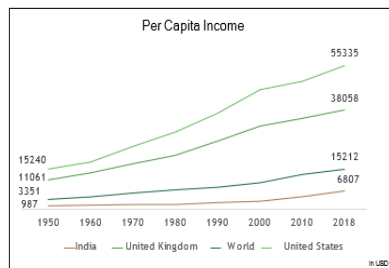


- Environmental and Economic Benefits:
 - The expert emphasized the significant environmental benefits of zero waste, including reduced greenhouse gas emissions, conservation of natural resources, and prevention of pollution.
 - Economic advantages such as cost savings through waste reduction, job creation in recycling industries, and enhanced community resilience were also highlighted.



- Challenges and Solutions:
 - The talk addressed common challenges faced in transitioning to a zero-waste paradigm, such as lack of infrastructure, cultural barriers, and resistance from industry stakeholders.

Opportunities in Waste Management



11,000 Cr+

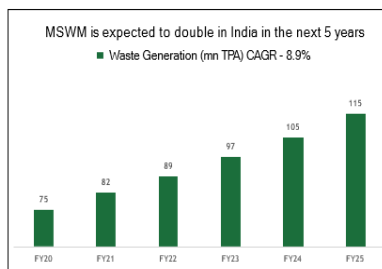
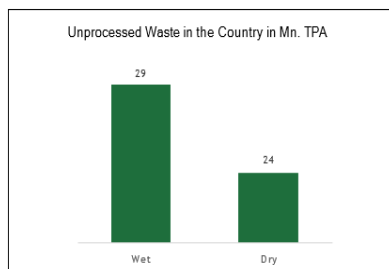
Market size for unprocessed wet waste across India

~25%

of Indian States process
<50% of the total waste generated

60-70%

of waste management assets in the country
are lying idle



Strong government growth impetus towards
the Solid Waste Management Sector:

46% ▲

of the recent budget in waste management was
allocated to solid waste management up from
mere 21% in FY16.

Source: [Link 1](#),
Frost and Sullivan, internal research

Services that can be offered



Machine Sales

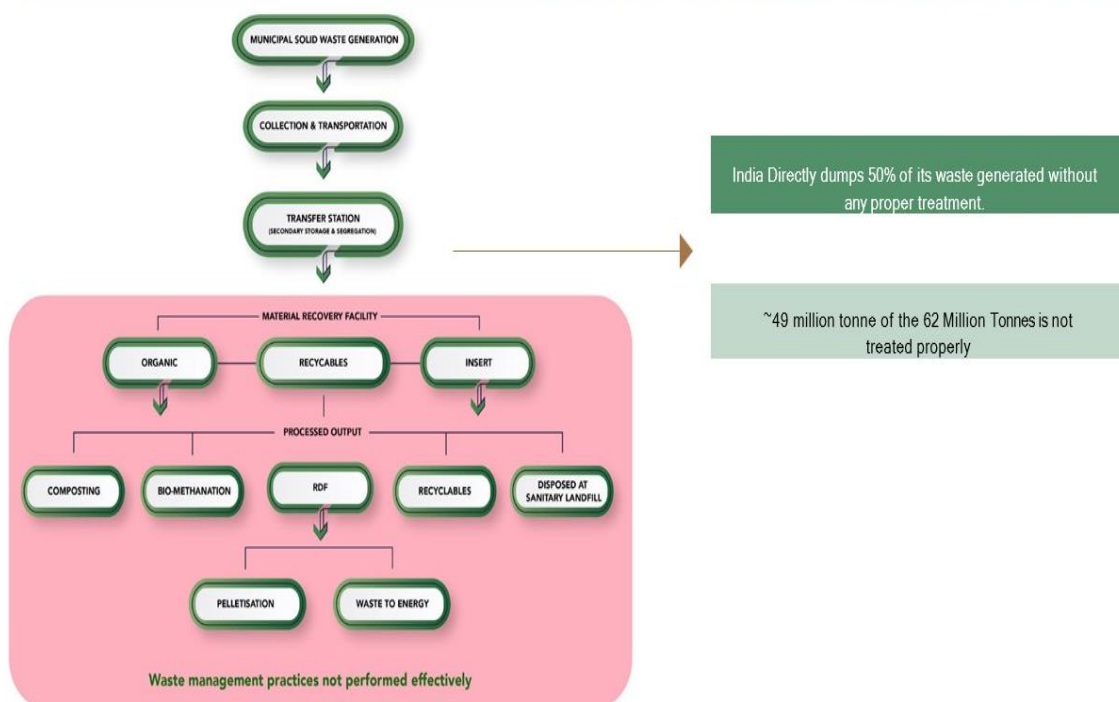
Machine Operation and Maintenance



Mobile Waste Management

- Solutions and best practices for overcoming these challenges were proposed, including policy interventions, public awareness campaigns, and collaboration between governments, businesses, and civil society.

INDIA FACES WASTE MANAGEMENT CHALLENGES AT A FUNDAMENTAL LEVEL



- Role of Individuals and Communities:
 - The importance of individual and community engagement in achieving zero waste goals was emphasized.
 - Practical tips and strategies for consumers to reduce waste in their daily lives, such as mindful consumption, waste segregation, and supporting sustainable products, were provided.

Municipal Solid Waste Rules, 2016

- (a) segregate and store the waste generated by them in three separate streams namely bio-degradable, non bio-degradable and domestic hazardous wastes in suitable bins and handover segregated wastes to authorised waste pickers or waste collectors as per the direction or notification by the local authorities from time to time;
 - (b) wrap securely the used sanitary waste like diapers, sanitary pads etc., in the pouches provided by the manufacturers or brand owners of these products or in a suitable wrapping material as instructed by the local authorities and shall place the same in the bin meant for dry waste or non- bio-degradable waste;
 - (c) store separately construction and demolition waste, as and when generated, in his own premises and shall dispose off as per the Construction and Demolition Waste Management Rules, 2016; and
 - (d) store horticulture waste and garden waste generated from his premises separately in his own premises and dispose of as per the directions of the local body from time to time.
- (2) No waste generator shall throw, burn or bury the solid waste generated by him, on streets, open public spaces outside his premises or in the drain or water bodies.
 - (3) All waste generators shall pay such user fee for solid waste management, as specified in the bye-laws of the local bodies.

BULK WASTE GENERATORS

As per Solid Waste Management Rules 2016, "Bulk Waste Generator" means and includes buildings occupied by the Central Government Departments or Undertakings, State Government Departments or Undertakings, Local Bodies, Public Sector Undertakings or Private Companies, Hospitals, Nursing Homes, Schools, Colleges, Universities, other Educational Institutions, Hostels, Hotels, Commercial Establishments, Markets, Places of Worship, Stadia and Sports Complexes etc. having an average waste generation rate exceeding 50kg or 100kg per day (of all waste streams put together).

- BULK SOLID WASTE GENERATORS Guidelines by Ministry of Housing & Urban Affairs, Government of India.

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NEW DELHI, FRIDAY, APRIL 8, 2016/CHAITRA 19, 1938

4 Duties of waste generators.- (1) Every waste generator shall,-

(6) All resident welfare and market associations shall, within one year from the date of notification of these rules and in partnership with the local body ensure segregation of waste at source by the generators as prescribed in these rules, facilitate collection of segregated waste in separate streams, handover recyclable material to either the authorised waste pickers or the authorised recyclers. The bio-degradable waste shall be processed, treated and disposed off through composting or bio-methanation within the premises as far as possible. The residual waste shall be given to the waste collectors or agency as directed by the local body.

(7) All gated communities and institutions with more than 5,000 sqm area shall, within one year from the date of notification of these rules and in partnership with the local body, ensure segregation of waste at source by the generators as prescribed in these rules, facilitate collection of segregated waste in separate streams, handover recyclable material to either the authorised waste pickers or the authorised recyclers. The bio-degradable waste shall be processed, treated and disposed off through composting or bio-methanation within the premises as far as possible. The residual waste shall be given to the waste collectors or agency as directed by the local body.

(8) All hotels and restaurants shall, within one year from the date of notification of these rules and in partnership with the local body ensure segregation of waste at source as prescribed in these rules, facilitate collection of segregated waste in separate streams, handover recyclable material to either the authorised waste pickers or the authorised recyclers. The bio-degradable waste shall be processed, treated and disposed off through composting or bio-methanation within the premises as far as possible. The residual waste shall be given to the waste collectors or agency as directed by the local body.

How Can you Contribute ?

- Start Managing Solid waste from your home
- Practice waste management by executing a project in your college
- Do internships at various companies in waste management
- Try to become a Green Entrepreneur in Future Changing City's Landscape.

Glimpse of the Event :





The expert talk concluded by reiterating the urgent need for concerted action to embrace zero waste principles for sustainable development. Participants were encouraged to become advocates for zero waste practices in their respective spheres of influence, recognizing the transformative potential of collective action in creating a more sustainable and resilient future.

Overall, the expert talk provided valuable insights and inspiration for advancing the agenda of zero waste as a cornerstone of sustainable development efforts.