Decentralised waste management

- Lessons learned from EGP’s experience

Padmam Auditorium,
IMG, Thiruvananthapuram, Kerala
16.03.2017
Solid Waste Management

Stone Age

Iron Age

Golden Age
Now We are in “Garbage”
Our Strategy

- Land and infrastructure
- Planning, Management
- Technical and managerial guidance support
- Submission of accounts
- Reporting and Feed back to Board Members
- Hand holding and handing over

Four Way Model

- Project Management unit expenses
- Vehicle Support
- Site development
- Training, awareness and research costs
- Ensure public participation
- Ensuring user payment
- Collection of payment
- Payment of remuneration to Green Ambassadors

Municipal Council-Infrastructure Support

NGO - EGP - Mentoring Support

Corporate Financial Support

Community Participation
Our area of operation

- Corporation of Chennai (Zone - 1)
- Department of Atomic Energy, Kalpakkam
- NPCIL / MAPS (Pudupattinam & Sadras)
- Haridwar, Uttarkhand
- HCL technology, Chennai
- Wabco India Ltd, Chennai
- Hyatt Regency, Chennai
- Hindu religious endowment board, Chennai
- Sangareddy Municipality, Telungana
- Pammal Municipality
- Panipat Municipality
Waste – Problem or Opportunity?

Waste
Unavoidable by-product of human activities

India
--7th largest country in terms of area
--2nd largest in terms of population
Current Scenario
Widespread littering and dumping of MSW hamper India`s efforts to achieve MDG and combat Climate change

BY 2020

The wastes will be 4 times more
Requiring an area of 1500 sq.km

Are we ready for this challenge?
What is The Magic Word?

Segregation at Source
Our Activities

• Door to Door Collection
• Segregation of Waste at Source
• Composting – Pioneer in Vermicomposting
• Recyclable Resources Recovery
• Bio gas plant from food waste,
• Up cycling plastic waste
• PPP model Preparation
• Participation with Local Governments’ MSW Programmes
• Preparation of DPR
• Participation in Swatch Bharath Scheme.
• Awareness creation and training programmes.
• Undertake Environment Evaluation study
Collection of different solid, domestic wastes
Collection of Different Solid, Domestic Wastes

Good Practice
Earth Worm Breeding
Final Output (Exorco)
26
Charcoal Production

Charcoal Process
Value Added Product On Sambirani (Incense) Pellets
Biogas to Power Generation

EGP - Methodology

Collection of Food, Slaughter House Waste

Grinding of Waste

Anaerobic digester (50m³)

Produces Gas CH₄, CO₂

- for Lightning
- for Cooking
- Organic manure for agriculture

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<table>
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<tbody>
<tr>
<td>Food Waste</td>
<td>500 kg/Day</td>
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<tr>
<td>Biogas Production</td>
<td>50 Cum/Day</td>
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<tr>
<td>Electricity</td>
<td>5 Kw</td>
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<td>Lights 75</td>
<td>3 -Streets</td>
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<tr>
<td>Liquid Fertiliser</td>
<td>225 Litter/Day</td>
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Bio gas plant at Pammal, Chennai
Waste to Energy
Mangaldeep – Green Temple

Arulmigu Kapaleeswarar Temple
Mylapore, chennai
Bio gas plant at Kapaleeswarar Temple
Biogas Burner Connection
Project Avthar
Litter free streets / Open defecation free streets
Community Participation

• Community pays
• Sustainability
• Waste Reduction
Sathurangapattinam
Community volunteers
Pudupattinam
Thuimai Kavalarkal (MGNREGS)
Home Composting
Cluster Composting
Aaga Composting
Making the temple surrounding Litter free zone

**Inside temple**
- 2 to 3 hours cooking from bio gas.
- Between Jan 19\textsuperscript{th} to Feb 18\textsuperscript{th} the temple saved 5 cylinders with a commercial value of Rs. 6690/-
- 300 Kgs of manure produced.

**Outside temple**
- Daily cleaning inner circle of Madaveedhi.
- Awareness campaign.
- Kapaleecharam takes ownership.
Clean streets near the temple lake
Benefits

- Avoid Air, Water and Soil Pollution
- Protecting Human Health
- Global Warming Reduction
- Reduce the cost for Waste Disposal
- Save Natural Resources
Lessons Learned

• SWM on contract mode?
• Payment (tonnage basis)
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Link 1: https://www.youtube.com/watch?feature=player_detailpage&v=OTNNXP3Navs
Link 2: https://www.youtube.com/watch?feature=player_detailpage&v=OTNNXP3Navs
Link 3: https://www.youtube.com/watch?v=u6n7mrF-FJw
Thank You!