Present Scenario and Future Vision of Solid Waste Management in Nepal

By

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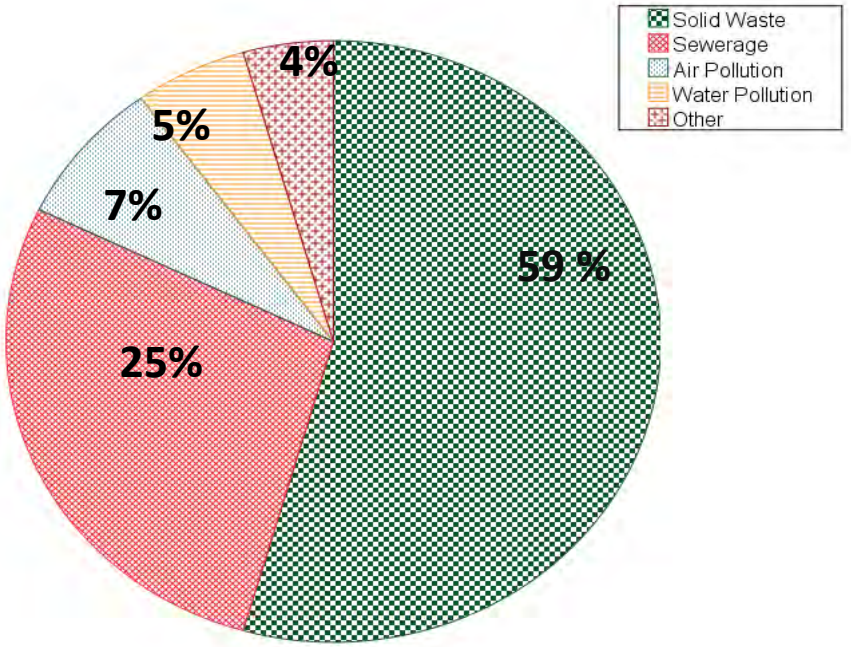
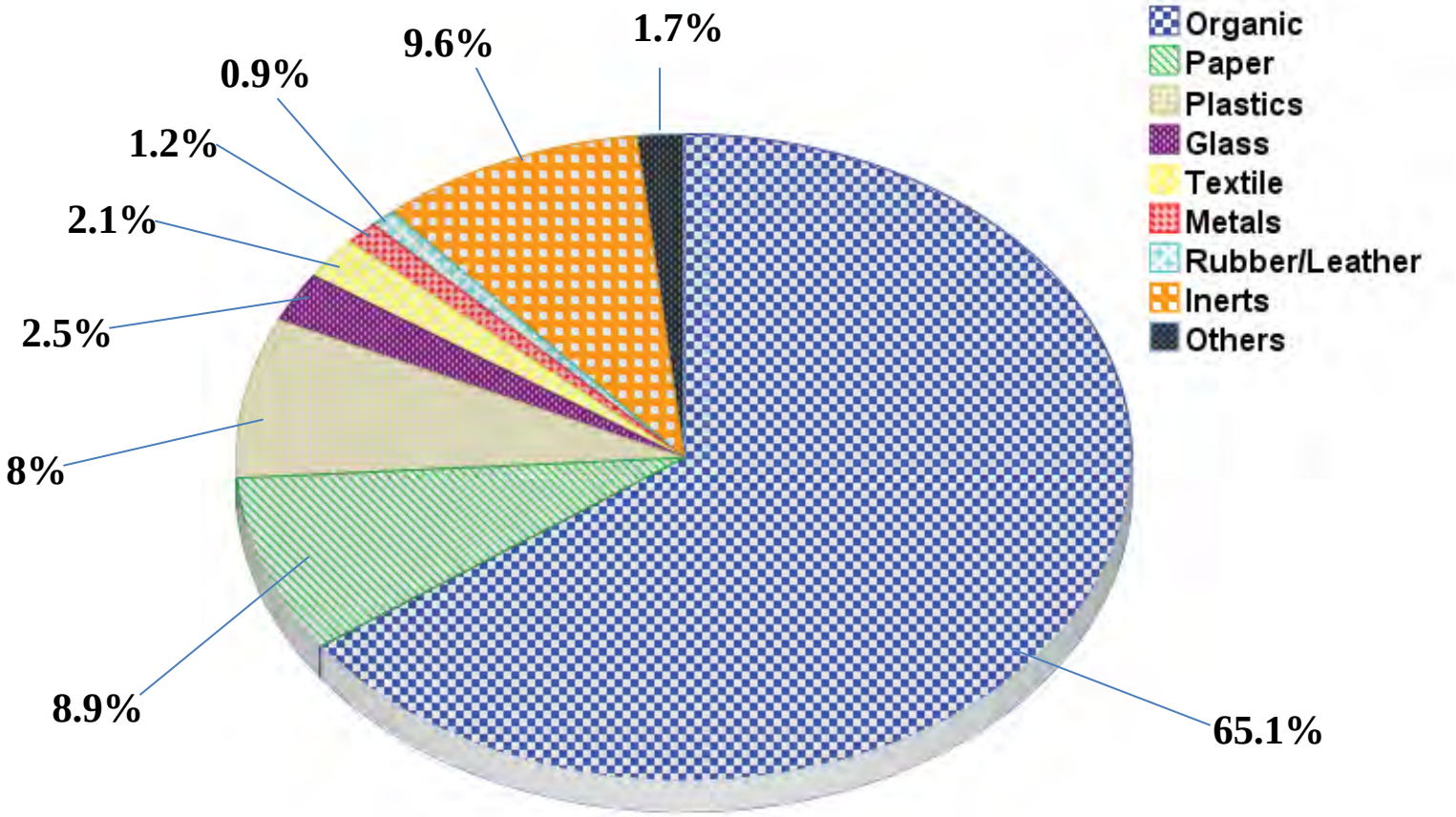
Solid Waste Problem in Nepal

According to a survey done by Central Bureau of Statistics in 1996, Solid Waste Management is a **number one environment problem** in their cities (CBS,1997) that is followed by Water and Air pollution.

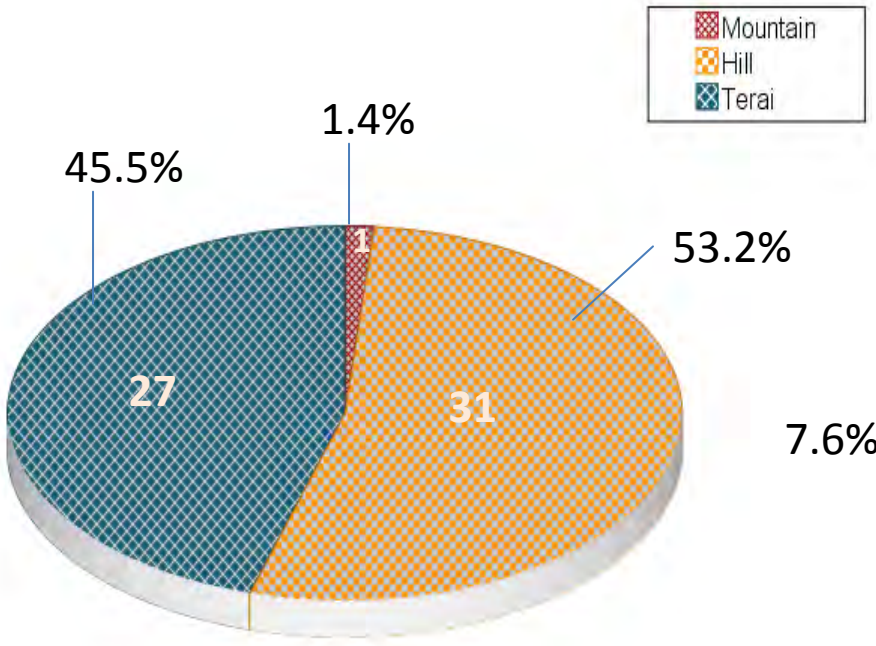


PUBLIC OPINION ON MAIN ENVIRONMENTAL PROBLEMS IN URBAN AREAS

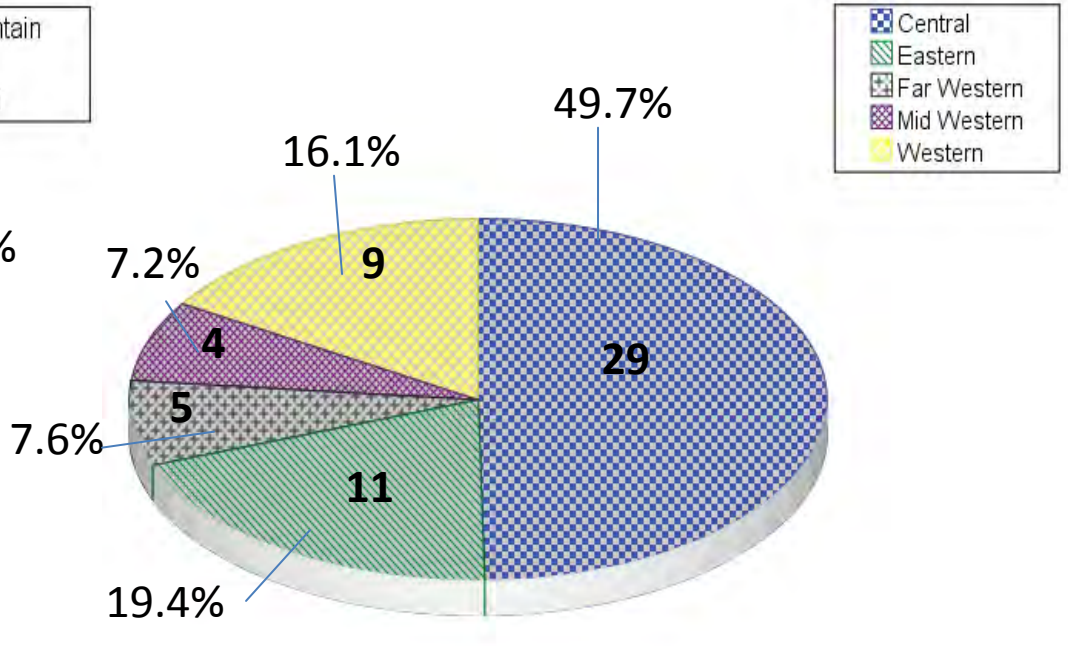
Composition of Municipal Solid Waste in Nepal



Municipalities in Nepal



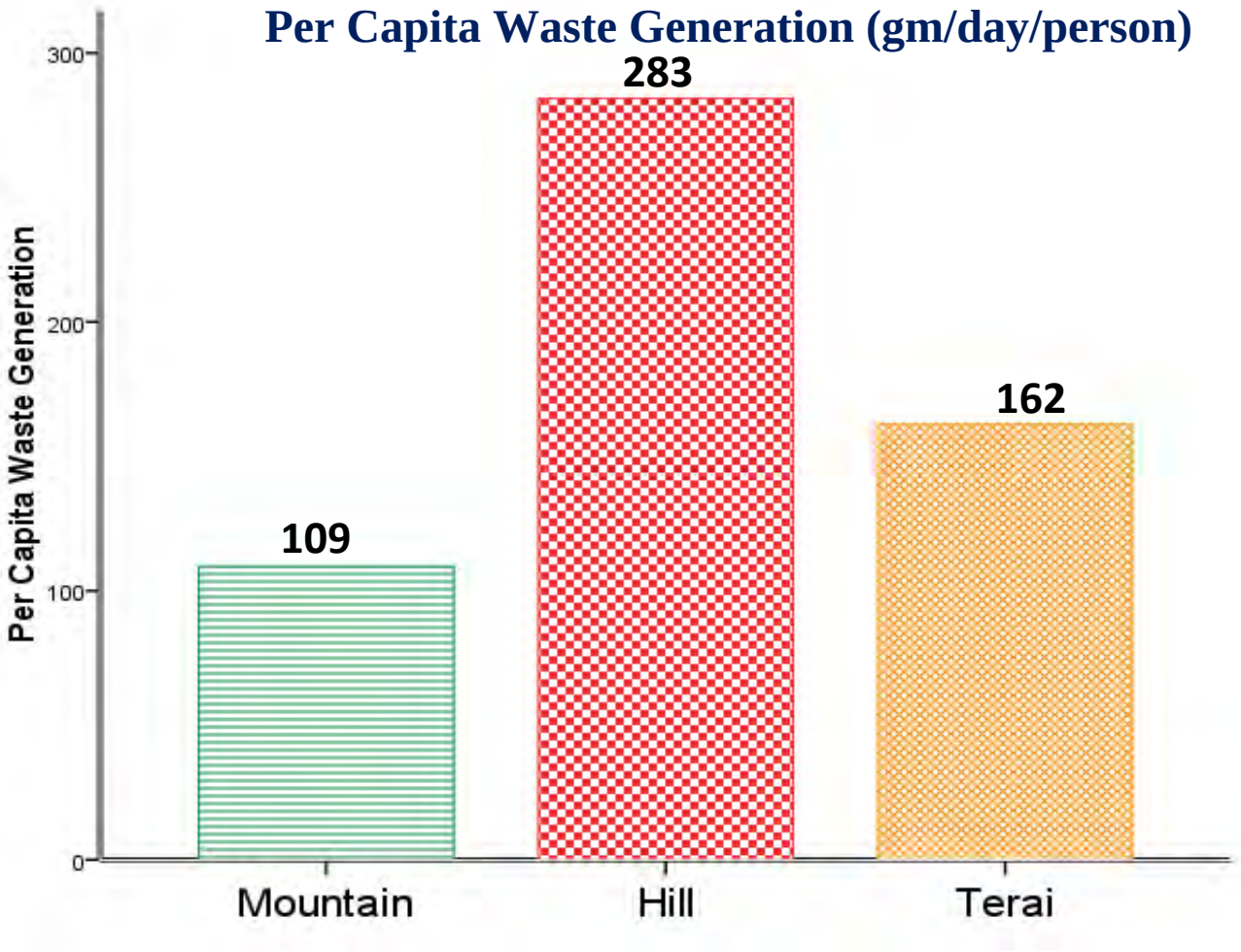
Municipalities densities according to Geographical regions



Municipalities densities according to Development regions

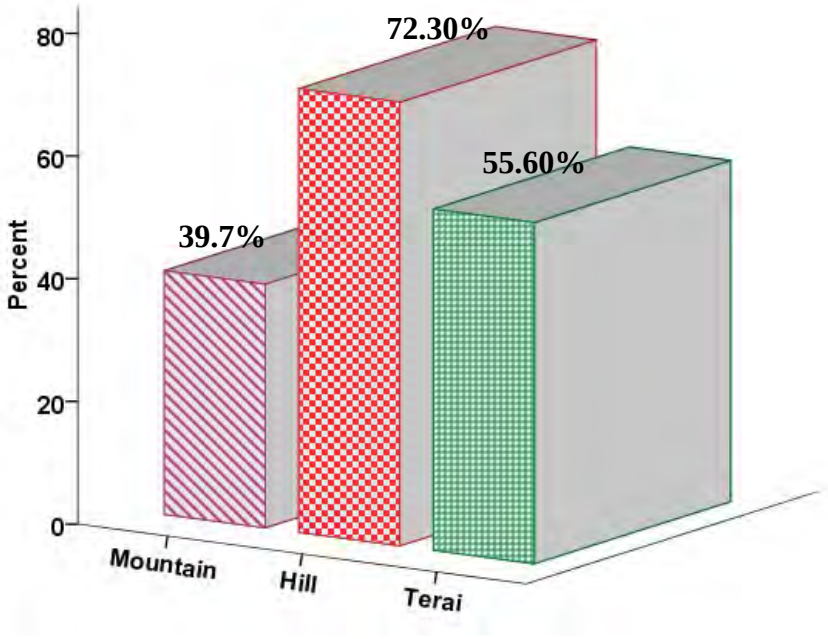
Primary Data obtain from survey on 58 municipalities

Per Capita Waste Generation (Geographically)

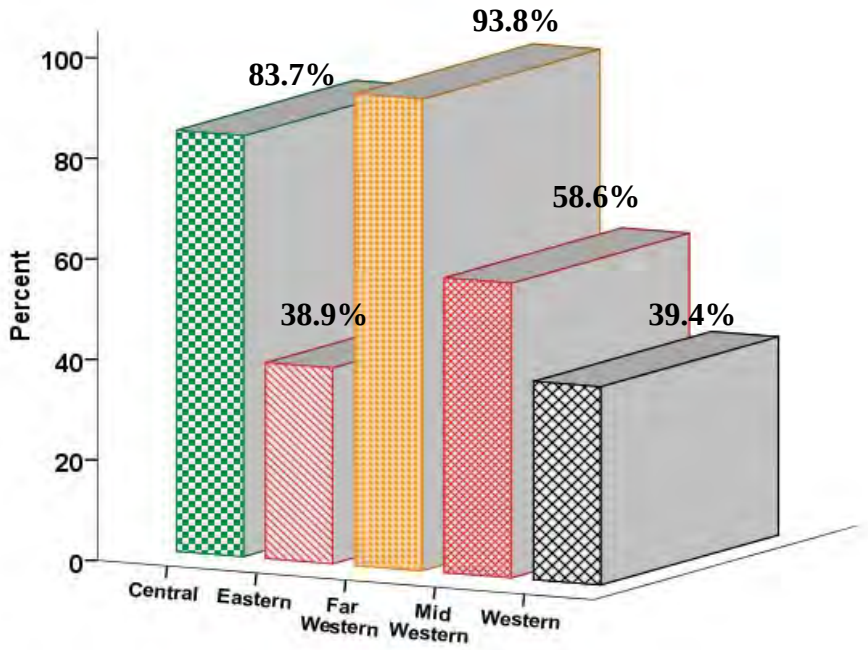


Source : Baseline Study 2009 (SWMRMC)

Waste Collection Efficiency



Geographical



Development Region

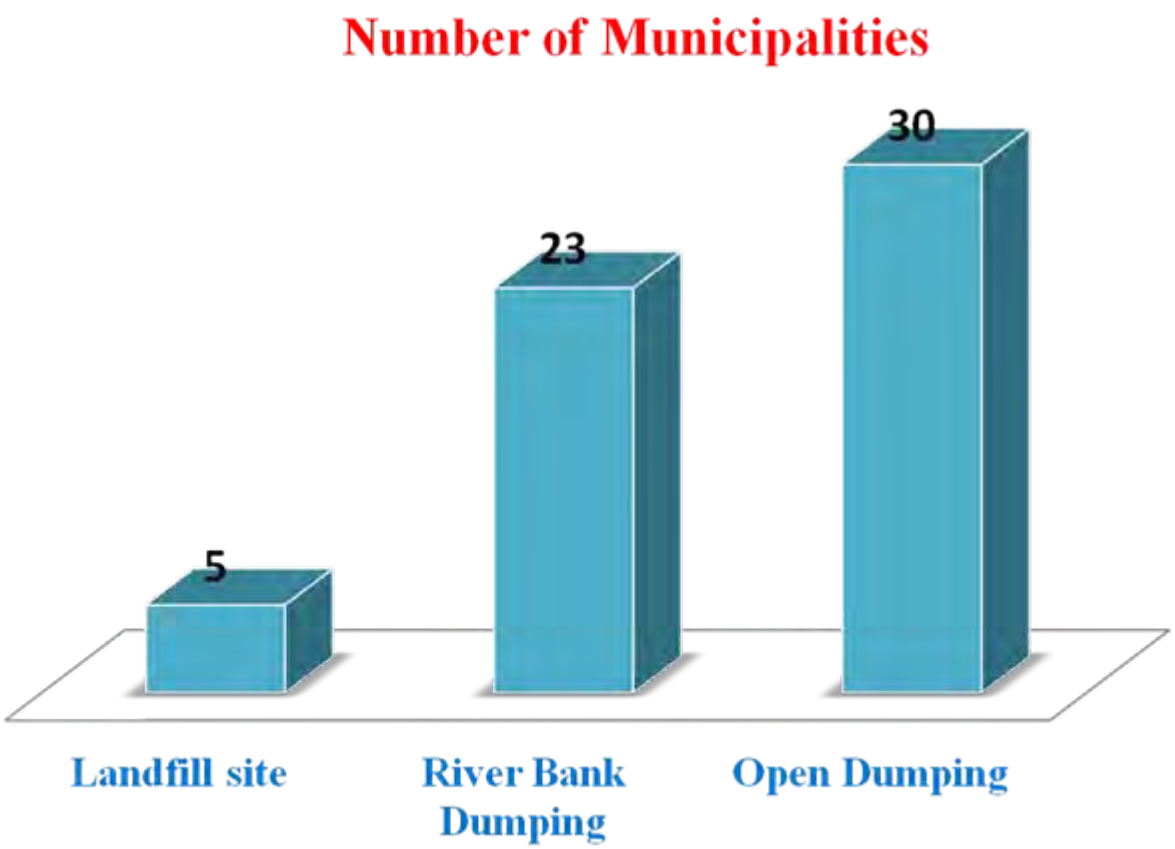
Based on data collection by SWMRMC

Current Practices in SWM of Nepal

- 58 municipalities generate about 500,000 tons per year, 41 newly added municipalities are unaccounted.
- Open dumping is still a common practice.
- Municipalities are often limited to street sweeping and dumping in the nearest river or vacant land.
- NGOs are involved in waste collection at the community level only.
- Awareness programs are gaining momentum in all the municipalities..

Continue…..

Disposal Of Solid Waste



Survey by SWMRMC 2003

Responsibility to manage Solid Waste

1. Rest with the Local Body:

- to construct and operate the infrastructure or structure
- to manage or use
- Notwithstanding anything contained in Sub-section
- management of hazardous waste, medical waste, chemical waste
- or industrial waste under the prescribed standards rest with the person or
- institution that has generated the solid waste.
- after processing of hazardous waste, medical waste, chemical waste and
- industrial.

2. Waste producer

- Source segregation
- Minimization
- change attitude, behavior

Functions, Duties and Powers of SWMTSC:

- To support the Local Body for development of technology .
- To monitor and evaluate the technical aspects of solid waste management .
- provide advice to the concerned Local Body regarding improvements.
- To prepare Act, Regulation, standards , guide line for the collection, treatment, transportation, disposal.
- To develop, extend and disseminate innovative technology regarding solid waste management.

Functions, Duties and Powers of SWMTSC:

- To provide **technical assistance** to the Local Bodies to construct facilities
- relating to solid waste management.
- To conduct research and study on solid waste management and **collect statistics** and make public the facts related to the solid waste management condition of the country.
- To develop skilled manpower and to enhance the capacity for solid waste management.
- To draw **attention of concerned agencies** for proper management of hazardous,
- medical, chemical and industrial waste.
- To identify sustainable techniques to minimize the production of solid waste
- To prepare a set of strategy to be adopted for **public participation** in the waste
- management

Activities

Activities Under Technical Assistance and Support

- Capacity development
- Technical Support
- Management Support
- Standardization/Assessment
- Stakeholder and partnership management
- Public Awareness on SWM
- Legal compliance of SWM (SWM act 2011)

Activities Under the research and development

- Technology improvement in SWM
- Management improvement in SWM
- Documentation of Best Practices and dissemination
- Organize research and studies in partnership with local, national and international academic/research institutions
- Information management on SWM
- National and international relations and networking for SWM

Activities under Monitoring and evaluation

- Development of monitoring and evaluation framework
- Development of standardization criteria on different aspects of SWM
- Carry out assessment/appraisal against standards
- Support the local bodies on developing Monitoring and Evaluation (M&E) system and its implementation
- Monitoring of resource mobilization

Household Composting

“Saaga” Compost Bin

Vermi Composting

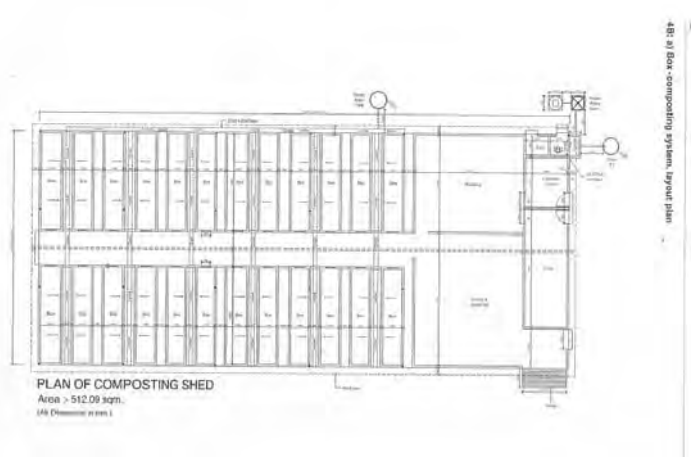
Medium Scale Vermi Composting

HEALTHY GRO
vermi compost

Main Challenge: Marketing, Sustainability & Scaling Up

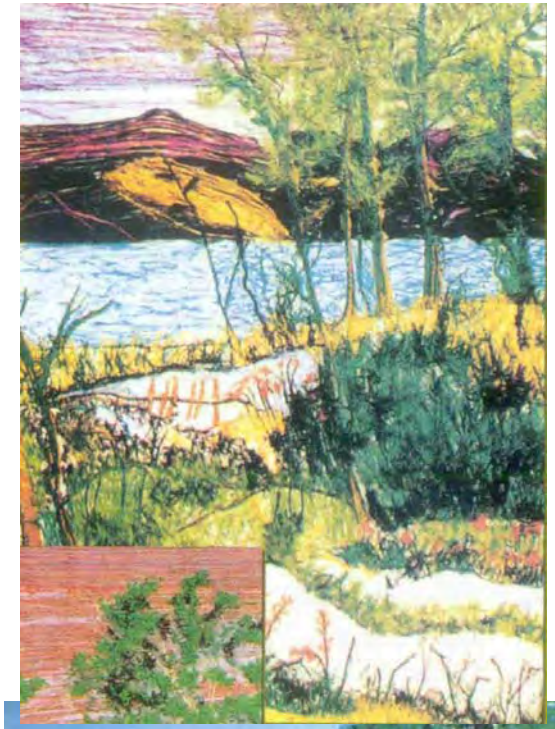
Decentralized Compost Plant in Hetauda

- Capacity: 3 tons per day
- Land: 500 sq. m
- Method: 24 compost boxes
- Estimated cost: Rs. 1.7 M
- Management: Public-Private-community partnership



Recycling, Composting and Landfilling Facilities at Karauti Danda

Reuse could be Beautiful & Useful



Conclusion

- Need to consider waste as a **resource.**
- Adopt **integrated** waste management system not just sweep & dump.
- Recycling can be **significantly** increased by home composting, biogas & central composting facility.
- Need to **strengthen** local governments.
- Clarity of **roles** & coordination with private parties Local government , Government and local communities.
- Solid Waste Management lessons (environment education) must include in the **School Curriculum**.
- Reduce **green house emissions** / Carbon reduction
- Figure out the **Carbon Credit Potential** on SWM practices in Nepal.
- Need to **reduce** the effect of waste on health, in environment or aesthetics and recover resources from the waste.
- The waste management in Nepal should be based on integrated with the participation of **PPPP**.


Thank You