Overview of Wastes Management in Mauritius

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Mauritius is a small island developing state (SIDS) found in the southwest Indian Ocean, about 900 kilometres east of Madagascar.
Some Fact & Figures About Mauritius

- Mauritius is very small. (2000 km²)
- Independence: 12 arch 1968
- Population: 1,284,264 (july 09) (650/km²)
- Population growth: 1.1 - 1.2%
- Urban Population: 44%
- Asian origin: 68%, African origin: 27%, Sino-Mauritian 3%, Franco-Mauritian 2%
- Official language: English (least spoken)
- Literacy Rate: 86%
Mtius is a Small Island Developing State.

- **Economy** based on Tourism, Financial Services, Textile Industry, Sugar Export.
- **Characteristics common to SIDS include:**
  - Remoteness from economic poles
  - Limited land space & Scarce resources
  - High population density
  - High degree of dependence on imports
  - Poor resilience to external shocks – EUROZONE
  - Fragile ecosystem compounded by natural calamities - Severe Cyclones, floods, sea level rise due to climate change
Strategies

- **Vision**

- To contribute to sustainable use of natural resources

- Enhance the lifestyle, economy and environment of the country
Current Solid Waste Management System
WASTE MANAGEMENT BEFORE YEAR 1997

- Dumpsites were natural depressions
- Waste was placed and compacted in some of the dump sites
- Most of the time the dumpsites were under fire
- No record of incoming waste was kept
- Only estimates available prior to 1997
- Pollution of ground water and aquifer
Current Situation of Waste Management

Amount of Wastes Landfilled

- In 2008: 398,070 tonnes
- In 2009: 413,236 tonnes
- In 2010: 427,000 tonnes
- In 2011: 414,000 tonnes
Costs of Solid Waste Management

- In 2009 was nearly MUR 1,069 million (USD $ 35.6 million) that is nearly MUR 832 (USD $ 27.7) per capita and MUR 2515 (USD $ 83) per Tonne

- Increase expected in view of:
  - Types of collection (source separation / mixed)
  - Transportation (Price of fuel etc…)
  - Disposal Technologies (Landfilling / Incineration)

BUT THE STRATEGY IS BRING DOWN COST!!!
Composition of Solid Waste

- Plastic: 25%
- Paper: 11%
- Textile: 9%
- Metals: 4%
- Yard: 2%
- Domestic Refuse: 2%
- Others: 1%
- Glass: 45%

Composition of Solid Waste
Strategic Goals

Goal 1. Additional Infrastructure and Services

Goal 2. Improvements in cost effectiveness

Goal 3. Improve Partnership

Goal 4. Improve Institutional and legal set up

Goal 5. Market Development to promote reuse and recycling
Goal 1: Additional Infrastructure and Services

- Waste collection
- Transfer Facilities Network
- Additional disposal capacity
- Hazardous waste interim storage facility
- Civic amenity centres
- Composting plants
Mare Chicose Sanitary Landfill
Status on site: OVER 32 Ha. To Develop 13 Ha
Contractual Arrangements

- **Solid Waste**: disposal in a sanitary landfill (since 1997) with clay + double HDPE line (1.5 mm), leachate collection system, flaring of landfill methane gas and final cover + post closure management Environmental, Surface & Ground water Monitoring. Now Gas to Energy

- **Hazardous waste**: haz waste cell for some solid haz waste – encapsulation in concrete
Waste disposal & compaction
Sanitary Landfill: A contained structure
Welding & testing of Liner
Gas well drilling
Gas capture & flaring
LANDFILL GAS TO ENERGY ENGINES
Construction Capping, grassing & surface water drain
THIS IS NOT SUSTAINABLE: WHAT'S THE WAY FORWARD
Market Development to promote Reuse and Recycling

Status of Recycling In Mauritius

Presently, the materials that are being recycled are Paper, Plastic, Glass, Textile, Metals and some hazardous Wastes.
Barriers according to recyclers

- Lack of incentives from the Government.
- Lack of laws and regulations to control the illegal exportation of waste material
- High cost of collection and transportation of the wastes
- Lack of labour.
- Lack of awareness among the public.
Some Options for Improving Recycling

- Legal instruments
- Economic instruments
- Increase public education
- Improve drop-off points in public places
- Implement Procurement guidelines for government purchase
Government decided to supply 180,000 tons of unsorted waste to a private company for composting.

Two additional compost plants of capacity 130,000 tons and 30,000 tons is foreseen under Public Private Partnership project.

Around 70% will be diverted from landfill.
Hazardous Waste Management in Mauritius

- Waste oil
- Medical wastes
- Obsolete pesticides
- Used mobiles phones and batteries
- Obsolete school chemicals
- E-wastes
- Mercury wastes

- Our present hazardous waste management system is currently deficient in terms of data on amounts of hazardous waste being generated, stored and disposed, enforcement of legislations and appropriate treatment/disposal infrastructure.
Policy on Hazardous Wastes Management

- Minimize hazardous waste generation
- Encourage on-site recycling and treatment of hazardous wastes
- Encourage exchange of hazardous wastes
- Export of hazardous wastes
Strategy

- To conduct a comprehensive national inventory of hazardous waste
- To develop and maintain a hazardous waste database
- To investigate feasibility of on-site recycling/treatment of hazardous wastes
- To devise and set-up hazardous waste exchange schemes
- To set-up an interim storage facility prior to exportation of hazardous wastes for treatment/disposal
Hazardous waste management in Mauritius is limited to the following practices:

- **Solid hazardous wastes are not collected separately but discharged with non-hazardous wastes**
- **Liquid hazardous waste is discharged with the sewage water**
- **Some hazardous waste stored at the premises of industries due to the lack of treatment/disposal facilities**
- **In hospitals, hazardous waste is collected separately and incinerated in hospital incinerators**
Hazardous Waste Management in Mauritius

- Infrastructure for disposal of hazardous wastes is limited to a hazardous waste cell at the Mare Chicose Landfill, where only certain types of hazardous wastes are accepted.

- Hazardous waste cell of capacity 2,000 m³ and equipped with double synthetic lining system to prevent groundwater contamination.
My Ministry has started working on Education and Sensitization campaigns with stakeholders including:

- Central Level - Relevant Ministries
- Local Level
  - Municipalities & district authorities
- Waste Generators
  - Residential, commercial, institutional, industrial, medical facilities
- Operators
  - Municipal and district councils solid waste service, and private operators
Thank you for your kind attention...