WASTES MINIMIZATION AND RECYCLING IN BRUNEI DARUSSLAM

Opportunities and Challenges

Background Information

- Land area of 5265 Square Kilometer (4 times the land area of Singapore)
- 2009 Population of about 400,000 (a quarter of the total population of Singapore)
- Population average annual growth rate 2.1%

Wastes Quantity

(Based on survey conducted in 2005)

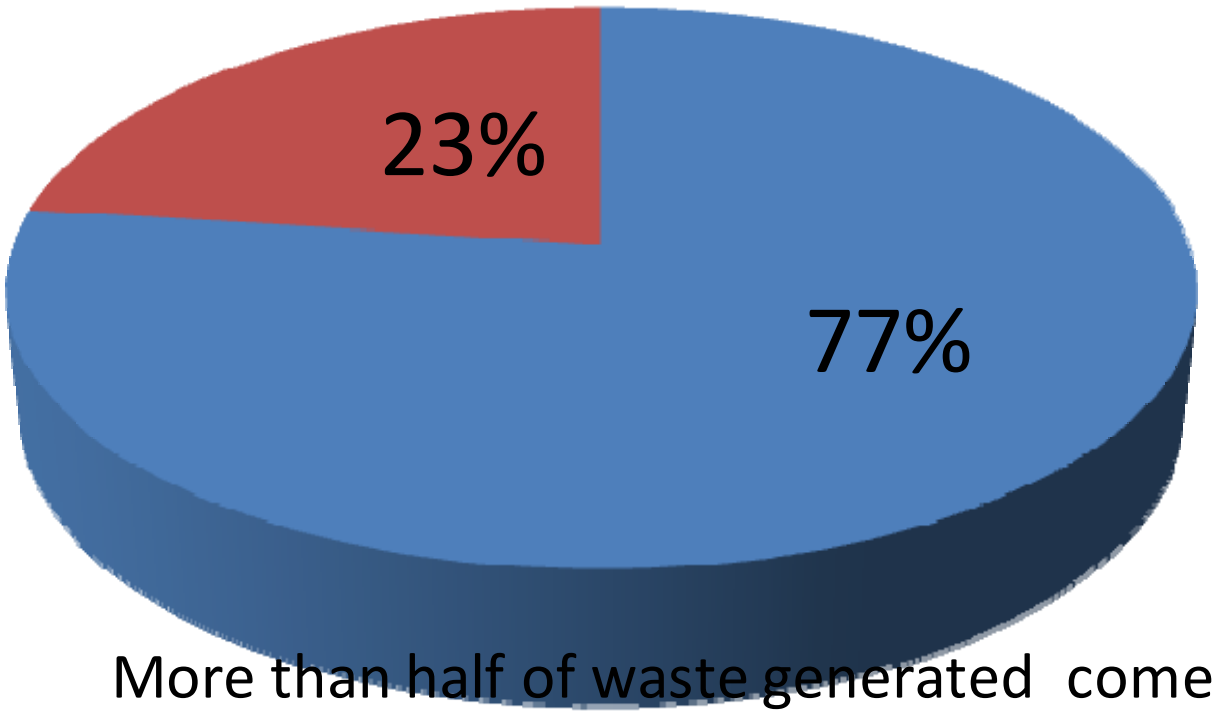
Based on survey conducted in 2005:

- Waste Generation/year: 182,135 tonnes
- Waste Generation/day : 499
- Waste Generation/capita/day: 1.4 kg

Estimates for 2009:

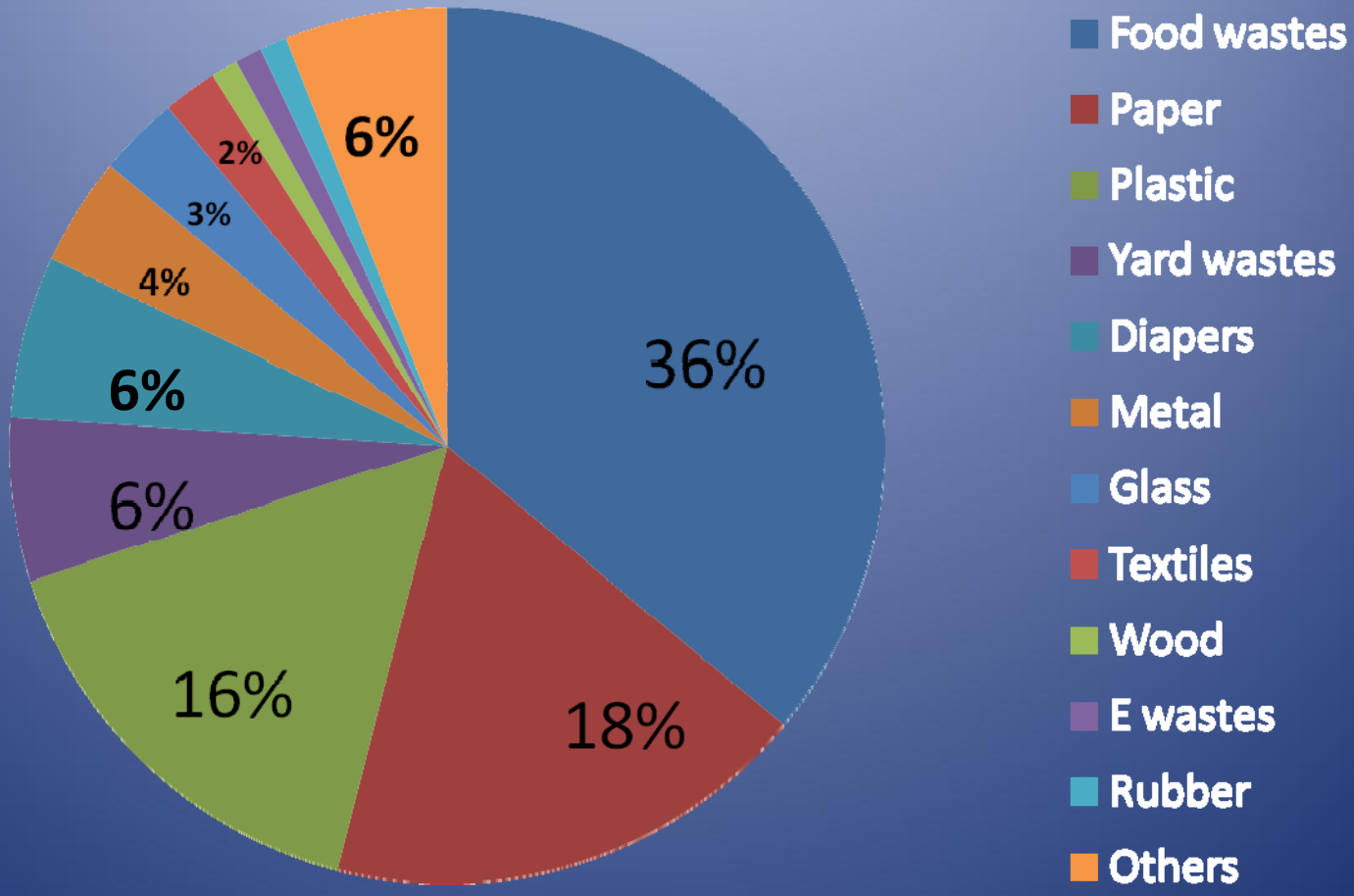
- Waste Generation/year: 200,000 tonnes
- Waste Generation/day: 560 tonnes

Wastes Stream



More than half of waste generated comes from residential, commercial and institutional premises

Wastes Composition (Residential and Commercial Premises)



Waste Management System

- Wastes management infrastructure costly and takes up our limited land

- Prior focus on wastes collection and management as well as promoting waste minimization (reduce, reuse and recycle)

Wastes Minimization Programme

Infancy/inception stage

Limited amount of waste reduction, reuse and recycling

Implemented through voluntary means:

- **Education and awareness on 3Rs habits in amongst the young generation – talks, project and competition**
- **Facilitate 3Rs through establishment of collection points**
- **Run by Private companies**

Wastes Reduction and Reuse

Wastes Reduction:

- **Private Companies recover 40,000 ton scrap metals and aluminum/year for export**
- **Private companies recover 1300 tons papers/year for export**

Reuse:

- **Government/Private partnership to promote reduce use of plastic bags/paper boxes**
- **Government/Private partnership campaign to introduce and promote use of reusable bags in June 2007**
- **Used construction and demolition concrete and bricks reused as hard core for access road base preparation**
- **Some used tires are exported for re-treading**

Recycling

- One used oil recycling facility that recycled 240,000 liters of used oils/year
- One composting facility that recycled 1200 tons of green wastes/year

Opportunities

- 60% of the waste generated has potential to be recycled into compost material
- Small amount of other wastes than can be recycled
- Interest and involvement of private companies
- Positive response from the people
- Room for advancing further 3Rs development

Challenges:

- Economies of scale – high capital costs to set up and operate recycling facility; relatively small volume of wastes that can be recycled; and lack of viable markets for the end product
- Sustaining stakeholders interest and support on 3Rs
  - Enhance private and people engagement and stewardship
  - Leveraging and enable investment in 3Rs infrastructure and facilities
  - Policy and regulation on 3Rs

Way Forward:

- Seize and Utilize potential for waste minimization (3Rs) to be developed further
- Measured pace approach – start small and build up over time – develop 3Rs in stages
- To ensure the long term viability of waste minimization system, government will continue to spearhead capital investment in 3Rs infrastructure and facilities
- Continue engagement of private company in the operation of waste minimization services

Waste Minimization Programme

- Focus on material recovery and composting
- Improve collection system for material recovery and recycling
- Introduce incentive to reduce volume of waste dispose
- Enhance promotion of public awareness on 3Rs
- Strengthen policy and regulation on 3Rs
- Capacity Building (technological, technical, legal, expertise)on 3Rs

THANK YOU FOR YOUR ATTENTION