Financing Waste Management
Trends in WM

- Increase in waste = increase in spending
- Cost > Revenue
- Challenge is costs are often not recovered in wastes
- In developing countries - 20 - 50% of municipal budgets are spent managing wastes
Overview:
Municipal/WM finance
Carbon Credits
is waste management a public or private good?
Difficult to attribute the collective benefit to a single individual

Clear relationship between fees and benefits
Municipal finance principles

- Economic Efficiency
- Fairness (equity)
- Accountability
- Adequacy and Stability
- Autonomy
- Ease and cost of administration
Economic Incentives

- Charges
- Deposit System
- Subsidies
Economic Incentives

- Charges
- Deposit System
- Subsidies

- User Charges
- Disposal Charges
- Product Charges
Economic Incentives

Charges

Deposit System

Subsidies

Step 1: Impose Tax

Step 2: Recover fees
Economic Incentives

- Charges
- Deposit System
- Subsidies
Economic Incentives: Effective?

• Applications have been limited

• No instance of significant improvement as a result of economic incentives

• Identifying suitable application is difficult and complex

• Economic incentives are only one element of ‘control and command’

Source: UNEP, Solid Waste Management
Financial Arrangements
WM in Low-income/Marginalized Areas

• Informal, often unrecognized areas by city
• Assumption that residents may not be able/willing to pay
• Research suggests residents are willing to pay
• Formal sector not servicing these areas
WM in Low-income/Marginal Areas

• Service Alternatives:
  • Public Participation
    • Public drops off waste @ more centralized locations, or certain time when a truck comes
    • Segregation of organics and recyclables
    • Funds from recyclables cover fees for services
  • Micro-enterprises
    • Smaller-scale enterprises that operate at house-to-house level and connect with the municipal government
Public-Private Partnerships (PPPs or P3)

- **Main roles:**
  - Improve efficiency
  - Reduce cost
  - Recover cost through user fees or recycling
  - Access to capital public sector doesn’t have

**Challenges?**
What about the informal waste sector >>

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Figure 3  Greenhouse gas emissions by country¹


Carbon Credits

Total GHG emissions per country:  
- >1,000 MtCO₂e/year  
- 100–1,000 MtCO₂e/year  
- <100 MtCO₂e/year
video!

Vocabulary

Cap & Trade
Carbon Credits
Carbon Offsetting
Kyoto Protocol
video!

Reflection: Carbon Credits

PROS/CONS?
Takeaways?