Waste Management in Dhaka North City Corporation: Challenges and CCAC Support

CCAC MSW Initiative Workshop
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Map of Dhaka City and Facilities for Solid Waste Management

Dhaka City Corporation divided into two parts as Dhaka North/South City Corporation by the decision of Government on November, 2011

Population:
- Dhaka City: 14 million
- Dhaka North: 7 million
History of Waste Management

- Traditionally night soil collection
- Open truck system from 1982
- Container carriers from 1992
- JICA study in 2003
- Clean Dhaka Master Plan formulated in 2005
- Waste Management Department established in 2007
- Ward-based approach introduced in 2007
- Compactors introduced in 2010
Waste Generation Increasing Rapidly
Waste Flow of Dhaka North City

Generation: 2,600 t/day

Recycle: 700 t/day

Discharge: 1,900 t/day

Self-disposal or illegal dumping: 500 t/day

Collection: 1,400 t/day

Recycle: 50 t/day

Final disposal: 1,350 t/day
Households

Primary Waste Collection

Dustbins/Containers

Secondary Waste Collection

Final Disposal Site

Transport

Generation

Residents/NGOs/CBOs

Primary collection is not responsibility of DNCC
Primary Collection
Disposal: Aminbazaar Landfill

- Weighing of vehicles at entrance
- Dumping of wastes at platform
- Heavy equipment dressing the wastes
- Control building
- Final soil cover
- Gas vent pipe
Composting Market Waste

- Organic waste collected from wholesale produce market
- Since 2006, 100 tons per day composted at facility outside city
  - Owned by Waste Concern
- Compost sold to farmers through fertilizer distributor
- Project registered with UNFCCC for carbon credits
Issues & Challenges : General

**Difficult to address**
- Rapid population growth
- Rapid income growth
- High population density
  - Challenges collecting in high-density areas
- Limited space
  - High costs of land
  - Difficult to locate disposal sites and transfer stations

**Can be addressed**
- Limited budget
- Environmental pollution
- Manpower shortage
- Insufficient infrastructure
- Lack of public awareness
- Traditional beliefs and practices
- Insufficient regulations
- Weak enforcement of existing laws
Issues & Challenges: Landfill

- Aminbazar Landfill
  - 20 hectares
  - Opened in 2007
  - Expected to be full in 2017
  - Receives 1,350 tons of waste per day
  - Located approximately 15 kilometers outside Dhaka
Issues & Challenges: Landfill (Cont’d)

- Challenges
  - Low staff capacity
  - Inadequate equipment
    - E.g., no compactors
  - High operating costs
    - E.g., due to operating vehicles on spongy waste
  - Mostly organic waste
  - Significant challenges with leachate
  - Health impacts on waste pickers and landfill operators
Issues & Challenges: Landfill

• CCAC Support
  – Landfill site visits in 2013 and 2014
  – Technical assessment by EPA consultant
  – Draft memorandum identifying recommended improvements
    • E.g., building access roads into and through the center of the landfill
  – Capacity building through operations and maintenance training in June 2014
Vision for the Future

• Waste collection and transportation
  – Achieve 100% municipal waste collection
  – Develop digital comprehensive database of primary and secondary collection
  – Construct transfer stations
  – Close all open dumping points in community and commercial areas

• Recycling and organic waste management
  – Promote separation of waste at source & implement national 3R policy
  – Manage organics waste (CCAC)

• Waste disposal
  – Implement waste to energy project
  – Implement better landfill operation and maintenance (CCAC)

• Waste management policies and education
  – Formulate policies for waste management
  – Expand environmental education
Thank you for your kind attention