Third Workshop on Enhancing the Regional Distribution of CDM Projects in Asia and the Pacific

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Waste Related CDM: The Perspective from Bangladesh

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1. Waste Situation in Bangladesh
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3. Barriers and Challenges
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Baseline Information on Selected Sectors of Waste in Bangladesh

Fig 1: Average Physical Composition of Urban Solid Waste

- **High organic matter**: (more than 70%)
- **High moisture content**: (more than 50%)
- **Low calorific value**: (less than 1000 Kcal/Kg)
- **Lack of space for disposal of solid waste**
PROBLEMS OF SOLID WASTE MANAGEMENT

- Waste generation rapidly increasing
- Inadequate waste collection
- Organic waste is left unutilized
- Shortage of land for final disposal of waste
- Lack of segregation of waste at source
- Lack of awareness among the citizens
- Lack of public private partnership
Resource Recover Potential from Organic Waste

- Composting
- Bio Gas
- Landfill Gas to Power
- Power from Gasification
- Refuse Derived Fuel (RDF)
Total urban waste generation in Bangladesh is estimated to be 15,000 tons/day. 70% of this waste is organic, amounting to 10,500 tons/day. If 30% of this waste is recycled, it reduces to 3,150 tons/day.

- **402,000 tons CO2e/Yr.** Emission reduction potential
- **236,250 tons/Yr.** Organic Manure
- **3600 nos.** new Jobs for the poor
Example of Organic Waste Composting Project in Bangladesh

Baseline Situation
Methane Emission (Green House Gas)

CDM project
No Methane Emission

Existing Practice:
land filling of waste

Waste

City Authorities Collecting transport

Composting Plant
Starting from 200 Tons/day capacity and within 2 years reaching 700 Tons/day capacity

The project is recycling organic vegetable waste and instead of disposing in landfill, it is converted into compost.

Waste Concern is involved in the design, implementation and now monitoring of the project.
Waste to Compost Project in Dhaka, Bangladesh
Organic Waste collection
PARTNERSHIP MODEL UNDER CDM PROJECT

Organic Waste

COMPOST PLANT

- Direct Collection from Vegetable markets
- Paying CBOs/NGOs for waste delivery
- Promoting source separation and community participation

CER (carbon credits)

Compost

- Giving concession agreement for 15 years

BOI

CDM Board

DCC

Project Investment Harnessing CDM

Project Approval

Giving concession agreement for 15 years

International Market

Rural Farmers

Urban Population

PUBLIC

PRIVATE

COMMUNITY
How the CDM Project is helping the city and the poor

**Input**
- **Collection** (Organic Waste From Markets)
- **Saving** DCC cost

**Process**
- **Aerobic Composting**
- **Saving** Landfill Area

**Output**
- **Compost** (50,000 tons/year)
- **Carbon Credits** (89,000 ton Co2e)

**Pro-poor element**
- 700 tons/day of waste collection
  Starting from 200 tons/day
- **Job Creation** 400 new jobs

**Pro-poor element**
- Creating 800 new jobs
- Focusing Waste Pickers
- Health Insurance
- Daycare Center
- Free Meal

**Pro-poor element**
- Cheaper
- Less Irrigation
- Soil Quality Improved
- Higher Yield
- Leads to higher income
Parameters to be Monitored During Implementation

Weighing of Waste Input
Process of Quality Control

Regular Oxygen Monitoring
Parameters to be Monitored During Implementation

Temperature Control
Positive Development in Waste Sector

Government has approved The National 3R Strategy to promote source segregation of waste which will lead towards more recycling.

Solid Waste Management Handling Rules focusing on Recycling, source segregation and promoting Public Private Partnership (PPP).

Tax Incentives for waste recycling projects: 4 years in Dhaka (capital city) and 6 years outside Dhaka.

No import duty on imported machinery linked with waste recycling and treatment project.

Waste Sector is also identified as a priority sector for investment by the government for both private and public sector.
• Separation at source is a big challenge. It is very difficult to do biogas or composting projects in urban areas due to non separation of organic and inorganic waste at the source.

• No financial incentive from city council for the tipping of waste and no subsidy for compost, whereas there is subsidy for chemical fertilizer.

• Two level of approval is required (municipality and central govt)

• No rate fixed by the government for purchase of electricity generated from renewable form biomass or other waste based renewable sources

• Getting license for compost produced from organic waste needs at least 2 years.

• Finding suitable Land for the establishment of recycling facility takes time as two level of permission is required.
Barrier and Challenges

- Current low CER price is not at all attractive. Small scale projects cannot recover the validation and verification cost by selling CERs.

- Buyers normally interested about large quantity of CER.

- Sometimes it is hard to get DOE and to get their quick validation report for project registration. DOE usually take 6-9 months for the validation report for the issuance of CER.

- Sometimes UNFCCC also takes longer time for issuance of CER for reasons like use of default value. Although it is allowed to use default value in the methodology.
Way Forward

- Simplification of lengthy, time consuming procedure at all level both national and international
- Enhancement of the capacity of the CDM projects relevant staffs and officials of both public and private sector.
- Many projects such as composting, biogas, improved stove, forestry can be implemented having the strong pro-poor elements.
- Mandatory source separation of waste would be very helpful for the waste related CDM projects
- Post 2012 Kyoto mechanism and future direction of carbon market would be the key factor for small scale project development
- There are many investors keen to invest in CDM projects if they get technical support for project development
- Government incentives and subsidy for the CDM projects and marketing of compost