Cagayan de Oro City
Solid Waste Management: A Work in Progress
Cagayan de Oro City

- Regional Center of Northern Mindanao (Region X)
- Annual Average Growth Rate: 5.8%
Cagayan de Oro City

- 2013: Most Competitive City in the Philippines
- 2014: 2\textsuperscript{nd} Most Competitive City
- Next to Makati, the country’s premier financial district
Conclusions

- Present system noncompliant with solid waste management law
  - Absence of proper segregation and waste reduction strategies at source
  - Inefficient collection
    - Compounded by poor coordination between waste generators and collectors
  - No specific treatment of solid wastes including medical and hazardous waste.
Conclusions

- Existing open dumpsite is close to maximum capacity
  - Timely rehabilitation will make it available for waste disposal for the next 3-4 years.
Current Disposal Site

- 17 hectares total land area
- 1.9 M cubic meters estimated capacity
- At present, 4.0 M cubic meters estimated waste deposited

Source: ADB Study, 2012  (Source: Google Earth year 2011)
Projected Solid Waste Generation Without Intervention (in Thousand Kilograms)

Solid Waste Generation at 0.67 kg/day per capita

Waste Composition 2014

- Biodegradable: 68%
- Recyclable: 14%
- Residual: 17%
- Special Waste: 1%

ADB-CDIA Pre-Feasibility Study on Solid Waste Management

- Recommendations
  - Improvement and Closure of Current Open Dumpsite
  - New Sanitary Landfill
  - Solid Waste Transfer Station Construction and Operation
Strategic Projects

- Carmen Dumpsite (Existing Open Dumpsite)
  - Operation improvements
    - Leachate collection
    - Reshaping
    - Landfill gas control
  - Final capping and closure
  - Post-closure maintenance
Strategic Projects

- **New Sanitary Landfill**
  - **Construction:**
    - New modern sanitary landfill with 3 cells and 4.55 million-cubic meter capacity
  - **Operation**
    - 21-year lifespan
Strategic Projects

- Solid Waste Transfer Station
  - Construction, civil work, supplies and equipment
    - Compaction unit
    - High volume closed containment
  - Operation
Proposed Flow for Highly Urbanized Areas

**Segregation at Source**

- **BIODEGRADABLE**
- **RECYCLABLE**
- **SPECIAL WASTE**
- **RESIDUAL**

**SOLID WASTE**

- **ECO-WASTE CENTER**
  - COMPOSTING FACILITY
  - RECYCLING
  - RESOURCE RECOVERY
  - TREATMENT PLANT

- **SANITARY LANDFILL**
Proposed Flow for Less Urbanized Areas

SOLID WASTE

Segregation at Source

BIODEGRADABLE
RECYCLABLE
SPECIAL WASTE
RESIDUAL

MRF Materials Recovery Facility

GARDEN/FARM
RECYLCING/JUNKSHOP

ECO-WASTE CENTER

COMPOSTING FACILITY
RECYLCING
RESOURCE RECOVERY
TREATMENT PLANT

SANITARY LANDFILL
ご清聴ありがとうございました