



**CLIMATE &  
CLEAN AIR  
COALITION**  
TO REDUCE SHORT-LIVED  
CLIMATE POLLUTANTS

# **Municipal Solid Waste Initiative**

## **Work Plan Development**

**CCAC MSW Initiative  
Latin American Regional Municipal Solid Waste Workshop  
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# Key sources of SLCP emissions from the MSW sector

- Methane
  - Anaerobic decomposition of organic waste in landfills and open dumps
- Black carbon
  - Open burning of waste
  - Waste collection and transportation vehicles
  - Waste handling equipment
  - Waste incinerators



# How do we Reduce SLCPs from the Municipal Solid Waste Sector?

- Reduce waste generation
- Improve waste collection
- Promote organic diversion programs: composting and anaerobic digestion
- Institute recycling programs
- Use landfills and waste to energy as final disposal options
- Address open burning
- Implement sustainable financing systems



# CCAC MSW Initiative

## Typical Process

- Conduct scoping missions
- Collect city-specific information using detailed questionnaires
- Develop action plan with broad goals
- Develop work plan with specific tasks
- Implement the specific tasks identified in the work plan
- Exchange information in workshops (global and regional)



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# Problems – Collection and Transport



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- Littering
- Accessibility to households and community disposal sites
- Poor or no collection route design
- Vehicle type and maintenance
- Fuel availability and costs
- Distance required travel to disposal site
- Tracking performance of collection team
- Capital and operating costs
- Lack of information on best practices



# Problems – Organic Diversion





# Problems – Organic Diversion



- Access to large organic waste generators
- Quality of feedstock
- Quality of compost
- Market for compost
- Access to grid or gas end users
- Market for energy
- Odor and vector control
- Low awareness
- Capital and operating costs
- Lack of information on best practices



# Problems - Recycling



# Problems – Recycling



- Informal sector
- Selection of materials to recycle
- Transportation of recyclables to market
- Markets or local use for recyclables
- Capital and operating costs
- Lack of information on best practices



# Problems – Waste to Energy



# Problems – Waste to Energy



- Moisture content of waste
- Guaranteeing quantity of waste
- Developing specifications for contracts
- Hazardous air pollutants
- Access to grid or electricity end users
- Capital and operating costs
- Lack of information on best practices



# Problems – Dumpsites and Landfills



# Problems – Dumpsites and Landfills



- Air emissions
- Leachate and groundwater contamination
- Health and safety
- Odor and vector control
- Space limitations at old sites
- Land availability for new sites
- Technical and economic feasibility of converting to sanitary landfills
- Developing specifications for contracts
- Access to grid or gas end users for landfill gas projects
- Capital and operating costs
- Lack of information on best practices



# Potential priorities

- Waste collection and transport
  - Improve collection rate
  - Optimize collection routes
  - Address staff efficiency
  - Use fuel efficient vehicles
- Organics management
  - Assess waste for composting and anaerobic digestion
  - Improve facility operations
  - Conduct market assessments





# Potential priorities (contd.)

- Disposal
  - Close dump sites
  - Design sanitary landfills
  - Improve landfill operations
  - Assess feasibility of landfill gas to energy projects
  - Manage leachate
- Other
  - Prevent open burning
  - Improve waste management planning
  - Conduct public outreach



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# Examples of work plan activities

- Improving landfill maintenance and operations
  - Capacity-building trainings
  - Site visits to identify best practices that can be employed
- Improving organic waste management
  - Compost feedstock source assessments
  - Organic waste management project economic assessments
  - Compost marketing assessments



# Examples of work plan activities (contd.)

- Capturing and using landfill gas
  - Assessments to determine landfill gas recovery potential
- Improving waste collection efficiency
  - Networking with experts to build local capacity
  - Results-based financing mechanism assessments
- Improving waste transportation efficiency
  - Capacity building (e.g., eco-driving trainings)
  - Waste transportation logistics assessments (e.g., transfer station siting)



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# Key CCAC-MSW Initiative Activities

- Develop SLCP emissions baseline
- Optimize waste collection
- Increase organic waste diversion
- Increase recycling
- Enhance landfill operations
- Promote methane recovery and use





# Thank you!

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