CASE STUDY: CALI, COLOMBIA

CCAC Municipal Solid Waste Initiative Meeting
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This presentation was developed by:

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COLOMBIA MUNICIPAL SOLID WASTE: NATIONAL CIRCUMSTANCES

- Landfills account for 5% of national emissions
- Tariff rates promote landfill disposal and disincentivize alternative treatment

>90% of waste is disposed in landfills

- Most recycling is conducted by the informal sector, which works in dangerous conditions, has poor quality of life and low wages
- Growth in waste streams is putting pressure on existing landfills and creating environmental problems such as increased leachate
CALI: CITY-LEVEL ACTIONS THROUGH CCAC

Findings
- Generates 1,800 tons/day of waste
- 59% is organic
- 1 sanitary landfill 60 km away; 40 open dumps
- No facilities for composting, WTE or formal recycling despite policies in place to promote
Proposed Source Separation Policy

1. Selective Routes for dry recyclables
2. Warehouses – Stockpile Centers
3. Material Recovery and Transformation Facility + Organics bioprocessing plant
4. Disposal in landfill of non-recoverable material

Trading and marketing of recovered material and products with added value
Key actions under Workplan

1. Develop analytical model to quantify impact (SLCP reduction and economic feasibility) of source separation policy

2. Scoping study of large generators of organic waste and pre-feasibility study of operation

3. Market study for compost
CALI: CITY-LEVEL ACTIONS THROUGH CCAC

Next Steps

- Develop source separation & collection policy for recyclables, organic waste
- Assess feasibility of treatment facilities
- Partnership with San Diego for technical and capacity exchange
- Seek financing for implementation
CITY-TO-CITY PARTNERSHIP: SAN DIEGO

Purpose

- Assist Cali to plan and implement their source separation policy and other climate friendly SWM policies (eg installation of MBT facility)

Objectives

- Understand Cali’s waste system and introduce Cali to San Diego’s waste system and policies
- Share San Diego’s expertise in composting
- Introduce to stakeholders planned source separation policy using formalized waste pickers and composting program from large generators
LINKING CITY-LEVEL ACTIONS TO NATIONAL POLICIES: COLOMBIA’S WASTE NAMA

City level work = near-term concrete actions; demonstrates feasibility

Nationally Appropriate Mitigation Action (NAMA) scales up city level actions to ensure:

scalability, ambition, transformation, & replication
Identified specific barriers and designed a NAMA to target these.

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<th>Barrier</th>
<th>NAMA Element</th>
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<tr>
<td>New/alternative technologies not eligible for competitive tariffs</td>
<td>- <strong>Tariff reform</strong>&lt;br&gt;- New standards for alternative technologies</td>
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<td>Private sector reluctant to invest equity in new business models</td>
<td>- <strong>Establish NAMA Equity Fund</strong>&lt;br&gt;- Demonstrate modern technologies (MBT &amp; MRF)&lt;br&gt;- Create incentives for the private sector (ie PPP schemes)&lt;br&gt;- Improve waste management processes (source separation, selective routes) to create investment opportunities</td>
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<td>Informal sector receives low wages from collection of waste</td>
<td><strong>Formalization of informal waste pickers</strong></td>
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NAMA will be piloted in 3-4 cities, starting with Cali, then will be scaled up and replicated nationally.
Formalization of waste pickers achieves sustainable development benefits such as improved quality of life, health, and worker safety.
EXPECTED OUTCOMES
MOBILIZES PRIVATE SECTOR PARTICIPATION

Leads to private sector investment in new waste tech

Waste structure shifts  →  economically valuable waste

- 2013:
  - 90% Send to Landfill
  - 4.5% Informal Recycling
  - 4.5% Formal Recycling
  - 1% RDF Production

- 2014-2034:
  - 50% Send to Landfill
  - 30% RDF Production
  - 8% Composting
  - 10% Informal Recycling
  - 2% Formal Recycling

CCAP
EXPECTED OUTCOMES
LONG-TERM, SUSTAINABLE SOLUTION

Fund investment as share of capital structure reduces as private sector is familiarized with technologies = sustainable solution

Expected Capital Structure in Three Phases

- Phase I project: NAMA Equity Fund 40%, Private Sector Equity 0%, Commercial Debt 30%, Concessional Debt 18%
- Phase II projects: NAMA Equity Fund 40%, Private Sector Equity 18%, Commercial Debt 33%, Concessional Debt 38%
- Phase III projects: NAMA Equity Fund 40%, Private Sector Equity 20%, Commercial Debt 38%, Concessional Debt 5%
EXPECTED OUTCOMES
SIGNIFICANT REDUCTION OF SLCPS NATIONALLY

Landfills emit 8.8 MtCO2e annually

Sanitary Landfill

50% of waste diverted

3.9 MtCO2e reduced through waste diversion

Waste Treatment Facility

5.9 MtCO2e reduced due to increased recycling, compost, & WTE

Carbon Neutral Waste Sector
CHALLENGES

- Lack of capital, especially for equity investment
- No history of MBT technology in country – the private sector, including banks, are hesitant to invest
- Lack of capacity of policymakers to regulate new models for waste management and technologies
- Market disincentives as a result of tariff structure
- Waste pickers united to prevent formalization of the sector
- Lack of clear regulations for industry to utilize waste; emission standards for cement companies to burn non-hazardous waste are too strict
- Markets for recyclables and compost are volatile and fragmented regionally
CROSS-REGIONAL BEST PRACTICES

- Project champions with the **political will** and time to dedicate to the project are key to success
- Each approach must be tailored to the circumstances of the host city
- Build capacity of local officials to be self-sufficient
- Coordination between local and national actors is important
  - Ensures city actions are consistent with national strategies
  - National guidelines can facilitate scaling up and replication
- Include relevant stakeholders from beginning, incl. the private sector
- Incentives (ie PPP schemes) can drive private sector participation
- Mentor cities and the CCAC network are useful for exchanging information, sharing best practices, and building capacity
THANK YOU

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