CASE STUDY: CALI, COLOMBIA

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President

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
Identified specific barriers which NAMA is designed to target

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<th>Barrier</th>
<th>NAMA Element</th>
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| New/alternative technologies not eligible for competitive tariffs      | - **Policy Changes**: Tariff reform  
|                                                                        |   - New standards for alternative treatment technologies                      |
| Private sector reluctant to invest equity in new business models       | - **Financing Strategy**: Establish NAMA Equity Fund                          |
|                                                                        |   - Demonstrate modern technologies (MBT & MRF)                               |
|                                                                        |   - Create incentives for the private sector (ie PPP schemes)                 |
|                                                                        |   - Improve waste management processes (source separation, selective routes) to create investment opportunities |
| Informal sector receives low wages from collection of waste            | **Formalization of informal waste pickers**                                  |

NAMA will be piloted in 3-4 cities, starting with Cali, then will be scaled up and replicated nationally.
EXPECTED OUTCOMES OF NAMA AND CCAC WORK
SIGNIFICANT REDUCTION OF SLCPS NATIONALLY

Landfills emit 8.8 MtCO2e annually

50% of waste diverted

Sanitary Landfill

3.9 MtCO2e reduced through waste diversion

Waste Treatment Facility

5.9 MtCO2e reduced due to increased recycling, compost

Carbon Neutral Waste Sector
Findings

- Generates 1,800 tons/day of waste
- 59% is organic
- 1 sanitary landfill 60 km away; 40 open dumps
- No facilities for composting or formal recycling despite policies in place to promote. WTE not competitive w/ hydro.
CALI: CITY-LEVEL ACTIONS THROUGH CCAC

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

Selected Routes for organic fraction
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
Next Steps

- Develop source separation & collection policy for recyclables, organic waste
- Assess feasibility of other treatment facilities like MBT to complement the SS policy
- Begin pilot program in March 2014 of ~100 waste pickers
- Partnership with San Diego for technical and capacity exchange
- Seek financing for implementation
Formalization of waste pickers achieves sustainable development benefits such as improved quality of life, health, and worker safety.
EXPECTED OUTCOMES OF NAMA AND CCAC WORK MOBILIZES PRIVATE SECTOR PARTICIPATION

Leads to private sector investment in new waste tech

Waste structure shifts → economically valuable waste

- Informal Recycling
- Formal Recycling
- Composting
- RDF Production
- Send to Landfill
City level work demonstrates feasibility

Nationally Appropriate Mitigation Action (NAMA) combines national policy with financing mechanism to catalyze private sector investment

By replicating Cali approach in other cities:

NAMA transforms waste policy, dramatically reduces GHGs, and scales up both public and private investment
CHALLENGES

- Lack of capital, especially for equity investment – first mover problem
- 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 being forced out of work
- Lack of clear regulations for industry to utilize/implement other treatment technologies besides landfill
- Markets for recyclables and compost are volatile and fragmented regionally
Project champions with the **political will** and time to dedicate to the project are key to success

- Guide consultants, coordinate with other offices (reg committee meetings)
- 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 and national funding 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

For more information, please contact:
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Please visit us at www.ccap.org.
Source separation

Collection Point

Regular waste recovery

Recovery of large organics generators

Mechanical Biological Treatment Plant

Transfer Station

Sanitary Landfill

Transfer Station

Sanitary Landfill

Selective Routhes

Regular waste recovery

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Source separation