



Libertad y Orden

MINISTRY OF ENVIRONMENT AND SUSTAINABLE DEVELOPMENT
DEPARTMENT OF CLIMATE CHANGE



Ministry of Environment and
Sustainable Development
Republic of Colombia

WASTE MANAGEMENT NAMAs: as part of GHG reduction strategy

Landfill Technical and Policy Session

GMI All-Partnership Meeting 2011
October 13, 2011 – Krakow, Poland



OVERVIEW

- Background: GMI activities in Colombia
- CDM statistics: Waste Management sector
- Formulation of the Colombian Low Carbon Development Strategy (CLCDS)
- Link between GMI and NAMAs
- Lessons learnt so far



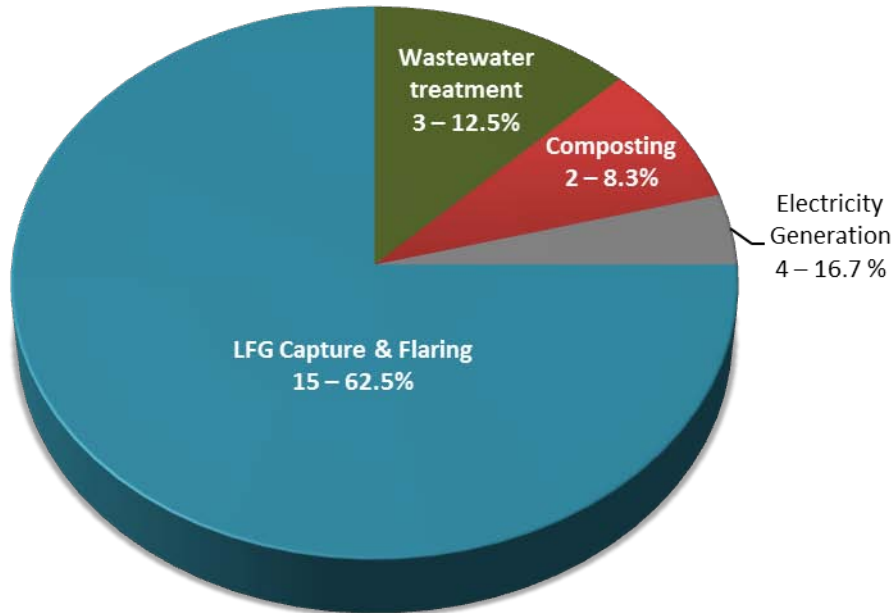
GMI Activities in Colombia – Landfill Subcommittee

- **Workshops and Capacity Building:**
 - *Landfill gas opportunities. Barranquilla, March 2008*
 - *Landfill operations and LFG opportunities. Medellín, April 2009*
 - *Side event International Waste Mgt Conference. Armenia, August 2009*
 - *Launching of Colombia Biogas Model. Medellín, September 2010*
 - *Coming workshop: Colombia Biogas Model, Bogotá, Dec 5 – 6 2011.*
- **Entities involved:**
 - *Climate Change Division. Ministry of Environment*
 - *Superintendencia de Servicios Públicos Domiciliarios*
 - *Center for Cleaner Production*



GMI Activities in Colombia – Landfill Subcommittee

- **Colombia Biogas Model:**
 - *Site visits to implemented LFG projects in Colombia*
 - *Design & development of the Colombian Biogas Model*
 - *Calibrated with implemented LFG projects in Colombia: Doña Juana, La Pradera, Antanas*
- **Landfill Database:**
 - *Superintendencia de Servicios Públicos Domiciliarios*
 - *Information Quality Assurance*
 - *More LFG variables to be added for Landfill operators reporting*
 - *Better systematization*



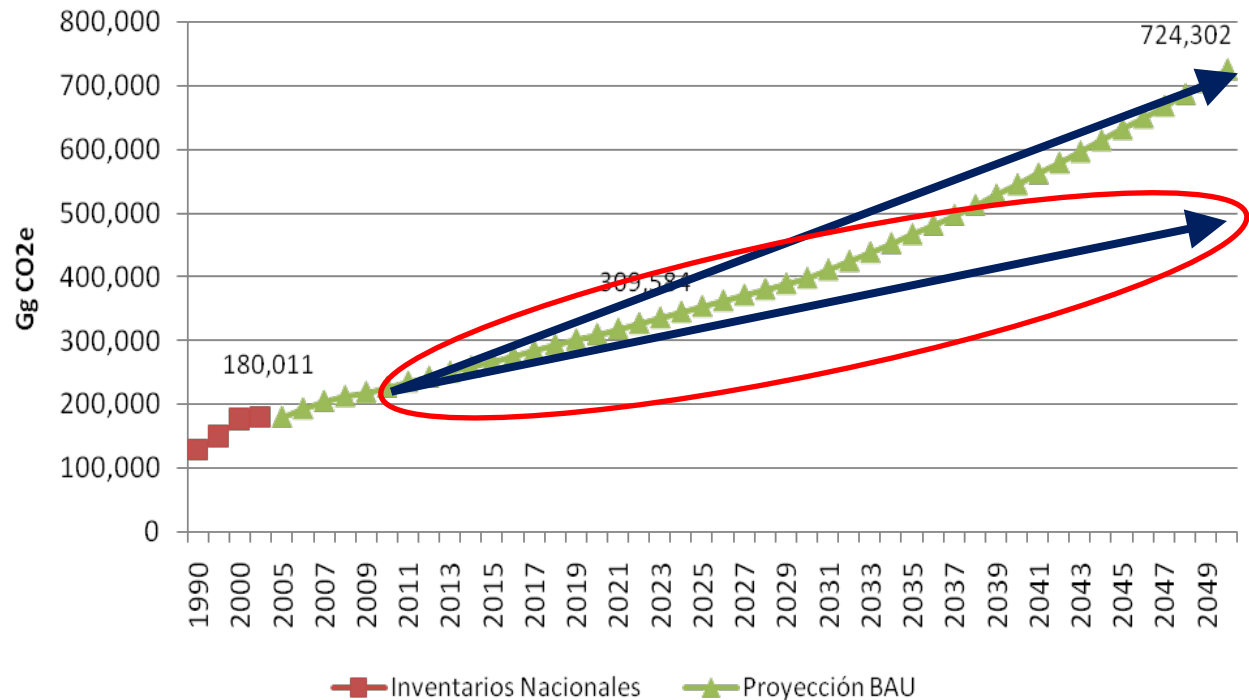
- **26** Waste Management CDM projects in the pipeline
- Emission Reductions potential **2.8 million tonCO₂e/year**
- This sector represents **17%** of the Colombian CDM Project Portfolio

- **18 LFG LoAs** issued by Colombian DNA: Contribution to Sustainable Development
- **8 LFG, 1 WWTP, 2 Composting** projects have been Registered by CDM EB
- **2** LFG projects have issued **23,379 CERs** – Antanas Landfill in Pasto
76,048 CERs – Doña Juana Landfill in Bogotá
 Awaiting issuance **99,2573 CERs** (Dic,2009 – Jun, 2011)



- To achieve the same level of expected economic growth while maintaining low GHG emissions.
- Decarbonization of Colombian Economy
- Decoupling GDP growth from emissions growth

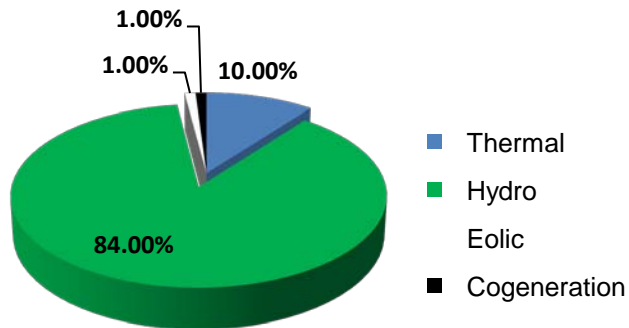
Proyección Tendencial de Emisiones de Gases Efecto Invernadero para Colombia (2005-2050)



**We are not the main part of the problem,
But we can help to SOLVE it!**

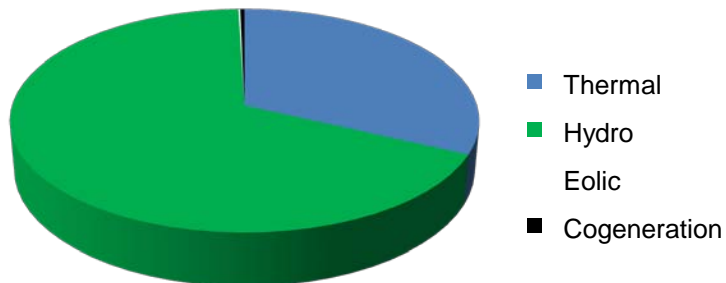
Electricity in Colombia has low carbon intensity

ELECTRICITY GENERATION- 2008 GWh (%)



Source: XM, 2009

INSTALLED CAPACITY (MW)



Source: UPME, 2009

Electricity generation in Colombia is mainly based on hydro. This explains its low carbon intensity

Country	Carbon intensity (gCO ₂ /kWh)
CHINA	860
INDIA	970
INDONESIA	740
COREA DEL SUR	440
MEXICO	530
TAILANDIA	540
SURAFRICA	940
BRAZIL	290
PERU	547
ECUADOR	660
FILIPINAS	454
CHILE	517
COLOMBIA	280



Building Blocks

Development of
BAU scenarios and
abatement cost
curves

Capacity Building

MRV

Analysis and
prioritization of
mitigation actions

Formulation and
implementation of
policies, projects
incentives,
regulations

Communication and
socialization

COLOMBIAN LOW CARBON DEVELOPMENT STRATEGY (CLCDS)

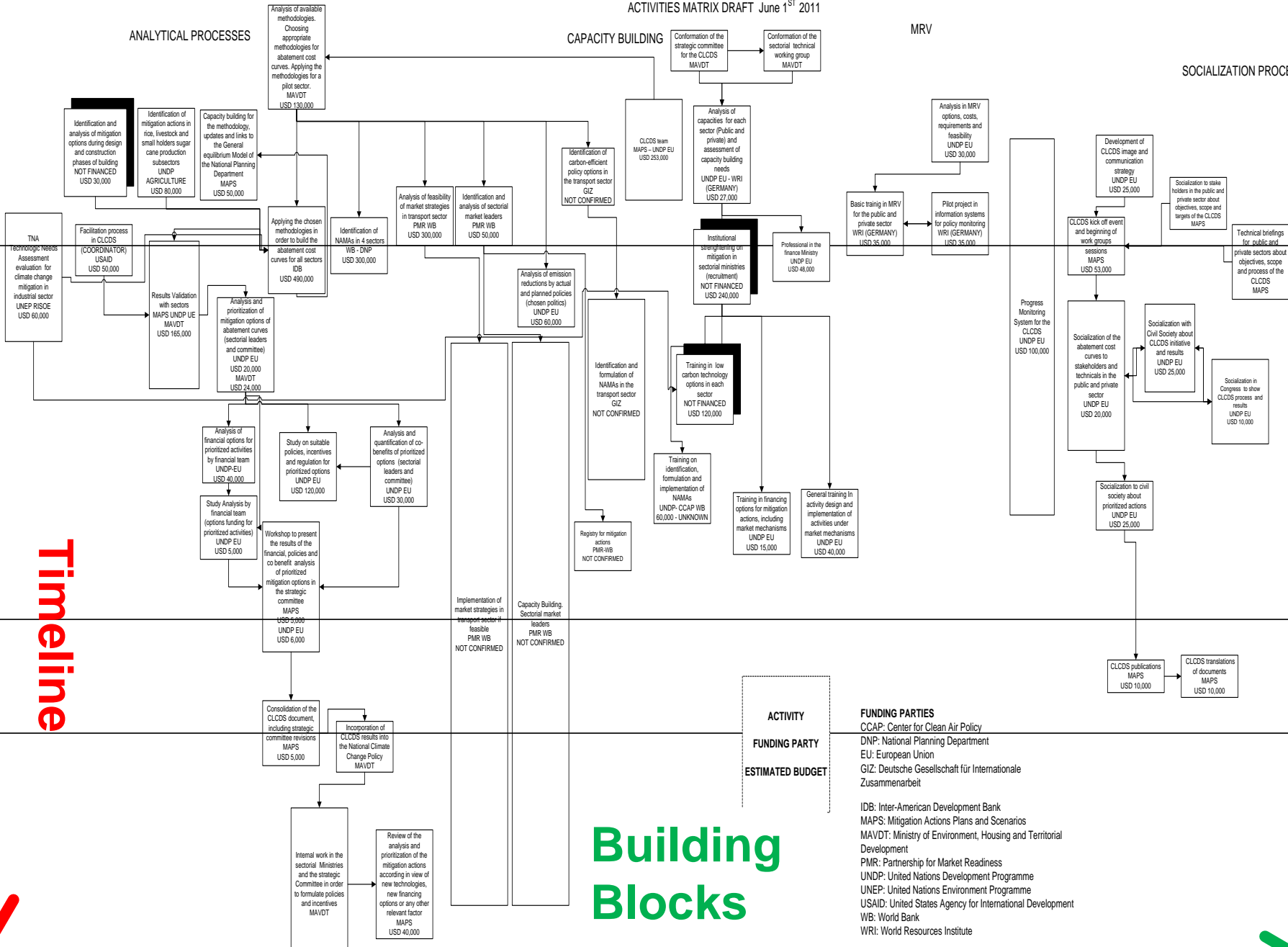
ACTIVITIES MATRIX DRAFT June 1ST 2011

ANALYTICAL PROCESSES

CAPACITY BUILDING

MRV

SOCIALIZATION PROCESS



Timeline

Building Blocks

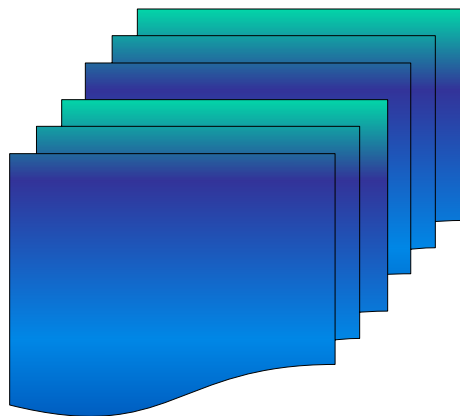
- ACTIVITY**
- FUNDING PARTY**
- ESTIMATED BUDGET**

Multi-donor scheme: Technical and financial support from 12 different sources

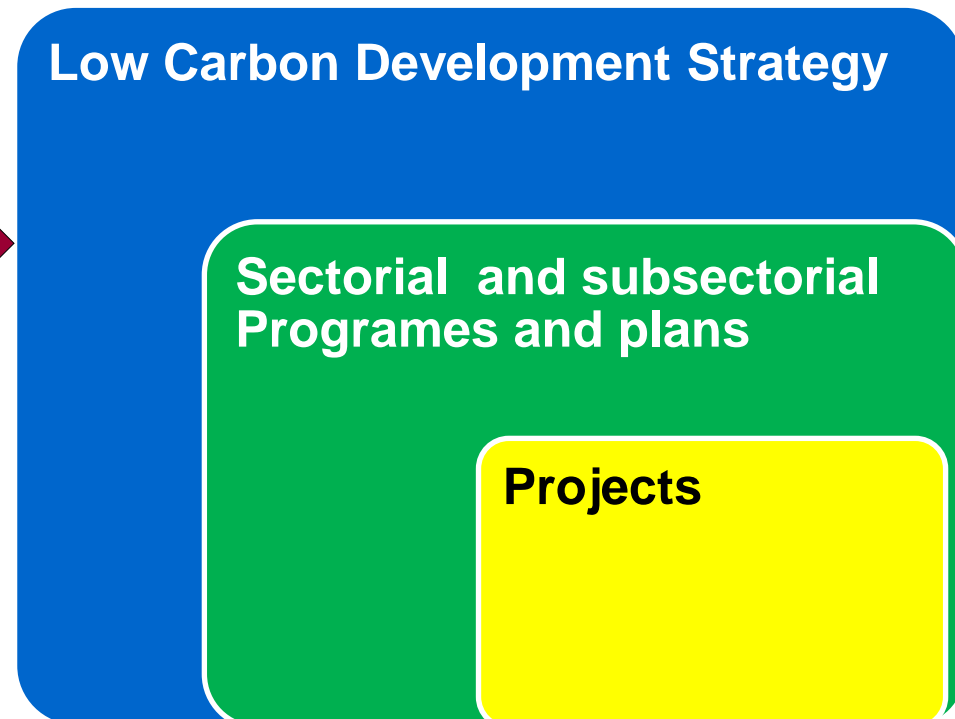
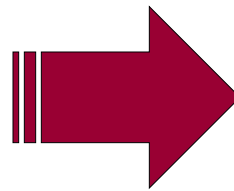
- Unilateral resources
- Bilateral: USA (LEDS), Germany (GiZ, WRI), EU-UNDP, UK (Prosperity Fund)
- Funds: MAPS, CCAP, PMR
- Multilateral: IADB, World Bank



METHANE ACTION PLAN ↔ WASTE NAMA



CDM based project by project





- **Regionalization of Landfills: improvements by measures/activities that increase GHG reductions.**
- **Formulation/improvements of the Waste Management Strategy → Municipalities are encourage to develop a Sanitation Plan in order to get resources allocated. Make it more ambitious including GHG reduction measures.**
- **Feasibility analysis for ongoing LFG projects → biogas utilization (surrounding industry, vehicle fuel) or electricity generation (own consumption or leachate treatment)**
- **Recycling → MRV?**



- **Analyze the GHG emissions by activity, provides a more accurate picture for NAMAs than GHG inventory**
- **Involvement of all stakeholders from the beginning**
- **Private sector involvement is key to guarantee future buy in**
- **Financing is really important in order to know how to implement NAMAs and get sectors to move**
- **The CLCDS will help us to change the way the country has been planned, towards long-term, climate resilient and efficient growth**



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GRACIAS!

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