Colombia MRP
Preparation phase – outline of progress

Barcelona, PMR PA6
May, 2013
Contents

- Background of PMR work and climate change policies
- Urban Transport policies
- Opportunities in the transport sector
- Preparatory phase
- Instruments
• Considerable climate change policy-related progress
• LEDS Colombia progress supporting PMR (i.e. via MRV and other activities)
• Broader agenda now in place for PMR:
  – Inclusion of Ministry of Finance
  – New carbon tax component (for all sectors)

Colombia’s Climate Change Priorities

- REDD National Strategy
- Colombian Low Emissions Development Strategy
- Strategy on Financial Protection for Disasters
- National Climate Change Adaptation Plan
1. Projection of future scenarios by sector and options of low emissions development

- Future Scenario building of GHG emissions
- Mitigation actions identification
- Costs and abatement cost evaluation of mitigation actions
- MACC curve construction

2. Sector action plans

- Prioritization of mitigation options
- Feasibility and co-benefit studies
- Policies, programs and project design
- Public and private action plans

3. Implementation and followup to mitigation action plans

- Sector action plan implementation
- Development of an MRV system
- Channeling international resources

Colombian Low Emission Development Strategy (stages)
Colombian LEDS: transport strategies

**Alternative Energy**
- Hybrid and Electric Vehicles ✔ (Bogotá)
- Natural Gas
- Biofuels
- Hydrogen

**Disincentives to the use of private vehicles**
- Congestion Charging ✔
- Promotion of non-motorized vehicles ✔ (Mobility Law)

**Changes in behavior patterns**
- Eco-driving
- Maintenance Practices

**Fuel standards and technologies**
- Diesel: Better quality ✔ (January 2013: 50ppm)
- Fuel Efficiency

**Urban Planning**
- National Urban Transport Policy ✔

**Optimization – Freight Transport**
- National Logistic Policy ✔

**Enterprise Best Practices**
- Teleworking
- Car pooling/Car Sharing

**Others**
- Zero emissions zones/corridors ✔ (Cali and Bucaramanga)
- Taxi optimization

- Infrastructure
- Mobility Plans
- Modal Shift
- Logistics/Vehicle efficiency
MADS and its relation to PMR

- MADS has given priority to the transport sector to study which would be the market mechanism that would adjust to national circumstances, enabling emission reductions cost-effectively and attending to the sector’s priorities and generating social and environmental benefits. (work on other sectors is moving forward as well with other resources – domestic and international)

- CDM is taken as a first step in this direction from which lessons can be drawn.

- The transport sector was chosen for its future increase in emissions and the increase of the sector in and of itself.
Ground Transportation GHG Emissions in Colombia

Source: LCDS Colombia
## Emissions Projections

<table>
<thead>
<tr>
<th>Category</th>
<th>Inertial</th>
<th>Reference</th>
<th>Kaya</th>
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<tbody>
<tr>
<td>Annual Average Growth Rate 2010-2040</td>
<td>3.7%</td>
<td>3.4%</td>
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<tr>
<td>Energy demand 2040 (thousands TJ)</td>
<td>857</td>
<td>792</td>
<td>1,184</td>
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<tr>
<td>CO$_2$ 2040 (million Ton)</td>
<td>63</td>
<td>58</td>
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<tr>
<td>PM$_{10}$ 2040 (thousands Ton)</td>
<td>24</td>
<td>17</td>
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<table>
<thead>
<tr>
<th>Category</th>
<th>%</th>
<th>Million Ton*</th>
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<tr>
<td></td>
<td>2009</td>
<td>2040</td>
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<tr>
<td>Interurban Cargo</td>
<td>40</td>
<td>36</td>
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<tr>
<td>Urban Cargo</td>
<td>11</td>
<td>9</td>
</tr>
<tr>
<td>Motorcycles</td>
<td>5</td>
<td>9</td>
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<tr>
<td>Light Vehicles</td>
<td>16</td>
<td>34</td>
</tr>
<tr>
<td>Taxis</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Urban Public Transport</td>
<td>15</td>
<td>5</td>
</tr>
<tr>
<td>Interurban Public Transport</td>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100</td>
</tr>
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</table>
## TRANSPORT SECTOR – IDENTIFIED MEASURES

### Urban Public Transport
- **BRT lanes**
- Infrastructure maintenance and improvement
- Technological shift: Hybrid buses for public transportation.
- Technological shift: Electric buses for public transportation.
- Improvement of public transport organization
- Public transportation fleet renewal
  - Electric cabs
  - Taxis and cabs organization; parking spots and zonal operation.

### Private Passenger Transport
- Congestion Charge Zones
  - “No motorcycle day”
  - Carpooling
- Technological Shift: Gas powered light duty vehicles
- Technological Shift: Electric powered light duty vehicles
- Institutional Transport Initiatives
- New parking policies (park and ride)

### Fleet Renewal
- Freight fleet renewal (over 20 years)
- Public transportation fleet renewal (over 20 years)
- High standards for technical and mechanical inspection compliance

### Energy Efficiency
- Increase gasoline-ethanol blend up to 10%.
- Aerodynamic improvements and tires inspection
- Improve fuel standards (sulphur, octane rating, international regulation)
- Increase diesel-biodiesel blend up to 10%.

### Freight and Logistics
- Increase rail freight capacity
- Increase river navigation freight capacity
- Improve logistics practices in cities (delivery schedules, storehouses)
  - Freightbrokers

### Non Motorized Transport
- Construction of safe, accessible and pleasant sidewalk paths.
- Construction of safe, accessible and pleasant cycling paths
- Construction of parking spots and restrooms for bicycles users in transport stations in order to improve modal share.
  - Public Bicycle Programs

**Prioritized actions regarding social, economical and environmental co-benefits**
Mitigation reduction potential (proposed) actions in transport (timeline)

Source: LCDS Colombia (transport sector), 2012
LEDS scenario of transport mode share

Source: LCDS Colombia final report, p. 47
1. Urban transport policies in Colombia
The National Urban Transport Policy created the Sustainable Urban Mobility Unit (UMUS)

Congress

National authorities:
- Finance Ministry
- Planning Department
- Transport Ministry
- Environment Ministry

UMUS

Management agencies

Supervision of public works

Infrastructure contractors

Fleet operator companies

Fare collection companies

Municipal Council

Local authorities:
- Municipality
- Transport Secretary
- Planning Secretary
- Environmental department
Urban and Regional Transport Policy

Massive Integrated Transport System (SITM)
- Population greater than 600,000 habitants

Strategic Public Transport Systems (SETP)
- Population between 250,000 and 600,000 inhabitants

Small Cities Strategies
- Population lower than 250,000 inhabitants

Integrated Public Transport Systems (SITP)
- Strategy to improve transport service providing efficiency and quality

Integrated Regional Transport Systems (SITR)
- Multimodal Regional Strategy

Mobility plans (PM)
- Territorial Planning

Binational Systems (SAB)
- Territorial Planning

Colombian transport policy components
3 main transport policy guidelines: Avoid – Shift – Improve

**AVOID/REDUCE**
The need to travel

- Reduce or avoid the need to travel

**SHIFT**
To sustainable modes

- Shift to more environmentally sustainable modes

**IMPROVE**
technologies, standards…

- Improve energy efficiency of modes and vehicles

Adapted from Dalkmann & Braningan, 2007
How does the policy work?

• In practice, the Policy is implemented through the construction of mass transit systems and public transport reorganization schemes.

• Once all currently planned works are done, 4.4 billion USD will have been spent in 14 different projects.
Six systems in operation, one under construction:

Projects developed in strong cooperation between national-local government, and implemented with private sector participation (operation of systems).
SETP – Strategic Public Transport Systems

In process of implementation:

Projects developed in strong cooperation national-local government, and implemented with private sector participation (operation of systems).

Also structuring systems in Manizales, Villavicencio, Buenaventura, Neiva, & Ibagué.
Sustainable Urban Mobility Unit

UMUS

Viceministerio de Transporte

+ Sector plan of low carbon transport

LEDs Colombia

ECDBC

Dirección de Cambio climático

MinAmbiente

MinTransporte

MinHacienda

Dirección General de Política Macroeconómica
2. Opportunities that the climate sector has brought forward in transportation projects
<table>
<thead>
<tr>
<th>TOD NAMA</th>
<th>GEF: Low–Carbon and Efficient National Freight Logistics Initiative</th>
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<tbody>
<tr>
<td>(CCAP-National Government)</td>
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<tr>
<td>Renovation (and freight) Fleet NAMA</td>
<td>GEF: Demonstration and assessment of battery-electric vehicles for mass transit in Colombia</td>
</tr>
<tr>
<td>(GIZ-IDB-National Government)</td>
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<tr>
<td>TC: Market entry of electric buses for Mass Transit in Colombia</td>
<td>CTF: Sustainable Transport US$ 80m (SITPs) + US$ 20m (SETPs - ciudades amables)</td>
</tr>
<tr>
<td>(IADN-National Government)</td>
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<tr>
<td>Partnership for Market Readiness (PMR): To establish a suitable market instrument for the transport sector in major cities</td>
<td>Institutional and regulatory support for low-carbon Urban Transport in Colombia</td>
</tr>
<tr>
<td>(World Bank-National Government)</td>
<td>(Prosperity Fund- Universidad de los Andes – University College London; with the support of the Ministry of Transport)</td>
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</tbody>
</table>
CDM-specific estimated reduction potential of CO2 emissions by sector

Estimated CO2 emissions reduction: 197 projects, 25,502,261 Ton CO2e/year:
MADS, 2013 (CDM project portfolio)
Fuel substitution
23%

Mass transit - BRT
61%

Mass Transit, cablecars
8%

Mass Transit, rail
8%

Total projects
13

National approval
7

Registered
6

With CERs
1
3. Description of the preparatory phase
PMR in Colombia - history

- 2011: Colombia presents its PMR organizing framework (May)
- 2012: Colombia develops Low Carbon Development Strategy (ECDBC) and Sustainable Urban Mobility Unit (UMUS) and begins PMR activities
  - Format is structured
  - Activities are defined
  - First versions of ToR
- 2013: Implementation of activities and workshops
### General activity: Coordination of PMR in Colombia

<table>
<thead>
<tr>
<th>Activity 2: Market readiness assessment of Colombia’s urban transport sector</th>
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<tr>
<td>Activity 3: Research on market instruments in urban transport sector</td>
</tr>
<tr>
<td>Activity 4: Feasibility study on a scaled-up GHG crediting instrument</td>
</tr>
<tr>
<td>Activity 5: Feasibility of a carbon tax or related measure as a national policy (ToR in discussion)</td>
</tr>
</tbody>
</table>

Note: MRV already being developed with other funders’ cooperation
Activity 2

• Compile, systematize and provide all necessary information to guide decisions regarding Colombia’s potential to develop market mechanism(s) in the urban transport sector;
• Provide an outline of the situation, trends, development goals and mitigation options in the urban transport sector;
• Assess conditions, data availability/gaps, institutions and regulations in the sector;
• Take part in the workshops and consultation activities developed for the project;
• Coordinate and share information with other consultants developing other components of this initiative;
• Elaborate relevant inputs for the preparation of select building blocks of Colombia’s MRP.
Activity 3

• Drawing upon a comprehensive review of experiences, lessons learned and case studies from across the world, provide insights on the role of market instruments to promote climate mitigation action in the urban transport sector, and the interaction of such instruments with other policy instruments;
• Provide an overview and menu of carbon pricing instruments suitable for the Colombian context in the urban transport sector, including allowance-based emissions trading schemes (ETS), sector crediting instruments, carbon taxes, and any other low-emissions development policy instrument that the consultant may deem appropriate;
• Take part in the workshops and consultation activities developed for the project;
• Coordinate and share information with other consultants developing other components of this initiative;
• Elaborate relevant inputs for the preparation of select building blocks of Colombia’s MRP.
Activity 4

- Development of preliminary technical proposal
- Estimation of ERs and outline of investment/financing scenarios
- Assessment of institutional and regulatory framework, capacity gaps
- Preparation of roadmap for implementation (incl. consultations)
Activity 5

- Evaluate the characteristics and feasibility of a carbon tax or related measure as per the indications of the Colombian government to implement such measures in the medium term.
- Define feasible carbon-related instruments in the context of the legislative reform in Colombia
- Identification of barriers for implementation of the instrument(s)
- Identify complementary measures to enhance the positive impact of the proposed instrument.
Opportunities in Colombia’s MRP Proposal

- Strong linkage and working group from Transport and Environment Ministries (including MRV development by sector)
- Recent addition of Ministry of Finance (Hacienda) to discussions and inputs
- Existent policies in transport sector that are coherent with climate change mitigation focus
- Substantial experience with CDM projects in the past (knowledge of carbon markets)
Revised Preparation phase timeline

Activity 1 (Coordination)

Activity 2 (market readiness of transport) – 4 months

Activity 3 (market instruments in transport) 4 months

Activity 4 (improved carbon market instrument) 4 mo

Activity 5 (Carbon tax study) 4 mo

Workshops and consultations
First stakeholder workshop (May 10, 2013)

- 48 participants
- National and local governments (3 national government entities, 5 city governments)
- Academia (3 universities)
- Experts (local, international)
- World Bank Carbon Finance and Transport staff
4. Instruments reviewed with GoC and stakeholders
Analysis

- CDM became a strong component of transport + climate change policy in Colombia
- Moving to other measures such as credited NAMAs is also reviewed
- Great potential in other mechanisms is being explored

CDM: Clean Development Mechanism
PMR: Partnership for Market Readiness
Working Group on Transport NAMAs (Government of Colombia and stakeholders, part of LEDS Colombia)

**National Freight Logistics Policy**

- **Freight NAMA**
  - Fleet renovation (GIZ TRANSfer)
  - Freight NAMA components (IDB)

**National Public Transport Policy (PNTU)**

- **Sustainable Transport NAMA(s)**
  - TOD (CCAP)
  - NMT (GIZ)
  - SETP
  - TDM (GIZ)
  - Electric (private sector)

**PMR readiness work**: assessment of NAMA crediting potential

- = concepts underway
- = concepts under development

**Abbreviations**

- TOD: Transit-Oriented Development
- NMT: Non-Motorised Transport
- SETP: Strategic Public Transport Systems (public transport systems in midsize cities)
- TDM: Travel Demand Management
Fleet renovation

Policy - Fleet renovation: in progress
+ MRV: under development
= Fleet renovation NAMA

Photo by Michael Altenhemme / DW
TOD NAMA concept
New component proposed: Carbon tax

- Carbon tax (or related measure)
- Interest from Finance Ministry (linked to PMR)
- Scoping study of rational, prefeasibility
- “Green taxes” indicated in new law: Ley 1607 de 2012: need for scoping study by June 26, 2013
Carbon tax scoping study: main sections

- Review of existent market instruments to reduce GHG emissions
- Discussion of international experiences
- Cap-n-trade vs carbon tax
- Implementation: key aspects
- Preliminary indications of feasibility and alternatives
- (to be prepared by June 26, 2013)
Thank you

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