Carbon markets, transport and Colombia

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Washington, March 2013, PMR meeting
@carlosfpardo
Colombia: 3 main policy guidelines

Consolidate urban transport policies based on Avoid – Shift – Improve framework

1. **Avoid** need to travel

2. **Shift** to more efficient modes

Source: Ministry of Transport, Colombia
3. **Improve** vehicle technologies and fuels, standards

Source: Ministry of Transport, Colombia
1. Colombian Low Emission Development Strategy

2004 Total Emissions: 180.010Gg CO2e

<table>
<thead>
<tr>
<th>Sector</th>
<th>Contribution</th>
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<tbody>
<tr>
<td>Agriculture</td>
<td>39%</td>
</tr>
<tr>
<td>Deforestation</td>
<td>14%</td>
</tr>
<tr>
<td>Energy and mining</td>
<td>14%</td>
</tr>
<tr>
<td>Transport</td>
<td>12%</td>
</tr>
<tr>
<td>Industrial</td>
<td>12%</td>
</tr>
<tr>
<td>Waste</td>
<td>6%</td>
</tr>
<tr>
<td>Others</td>
<td>3%</td>
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</tbody>
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Source: Ministry of Environment and Sustainable Development, Colombia

Source: IDEAM, 2010

<table>
<thead>
<tr>
<th>COLOMBIA</th>
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<tbody>
<tr>
<td>Population</td>
<td>46.36 million hab</td>
</tr>
<tr>
<td>Area</td>
<td>1,141,748 km2</td>
</tr>
<tr>
<td>Density</td>
<td>40.74 hab/km2</td>
</tr>
</tbody>
</table>
### 1. Colombian Low Emission Development Strategy

<table>
<thead>
<tr>
<th>Alternative Energy</th>
<th>Urban Planning</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Hybrid and Electric Vehicles ✔ (Bogotá )</td>
<td>✓ National Urban Transport Policy</td>
</tr>
<tr>
<td>• Natural Gas</td>
<td>• Infrastructure</td>
</tr>
<tr>
<td>• Biofuels</td>
<td>• Mobility Plans</td>
</tr>
<tr>
<td>• Hidrogen</td>
<td></td>
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<table>
<thead>
<tr>
<th>Disincentives to the use of private vehicles</th>
<th>Optimization – Freight Transport</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Congestion Charging ✔</td>
<td>• Modal Shift</td>
</tr>
<tr>
<td>• Promotion of non-motorized vehicles ✔ (Mobility Law)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• LogisticsVehicle efficiency</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Changes in behavior patterns</th>
<th>Enterprise Best Practices</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Eco-driving</td>
<td>• Teleworking</td>
</tr>
<tr>
<td>• Maintenance Practices</td>
<td>• Car pooling/Car Sharing</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fuel standards and technologies</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Diesel: Better quality ✔ (January 2013: 50ppm)</td>
<td>• Zero emissions zones/corridors ✔ (Cali and Bucaramanga)</td>
</tr>
<tr>
<td>• Fuel Efficiency</td>
<td>• Taxi optimization</td>
</tr>
</tbody>
</table>
Climate change + transport in Colombia

**TOD NAMA**
(CCAP-National Government)

**Fleet Renovation NAMA**
(GIZ- National Government)

**TC: Market entry of electric buses for Mass Transit in Colombia**
(IADN- National Government)

**PMR Project:**
_To establish a carbon trade system between the transport sector in major cities_
(World Bank-National Government)

**GEF: Low-Carbon and Efficient National Freight Logistics Initiative**

**GEF: Demonstration and assessment of battery-electric vehicles for mass transit in Colombia**

**CTF: Sustainable Transport**
US$ 80m (SITPs) + US$ 20m (SETPs - ciudades amables)

**Institutional and regulatory support for low-carbon Urban Transport in Colombia**
(Prosperity Fund- Universidad de los Andes – University College London; with the support of the Ministry of Transport)
Transport sector CDM projects

- 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

Source: Ministry of Environment and Sustainable Development, Colombia
GIZ support in NAMA development (TRANSfer)

Working Group on Transport NAMAs (with Government of Colombia)

TRANSfer I

- Fuel quality
- Emission standards
- Efficiency standards

Large vehicles fleet renovation

TRANSfer II (proposed)

Sustainable Transport NAMA

- TOD (CCAP?)
- NMT
- SETP
- TDM

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

= Main NAMA concept
= accompanying/related concepts
= external involvement

Source: GIZ TRANSfer project
Policy - Fleet renovation: in progress + MRV: under development = Fleet renovation NAMA
Colombia TOD NAMA
Creates a Coordinating Entity

TOD = Transit Oriented Development
SPE = Special Purpose Entity
NAMA = Nationally Appropriate Mitigation Actions
GHG = Greenhouse Gas emissions
MRV = Measurement, Reporting and Verification

Source: CCAP (draft material)
Electric Mobility NAMA

- Introduction of electric vehicles and needed infrastructure for private and public transport in Colombia. Pilot project for Bogotá.
- Preliminary abatement cost calculated
- Baseline in calculation (by private sector)
- Involvement from:
  - CODENSA/EMGESA
  - Ministry of Transport
  - National Planning Department
  - Ministry of Environment and Sustainable Development

Photo Source: El Espectador/ David Campuzano
Analysis

- CDM became a strong component of transport + climate change policy in Colombia
- Moving to other measures such as NAMA, etc is fruitful and well seen, but poses perceived problems in terms of double-counting
- Great potential in other mechanisms must be explored
- PMR is a useful initiative to complement measures that have been taken

CDM: Clean Development Mechanism
PMR: Partnership for Market Readiness
Other mechanisms that could be explored (via PMR or other)?

• New market mechanisms?
• Market mechanisms/ schemes?
• New regulations already mention carbon taxes (must be developed, supported, moved forward!)
• Part of the PMR work includes evaluating these options
• Other stakeholders (CAF, etc) interested in developing analyses towards other non-market mechanisms

Artículo 184. Impuestos Verdes. Dentro del término de seis (6) meses contados a partir de la vigencia de la presente ley, el Gobierno Nacional elaborará un estudio sobre la efectividad de impuestos, tasas, contribuciones y demás gravámenes existentes para la

Source of text: Ley 1607 de 2012
Transport instruments/policies that could be included into market mechanisms

- (public transport is the default policy used)
- Travel Demand Management
  - Congestion pricing
  - Parking policies
  - Pay as you Drive schemes
- Non motorised transport
  - Improvement of conditions for cyclists and pedestrians
- Road-based carbon taxes
Additional comment: the issue with transport as a market

“... in no other major area are pricing practices so irrational, so out-dated, and so conducive to waste as in urban transportation.”

William S. Vickery, 1996 Noble Prize laureate in Economics (quoted from ICLEI 2000)
How markets can help each other

This is a (nascent) carbon market

This is the transport market
Applying market mechanisms in the transport sector?

- Start by “balancing the market” in the transport sector (pricing, real costs, etc)
- Link such balancing with market mechanisms related to climate change
- Thorough and balanced approach at market mechanisms in the transport sector
GO SLOW
AND SEE OUR BEAUTIFUL
CITY
GO FAST AND SEE OUR
JAIL
STATE LAW ENFORCED.

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