Organizing Framework for Scoping of PMR activities

COLOMBIA
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16 05 2011
Outline of Template

1. Policy context: Domestic mitigation objectives and role of market instrument(s)
   1. Policy context, objectives and envisioned role for new market instruments
   2. Overview of country’s GHG emissions
   3. Interest in market-based instrument(s)*

2. Organization and consultations
   1. PMR contact
   2. Partners in the formulation and implementation of the country’s Market Readiness Proposal

3. Technical building blocks of Market Readiness
   1. Taking stock of relevant sectors (and/or region) – 1 slide per sector/region
   2. OPTIONAL – Assessment of readiness of sector(s)/ region(s)
   3. OPTIONAL - System for domestic measurement, reporting and verification (MRV)
   4. OPTIONAL - Institutional/legal components

4. Other key relevant initiatives

5. Organization of work and estimated timeline

6. Other relevant information

7. Conclusions – Summary of market readiness priority areas for PMR support
1. Policy context: Domestic mitigation objectives and role of market instrument(s)

1.1 Policy context, objectives and envisioned role for new market instruments

- The general framework of CC agenda is the National Development Plan 2010 – 2014 (NDP)
- The NPD and MAVDT currently structuring a policy document (CONPES) on institutional arrangements for climate change in the government. The National Climate Change System will be created through this policy. It will enable the creation of multi-level working groups in the different CC issues, that will have channels to deliver their inputs to decision-making levels in the government, throughout its different sectors. It will be the framework that will allow the orderly management of actions in the matter of climate change in the country and provide institutions with tools to work on the topic. This CONPES is expected to be approved before the end of 2011.

- The Government has set out 3 pillars for its Climate Change agenda:
  2. Low Carbon Development Strategy (included in the NDP): The first task, now underway, is to estimate the marginal abatement costs of the most probable abatement options in the key emitting sectors, beginning with industrial processes, and
  3. REDD Strategy (included in the NDP)
- Carbon markets play a major role in the institutional future system (MAVDT to lead all market related issues), the LCDS and the NDP. The presidency has committed to a goal of 300 emission reduction projects identified by 2014 mainly to participate in international carbon markets. Domestic carbon markets have not been yet explored within the country’s planning framework.
1. Policy context:

1.2 Overview of country’s GHG emissions and growth priorities

<table>
<thead>
<tr>
<th>Categories and Subcategories sources and sinks</th>
<th>CO₂ equivalent (Gg) 2004</th>
<th>% of the participation in the inventory</th>
</tr>
</thead>
<tbody>
<tr>
<td>NATIONAL TOTAL</td>
<td>180,088.18</td>
<td>100.00%</td>
</tr>
<tr>
<td>1. ENERGY</td>
<td>65,971.11</td>
<td>36.65%</td>
</tr>
<tr>
<td>2. INDUSTRIAL PROCESSES</td>
<td>9,179.61</td>
<td>5.10%</td>
</tr>
<tr>
<td>3. AGRICULTURE</td>
<td>68,565.58</td>
<td>38.09%</td>
</tr>
<tr>
<td>4. LULUCF</td>
<td>26,014.53</td>
<td>14.45%</td>
</tr>
<tr>
<td>5. WASTE</td>
<td>10,277.35</td>
<td>5.71%</td>
</tr>
</tbody>
</table>

2010 – 2014 ECONOMY DRIVERS – ENGINES

- 1.4 MMBPE
- 124 MT/year coal
- Installed Capacity 16GW

1. Mines and Energy

- Total km constructed of dual carriageway (concessionaire allocated) 1,000Km
- Rail network in operation (concessionaire allocated) 2,000Km
- Km of waterway depth in Magdalena River: 800
- Km of tertiary road network in maintenance: 50,000

2. Infrastructure

- 1,000,000 new housing solutions
- 22 cities with mobility solutions in place

3. Housing and mobility in cities

- 36MT of products
- 506,000 Ha new commercial plantations (200,000 additional)
1. Policy context: Domestic mitigation objectives and role of market instrument(s)

### 1.3 Interest in market-based instrument(s)

- **161** projects in the Colombian CDM pipeline –
- **65 LoAs** approved by DNA – **5,368,660 tonCO2e/year**
- **28** Registered by CDM EB – **3,525,654 tonCO2e/year**
1. Policy context: Domestic mitigation objectives and role of market instrument(s)

1.3 Interest in market-based instrument(s)

- To continue our efforts in line with the global mitigation effort, in a growing market oriented economy (GDP average growth of 5.3% from 2004 – 2008, in 2010 4.6%)
- To access international carbon markets (new markets)
- To stimulate action in sectors with low participation in the CDM (transport, agriculture, mines). Those sectors are qualified as economy engines in the NDP
- To enable much greater emission reductions – subsectoral or subregional – with more efficiency and effectiveness
- To identify monitoring and reporting needs and real applicability in our emitting sectors
- To improve the government’s role in mitigation actions (not only as DNA) / aligning mitigation actions with development priorities
- To reduce the transaction cost burden related to the project–by–project approach of the CDM
- To reduce risks of time and lengthy procedures experienced under the CDM by creating capacity in the sectors to address all relevant issues in defining baselines, monitoring
- To participate in a market that can create incentives for countries with low-emitting economies
- To stimulate the transfer of clean technology and know how
2. Organization and consultations

2.1 PMR contact point

**Main**
**Ministry of Environment, Housing and Territorial Development**
Andrea Garcia Guerrero
Coordinator Climate Change Mitigation Group
Presidency has appointed all LCDS and market related efforts to the
**MAVDT – CCMG**

**Sectoral contact point**
**Ministry of Transport**
Felipe Targa
Viceminister of Transport

*Progress of the initiative will be also monitored within the agenda of the LCDS Strategic Committee*
2. Organization and consultations

2.2 Partners in the formulation and implementation of the country’s Market Readiness Proposal

- The Ministry of Environment – MAVDT began a stakeholder consultation process to inform and exchange ideas on the PMR.
- An expert consultant was hired to organize the stakeholder meetings and help identify key stakeholders.
- High level experts from key ministries (Commerce and industry, mines and energy, transport, finance, environment), NPD, planning agencies, and the private sector are participating.
- The World Bank visited Colombia and participated in stakeholder meetings.
- Subsequent meetings with relevant stakeholders from the Ministry of Transport took place with the support from the Viceminister of Transport.
- The PMR proposal presented today was developed based on the stakeholder consultation process and has been incorporated into the LCDS planning process.
3. Technical building blocks of market-readiness

3.1 Taking stock of relevant sectors (and/or regions) – GENERAL REMARKS

ENERGY /POWER GENERATION SECTOR

- Emissions share 2004: 1. Relative to total GHG emissions: 8.49%  2. Relative to energy: 23.16%
- Market oriented sector 13,289 MW installed, Exports through interconnections: 797GWh in 2010
- Participants:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Registered</th>
</tr>
</thead>
<tbody>
<tr>
<td>Generation</td>
<td>48</td>
</tr>
<tr>
<td>Comercialization</td>
<td>85</td>
</tr>
<tr>
<td>Grid operation</td>
<td>30</td>
</tr>
<tr>
<td>Transmission</td>
<td>11</td>
</tr>
<tr>
<td>Market operator</td>
<td>1</td>
</tr>
</tbody>
</table>

- Baseline - BAU: difficulties in setting a baseline - BAU. Different priorities and interests regarding coal use and hydro availability perspectives. By law the system is technology neutral and based on cost/effectiveness principle. Market favors lowest cost technology. Regulatory modifications need ad

- MRV: daily transactions and hourly generation by fuel registered. Robust activity data system.
3. Technical building blocks of market-readiness

3.1 Taking stock of relevant sectors (and/or regions) – GENERAL REMARKS

WASTE SECTOR

Share of emissions relative to total: 6% (10,800 GgCO₂/year) come from the waste management sector. Emissions include those associated with solid waste management and wastewater treatment.

CDM projects in Colombia: potential reductions of around 2.3 million tCO₂ eq/year.

MRV. Public service providers in the waste sector, report the more relevant information to the Unified Information System (SUI). Information on quantities treated and disposed in landfills, and volume of water treated in WWTP and technologies employed. Still difficulties in collecting information.
3. Technical building blocks of market-readiness

3.1 Taking stock of relevant sectors (and/or regions) – GENERAL REMARKS

INDUSTRY

- Industrial processes contribution relative to total emissions: 5.1% of total emissions, and emissions from fossil fuels combustion in industry (including oil) 9.78% of total emissions.

- Sectoral information: Activity data: DANE carrying out the annual manufacturing survey.

- Difficulties with MRV due to high participation of SMEs. More than 70% in number of industries. Industries with less than 10 employees not included in the National Annual Manufacturing survey.
3. Technical building blocks of market-readiness

3.1 Taking stock of relevant sectors (and/or regions) – GENERAL REMARKS

TRANSPORT

- **Share relative to total GHG emissions:**
  - 12% Share related to the energy module: 33%

- **Outstanding:** SITM (Integrated massive transportation systems, BRT system alike) and SITP (Integrated public transportation systems) in implementation

- **Measurement and reporting improved in cities with SITM (indicators). SISET – urban transport information and assessment system. However, still many gaps on information and reporting.**

Institutional framework for urban transport SITP:

- **Ministry of Transport**
  - Policy definition
  - Municipalities and management entities
  - Fiduciary
  - Capital management for Ministry of Finance and Municipalities

5 Integrated Massive Transportation Systems (SITM/BRT) in operation. 2 under construction
3. Technical building blocks of market-readiness

3.1 Taking stock of relevant sectors (and/or regions) – COLOMBIA LEADING IN CDM TRANSPORT SECTOR

The first Transport Approved Methodology and Registered Project Activity

**AM0031**: Baseline Methodology for Bus Rapid Transit Projects (July 2006)

**TransMilenio/Bogotá**: Fase II – IV. (Registered: December 2007)

CERs issued:

- 59,020 tCO2e (year 2006)
- 68,813 tCO2e (year 2008)
- 69,885 tCO2e (year 2007)
- 79,326 tCO2e (year 2009)

Small scale transport approved methodology

**AMS-III.U**: Cable Cars for Mass Rapid Transit (September 2008)

Cable Cars, Metro Medellín: Registered: April 2010

Emission reduction potential: **17,290 ton CO2e/year**

*We have experience in carbon markets and transport sector and would like to build on that experience.*
3. Technical building blocks of market-readiness

3.3 Taking stock - System for domestic measurement, reporting and verification (MRV)

**NATIONAL DEPARTMENT OF STATISTICS**

Census every 8-12 years
Yearly Industry Survey
Agriculture and Livestock National survey
GDP quarterly
Price indexes and unemployment monthly

**ENVIRONMENT, HYDROLOGY AND METEOROLOGY STUDIES INSTITUTE (IDEAM)**

Host the System for Environmental information
Produces GHG Inventories with activity data from DANE and inputs on fuels from UPME
Third National Communication in process and upgrading to 2006 guidelines.

*MRV improvement could enhance data collection systems for the sectors in general*
3. Technical building blocks of market-readiness

3.3 Taking stock  Institutional/legal components

- SECTORS DIFFER BUT USUALLY:

- Ministries
  - Research, planning and technical institutes
  - Market operators
  - Regulators
  - Information operators
  - Implementing agencies or territorial entities
  - Associations (private, public and mix)
3. Technical building blocks of market-readiness

Colombia identified 3 building blocks to prepare the country in market components: 1. Sectoral leaders, 2. Mitigation actions registry and 3. Urban transport market initiative

- **Barriers to identify and appoint sectoral leaders for NAMA/sectoral crediting**
  - Legal capacity and responsibilities within the sector
  - Interest in CC issues
  - Budgetary constraints
  - Regional or national scope of work
  - Human resources constraints, lack of technical capacity
  - Inadequate coverage or aggregation capacity

- **Barriers to promote scaled-up mitigation actions in the transport sector**
  - A variety of participants, not very organized
  - Institutional framework/implementation is decentralized – municipalities implement actions
  - MRV difficulties
  - Lack of incentives
4. Building blocks of market-readiness

1. Institutional/legal components

**Component 1. C1** Identify appropriate sectoral institutions as possible NAMA market leaders/coordinating entities in each sector - Energy, Industry, agriculture, transport and waste (coordinating with other Capacity Building initiatives within the LCDS)

1. **Legal capacity to coordinate**
2. **Human resources**
3. **Interest in CC issues**
4. **Scope of action: regional /national**
5. **Financial capacity and incentive to lead**
6. **Credibility (weight) within the sector**
4. Building block of market-readiness

2. Support national system for domestic measurement, reporting and verification (MRV)

**Component 2. C2. Registry of mitigation actions at national level (NAMAs, market initiatives and linking with LCDS).**

Support to the MAVDT in setting-up a registry* of mitigation actions aiming to:

1. Keep records of all mitigation initiatives and sources of financing
2. Avoid double counting in the national system
3. Inform the LCDS and the national communication
4. Ensure international transparency

*includes technical and procedural /regulatory areas
4. Building block of market-readiness

Component 3. C3. Specific initiative for the transport sector in urban areas

**Objective:** To establish a carbon trade system between the transport sector in major cities to promote environmental sustainable urban transport, enhancing GHG emission reductions/avoidance and promoting social, economic and environmental co-benefits.

**Scope:** Initially, the program will include the different modes of transport, public and private, in cities and its metropolitan areas with more than 600,000 inhabitants, all of which have already planned to implement a BRT system. Being part of the program is on voluntary basis for eligible cities. There would be set a emission cap per city, according to its population density. Emissions from transportation within the cities would be monitored annually versus a baseline. Those cities that exceed its quota would need to buy from those cities that have not surpassed it, or could buy units from the international carbon markets. The cities with emissions below the cap, could sell their units to another city or in other markets.
6. Organization of work and estimated timeline

6.1 Overview of organization of work/tasks

PREPARATION PHASE MARKET READINESS PROPOSAL

C1. Identify relevant institutions in consultation with sectors

C2. Identify and evaluate existing mitigation projects’ registries and procedures

C3.1 Elaborate technical, legal and financial pre-feasibility study to establish carbon trade system between cities to promote environmental sustainable urban transport. This study should identify the current status of the information platform available, political willingness to participate from local authorities and institutional gaps for the implementation of the program.

C3.2 Identify possible emission reductions portfolios: A package of measures and energy efficiency programs for different transport modes, technologies and the fuel alternatives; to avoid or reduce emissions and unnecessary travel; to reduce motor transport use and to improve social behavior. Those measures would be developed with PMR support by the Ministry of Transport and would be offered to cities to select the most suitable for them in order to achieve their emission goal.
6. Organization of work and estimated timeline

6.2 Overview of estimated timeline for formulation of Market Readiness Proposal

<table>
<thead>
<tr>
<th>COMPONENT 1</th>
<th>PREPARATION PHASE</th>
<th>IMPLEMENTATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEP - 2011</td>
<td>JAN 2012</td>
<td></td>
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<table>
<thead>
<tr>
<th>COMPONENT 2</th>
<th>PREPARATION PHASE</th>
<th>IMPLEMENTATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEP - 2011</td>
<td>JAN 2012</td>
<td>FEB - JULY 2012</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>COMPONENT 3,1</th>
<th>PREPARATION PHASE</th>
<th>IMPLEMENTATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUG 2011</td>
<td>MAR 2012</td>
<td>MAY 2012 - DEC 2014</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>COMPONENT 3,2</th>
<th>PREPARATION PHASE</th>
<th>IMPLEMENTATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUG 2011</td>
<td>MAR 2012</td>
<td>MAY 2012 - DEC 2014</td>
</tr>
</tbody>
</table>
5. Other key relevant initiatives. Low Carbon Development Strategy main planned outputs*

<table>
<thead>
<tr>
<th>OUTPUT</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>OUTPUT 1</td>
<td>Development of Business as Usual scenarios and abatement cost curves by economic sector</td>
</tr>
<tr>
<td>OUTPUT 2</td>
<td>Capacity Building ECDBC</td>
</tr>
<tr>
<td>OUTPUT 3</td>
<td>MRV (Measurement, Report and Verification)</td>
</tr>
<tr>
<td>OUTPUT 4</td>
<td>Analysis and prioritization of mitigation actions by sector</td>
</tr>
<tr>
<td>OUTPUT 5</td>
<td>Formulation and implementation of policies, incentives, regulation and prioritization of cooperation and national investment</td>
</tr>
<tr>
<td>OUTPUT 6</td>
<td>Communication and socialization strategy</td>
</tr>
</tbody>
</table>

* Detailed information on main components of the outputs and current or potential donors to be provided during the meeting in hard copies.
During the consultation process other initiatives were identified:

1. **Energy efficiency and renewable energy agency**: UNDP is supporting the analysis/feasibility studies. This will inform C1 of PMR proposal.

2. **International Electricity interconnections crediting from RE based system**: IADB supporting the identification of possible ways to quantify emission reductions from international interconnections (Colombia to Central America and South America) and provide advise on possible CO2 market opportunities from electricity exports.

3. **Energy efficiency certificates market**: initiative pending on the institutional results from (1)

4. **Electricity regulatory/market modifications for RE participation in generation**: further policy consultations needed.

5. **Waste and urban city planning**: suggestions on feasibility to tackle various items in a city approach (waste, housing and transport)

6. **Vehicles scrappage scheme** (Fund/subsidy)
8. Conclusions – Summary of market readiness priority areas for PMR support

- **Main stakeholders supported the PMR initiative**

- **CC issue traditionally led by Ministry of Environment – Capacity building needed in other institutions. Identification of sectoral leaders for market proposals is a priority**

- **Transport sector the second highest emitter activity and one of the economy engines for the next 4 years. The MoT is looking for options to promote sustainable transport solutions.**

- **Registry to support the record of mitigation actions**
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