Overview of World Bank activities: modeling & assessment of climate policy (research, technical assistance and knowledge management)

Expert Meeting on Modeling of Carbon Pricing Instruments

April 24, 2013
Proposed World Bank Approach to support country needs on Modeling of Carbon Pricing Instruments

- Collaboration between units/programs of the World Bank to leverage expertise in modeling and assessment of climate policies and maximize synergies:

  Platform for collective information and experience sharing on carbon pricing instruments
  Partnership for Market Readiness (PMR)

  **Capacity building & Technical Assistance**
  - Carbon Finance Unit (CFU)
  - Climate Policy and Finance Department (CPF)
  - Energy Strategy Management Assistance Program (ESMAP)
  - Poverty Reduction and Management Network (PREM)

  **Research, analysis & tool development**
  - CFU
  - CPF
  - Development Economics Vice Presidency (DEC)
  - ESMAP
  - PREM

  **Training/learning**
  - ESMAP
  - World Bank Institute (WBI)

Regional departments

Expert Meeting
Washington, DC.
April 24-25, 2013
## Partnership for Market Readiness (PMR): a partnership of major economies and climate leaders to pursue pricing carbon and a globally networked carbon market

<table>
<thead>
<tr>
<th>Implementing Country Participants</th>
<th>Contributing Country Participants (total of US$115 million mobilized)</th>
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<tbody>
<tr>
<td>Brazil</td>
<td>Indonesia</td>
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<tr>
<td>Chile</td>
<td>Jordan</td>
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<td>China</td>
<td>Mexico</td>
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<td>Colombia</td>
<td>Morocco</td>
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<td>Costa Rica</td>
<td>Peru</td>
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<td>India</td>
<td>South Africa</td>
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</tbody>
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- **PMR Observer countries:** South Korea, New Zealand, Singapore, Italy and Spain
- **PMR supports countries to:**
  - Assess and support decision making and design (incl. through modeling) and build market readiness “infrastructure” (e.g. MRV and policy frameworks) essential for implementing carbon pricing schemes and carbon market
  - Design and implement a domestic emission trading scheme, carbon tax, and sector wide crediting mechanism for mitigation, and energy efficiency trading scheme.
Carbon Finance Unit

◆ Pioneered facilities bridging innovative public private partnerships & innovated GHG methodologies and approaches

History

◆ Prototype Carbon Fund: world’s 1st carbon fund established in 2000. Since then, 13 additional carbon funds and facilities have been developed to promote GHG mitigation in developing countries.

◆ Partnered with >90 companies & governments in funds and facilities

Overview of Activities

◆ >$2.9bn committed for carbon purchase; Additional >$0.4bn committed for technical assistance facilities

◆ 160 carbon reduction projects in >50 countries with over 177 million tons of emission reductions delivered to investors to-date

Carbon Pricing Methodology & Policy

◆ Development of GHG accounting methodologies (50+ CDM methodologies so far), REDD+ methodological framework;

◆ Policy MRV: methodologies and modeling tools for ex-ante and ex-post GHG impact assessment of economy-wide/cross-sectoral policies (initially focusing on fossil fuel subsidies removal and carbon pricing)
Development Economics Vice Presidency (DEC)

- DEC’s overall purpose:
  - to accelerate poverty reduction and contribute to progress toward achieving MDGs by providing countries with the knowledge it creates, to enable them to make more informed policy choices.

- Technical work related to carbon pricing instruments:
  - mathematical modeling;
  - computable general equilibrium other economy-wide modeling; and
  - empirical/econometric analysis

- List of publications in Annex
Energy Sector Management Assistance Program (ESMAP)

ESMAP low carbon development planning tools:

**META** | Help countries choose electricity supply options

**EFFECT** | Build development scenarios and forecast their impact on GHG emissions

**MACTool** | Identify the marginal abatement costs associated with each scenario

**TRACE** | Assess energy efficiency opportunities at the city-level

Low Carbon Development Country Studies:
World Bank Institute (WBI)

- Supports WB’s operational work & its country clients by new dynamic approaches to capacity development

Program for Low Emissions Development (LED)

◆ Strengthen the capacity of policymakers to identify, prioritize and utilize diverse types of policy instruments to support LED in their countries

◆ Build knowledge on how to strengthen the readiness for Climate Finance and enable policymakers to use climate finance in a transformative way

◆ Working with country teams to develop tools for LED and NAMAs in a ‘learning-by-doing’ approach
World Bank Institute (WBI): E-Learning Platform

Policy Instruments for Low Emissions Development:
*From Strategy Design to Implementation*

Emission Trading Schemes:
*Using Markets to Promote Low Emission Development*

Multimedia Case-Study Series
*(drawn from PMR Experience)*

‘How to-guides’ for NAMAs
The Platform for Climate-Smart Planning

Access tools and data for climate-smart planning, with guidance on their use

Core Principles
- Collaborative
- Crowd-sourcing
- Quality control
- Neutrality

User Benefits
- One-stop platform
- Community of users
- Technical support
"Lack of action on climate change threatens to make the world our children inherit a completely different world than we are living in today. Climate change is one of the single biggest challenges facing development, and we need to assume the moral responsibility to take action on behalf of future generations, especially the poorest. “World Bank Group President Jim Yong Kim
Development Economics Vice Presidency (DEC)

- List of technical work related to carbon pricing instruments:
  - Analysis of various CDM challenges and other offset mechanisms (endogenous baselines, additionality, and leakage) -- Jon Strand and Govinda Timilsina (DECEE)
  - Various empirical analyses of the CDM -- Donald Larson (DECAR)
  - Optimal carbon pricing regimes for international aviation and shipping -- Jon Strand (DECEE; jointly with IMF)
  - Taxes versus cap-and-trade as optimal climate policy instruments with strategic energy exporters and importers (static and dynamic analysis) -- Jon Strand (DECEE)
  - Emissions implications of global convergence of emissions intensities -- Govinda Timilsina (DECEE)
  - Emissions implications of global convergence of emissions intensities -- Govinda Timilsina (DECEE)
  - Effects of carbon taxes on biofuels production -- Govinda Timilsina (DECEE)
  - Carbon pricing and utilization of renewable electricity resources – Govinda Timilsina (DECEE)
  - Explanatory factors behind energy subsidies -- Jon Strand (DECEE)
Thank you.