Organizing Framework for Scoping of PMR activities

Country: Morocco
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Date of submission: March 14, 2012
Outline of the presentation

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   2. Overview of country’s GHG emissions
   3. Interest in market-based instrument(s)

2. Organization and consultations
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   3. Partners in the formulation and implementation of the country’s Market Readiness Proposal
   4. Organizational set up for the preparation of the Market Readiness Proposal

3. Technical building blocks of Market Readiness
   1. Taking stock of relevant sectors
   2. Preliminary assessment of readiness of sectors

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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

“*To address the causes of climate change, Morocco is seeking to decouple its economic growth and its greenhouse gas emissions. Morocco is convinced that implementing a climate change mitigation policy through the reduction of greenhouse gas emissions will contribute to its global development, including through the introduction of clean technologies*”

Source: National Plan against Climate Change.

- Morocco signed the United Nations Framework Convention on Climate Change in 1992 and ratified it in 1995. The country also hosted the seventh Conference of the Parties (COP 7) in 2001 in Marrakesh, at which the Kyoto Protocol became operational. Morocco ratified the Kyoto Protocol in 2002.

- Morocco has prepared its first and second national communications for the UNFCCC. The country is currently organizing its consultation framework to prepare its third national communication.

- In addition to its national charter on environment and sustainable development, Morocco is currently developing its national strategy on climate change.

- Morocco has established an ambitious strategy on energy for the promotion of energy efficiency and a large-scale development of renewable energy sources. The mid to long-term objectives of this strategy are:
  - To reduce energy consumption by 12% by 2020 and 15% by 2030.
  - To bring the capacity level of renewable energies to 42% (14% solar, 14% wind, and 14% hydro) of the total power generation capacity by 2020.

→ Morocco is seeking to build on its CDM experience and explore how to develop its market readiness and further use market mechanisms (in particular a new scaled-up GHG crediting mechanism) to support its strategy on climate change and support the introduction of clean technologies.
1.2 Overview of the country’s GHG emissions

- With an average of 2.8 tCO2/year/capita, Morocco has a low level of GHG emissions.
- Until 2010, Morocco’s GHG emissions increased by an average rate of 3% per year. They are projected to increase faster in the future, largely driven by electricity demand that increases at an annual rate of 7%.
- Generating over half of the total emissions, the energy sector is the main source of GHG emissions.
1.2 Overview of the country’s GHG emissions: Mitigation potential

- Overall, based on the scenario analysis of the Second National Communication, the GHG emissions mitigation potential is estimated at 57.6 million tCO\(_2\) per year by 2030, largely coming from electricity generation (2/3) sector, equivalent to the level of emissions in Morocco in 1998.

**Distribution of the mitigation potential in Morocco**

Total 57.6 million tons CO\(_2\)/year

<table>
<thead>
<tr>
<th>Sector</th>
<th>Mitigation Potential</th>
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<tbody>
<tr>
<td>Transport</td>
<td>14%</td>
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<tr>
<td>Buildings</td>
<td>7%</td>
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<tr>
<td>Industry</td>
<td>3%</td>
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<tr>
<td>Energy Generation</td>
<td>4%</td>
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<tr>
<td>Waste</td>
<td>4%</td>
</tr>
<tr>
<td>Agriculture</td>
<td>1%</td>
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<tr>
<td>Forests</td>
<td>67%</td>
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</tbody>
</table>

**GHG emissions evolution scenarios**

<table>
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<tr>
<th>Year</th>
<th>BAU Scenario</th>
<th>Mitigation Scenario</th>
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</thead>
<tbody>
<tr>
<td>2000</td>
<td>65.3</td>
<td>194.8 (-30%)</td>
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<tr>
<td>2005</td>
<td>76.7</td>
<td>134.5</td>
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<tr>
<td>2010</td>
<td>89.6</td>
<td>113</td>
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<tr>
<td>2015</td>
<td>89.9</td>
<td>117.9</td>
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<tr>
<td>2020</td>
<td>96.8</td>
<td>160.8</td>
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<tr>
<td>2025</td>
<td>117.9</td>
<td>137.2</td>
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<tr>
<td>2030</td>
<td>137.2</td>
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</table>
1.3 Interest in carbon market-based instrument(s)

Morocco committed itself to the path to a climate-friendly development, based on a range of different policies and measures, including carbon market instruments.

- CDM experience (project/PoA approach);
- Development of NAMAs along national strategies and programs, favorable context for the preparation for the carbon market;
- A natural choice for evolution of a national carbon market instrument is to support the NAMAs, including through the development of sectoral approaches, in order to value carbon assets resulting from national policies, plans, and programs.
2. Organization and Consultations
2.1 PMR contact point

- The Ministry of General Affairs and Governance (MAGG) is the PMR focal point. It reports directly to the Head of Government and has horizontal responsibilities, which were recently extended to include governance. MAGG’s main role is to ensure inter ministerial coordination and consistency of the Government’s sectoral strategies, and to monitor the implementation of policies.

- As PMR focal point, MAGG is responsible for the coordination and monitoring of relationships between stakeholders.

- The Ministry of Economy and Finance (MEF) will ensure the consistency of the economic aspects of the Moroccan Market Readiness Proposal and monitor the allocation of funding and management procedures, particularly the grant supporting the implementation of the PMR.

- Morocco has requested the support of the World Bank to manage and execute the PMR preparation grant for the elaboration of Morocco’s Market Readiness Proposal, to ensure a quick start and reduce lead times for the implementation of pilot activities under the PMR.
## 2.2 Consultation Process

<table>
<thead>
<tr>
<th>Deliverables</th>
<th>Development process of the organizational framework</th>
<th>Consultation and Validation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Final OF Report</td>
<td>Drafting and Validation of the Final Organizing Framework Report</td>
<td>Workshop #2</td>
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<tr>
<td>Draft OF Report</td>
<td>Preparation of the draft Organizing Framework Report</td>
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<tr>
<td>Note on the Consultations Process</td>
<td>Capacity building for stakeholders on carbon market issues</td>
<td>Interviews with stakeholders</td>
</tr>
<tr>
<td>Note on the Scoping of Activities</td>
<td>Diagnosis and analysis of different CC policies, plans and programs (PPP)</td>
<td>Workshop #1</td>
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<tr>
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<td>Diagnosis of experiences and identification of constraints to the implementation of CC PPP</td>
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<td></td>
<td>Identification of stakeholders and target areas</td>
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<td></td>
<td>Determination of an enabling environment for the development of a market adapted to national circumstances</td>
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<tr>
<td></td>
<td>Carbon market mechanism type</td>
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<td></td>
<td>Framework for implementation</td>
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</table>
### 2.3 Partners in the formulation of Morocco’s Market Readiness Organizational Framework

| Ministerial Departments | • Deputy Ministry in charge of General Affairs and Governance;  
| | • Ministry of Economy and Finance;  
| | • Department of Energy;  
| | • Department of Environment;  
| | • Ministry of Equipment and Transport;  
| | • Ministry of the Interior;  
| | • Ministry of Industry, Commerce, and New Technologies;  
| | • Ministry of Habitat, Urban Planning, and Urban Policy.  
| Offices/Agencies | • National Electricity Agency (ONE);  
| | • Agency for the Development of Renewable Energies and Energy Efficiency;  
| | • National Phosphates Agency (OCP);  
| | • High Commissioner for Planning;  
| | • High Commissioner for Waters and Forests and against Desertification;  
| | • Agricultural Development Agency.  
| Public Financial Institutions | • Municipal Infrastructure Fund (FEC);  
| | • CDG-Capital.  
| Professional organisations | • Professional Association of Cement Producers  
| International Cooperation | • European Union
2.4 Organizational set up for the preparation of the Market Readiness Proposal

Partnership for Market Readiness
Proposed Implementation Arrangements for Morocco’s Market Readiness Proposal (MRP) Preparation Grant (US$ 315,000)

Morocco PMR Focal Points
- Ministry of General Affairs and Governance
- Ministry of Economy and Finance

PMR Steering Committee
- Ministry of General Affairs and Governance
- Ministry of Economy and Finance
- Department of Energy
- Department of Environment

MRP Preparation Unit

Execluting Agency
World Bank

Institutional Partners
ONE (National Electricity Agency)
ADEREE (Agency for the Development of Renewable Energies and Energy Efficiency)
OCP (National Phosphates Agency)

Institutional Partners
- Ministry of Equipment and Transport
- Ministry of Industry, Trade and New Technologies
- Ministry of Habitat, Urban Planning and Urban Policy

Private and Financial Partners
FEC
CDG-Capital
APC
3. Technical building blocks of market-readiness
Initial identification of potential sectors

◆ **Five potential sectors to be considered for the development of market instrument(s):**
  1. Electricity generation;
  2. Cement Production;
  3. Phosphate Extraction and transformation;
  4. Energy efficiency in public buildings;
  5. Transport.

◆ **Key criteria for the identification of potential sectors:**
  1. Readiness for market instrument(s)
  2. Interest of stakeholders
  3. GHG mitigation potential
  4. Adequacy with country’s Sustainable Development priorities

◆ **At this stage, the first three sectors (electricity generation, cement and phosphate) appear to be the most promising.**
3.1 Taking stock of relevant sectors: Electricity generation

- Annual growth rate of 7%-8%
- Significant mitigation potential 2/3 of the national potential
- Ambitious development strategy of R&E
- A NAMA associated to the national solar plan (2000 MW)
- A NAMA associated to the wind energy program (2000 MW)
- A national PoA under development

The electricity demand in Morocco is expected to double by 2020 and quadruple by 2030

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[Graph showing Evolution of the National Grid Emission Factor from 2000 to 2010]

[Graph showing Consommation en TWH from 2008 to 2030]
3.1 Taking stock of relevant sectors: Electricity generation

**Significant potential for renewable energy**
- Wind power potential estimated at about 25,000 MW
- Wind speeds between 9 and 11 m/s
- Over 3,000 h/year of sunshine or a sun irradiation of ~ 5 kWh/m2/day

**Highly-developed power transit infrastructure**
- Morocco – Spain 1400 MW in service
- Morocco – Spain: 700 MW under development
- Morocco - Algeria: 1200 MW in service

**World-class projects**

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**Moroccan Solar Plan**
- Objective (2020)
- Electrical production
- Investment
- Avoided CO₂ emissions / Year
- 2 000 MW
- 4500 GWH
- 9 billion $
- 3.2 million tons

**Moroccan Wind Program**
- 2 000 MW
- 6600 GWH
- 3.5 billion $
- 5.6 million tons
3.1 Taking stock of relevant sectors: Cement Production

- Five major international and national players (Lafarge, Holcim, Italcementi, Cimpor, and Atlas Cement) – 13 cement plants for a total production of 16 MT per year
- Important growth rate of 7% to 8% per year. High GHG emissions (energy and matter decarbonization, 11% of the national emissions) and world-standard energy performance
- One Professional Association (APC) covering four international players (11 cement plants)
- The sector emissions are evaluated according to the Cement Sustainable Initiative (CSI) of the World Business Council for Sustainable Development (WBCSD)
- Potential projects: cogeneration - use of Alternative Fuels and Materials (AFR)
3.1 Taking stock of relevant sectors: Phosphate extraction and processing

- Morocco has the largest reserves of phosphates in the world, with several centuries of exploitation
- The National Phosphates Agency (OCP) is a world champion with more than 90 years experience in mining and 45 years in industrial processing of acids and fertilizers
- An export turnover of more than US$4 billion representing 24% of the Morocco’s national export value
- OCP has established a carbon footprint system for its industrial and offsite activities
- The Carbon evaluation system is to be certified by end 2012
- OCP total emissions are around 3 million tCO₂/year for around 28 millions tons extracted raw phosphate per year (110 kg CO₂/ton of phosphate extracted)
- Major emissions reductions projects: Slurry transport pipeline (-1 million ton per year); several Heat Recovery Systems (HRS) on sulfuric acid processing units (-90 000 t CO₂/year)
### 3.2 Preliminary assessment of readiness of potential sectors

<table>
<thead>
<tr>
<th>Sector</th>
<th>Implemented Activities</th>
<th>Strengths</th>
<th>Challenges</th>
<th>Preliminary Assessment of Readiness</th>
</tr>
</thead>
</table>
| Electricity Generation | Various CDM Wind projects  
NAMA Solar - NAMA Wind  
PoA Wind | National RnE Strategy  
Technical and organizational simplicity  
High Potential | Need to address CDM projects in sector | High |
| Cement             | Various ER projects implemented  
CDM projects limited to wind farms | Champion (industry association)  
Good MRV system  
High ER potential | Limited motivation for a local carbon market due to low carbon prices and limited NMM visibility | Medium |
| Phosphate          | Carbon footprint evaluation  
Major ER projects | A world class sector champion  
Opportunity to establish a worldwide MRV reference | MRV system still to be established | Medium |
| EE in Buildings     | NAMA in preparation | National EE Strategy  
High ER Potential  
A centralized agency | Dispersed Sector  
Need to address CDM projects in sector  
Complexity of the baseline | Low |
| Transport           | NAMA in preparation | National Strategy with an objective of -30% ER in 2020 | Various actors  
Dispersed sector  
Complexity of the baseline  
Lack of data | Low |
4. Other key relevant initiatives

- The Kingdom of Morocco has recently developed a national plan of actions against climate change (PNRC), defining measures to reduce GHG emissions as well as adaptation measures to climate change. Morocco intends to implement such measures in the short to medium run;
- The potential of GHG emissions mitigation in Morocco was estimated at 57 million tCO2 by 2030 bringing down the BAU emissions from 195 Mt CO2 to 138 Mt CO2 for an estimated cost of US$ 30 billion;
- Morocco is receiving GIZ support to develop its climate change strategy;
- Morocco received the support of the World Bank (separate from the PMR) to develop a technical and organizational framework for the implementation of the information system in order to institutionalize the national GHG inventory. The technical and institutional arrangements are being defined to contribute to the design and implementation of this tool;
- Morocco receives the support of the EU and UNDP to implement a capacity-building project for a low-carbon development strategy.
- Morocco receives the support of GIZ, under the CDM/JI regional program, to implement capacity-building activities for the development of CDM projects, PoA, and NAMAs.
- Morocco has requested World Bank technical and financial assistance to support its climate change/green growth strategy through a budget support operation (DPL)
5. Organization of work and estimated timeline
5.1 Overview of organization of work/tasks envisioned for Preparation Phase to conduct the scoping of market readiness activities

- C1 – Preparation of MRP draft
- C2 – Validation of MRP

- B1 – Definition of institutional setup
- B2 – Selection of favorable sectors
- B3 – Identification of PMR activities
- B4 – Identification of capacity development needs

- A1 – Analysis of local mitigation context (policies, programs and actors);
- A2 – Assessment of country’s market readiness
- A3 – Study of Institutional and organizational setup
- A4 – Sectoral analysis of the potential PMR sectors

MRP validation workshop

Consultations
Key partners and actors
Interviews

MRP preparation workshop
### 5.2 Overview of estimated timeline for formulation of Market Readiness Proposal

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<td>Subcontractor hiring process</td>
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<td>MRP preparation Startup workshop</td>
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<td>Consulations process</td>
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<tr>
<td>Sectors studies</td>
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<td>MRP preparation</td>
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<tr>
<td>MRP validation Workshop</td>
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<td>MRP submission</td>
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### 6. Other relevant information: Morocco’s PMR SWOT Analysis

#### Strengths
- Existence of a SD vision backed by Policies, Plans and Programs
- National plan to fight against global warming
- Experience with carbon finance (CDM, PoA) and institutional (DNA, CDG, FEC)
- Existence of a NAMA portfolio backed by national strategic policies
- Electrical interconnection with Europe and electricity exchanges with Spain

#### Opportunities
- Geopolitical position of Morocco and leadership role in the development of Euro-Mediterranean Partnership
- Opportunity offered by the PMR as a tool to support development of carbon market instruments
- Proximity, synergy and privileged partnership with the European Union (Association Agreement in 2000, advanced status in 2008, Protocol for participation in EU programs in 2012)

#### Weaknesses
- Low carbon emission levels to ensure required market liquidity
- Limited knowledge at the institutional level of the carbon market mechanism
- Limited ability to analyze the opportunities offered by the New Market Mechanisms
- Inadequate institutional coordination with regard to implementation of mitigation programs and policies (sectoral approach)

#### Risks
- Low motivation of operators due to the financial crisis and a depressed market
- Lack of visibility in the carbon market
- Lack of procedures / operational modalities for implementation of new market mechanisms
- Need for strong institutional involvement and complexity of operational implementation
7. Conclusions – Summary of market readiness priority areas for PMR support
The proposed approach is pragmatic, adapted to the current local context and combining flexibility and simplicity.

It entails a gradual integration of the main pillars of a carbon market based on crediting mechanisms (NAMA or Sector for instance).
7.1 Long-term objective of market mechanisms in Morocco

- **2013**: Start of the PMR preparation phase
- **2016**: Establishment of a pilot carbon market instrument based on NAMAs for crediting
- **2018**: Establishment of a domestic carbon market instrument
- **2020**: Linkage with the international carbon market (incl. EU ETS?)
Phase 1: 2013-2016

- Assessment of programs and mitigation actions in Morocco and definition of sectoral baselines;
- Support to the selection of NAMAs/favorable sectors for the establishment of a market credited by 2016 and the technical, institutional, and legal design;
- Support to the design and implementation of a national registry of emissions and mitigation actions;
- Support to the implementation of a national MRV system to back up the inventory of GHG emissions and the MRV systems for the selected NAMAs;
- Support to a capacity-building program for relevant actors on market mechanisms instruments.
Phases 2 and 3

Phase 2: 2016-2018

◆ Institutional organization for the establishment of a pilot carbon market instrument;
◆ Carbon market instrument: creation and testing of institutional, technical and regulatory instruments

Phase 3: 2018-2020

◆ Integration with the international market (potential inclusion of sectors under the EU ETS)
Thank you for your attention