PERU
Organizing Framework for Scoping of PMR activities

Country: Peru
Responsible official: David Dall´Orto
Date of submission: March 11, 2013
1. Policy context: Domestic mitigation objectives and emissions profile
   1. Policy context and objectives
   2. Overview of country’s GHG emissions

2. Technical building blocks of Market Readiness and role of a GHG crediting instrument
   1. Taking stock of relevant sectors
   2. Core readiness components
   3. Interest in market-based instruments

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

4. Other key relevant initiatives

5. Organization of work and estimated timeline
   1. Overview of organization of work/tasks envisioned to prepare the Market Readiness Proposal
   2. Overview of estimated timeline for formulation of Market Readiness Proposal

6. Other relevant information

7. Conclusions – Summary of priority areas for PMR support
1. Policy context:

Domestic mitigation objectives and emissions profile
1. 1 Policy context and objectives

Policy and regulatory context for climate mitigation in Peru:
National Framework on Climate Change

1993
• National Commission for Climate Change

2002
• Peru ratifies Kyoto Protocol

2003
• First National Strategy for Climate Change (S.D. Nº 086-2003-PCM)

2005
• General Law for the Environment (Law Nº 28611)

2008
• Establishment of the Ministry for the Environment (Legislative Decree Nº 1013)

2009
• National Policy for the Environment (S.D. Nº 012-2009-MINAM)

2010
• Action Plan on Climate Change Adaptation and Mitigation (RM Nº 238-2010-MINAM)

2013
• Update of National Strategy for Climate Change
1.1 Policy context and objectives (cont.)

**Net emissions declining to zero in LULUCF**
Baseline: annual deforestation 150,000 ha (1990-2000) – 53 MT CO2eq; Conservation of 54 million Ha of primary forests

**Shift of the national energy consumption matrix to 40% of non-conventional renewable energy and hydro-energy**
Mix of efficiency and renewable, including hydropower; biomass; wind; solar; about 28% reduction as compared to 2000; potential reduction 7 MT CO2eq

**Capture and use of methane from proper disposal of municipal solid waste**
Country-wide program; priority in landfills for medium and large cities; potential reduction of 7 MT CO2eq.

Peruvian pledges under Copenhagen Accord
1.1 Policy context and objectives (cont.)

- **Government bodies and stakeholders** implement actions to **enhance adaptation capacity of the population, productive activities and services** specially in more vulnerable areas in the country.

- **Sectors and governments at national, regional and local levels** conserve carbon stocks and substantially improve the management of GHG emissions.

- **Governments at national, regional and local levels** manage water resources in an integrated way, with due consideration of the impacts of climate change.

  - **Priority actions stated in the National Strategy for Climate Change** have enough technical and financial resources available for its implementation, that are managed effectively, with accountability and social equity.

- **Government entities** respond to the challenges of climate change with strengthened capacities and organized institutional action at the national, regional and local levels.

- The population acquires awareness about climate change and develops capacities to respond to its effects.

- **Government authorities and stakeholders at national, regional and local levels** have **scientific and technical knowledge for an opportune and effective response** to events associated to climate change.
About 15% of GDP and one third of the labor force are associated to economic activities which are sensitive to the effects of climate change: agriculture, fisheries, mining, energy and water.

The expected overall costs of not acting now goes from 5% to 20% of total GDP (damages and impacts).

The investment required to avoid a loss of 5% of GDP is about 1% of GDP.
1.2 Overview of country’s GHG emissions (cont.)

GHG emissions in Peru and evolution of GDP: Towards a low carbon economy

- In Peru, national GHG emissions increased by 21% between 1994 and 2000 and a further 22% between 2000 and 2009.

<table>
<thead>
<tr>
<th>Year</th>
<th>GgCO2e</th>
<th>PBI (millones de $)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1994</td>
<td>98,816</td>
<td>44,910</td>
</tr>
<tr>
<td>2000</td>
<td>120,023</td>
<td>53,290</td>
</tr>
<tr>
<td>2009</td>
<td>146,783</td>
<td>126,923</td>
</tr>
</tbody>
</table>

- Peru is a marginal emitter at global level (0.4%), but shows a high carbon intensity of the economy, and strong correlation of economic growth and GHG emissions.
1.2 Overview of country’s GHG emissions (cont.)

National GHG Emissions Inventory (2009)

Total GHG Emissions
Total: 146,311 Gg CO$_2$eq

- Energy: 38%
- Industrial processes: 6%
- Agriculture: 27%
- Solid waste: 4%
- LULUCF: 25%

Source: MINAM, Second National Communication to the UNFCCC.
Note: An update of the inventory is currently in progress.
2. Technical building blocks of market readiness
2.1 Taking stock of relevant sectors

- Peru is currently in the process of identifying GHG mitigation programs/actions in key sectors, that may integrate a crediting instrument to generate tradable carbon offsets.

- Preliminary criteria for the consideration of these sectors/sector programs include:
  - Major source of GHG emissions
  - Existence of regulatory framework
  - Involvement of key stakeholders
  - Sustainable development co-benefits
  - Major potential for reduction
  - Availability of funding sources
  - Alignment with national priorities
  - Contribution to international commitments
  - Responsiveness to market signals
  - Link with existing & future NAMA development

- The final selection of key sectors will be made through a detailed analysis during the PMR Preparation Phase.
2.1 Taking stock of relevant sectors

- Pre-identified sectors/sector programs, where mitigation could be encouraged via a market-based instrument in Peru are:

  1. ENERGY SUPPLY (Bioenergy & Generation and Use of Energy)
  2. HOUSING (Sustainable Housing & Sustainable Buildings)
  3. INDUSTRY (Construction Materials: Cement, Brick, Steel)
  4. WASTE (Solid Waste Management)
  5. TRANSPORT (Low Carbon Transport in Lima and Callao)

- Rationale for the consideration of each sector is provided in the following slides.
Potential NAMAs that may seek international support and/or integrate a carbon crediting instrument.

<table>
<thead>
<tr>
<th>Sector</th>
<th>Sub sector</th>
<th>Main objective(s)</th>
<th>Support for NAMA development</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENERGY</td>
<td>Bioenergy</td>
<td>Promote good practices in the development and utilization of renewable (biomass) resources, which also promotes diversification of the energy matrix</td>
<td>ICI - BMU</td>
</tr>
<tr>
<td></td>
<td>Generation and use of energy</td>
<td>Diversify the energy matrix: generation of conventional and no conventional renewable energy, energy efficiency in the industrial, commercial and residential sectors and rural electrification.</td>
<td>GEF – UNDP</td>
</tr>
<tr>
<td>HOUSING</td>
<td>Sustainable Housing</td>
<td>Promote the introduction and application of energy efficiency and renewable standards in new residential houses in the National Building Regulation.</td>
<td>EU – CAF</td>
</tr>
<tr>
<td></td>
<td>Sustainable Buildings</td>
<td>Develop a roadmap for the promotion of a sustainable buildings market. Implement demonstration projects (construction of low carbon homes). And establish a monitoring system of energy savings and GHG emission reductions.</td>
<td>Environment Canada</td>
</tr>
<tr>
<td>INDUSTRY</td>
<td>Construction Materials: Brick, Cement, Steel</td>
<td>Promote energy efficiency and best practices in the construction sector. LEDS for the construction industry which includes NAMAs and MRV systems</td>
<td>UNDP</td>
</tr>
<tr>
<td>WASTE</td>
<td>Solid Waste Management</td>
<td>Design the legal and technical tools which are necessary to capture, destroy or reuse methane for energy. To achieve this a sectoral GHG inventory will be develop and a baseline will be establish.</td>
<td>NEFCO</td>
</tr>
<tr>
<td>TRANSPORT</td>
<td>Low Carbon Transport in Lima and Callao</td>
<td>Promote urban mobility through integrated mobility systems. Energy efficiency labeling on light cars. And land use planning.</td>
<td>British Embassy - Centre for Low Carbon Futures</td>
</tr>
</tbody>
</table>
2. 2 Core Readiness components

Peru is seeking to ensure that the development of NAMAs (supported/credited) is fully consistent with and supports key national processes related to, inter alia:

- GHG information management;
- Measurement, reporting & verification (MRV) of development & climate impacts;
- Effective and efficient use of national public budget.

| INFORMAGEI                                                                 | • National system established to enable and facilitate the periodic production of reliable National GHG Inventories;  
|                                                                          | • Lays the foundation for a National GHG data management system. |
| National Development Priorities                                           | • Established by (i) Government Plan 2011-16; (ii) Bicentennial Plan Peru 2021; and (iii) Multiannual Macroeconomic Framework.  
|                                                                          | • Key strategic areas count with a national budget program/line. |
| Results-based Budgeting (RBB)                                            | • Governance strategy for resource allocation, implemented by MEF  
|                                                                          | • Requires sector budget programs with, i.a., results framework and M&E procedures and tools. |
2. 2 Core Readiness components

- National Priorities (sector) budget programs with domestic public funding
- INFORMAGEI National GHG data management system
- Results-based Budgeting (RBB) MEF’s monitoring & evaluation framework for ‘sector budget programs’

Development & implementation of NAMAs with crediting instrument

- GHG emissions reporting, crediting baselines; etc.
- MRV of climate impact
- MRV of development
- Domestic public investment; int’l support & carbon revenues

- This relationship will be analyzed under the PMR. Frameworks and tools will be assessed and developed. We propose the following steps...
2. 2 Core Readiness components

- The tasks in Peru’s preparation phase will be approached in 3 main steps, each with different objectives:

**Step I:**
Identification and selection of NAMAs most suitable for a market instrument

1. Systematize the information about NAMAs (including crediting potential), at national as well as international level
2. Analysis of compatibility / complementarity of other national initiatives with the NAMAs identified in the previous step
3. Selection of NAMA(s) which will be prioritized to receive support from PMR and definition of areas of work. The number of NAMAs needs to be defined.

**Step II:**
Development of ToRs to establish the methodologies of interventions in the selected fields

**Step III:**
Finalization and presentation of MRP
2. 2 Core Readiness components

**Step 1**

- All seven proposed NAMAs count with some initial budget which has been already allocated (but not necessarily spent) to different readiness components.
- Undertake a comprehensive mapping of the various market readiness needs and capacity gaps in the different NAMAs would be one of the first actions under the PMR preparatory phase.
- Develop a framework to assess the various NAMA proposals to help Peru determine which of the proposed NAMAs might develop a crediting component.
2. 2 Core Readiness components

- The information provided by the mapping and framework should help us to systematize the relevant information and to identify data and capacity gaps for the purposes of budget allocation and carbon crediting.
- The following example shows a sub set of the criteria to be consider in the analysis.

<table>
<thead>
<tr>
<th>NAMA</th>
<th>GHG data management</th>
<th>MRV System</th>
<th>Registry Tool</th>
<th>Institutional Framework</th>
<th>Regulatory Framework</th>
<th>Crediting component</th>
</tr>
</thead>
<tbody>
<tr>
<td>NAMA 1</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>NAMA 2</td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>...</td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>NAMA Y</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>
2. 2 Core Readiness components

Step II
After an initial analysis of the readiness components of proposed NAMAs, Peru needs to evaluate how readiness work for NAMA crediting (under PMR) and other relevant national processes would complement and support each other.

INFORMAGEI
- Assessment of GHG data gaps and needs; identification of GHG quantification methodologies/protocols;
- Plans for (new) GHG data collection / reporting systems, with relevant disaggregation level.

National Development Priorities
- Coherency between sector budget programs and proposed sector NAMAs;
- Secured public funding for NAMAs, as a critical success factor to leverage international support and access carbon markets.

Results-based Budgeting (RBB)
- Consistent MRV framework for domestic and international purposes
- Metrics for GHG mitigation impact and development results; M&E procedures and tools.
2.2 Core Readiness components

- A more complete matrix would then be created taking into account those National Initiatives which may have significant impact on the implementation of NAMAs.

<table>
<thead>
<tr>
<th>NAMA</th>
<th>GHG data management</th>
<th>MRV</th>
<th>Registry Tool</th>
<th>Inst. Frame</th>
<th>Reg. Frame</th>
<th>Crediting component</th>
<th>Informa GEI</th>
<th>RBB</th>
<th>National Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>NAMA 1</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>NAMA 2</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>...</td>
<td></td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>NAMA Y</td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

- With this information we will be able to decide which subset of NAMAs should be supported by the PMR funding.
- It is noteworthy that the seven NAMAs under consideration are in an initial stage of design which means that, if needed, the PMR could also contribute to modify the original design in order to develop/strengthen specific readiness components.
## 2. 2 Core Readiness components

### Step III

- The PMR preparation phase will result in a MRP that:
  1. Identifies data gaps and capacity needs to be addressed, avoiding duplication of efforts with other support programs in the same sector activities;
  2. Expands and deepens critical work underway in core readiness components;
  3. Determines feasibility of crediting components for selected NAMAs;
  4. Establishes how GHG metrics/impact indicators will be included in our RBB system;
  5. Incorporates capacity-building as a cross-cutting activity in all readiness components.

- As a result a final matrix will be created as a framework for mapping initiatives, including PMR-supported activities to enable government and its partners to ensure coordination.

<table>
<thead>
<tr>
<th>NAMA</th>
<th>GHG data management</th>
<th>MRV</th>
<th>Registry Tool</th>
<th>Inst. Frame</th>
<th>Reg. Frame</th>
<th>Crediting component</th>
<th>Informa GEI</th>
<th>RBB</th>
<th>National Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>NAMA 1</td>
<td>X</td>
<td>X</td>
<td>X + PMR</td>
<td>PMR</td>
<td>PMR</td>
<td>X + PMR</td>
<td>X</td>
<td>PMR</td>
<td>X</td>
</tr>
<tr>
<td>NAMA 2</td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>…</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>NAMA Y</td>
<td>PMR</td>
<td>PMR</td>
<td>PMR</td>
<td>X</td>
<td>X</td>
<td>X + PMR</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>
2. 2 Core Readiness components

- **PMR support to Peru in this phase further addresses:**

  **Private sector**
  - Capacity needs for GHG emissions inventories/reporting and MRV, as relevant;
  - Promotion and positioning activities to attract investors.

  **Institutional arrangements**
  - Assessment of adequate infrastructure and procedures/protocols at sector level (incl. ownership), as a basis for an integrated national GHG data management system.

  **Inter institutional coordination**
  - Establish responsibilities and roles
  - Internal coordination of activities
  - Facilitate communication among sectors

  **Access to international information & best practice**
  - Practical exchange on market-based instruments experience in other PMR member countries
2.3 Interest in market-based instruments

i. Explore cost-effective approaches to achieve mitigation commitments.

ii. Work on target areas that are compatible with its national low emission development objectives and the design of crediting NAMAs.

iii. Explore and develop the design of crediting dimension for a number of concrete NAMAs.

iv. Design incentives to better align sector policies with the National Strategy on Climate Change (instrumentalisation of policy guidelines).

v. Boost private sector participation in mitigation actions through the establishment of incentives based on crediting approach.

vi. Develop core market readiness infrastructure (such as MRV, baseline development and data collection) to support usefulness and effectiveness of public expenditures (through RBB) in line with market readiness for potential crediting.
3. Organization and consultations
3.1 PMR contact point

- **MINISTRY OF ECONOMY AND FINANCE**
  - Mr. Javier Roca,
    Chief of the General Directorate of International Economy Affairs, Competition and Productivity
    E-mail address: jroca@mef.gob.pe
    Phone: (511) 311-5930 Ext. 3510

- **MINISTRY OF ENVIRONMENT**
  - Mr. Eduardo Durand,
    Chief of the General Directorate of Climate Change, Desertification and Water Resources
    E-mail address: edurand@minam.gob.pe
    Phone: (511) 611-6000 Ext. 1350
3.2 Consultation process

- **Pre EoI**
  - MEF presents PMR initiative to other Ministries and discusses the possibility to participate.

- **Pre EoI**
  - Peru decides to present its EoI. MEF and MINAM are responsible for elaborating the document.

- **Post EoI**
  - The resolution of acceptance of Peru in the PMR is sent to all involved Ministries.

- **Post EoI**
  - MEF participates in meetings with some Ministries to push NAMAs which can be presented in the PMR initiative.

- **Post EoI**
  - MEF and MINAM are responsible to systematize the information concerning the NAMA initiatives in Peru.

- **Pre OF**
  - PMR Mission meets MEF, MINAM, MVCS and PRODUCE.

- **Pre OF**
  - Workshop “Use of market-based instruments for mitigation: State of the NAMA discussion in Peru”. 63 participants.

- **Pre OF**
  - MEF and MINAM participate in meetings with other Ministries pushing NAMAs which can be linked to the PMR initiative.
3.3 Partners in the formulation and implementation of the country’s Market Readiness Proposal (MRP)
4. Other key relevant initiatives

- With the help of IDB, Peru is undertaking a feasibility study of a domestic carbon market in Peru. We are studying i) its legal and institutional feasibility and ii) the potential demand of carbon.
- Climate finance readiness. MEF and MINAM are conducting an investigation to study the institutional barriers that four Peruvian Ministries (three of them implementing NAMAs) face to efficiently manage and report climate funds.
- PlanCC: seeks to develop sound evidence about possible climate change mitigation scenarios in Peru and provides input for climate compatible and economical, social and environmentally profitable policy and investment design.
- Other initiatives already mentioned: INFORMAGEI and RBB
5. Organization of work and estimated timeline
5.1 Overview of organization of work/tasks envisioned prepare the Market Readiness Proposal (MRP)

- Peru has already identified three steps in order to be able to present our Market Readiness Proposal to the PMR Assembly

<table>
<thead>
<tr>
<th>Steps</th>
<th>Sub-steps</th>
<th>Activity</th>
<th>Responsible</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step I: Identification and selection of NAMAs most suitable for a market instrument</td>
<td>Sub-step 1: Systematize information about NAMAs</td>
<td>Analysis of NAMA proposals in Peru</td>
<td>MEF and MINAM</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Analysis of international experience</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Evaluation of development potential of crediting component</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sub-step 2: Linkage with other initiatives</td>
<td>Analysis of complementarity</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Evaluation of potential and adequacy of NAMAs for the initiatives</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sub-step 3: Prioritization of NAMAs</td>
<td>Selection of NAMAs based on established criteria</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Definition of areas of intervention</td>
<td></td>
</tr>
<tr>
<td>Step II: Development of ToRs to establish the methodologies of interventions in the selected fields</td>
<td></td>
<td>ToRs to establish a methodology of intervention on components/prioritized sectors</td>
<td>MEF, MINAM and Sectoral Ministries with prioritized NAMAs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ToRs to develop crediting component(s)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Plans for intervention in components/prioritized sectors</td>
<td></td>
</tr>
<tr>
<td>Step III: Finalization &amp; presentation of MRP</td>
<td></td>
<td>Finalization of MRP document and presentation to the PMR Assembly</td>
<td></td>
</tr>
</tbody>
</table>
5.2 Estimated timeline for MRP formulation

- We estimate that our preparation phase will take 18 months, and it will be organized as follows:

<table>
<thead>
<tr>
<th>Steps</th>
<th>Sub-steps</th>
<th>Months</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18</td>
</tr>
<tr>
<td>Step I:</td>
<td>Sub-step 1 - Systematize information about NAMAs</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sub-step 2 – Linkage with other initiatives</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sub-step 3 – Prioritization of NAMAs</td>
<td></td>
</tr>
<tr>
<td>Step II:</td>
<td>Intervention strategy</td>
<td></td>
</tr>
<tr>
<td>Step III:</td>
<td>Finalization and presentation of MRP</td>
<td></td>
</tr>
</tbody>
</table>
6. Collaboration and coordination with other relevant programs and processes

◆ **Projects**
  - PlanCC / MAPS
  - Technical Assistance for emissions management – Silva Carbon
  - UNEP – REGATTA, Regional gateway for technology transfer and climate change action in Latin America
  - Expression of Interest of project TRANSfer – GIZ for the preparation of NAMA in the transport sector at national level.

◆ **Studies**
  - Design Concept of GHG emissions management system with application to the energy sector

◆ **Working Groups**
  - Mitigation Action Implementation Network (MAIN), CCAP
  - International Partnership on Mitigation and MRV, ICI
  - EC – Low Emission Development Strategy, USAID
  - Global Methane Initiative, EPA

◆ **Sub-Committee of GHG management**
  - Peruvian Technical Standard about Corporate GHG Inventory
  - Elaboration of Peruvian Technical Standard about specifications and orientations for the validation and verification of the declaration of GHG emissions
  - Discussion of Technical Standard about national guidelines for elaboration of national GHG inventories.

◆ **Synergy initiatives between cooperating partners:**
  - Capacity-building workshops:
  - NAMAs: Transport, Materials, Construction and Bioenergy (GIZ, UNDP, ICI-BMU)
7. Conclusions – Summary of market readiness priority areas for PMR support

◆ Peru’s low emissions development objective is to make development climate-compatible.
◆ This will imply aligning Peru’s national development priorities and sector policies with its National Strategy on Climate Change and the international GHG reductions commitments.
◆ Peru’s focus under the PMR is to set the ground work for designing / providing crediting-based approach incentives to support usefulness and effectiveness of public expenditures (through results-based budgeting - RBB) in line with market readiness for potential crediting mechanisms.
◆ Market readiness priority areas for PMR support are:
  ◆ Developing core market readiness infrastructure, such as MRV systems, GHG baselines, data collection/management and regulatory frameworks
  ◆ Pre-identified sectors for crediting NAMA development are: energy supply, housing, waste, transport, construction materials
  ◆ Final selection of sectors/NAMAs will be part of the preparation phase
  ◆ The desired PMR support strategy in Peru is summarized in the following picture
7. Conclusions – Summary of market readiness priority areas for PMR support (cont.)

Low Emissions Development Objective

Crediting NAMAs implementation
(Sectors: Energy supply, housing, waste, transport, construction materials, others?)

Providing incentives based on crediting approach

↑ Mobilize domestic funds (National priorities)

↑ Stimulated by international funds (crediting mechs)

↑ Mobilize domestic funds (National priorities)

↑ Baseline development

↑ MRV

↑ Data collection

↑ Sust. Develop.

↑ GHG

National development priorities + International GHG reductions commitments

Data collection

Baseline development

Mobilize domestic funds (National priorities)

Stimulated by international funds (crediting mechs)
For any question, clarification or comment on this presentation, please contact:

MEF - jroca@mef.gob.pe  
MINAM - edurand@minam.gob.pe
ANNEX

Sector information
I. ENERGY SUPPLY (Bioenergy & Generation and Use of Energy)

a) Brief description of the sector
   - Current energy supply profile
     - Current national installed capacity is 40% hydro and 60% thermal (i.e. a total of 8,613 MW), plus a tiny wind power plant.
     - During 2010, almost 36 TWh (Terawatt-hours) of electricity were produced; 58% by hydroelectric power stations and 42% by thermal power stations.
   - Sector’s estimated GHG emissions and share of country’s total emissions
     - The energy supply sector is the 2nd largest source of GHG emissions in Peru, after the LULUCF sector, with over 20% of the country’s total (i.e. approx. 30 MtCO₂e).
     - The projections for the second National Communication estimate that GHG emissions from the energy sector will almost triple in a 50-year period (2000-2050).
   - Development benefits associated with activities which may be targeted by market instrument(s)
     - Increase employment opportunities, increase income for the local communities, provide secure access to carbon revenues for small project owners, making the proposed activity more attractive to others source of capital or equity, create new sources of renewable energy in a sustainable way,
   - Other initiatives
     - In the energy sector, several initiatives have been introduced, including tax incentives, to promote the use of natural gas, and the generation of renewable energy. Peru has promoted Actions for Unconventional Energy Generation Projects to encourage the use of technologies for harnessing wind, solar, biomass and biogas energy.

b) Other criteria for the consideration of this sector
   - Major source of GHG emissions, link with NAMA development process, sector with high emissions growth, good availability of funding, contribution to international commitments, alignment with national priorities.
II. HOUSING (Sustainable Housing & Sustainable Buildings)

a) Brief description of the sector
   - **Current and future sector profile**
     - In 2009, energy consumption in the residential sector, commercial and public was 175,655 TJ, with a share of 29.0% of total primary consumption.
     - According to the diagnosis made by the MVCS, in future years new houses and dwellings will be needed in Peru to meet the demand for housing and enhance the quality of life. In the BAU scenario the majority of these houses will be built without considering EE measures and hence, more energy will be consumed.
   - **Sector’s estimated GHG emissions and share of country’s total emissions**
     - The level of CO₂ emission from the residential and commercial sector was steady since 2004, reaching about 1.8 million tCO₂/a.
     - More GHG emissions will arise to meet the demand for housing
   - **Development benefits associated with activities which may be targeted by market instrument(s)**
     - Environmental impacts: limiting local/regional air pollution, reducing the irresponsible consumption of natural resources, limiting inadequate growth of cities, preventing poor construction, regulating application of building materials and inappropriate designs.
     - Socio-economic impacts: contribution to rural electrification, improved welfare and poverty alleviation, improvement health and quality of life, reduction in fuel costs (energy expenditure), less time for women to spend collecting wood, reduced burden on limited natural resources (energy security), reaching a minimum comfort for housing.

b) Other criteria for the consideration of this sector
   - Link with NAMA development process, Sector with high emissions growth, Sustainable development co-benefits, Major potential for reduction, Involvement of key stakeholders, Funding sources, Alignment with national priorities.
III. WASTE (Solid Waste Management)

a) Brief description of the sector

- **Current and future sector profile**
  - Currently, in Peru 13,000 tons of solid waste are produced every day, of which 8,580 tons are collected and subject to treatment.
  - Until now, there are 8 official landfills across the country (5 in Lima), and 1 separate landfill for hazardous waste.

- **Sector’s estimated GHG emissions and share of country’s total emissions**
  - Following the country’s Second National Communication to the UNFCCC, about 6% of annual GHG (8,778 MtCO$_2$e) are produced by the waste sector (year 2009 data)
  - These emissions are expected to grow to well over 11 MtCO$_2$e by 2050 in the Business as Usual scenario.

- **Development benefits associated with activities which may be targeted by market instrument(s)**
  - Limiting local/regional soil, water and air pollution, improvement health and quality of life, promotion of usage of waste for energy generation, increase employment opportunities, sensibilization of the population towards sustainable waste management.

b) Other criteria for the consideration of this sector

- Involvement of key stakeholders, Link with NAMA development process, Funding sources, Sustainable development co-benefits, Contribution to international commitments, High emissions growth, Potential of responsiveness to market signals, Major potential for reduction, Alignment with national priorities (e.g. PLANAA)
IV. TRANSPORT

a) Brief description of the sector

- Current and future sector profile
  - Currently, the Peruvian national road network has a length of about 96,000 km. and can be divided in national (24.1%), regional (26.4%) and local (49.5%) networks.
  - In total there are 59,109 registered transport service providers at national level, which possess 160,734 vehicles. Over 70% of the national vehicle fleet is concentrated in the Lima Metropolitan Area. In early 2000, the number of cars in Lima increased to about 1 million. Also the number of public transport vehicles rose to over 60,000 units with an average of age of 16 years (many exceeding 25 years), meanwhile in the year 2010, in total 1,849,690 vehicles have been registered.
  - According to estimations in the year 2008 the investment gap in infrastructure was US$ 37,760 million, which equals to approx. 30% of the national GDP. Of this amount about 37% correspond to the transport sector.

- Sector’s estimated GHG emissions and share of country’s total emissions
  - In 2000, GHG emissions from the transport sector amounted to 9,938 MtCO\(_2\)e which was 8.28% of Peru’s total GHG emissions.
  - Until 2009 emission increased up to 14,848 MtCO\(_2\)e, and at the same time the share in total emissions rose to 10%.

- Development benefits associated with activities which may be targeted by market instrument(s)
  - Limiting local/regional air pollution, improvement health and quality of life, increase employment opportunities, improvement of country’s competitiveness, economic growth, reduced burden on limited natural resources (energy security), reducing the irresponsible consumption of natural resources

- Other initiatives
  - In the transport sector, the most important actions on mitigation are the normative and fiscal efforts to increase imports of new vehicles; the construction of efficient public transport infrastructure; the encouragement of natural gas usage; and the reduction of fuel subsidies.

b) Other criteria for the consideration of this sector

- Major source of GHG emissions, Link with NAMA development process, Funding sources, Sustainable development co-benefits, High emissions growth, Alignment with national priorities
2. Technical building blocks of market-readiness (6/16)

2.1 Taking stock of relevant sectors (and/or target areas)

v. INDUSTRY - CONSTRUCTION MATERIALS (Cement, Bricks, Steel)

a) Brief description of the sector
   - Current and future sector profile
     - The main materials used in the construction sector are cement, bricks, steel, iron, sand, etc. In 2009 the GDP share of the construction material reached 8.7%. Cement consumption amounted to 6.3 million t in 2008. The production in the metal sector represents 3% of the manufacturing GDP which equals approx. 240 million US$.
     - In general, the Peruvian construction sector showed an annual growth of 6.14% during the last years and it is estimated that it will keep increasing by 10 – 12%.
   - Sector’s estimated GHG emissions and share of country’s total emissions
     - In 2000, GHG emissions from energy consumption in the manufacturing and construction industry has been 2.7% (3,260 MtCO$_2$e) of total GHG emissions, while the production of minerals and metals participated with 6.5% (7,832 MtCO$_2$e) to the country’s emissions.
   - Development benefits associated with activities which may be targeted by market instrument(s) in given sector
     - Reduced burden on limited natural resources (energy security) due to energy efficiency measures, reducing the irresponsible consumption of natural resources, minimizing risk of failures due to automatization of production
   - Other initiatives
     - In the industry sector regulatory measures have been put into practice. Although these policies were primarily intended to improve the competitiveness, efficiency and clean production in both sectors, it is expected that those initiatives generate GHG emissions reductions.

b) Other criteria for the consideration of this sector
   - Involvement of key stakeholders, Link with NAMA development process, Funding sources, Sustainable development co-benefits, Potential of responsiveness to market signals, Major potential for reduction, Alignment with national priorities