RESEARCH PAPER

Country Study

Mitigation Actions in Peru

Issue 5
Country Study

Mitigation Actions in Peru

Date: 20/06/2011

Country: Peru

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The following citation should be used for this document:
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INTRODUCTION

The main purpose of this study is to understand and explore the concept of mitigation actions in Peru, how they are defined and identified and to know and understand the issues related to its development. For this purpose, the study is divided into two parts: the first one analyzes and describes the country specific approach to mitigation actions (MAs) and the second part analyzes the particular example of the development of an ongoing exercise to define and structure a mitigation action of Efficient Lighting under the NAMA approach.

The first part of the study is mainly descriptive, and presents the national perspectives and approaches to them. As there is no literature on this topic, the information was collected through interviews and revising national documents presented to the UNFCC and of public disposition. The second part is more analytical as it looks to understand the development process of a mitigation action, how mitigation actions are identified in Peru, the main issues that arise while developing a mitigation action project design and its possible implementation problems. The study looks at the specific case of the NAMA proposal on Efficient Lighting that is under development in Peru. This is part of an ongoing exercise to define and structure mitigation actions under the NAMA approach. The information was collected through interviews with the Ministry of Environment and the Ministry of Energy and Mines project team and their public presentations on the progress of this project.
PART 1: DESCRIBING & UNDERSTANDING THE COUNTRY-SPECIFIC APPROACH

Regarding Climate Change, Peru is a Party of the UNFCCC since 1992 and to the Kyoto Protocol since 2002. shows the evolution of climate change policy in Peru within the international context. It has been updated until year 2011, but it is based on the information presented at the Second National Communication to the UNFCCC.

TABLE 1. EVOLUTION OF MITIGATION ACTIONS POLICY IN PERU WITHIN THE INTERNATIONAL CONTEXT (1990-2003)

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TABLE 2. EVOLUTION OF MITIGATION ACTIONS POLICY IN PERU WITHIN THE INTERNATIONAL CONTEXT (2004-2011)

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The Environmental Management System Law

The Kyoto Protocol enters into force

Bali roadmap is adopted (COP 13)
1. Peru’s Position in the UNFCCC Negotiations and Approach to MAs

In the UNFCCC negotiations, Peru calls for an effective and ambitious global mitigation effort led by the developed world, but in which developing countries also have an active role. Before 2008, national GHG mitigation had low priority in Peru. The main argument for that was Peru’s relatively small contribution to the world total emissions and the country’s high vulnerability, as it presents four out of five vulnerability characteristics recognized by the UNFCCC: low coastal zones; arid and semi-arid zones; zones exposed to floods, drought and desertification; and fragile mountainous ecosystems (Tyndal Centre, 2004 cited by Ministerio del Ambiente, 2010b). At the same time, it faces a continuous population growth, persistent poverty, increasing threats due to events such as El Niño, problems with water resources distribution, low level of resources and institutional and organization capacity to face climate change impacts. Under this scenario Peru’s main concern was how to adapt to climate change and how to fund this adaptation.

On the way to Copenhagen 2009, the Government of Peru realized that adaptation efforts were not going to be enough in time, while no deep mitigation actions were performed globally. Consequently, Peru decided to play an active role in reaching a bold global mitigation agreement.

Peru’s current contribution to greenhouse gas emissions still accounts to less than 1% of global emissions. However, national awareness around the issue of the sustainability of the Peruvian economic model has increased due the fact that the country evidences a continuous economic growth (2001-2010 annual economic growth average rates of 5.3 %) that is currently linked to Greenhouse Gas (GHG) emissions growth and to the increase of social environmental conflicts.

The national position with regard to mitigation states that “mitigation has potential economic and social benefits for Peru, compared to the costs of reducing emissions” (p. 24, Ministerio del Ambiente, 2010a). It also indicates that “the profile of the country’s development against the current composition of its emissions, places it (the country) in a negative net cost perspective for early mitigation efforts and thus, Peru can aspire to long-term low-carbon development” (p. 25, Ministerio del Ambiente, 2010a). Therefore, it is necessary to gather information to make the case and to develop forecasts to incorporate measures to optimize the use of fossil fuels and switch to a more efficient energy matrix. At the same time, it is necessary to draw attention to the largest source of emissions today: deforestation and land use change in the Amazonian forests.

Under this approach three different areas can be identified regarding mitigation actions in Peru:

1. **Existing mitigation actions**: The first area comprises actions that have been put in place in different sectors for purposes other than mitigation but nevertheless contribute to mitigation. For example, the transportation and waste sector have started to implement actions which main purpose is to satisfy the demands of the population for better transportation systems and safe, sanitary conditions for waste disposal. The efforts engaged in the construction of segregated high capacity corridors in Lima to satisfy the public transportation demands of the city and the application of technical vehicle inspections and limits to contamination and the implementation of the National Comprehensive Plan for Solid Waste that aims to control the sanitary and environmental risk of the national production of solid waste (from which 71.52% is disposed in dumpsites or burned). The Second National Communication of Peru (Ministerio del Ambiente, 2010b) shows that Ministries like the Ministry of Energy and Mines, Transportation, Agriculture and the Ministry of Environment, have established regulations and are implementing programs and plans that will contribute to emissions reductions.
2. **Clean Development Mechanism (CDM):** The second area includes the experience and lessons learned under the CDM. Peru has actively participated in the mechanism for more than ten years now and has over 25 projects registered. Most frequent projects are hydroelectric plant (61%) followed by fuel changed projects (13%) and solid waste projects (11%). Lessons learned from CDM are being useful in developing the first works on measuring, reporting and verifying mitigation actions.

3. **Nationally Appropriate Mitigation Actions (NAMAs):** The third area focuses specifically on the work undertaken to design and implement NAMAs as set out in the Bali Action Plan and further developed in the Cancun Agreements. This country study focuses primarily in this area.

The Ministry of Environment and its technical team conducted most of the work around mitigation, with the help of national and international consultants. The Second National Communication to the UNFCCC gathers most of the information developed to date. More recently the issue has also been addressed by the Ministry of Economy and Finance (MEF). The Multi-annual Macroeconomic Framework (MMF) developed by the Ministry of Economy and Finance, one of the most important planning instruments for public investment used at the national level, request the inclusion of climate change as an issue that threatens competitiveness.

The Ministry of Economy and Finance envisions the effort for climate change mitigation as a long-term process of deep transformation of the economy (see Figure 1). To this purpose, MEF has included goals related to the development of mitigation scenarios and plans in the climate change policy matrix of IADB’s programmatic loan. Peru is still in the preparatory phase and will enter the pre-investment phase later this year. Although the figure shows a linear process it is understood that not all sectors have the same level of preparedness and some are even ready to start some work on Mitigation Actions.

![Figure 1. Phases towards a low carbon economy](image)

The country has shown its determination to engage proactively in GHGs mitigation. In June 2010, the Peruvian Government, through the Ministry of Environment, sent a letter to the Executive Secretary of the UNFCCC expressing its will to achieve voluntary medium term goals for 2021. Through a new communication sent on July 27th, 2011, Peru reaffirmed its will to strengthen collective action to mitigate climate change through the development of a sustainable low carbon emissions growth economy, implementing emission reduction actions. All the voluntary emission reduction goals are estimated over the baseline of year 2000:

- A net declining emissions equivalent to zero in the category Land Use, Land Use Change and Forestry (LULUCF), with an estimate reduction of emissions of 45% and a potential of avoided emissions of around 50 MT of CO$_2$eq.
- Ensure the modification of the national energy matrix in a way that non-conventional renewable energy and hydropower, together, will represent at least 40% of the total energy consumed in the country, with a reduction of approximately 28% emissions in this sector in relation to year 2000, and a potential of avoided emissions of around 7Mt CO$_2$eq.
Undertake a national program focused on the construction of landfills in 31 large and medium cities around the country which will reduce an estimated 7 MT of CO₂eq.

These measures have been included in the recently approved National Plan for Environmental Action 2010-2021, recently approved by the Executive Order DS-MINAM 014-2011.

In his inaugural speech, on July 28th, the new Peruvian President made a direct reference to the problem and expressed the decision of his Administration to properly address the threat that climate change poses to the country, specifically through stronger regulation. Annex 1 includes more detailed information on Peruvian Institutional and Legal Framework related to Climate Change Mitigation at a National Level.

Peru is the fastest growing nation in Latin America, a biodiversity hot spot and a land of entrepreneurs. The time for deep transformation is now. From that point of view, Peru sees climate change as a risk, but also perceives climate change mitigation as an opportunity to plan and follow a different development path, one that increases sustainability and helps the country to tackle major structural problems such as poverty, low technology development, environmental degradation and conflicts.

2. Defining & Identifying MAs in Peru: National Plans for Adaptation and Mitigation

The Action Plan for Climate Change Adaptation and Mitigation, and the National Guidelines for Climate Change Mitigation, both developed within the Climate Change Directorate in the Ministry of Environment in recent years, show the way Peru has identified and defined mitigation actions. Both these instruments could be considered sectoral policies, although there is a multi sectoral National Climate Change Commission which also has representation from regional al local governments that has contributed to their development. The National Guidelines for Climate Change Mitigation have also been through a sub national validation process in six prioritized regions.

3. Action Plan for Climate Change Adaptation and Mitigation (APCCAM)

The APCCAM identifies and points out the national and global priorities in terms of Peru's contribution to global mitigation of climate change; promotes the inclusion of actions addressing climate change in investment and development activities of short and medium term that are been undertaking for the National Administration and the Regional Governments; sets the priorities of public spending and investment in terms of insertion approach to climate change programs and development projects in the country; guides the negotiation efforts to obtain technical and financial international support for the implementation of mitigation actions in the country; and helps to lay the groundwork for sustainable low carbon intensity economic development in the country.

The APCCAM puts together the following immediate actions to be developed at the national, regional and sector levels to reduce GHGs emissions and promote carbon sequestration:

1. Validation and socialization of the strategic guidelines for the mitigation of climate change formulated under the Peru’s Second National Communication to the UNFCCC. Complementary studies to explore the potential of reducing emissions by
sector for the prioritization of mitigation options will be carried out to fulfil this task. Matrices and criteria to be taken into account during this process will also be incorporated.

2. Adjustment of the legal framework for emissions control, provision of reports by companies, enterprises and corporations, implementation of payments for environmental services, and promotion of private investment in conservation and sustainable use of forests.

3. Finishing the preparatory processes for the implementation of REDD+ mechanisms in the country, as a way to implement the strategy and programs for forests conservation. In the short term, there is the need to harmonize policies to develop forest ecosystems, and to prevent deforestation of primary forest, build an institutional framework to regulate and articulate a network for MRV purposes in forests, and to implement mechanisms for benefit sharing and for consultation among all actors involved in forest exploitation.

The APCCAM also suggests the main mitigation measures that each sector must implement.

1. Land Use, Land Use Change and Forestry

   (i) National programme of forest conservation for the mitigation of climate change.
   (ii) Mountain ecosystem conservation (cloud forests, moors, high land, and puna).
   (iii) Integrated management of soils.
   (iv) Policies for social development.
   (v) Policies for eradication of illegal deforestation.
   (vi) Development of information systems for forest control.
   (vii) Reforestation programs.
   (viii) Propose international financial instruments to increase the value of standing forests.
   (ix) Incentives to make the most of the benefits coming from the implementation of REDD mechanism.

2. Energy: Diversify the energetic matrix through the development and inclusion of renewable energy; improve fuel quality and; promote energy efficiency in the industrial, residential and services sectors.

3. Agriculture: Improve soil fertilization systems and methods using nitrogen compounds and reduce livestock emissions improving efficiency in production of meat and milk.

4. Transport: Stimulate mechanisms for urban transport planning and the renewal of the public transportation fleet; promote the use of compressed natural gas and liquefied petroleum; and improve fuel quality and vehicle technology.

5. Industry: Replace the fuel used for processing plants, promote the use of clean technologies for power generation, and improve energy efficiency in the industry.

6. Waste (solid and wastewater): proper handling and disposal of solid waste and water waste, introducing measures to promote substantive local co-benefits to improve the quality of life of people.

The APCCAM indicates that, to consolidate Peru’s position within the global carbon market, there is the need to design mechanisms to strength and develop the CDM in the country, focusing on more programmatic approaches.
4. National Guidelines for Climate Change Mitigation (NGCCM)

The formulation and validation of the NGCCM (2010-2011) is also a good example of how the country has identified mitigation actions. The NGCCM formulation has its origins in the Peruvian proposal to stabilize its emissions from deforestation in protected areas presented at the 14th Conference of the Parties, held in Poznan, Poland, in December 2008. In return, Peru requested a substantial emission reduction from large emitters to reduce the medium to long term climate change impacts, and increase in the short term, the size of the carbon markets and carbon flows to the country. After that, a proposal of National Guidelines for Climate Change Mitigation was formulated by consultants as part of Peru’s Second National Communication to the UNFCCC.

The NGCCM proposal was based on information collected from various studies, coordination meetings, and interviews with governmental officers, experts, and representatives from the national institutions and entities involved. This approach seeks to minimize the potential damage that Peru could suffer due to climate change, and get the best out of the substantial mitigation opportunities that the country hosts. It also maintains the ability to use flexible mechanisms for carbon trading to which Peru already has access, without committing to international schemes that can reduce flexibility in terms of domestic policy.

As a proposal it was subsequently validated by the Technical Working Group on Mitigation and Clean Development Mechanism of the National Climate Change Commission and it was agreed to also undertake a sub national validation process in six prioritized regions: Arequipa, Junín, La Libertad, Metropolitan Lima, Loreto, and San Martin. The process was carried out in each region holding workshops that gathered the competent officers from each regional governments and representatives from the private sector and the civil society.

The NGCCM proposes a national mitigation effort that lies in the development of National Mitigation Programs (PRONAMI) which was initially suggested to be developed within the CDM sectors; forestry and land use, waste, energy, transportation, and industry. After the regional validation, a new sector was included; housing. According to the NGCCM, the dimensions and size of the programs shall be proportionate to the contribution of each sector to the GHG emissions inventory.

The document also states broadly that each PRONAMI should be coordinated by the respective Ministry and / or Ministry of Environment and has a register to account for mitigation actions and emission reductions. Each PRONAMI should be regularly evaluated based on the progressive approach to previously agreed targets. An inter-sectoral committee, supported by technical committees should coordinate its implementation; the sale of emissions reductions; and monitor compliance with established goals (see Figure 2).

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1 Until the development of this study, the NGCCM were ready for formal and official approval by the Ministry of Environment.
2 The prioritization of regions for the sub national validation of the NGCCM where developed using Multicriteria Analysis under the guidance of the Ministry of Environment.
Finally, the NGCCM suggest the following strategic lines:

1. Frame the mitigation policy within an international effort of ambitious global mitigation, in accordance with the principle of common but differentiated responsibilities.
2. Promote international and global sustainable mitigation scenarios consistent with the Peruvian international position.
3. Develop criteria and policies to place Peruvian reductions in carbon markets.
4. Prioritize areas where there are co-benefits in terms of economic growth and social development.
5. Strengthen institutional capacities and of organized society

5. International Partnerships in Defining & Structuring Approaches for MAs

5.1 European Commission

On December 2010 a country report by Euroconsult Mott MacDonald was developed for the European Commission. The aim of these scoping country reports (also developed for Mexico, Kenya, Indonesia and Thailand) was to guide a future EC Capacity Building Programme for NAMA MRV. The document called “Developing countries, monitoring and reporting on greenhouse gas emissions, policies and measures - Country Report Peru” identifies main gaps and barriers and proposes a way forward for the country which is summarized below:

Gaps and barriers identified both for the energy and LULUCF sectors are focused around two main issues: lack of institutional and political articulation for effective planning, design and implementation of NAMAs; and the absence of sound information and harmonized methodologies for evaluating alternatives of growth and prioritizing mitigation measures, and for measuring GHG emission reduction and avoidance, and monitoring and reporting mitigation policy.
The report recommends working on strengthening MRV for mitigation actions in Peru under an approach of seizing the current opportunities for early adopters of a low emission mindset. It became clear that while there are some opportunities in Peru for reducing emissions, the big opportunities lie in avoiding emissions by taking action in the near future to decouple economic growth from emission growth. Under this approach a way forward has to include the development of capacity in all sectors of government and society in relation to four main challenges: (a) incorporating climate change in sectoral policy planning; (b) designing processes for dialogue and consensus building around development paths which include different mitigation options; defining baselines and elaborating projections; and establishing systems for measurement/monitoring, reporting and verification. General gaps and barriers for the forestry sector that were identified in this study are presented in Annex 3.

5.2 United Nations Development Programme (UNDP)

The regional project Carbon 2012 Programme, provided technical support to the Ministry of Environment funding a study of prioritization and formulation of a Mitigation Action under the NAMA approach. The main goal of the study was to provide to the National Administration and / or Regional Governments with tools to implement specific activities to mitigate climate change through nationally appropriate mitigation actions in the framework of the National Guidelines for Climate Change Mitigation.

The specific goal of this study was to prioritize a sector in which to develop mitigation actions and build a NAMA conceptual model for the selected sector. Work and initiatives under the forestry sector were excluded from this study since they are quite specific and comprise a large number of different projects and initiatives both at the National and Sub national levels. The conceptual NAMA model still needs to be validated by the Ministry of Environment and relevant sectors.

The idea is to develop a first exercise of participative formulation of this kind of measure, to learn lesson derivate from the process and improve it; to identify, at the greatest possible detail, barriers and gaps in information needed to overcome to successfully design a NAMA, determining which of them require technical assistance and international support for its solution; to identify the key stakeholders that should be involved in the formulation of the NAMA package; and to make a first exercise to design a Monitoring, Reporting and Verification (MRV) system, both for estimating GHGs emission reduction, as well for a national registry of NAMAs.

UNDP’s “Low Emission and Climate Resilient Development Strategies” (LECRDS) framework will also act in Peru in the following years supporting the Ministry of Environment and the Ministry of Economy and Finance. Under this framework Peru will participate in the Low Emission Capacity Building Programme, a UNDP-EU collaboration that seeks to build national capacities to prepare low emission development strategies through the establishment of GHG inventory systems; identification of NAMA opportunities in the context of national development; Low Emission Development Strategy Design and the development of MRV systems. It has been decided by the government that this project in Peru will be complimentary to MAPS and will focus on MRV issues.

UNDP will also provide more specific support for one sector under the Sectoral Market Mechanisms Initiative, Latin America (SMMI-LAC). The project objective is to strengthen the capacity of selected countries to assess, pilot and adopt scaled-up sectoral market-based approaches to climate change mitigation. This initiative will initially focus on sectoral crediting, and where appropriate the initiative will further advance the sectoral mechanisms, with increasing emphasis on sectoral trading and cap-and-trade. These sectoral market mechanisms will support emission reductions on a large scale in developing countries, through the
sale of credits and allowances on the international carbon market and national and international public climate finance such as the Green Climate Fund.

**5.3 Mitigation Action Implementation Network (MAIN)**

Also under the heading of initiatives to further define NAMAs in Peru, the country takes part in the Mitigation Action Implementation Network (MAIN). The initiative – driven by the Center for Clean Air Policy (CCAP), the World Bank Institute (WBI) and INCAE Business School- seeks to support the design and implementation of NAMAs and Low-Carbon Development LCD strategies in developing countries through regionally based dialogues, web-based exchanges, and practitioner networks. The MAIN initiative will work to identify and highlight the most successful developing country mitigation policies and will use these lessons to assist other countries in refining their policies and implementation frameworks in order to achieve ambitious mitigation actions. Principal financial support for the initiative will be provided by the German Ministry of Environment, with additional support from WBI’s Carbon Finance Assist program and financing from other donors.

Also relevant is that the Nordic Ad Hoc Group on Climate Change (NOAK) and the Nordic Environmental Finance Corporation (NEFCO) have commissioned Climate Focus and its partner GreenStream with a feasibility study to explore and analyze, jointly with the government departments in Peru and Vietnam, a comprehensive climate mitigation strategy that could translate into one or more NAMAs accessible for international MRV and funding. It is envisaged that the exercise helps formulate principles and general building blocks for NAMAs worldwide. This study has not yet produced outputs but it is the government interest that it will help develop information needed especially for the waste sector.

**5.4 Mitigation Actions Plan and Scenarios (MAPS)**

A broader context of the work is given by the MAPS project. MAPS represent both the pre investment phase and planning phase of the long term Peruvian effort towards deep transformation to a Low Carbon Economy. To avoid risk and seize opportunities, Peru has decided to develop Long Term Mitigation Action Scenarios and Plans through the MAPS project, in order to enable low carbon investments and reduce the risk of losing competitiveness in a low carbon world.

Through a combination of a participatory process and advance modelling, under a strong governmental mandate, MAPS will develop scenarios that allow major stakeholders to understand the impacts and benefits of climate change mitigation. At a later stage, the project will also develop consensus based planning for a low carbon economy.

**5.5 Bilateral Relationships**

More recently the British Embassy has developed a project that seeks to develop a NAMA for the transport sector. After deforestation, the second source of emissions is energy, of which the main contributing sector is transportation with 8% of the national emissions. Under a business-as-usual scenario transport sector emissions are estimated to grow 700% by 2040, related to 2000 levels. The objective is to develop low-carbon transport policies in Peru and build capacity for their implementation. The project will lead to the development of a Transport NAMA, building on the initial measures that the former Peruvian Government has developed, and ensuring that the new administration has the necessary skills to implement it. The Transport NAMA will feed into Peru’s existing long term mitigation action project (MAPs). As the NAMA will consider specific measures for land use planning...
aimed to sustainable transport, it is envisaged that special environmental and economic zones might be identified across the country. One of these may receive support from the International Climate Fund (ICF) as Peru is a potential recipient country.

Finally, the Ministry of Environment of Japan has decided to implement feasibility studies, information dissemination and capacity building activities as a contribution to promote the establishment, during the COP 17 at Durban, of one or more market-based mechanisms within the Cancun Agreements, as was decided during COP 16. The Japanese approach includes the development of institutional infrastructure and support for Japanese business in order to encourage them to, through bilateral agreements, transfer and deploy low-carbon technologies to developing countries to reduce CO₂ emissions through the implementation of joint projects with Japan. This effort will contribute to Japan’s fulfilment of its emission reduction target. The support to the developing countries governments and business include support for human resources development to identify and formulate projects, and for the development of validation and MRV systems.

The Peruvian Government has been approached by Japanese representatives, focusing their offer in the MRV segment. According with their communications the major tasks of the project are as follows: (a) find out potential verification entities to implement MRV for GHG emission reductions in each target county; (b) conduct training for the verification entities; (c) find out potential GHG emission reduction projects for market mechanisms, including new mechanisms, for MRV in each target country; (d) support verification of the potential GHG emission reduction projects by the verification entities; (e) disseminate the results at COP 17 in Durban; (f) organize an international workshop in Tokyo.

6. Conclusions from Step 1

Peru’s vision on climate change has shifted from that of a vulnerable developing country that prioritizes adaptation and adaptation support; to that of a growing economy that also starts looking at mitigation as an opportunity. Following that idea, in 2010 and 2011 Peru sent official communications to the Executive Secretary of the UNFCCC to presented three NAMAs expressed as voluntary medium term goals to be achieve by 2021 that will require a certain level of technical support and financial cooperation to be effectively and promptly implemented. The stage of development of these goals is summarized in Table 2.

<table>
<thead>
<tr>
<th>Mitigation Action</th>
<th>Stage of development</th>
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| A net declining emissions equivalent to zero in the category Land Use, Change of Land Use and Forestry, with an estimate reduction of emissions of 45% over 2000 and a potential of avoided emissions of around 50 Mt of CO₂eq. | As a NAMA, it is an idea under development through parallel projects that have not been integrated:  
- New Forestry Law  
- The REDD Strategy is under development.  
- The Forest Conservation Program is under design and certain components are under implementation. |
| Ensure the modification of the national energy matrix in a way that non-conventional renewable energy and hydropower, together, will represent at least 40% of the total energy consumed in the country, with a reduction of approximately 28% emissions in this sector in relation to 2000, and a potential of avoided emissions of around 7Mt CO₂eq. | As a NAMA, it is an idea under development, but it is based on:  
- A National Policy  
- An Energy Efficiency Plan that is being updated, that has been partially implemented.  
- The new Sustainable Energy Matrix is under development  
- A first NAMA exercise has been tested for Efficient Lightning and main challenges for their final design and financing have been highlighted. |
| Undertake a national program focused on the construction of landfills in 31 large and medium cities around the country which will reduce an estimated 7 MT of CO₂eq. | Law for the Modernization of Local Governments enforces the adequate management of waste  
Landfill implementation Project (MINAM) funded by JICA. |
Although climate change mitigation is not a national priority and not even a well-known concept for most Ministries, regional governments and the private sector, Peru has managed to attract the interest of several countries and cooperation entities for the development of mitigation actions. All this support will be canalized towards an effort of deep transformation of the economy, under the leadership of the Ministry of Environment and the Ministry of Economy and Finance (through its General Directorate of International Economic Affairs, Competitiveness and Productivity).

Mitigation actions in Peru can be classified in: (a) actions that have been put in place in different sectors for purposes other than mitigation, but nevertheless contribute to mitigation; (b) the experience and lessons learned under the CDM and; (c) the work undertaken to design and implement NAMAs as set out in the Bali Action Plan.

The third area, NAMAs, which is the focus of this paper, has the following progress: (a) international voluntary commitments for reduction of emissions in three sectors, (b) general guidelines for developing mitigations actions; (c) prioritization criteria for sectors where NAMAs can be developed; (d) a first undergoing exercise of developing a conceptual framework and structure for NAMAs. The last two topics are studied in much more detail in the next section of this paper.
PART 2: ANALYSING AN EXAMPLE AGAINST ISSUES & CHARACTERISTICS OF MITIGATION ACTIONS

The Ministry of Environment (MINAM) has started to undertake efforts to understand how to design and develop Nationally Appropriate Mitigation Actions (NAMAs) aligned with the international and national political context, aiming to provide to the National Administration and Regional Governments with tools to implement specific activities to mitigate climate change through NAMAs in the framework of the NGCCM. In early 2011, it started to develop a “Study of prioritization and formulation of a mitigation action” which has as main objective to prioritize a sector in which to start focusing on mitigation actions under the NAMA approach and build the conceptual model of NAMAs that could serve for future NAMA formulation in all the PRONAMI sectors defined in the NGCCM.

Energy efficiency was ranked as number one in priority, after analyzing all the PRONAMI sectors defined in the NGCCM using factors that not only rated the sector by its potential of emission reductions but considered also the effectiveness and efficiency to implement MAs. The factors were: (a) potential emission reduction; (b) economic feasibility; (c) alignment with policy priorities and technical feasibility; and (d) socio-cultural conditions (see Annex 2 to for complete list of criteria). Other prioritized sectors were renewable energy, waste, industry, enteric fermentation, transport and, agricultural soils. After this first part of the study was completed, Efficient Lighting was proposed as a mitigation action to be developed under the NAMA approach.

The efficient lighting NAMA will be analyzed in more detail in the following sections, looking at its specific stage of development; ownership and; planning, policy and regulatory context. The main characteristics and issues arising from the developing of energy efficiency MA and more specifically the efficient lighting NAMA will also be discussed, focusing on the technical capacities for designing an MA, institutional capacity to take MAs to implementation, the existing technical capacity to design and domestically implement MRV systems for MAs and MAs financing.

1. Ownership

The “Study of prioritization and formulation of a mitigation action” is an initiative led by MINAM to define and structure approaches to NAMAs. Under the “Carbon 2012“ regional Programme, the United Nations Development Programme (UNDP) facilitates technical support to MINAM, by funding the study.

Due the results of the ranking, the Ministry of the Environment (MINAM) approached the Energy Efficiency Direction of the Ministry of Energy and Mines to start the development of a NAMA proposal. After a couple of meetings, it was agreed to develop a NAMA in Efficient Lighting as a first exercise of participative formulation because it aligned with the Direction’s priorities, because of the existence of the necessary legal framework that supports and promotes the implementation of energy efficiency programs; the existence of prior experiences in the country of efficient lighting programs in the residential sector; and the potential it has to improve the general awareness on energy efficiency and its benefits, as it can reach the whole population with the particular experience of switching to efficient light bulbs.

The rest of activities including the validation and presentation of the exercise in different forums (such as CCAP and work meetings) have been led by both the Ministry of Environment and the Ministry of Energy and Mines.
2. Stage of Development

The study has been completed and up to October 2011. The conceptual framework for NAMAs and design methodology are ready to be validated by the relevant actors. A detailed concept note of the set of actions that are being proposed as part of the Efficient Lighting NAMA were developed but still need to be completed.

Many lessons have been learnt from the study. It is clear that for Peru, mitigation actions should always be nationally appropriate. In other words, they need to be designed to aim for development objectives and emissions reductions at the same time: NAMAs should be transformational. Not only designed to aim emissions reductions but also to promote significant changes in behavioural patterns, levels of investment, cultural levels, available information, capacities, information systems, etc. At the same time, many sectors have already identified potential mitigation actions but usually have problems to implement them. Therefore, one of the key aspects of this proposal is that it NAMAs should be considered as a way to define and fund actions oriented to overcome barriers that could potentially delay the effective implementation of mitigation actions.

A first proposal of a conceptual NAMA scheme and NAMA design methodology has been developed in Peru, under the guidance of MINAM and MINEM. It has been suggested that NAMAs should be presented as a bundle of actions that are proposed to guarantee mitigation actions are implemented by removing previously identified barriers and to ensure their sustainability over time. This bundle of actions considers two types of actions: (a) mitigation actions: projects or measures that reduce emissions directly, and (b) support actions: projects or measures that supports the mitigation actions by removing barriers and helps to generate other economic, social and environmental benefits.

![Figure 3. Efficient Lighting NAMA Scheme.](image-url)

The proposed NAMA scheme, based on Michael Porter’s model of the value chain, is used to graphically present the different actions that are part of the NAMA (see Figure 3 that shows the actions defined for the efficient lighting exercise). It proposes a summarized and graphical way to present both, the support actions that are defined to guarantee the implementation and continuity of mitigation actions by removing previously identified barriers for the implementation of a policy and a monitoring.
reporting and verifying (MRV) system. The far right column shows the total reduction of altogether mitigation and support actions and the benefits that can be achieved if all actions are implemented.

The NAMA approach that is proposed for Peru is to catalyze the implementation of mitigation actions. In order to design adequate NAMAs to achieve it, a five step methodology has been proposed for NAMA design (summarized in Figure 4).

3. Efficient Lighting: A NAMA Proposal

The Efficient Lighting NAMA consists of three mitigation actions, as well of three support actions. The mitigation actions are addressed to reduce the energy consumption, as well to implement the use of more efficient lighting technologies in the residential, industrial, and public services sectors. The supporting actions were proposed to remove the main barriers that were identified in the exercise. Therefore, they should be oriented to promote private sector involvement; to increase the knowledge of the general public about efficient types of lighting, good practices of energy use; to remove barriers to funding efficient energy investment projects, and to develop the necessary regulations for the implementation of efficient lighting technologies in the different sectors.

The main goal of the Efficient Lighting NAMA is to reduce 4,409.789 tons of CO₂eq in ten years. Regarding the benefits that the NAMA will generate, the most important one will be the reduction of 2,779 MW of demanded power electricity and energy consumption of 80,109.2 kilowatts per hour per year and, which will avoid the construction of new power plants to satisfy the peak hours demand (in the short term) and economic benefits for the final consumers such as the reduction of power electricity expenses for the participants in the project. Other benefits are the reduction on light bulbs expenses, the increase of general public...
awareness regarding types of efficient lighting and improving energy saving culture and good practices in energy use, as well to contribute to increase environmental care, and poverty reduction as collaterals.

4. Planning, Policy & Regulatory Context for Energy Efficiency

The Ministry of Energy has produced long-term plans to 2050, and has also produced several plans on expansion of the energy system; energy efficiency and consumption, among others. However, none of them were developed in a participatory way with an open consultation process. Therefore, the Efficient Lighting NAMA design is an exercise first of its kind in the country.

Looking at the policy, regulatory and planning context for energy efficiency in Peru, many laws, regulations and policies have been created in the past ten years to promote and support energy efficiency actions and programs in the country. However, none of them is specifically designed to provide funding or help the projects to obtain funding from private sources or international cooperation; as also, none of them is oriented to increase the national technical capacities to implement the projects. The regulatory and policy context is summarized in Table 3.

In Peru, it is difficult to develop long-term plans and actions. We can see that the formulation of national and sector policies usually respond to short-term, or at best, medium term interests. This is because the long term is not attractive since it usually overcome the period of a presidential mandate. The constant turnover that occurs in managerial and technical levels of the administration severely affects the capacity building efforts as well the technical capacity to develop programs and projects, due the fact that officials responsible of designing, implementing and monitoring the mitigation actions will have the necessary continuity in their responsibilities.

At the same time, not all the decision makers are well informed about the relation of GHG emission, impacts of climate change and especially about the human activities that increase GHG emission. For example, many of the energy sector initiatives are carried out without taking into consideration the impact on the increase and emissions reduction or avoidance opportunities that they could bring.
<table>
<thead>
<tr>
<th>Policy / Measures</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 National Energy Plan</td>
<td>Energy Efficiency is considered as a long-term permanent activity. It includes the following lines of action:</td>
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<tr>
<td></td>
<td>• Generation of an Energy Efficiency culture</td>
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<td></td>
<td>• Formulation of an Energy Efficiency Policy</td>
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<td></td>
<td>• Energy Efficiency MRV and control system</td>
</tr>
<tr>
<td></td>
<td>• Regulatory Framework for Energy Efficiency</td>
</tr>
<tr>
<td>2 Act 27345 for the Promotion of the use of Energy Efficiency (year 2000)</td>
<td>• Rules that the promotion of the use of Energy Efficiency to ensure energy supply, and consumer’s protection, and to promote the competitiveness of the national economy and to reduce the negative environmental impact of the use and consumption of energy, is of national interest.</td>
</tr>
<tr>
<td></td>
<td>• Determines that the MINEM is the national competent authority responsible of the promotion of the efficient use of energy. Among its responsibilities counts the promotion of the establishment of energy services companies, as well the provision of technical assistance related to the use of energy efficiency to public and private institutions. Te Ministry also promotes consultation processes with consumer’s organizations, and private businesses.</td>
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<tr>
<td></td>
<td>• Determines that the equipment and appliances that require supply of energy for its operation, must include in their labels, containers, package, as well advertising, information on energy consumption according with EE standards.</td>
</tr>
<tr>
<td>3 Regulations to Act 27345 (D.S. Nº 053-2007-EM)</td>
<td>• The Rules apply to the production, transport, transformation, distribution, marketing and consumption of energy.</td>
</tr>
<tr>
<td></td>
<td>• The Rules establishes that the MINEM implements programmes for energy efficiency, promotes the implementation of activities to improve consumption habits, as well the use of energy efficient equipments. It also promotes the creation of an energy efficiency market; establishes the minimum standards to be observed in terms of efficient energy by productive activities to reduce the participation on the market of old technologies, and to promote technological upgrading. The MINEM also promotes the access to the CDM.</td>
</tr>
<tr>
<td>4 Energy consumption indicators and methodology for its monitoring (R.M. Nº 038-2009-EM/DM)</td>
<td>• Establishes indicators for energy consumption, disaggregated by sectors, as main tools to achieve the objectives set by the Efficient Energy National Policies.</td>
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<tr>
<td></td>
<td>• They also set that MINEM is the responsible entity to annually evaluate the data facilitated by each Sector.</td>
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<td></td>
<td>• The energy consumption indicators monitoring methodology has three phases:</td>
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<tr>
<td></td>
<td>a) The design of samples for the developing of surveys on net energy consumption by Region, socio-economic sector, and type of use.</td>
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<td></td>
<td>b) The conduction of surveys on net energy consumption for all 26 administrative Regions of the country.</td>
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<tr>
<td></td>
<td>c) The elaboration of the selected energy indicators.</td>
</tr>
<tr>
<td>5 Referential Plan for the Use of Energy Efficiency for 2009-2018 (R.M. Nº 469-2009-MEM/DM)</td>
<td>• Approved by all 26 Regional Governments focus on the four sectors contemplated Regulations to Act 27345: residential; productive; public services; and transport. It establishes, as a main goal, a saving of 15% on energy consumption for the year 2018.</td>
</tr>
<tr>
<td></td>
<td>• The Referential Plan sets that this goal should be achieved without compromising the activities of the productive sector, neither the comfort of the residential sector.</td>
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<td></td>
<td>• If the implementation of actions contemplated in the Referential Plan becomes a success, the expected savings in energy for the next ten years are estimated in about 5.3 billion dollars. The estimated investment to achieve this goal is of 673 million dollars.</td>
</tr>
<tr>
<td>6 Eco-efficiency rules for the Public Sector (D.S. Nº 009-2009-MINAM)</td>
<td>• Defines an eco-efficiency rule as an action addressed to promote the continuous improvement of the public services, using fewer resources and reducing negative impacts in the environment.</td>
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<td></td>
<td>• The rules are addressed to ensure saving through the:</td>
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<td></td>
<td>- reduction of the use of paper and other related materials,</td>
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<td></td>
<td>- reduction of the use of energy,</td>
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<td></td>
<td>- reduction of the use of water, and</td>
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<td></td>
<td>- segregation and recycling of solid waste.</td>
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<tr>
<td>7 Inter-active system for the efficient use of energy</td>
<td>Using an Energy Efficiency web site: <a href="http://peruahorraenergia.minem.gob.pe">http://peruahorraenergia.minem.gob.pe</a></td>
</tr>
<tr>
<td>8 Rules to enforce savings of energy in the Public Sector (D.S. Nº 034-2008-EM 2008-06-19)</td>
<td>The Rules set that Public entities must replace fluorescent lineal lamps (from 40W down to 36W), as well incandescent lamps for compact fluorescent lamps.</td>
</tr>
<tr>
<td>9 Formulation of an Energy Efficiency Policy</td>
<td>To ensure energy savings in lighting, in the operation of industrial boilers, as well in refrigeration activities.</td>
</tr>
<tr>
<td>10 Energy Efficiency minimum standards</td>
<td>Provides pertinent information about the energy efficiency of equipments with the aim to promote the use of energy efficiency, as well to reduce negative environmental impacts.</td>
</tr>
<tr>
<td>11 Energy Efficiency Labeling</td>
<td>To help consumers to buy low energy consumption products.</td>
</tr>
<tr>
<td>12 Guidelines for installation of domestic photo-voltaic systems (SFD)</td>
<td>To help consumers to properly install domestic photovoltaic systems and to ensure that the system will operate in a save, trustable and efficient way.</td>
</tr>
<tr>
<td>13 Inter-ministerial Energy Efficiency Programme</td>
<td>To ensure a joint and efficient partnership with the Ministry of Housing. Rules related to the use of solar and wind powered systems for houses have been developed.</td>
</tr>
<tr>
<td>14 International technical cooperation - ATN/IF-7040-PE</td>
<td>To consolidate the institutional and regulatory framework for sustainable and efficient use of energy.</td>
</tr>
</tbody>
</table>

Sources: MINAM, MINEM and National Congress web pages (see list of references)
5. Institutional & Technical Capacity to Design MAs

As mentioned on the first section of this paper, in 2010 the European Commission developed a country study named “Developing countries, monitoring and reporting on greenhouse gas emissions, policies and measures: Final country report Peru”. The study aimed to understand the needs that developing economies have to develop to implement NAMAs and MRV systems. The study was carried by Euroconsult Mott Macdonald, in collaboration with a national team and national authorities.

According to the study\(^3\), the main challenge that the country faces regarding the designing of mitigation actions is the lack of reliable national information systems and capacity to create projection models. The national information systems are not centralized, the information is outdated and there is a lack of harmonized methodologies for evaluating the different alternatives of MA’s to relate to economic growth and emissions reduction potential, in order to prioritize their development\(^4\).

The Energy Sector does have a more reliable information system (compared to other sectors) but it does not give feedback to the national GHG inventory systems. In terms of information related to mitigation and emissions in the public sector, the Energy Sector has the capacity of generating analytical models based on their information. The Ministry of Energy produces bi-annual basis information for a national energy balance, with information on the use and consumption of energy and fuel in all sectors in the alternate years, extrapolating the information contained in the previous year and foresight scenarios are carried on every 5 years. Until 2009, this foresight plans were developed as an internal exercise and without consultation with the industry and / or other civil society actors.

There is an initiative to further develop the “National Energy Information System” promoted by the Latin American Energy Organization (OLADE) that has a module on GHG emissions. The latest reports analyzing such system do not mention what should be the coordination and flow of information between participant institutions.

There is also very little experience on the establishment of baselines and projections development. Most of this kind of work has been developed for CDM projects but not necessary for national projects. Both of these problems difficult the project design from the beginning, especially to estimate the MA’s potential emission reductions and to design and plan MAs and MRV systems that can be adequate for NAMAs.

The NAMA exercise identified the need to involve different stakeholders in NAMA design in order to develop a successful and feasible program. This is a very difficult task to carry on as the level of coordination needed is very high, and national coordination culture is very low. However this coordination is necessary from the design level in order to involve the stakeholders from the beginning and avoid the risk of lack of approval from a relevant stakeholder at the implementation stage.

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\(^3\) Euroconsult Mott Macdonald.

\(^4\) MAPS-Peru. "State of the Art".
As for the institutions and their capacities, and despite the recent creation of the Directorate General for Energy Efficiency at the Ministry of Energy and Mines, there is still room to improve their knowledge on new technological alternatives for energy efficiency. Figure 4 shows the main stakeholders identified in the Efficient Lighting NAMA design exercise that need to be involved from the beginning.

6. Institutional & Technical Capacity for Implementation

According to the study “Developing countries, monitoring and reporting on greenhouse gas emissions, policies and measures: Final country Report Peru”, the main characteristic of the institutional and political arrangements is the lack of articulation among them to guarantee an effective and efficient implementation of mitigation actions, added to the fact that there is no National Monitoring System of programs and projects.

As mentioned before, the Ministry of Environment was created in 2008 which makes it a relatively new authority and some responsibilities and competences from other Ministries and Public Entities were transferred to it. This is the case of the new Organism for Environmental Evaluation and Control (OEFA) attached to the Ministry of Environment, which recently became part of the National System for Fiscal and Environmental Regulation, as the governing body, under the Law N°29325. OEFA’s main objective is to meet with environmental legislation as well as supervise and assure the effective evaluation, supervision, fiscal control and sanction in environmental matters. These faculties will be exercise by the system in an independent, impartial, easy and efficient way.

In the role of **Evaluator**, the OEFA will assume roles of surveillance and monitor to assure the effective accomplishment of environmental laws. In the role of **Direct Supervisor**, the OEFA assumes the follow up and verification actions with the purpose of assuring obligations and incentives established in environmental regulation matters. This involves coordination with other formerly independent regulating bodies that have been in charge of supervising standard compliances in forest practices (OSINFOR) and

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5 Euroconsult Mott Macdonald, December 2010
The OEFA also assumes a **Normative Function**, defining standards in reference to fiscal and environmental control.

The OEFA may require support from public entities such as local and regional governments. As a sanctioning body, the Ministry of the Environment will approve the scale of sanctions taking as a reference the scale established by the General Environmental Law. The OEFA may impose precautionary as well as amending measures to avoid environmental damages and deterioration. The OEFA may also impose the stagnation and restriction of activities as a sanction for damages in the environment, natural resources, people and other harmful damages.

The law also dictates that, through the **Supreme Decree**, the entities in charge of evaluating, supervising, controlling and sanctioning in environmental matters will be established and assumed by OEFA, as well as the schedule to transfer relevant documentation that has been previously developed in environmental regulation matters.

The transitional process of transferring the environmental inspection responsibility from sector agencies such the Supervisory Agency for Investment in Energy and Mining (OSINERGMIN) to the new Organism has generated some difficulties in relation to the national environmental control system and has temporarily affected its monitoring, control and enforcement capacities due mainly to lose of human capacities. However, it is a step towards centralizing information and building the enforcement power that the Ministry of Environment requires to fulfil its monitoring tasks.

For the specific case of Efficient Lighting, some issues regarding to technical capacities within FONAFE (National Fund for Financing State Business Activity) - which was the institution in charge of the National Program to Replace Incandescent Lights - were identified. They were mainly related to the lack of experience with the CDM process, and that administration approval processes can take longer within the public sector compared to what they take in private companies.

### 7. MRV systems for MA’s in the Energy Sector

The national institutional structure of the Energy Sector centralizes all the information related to the energy activities within the Ministry of Energy and Mines. This allows for the information to be up to date and to be easily handled by the same sector. The Ministry has a system that ensures consistency, understanding, accuracy and transparency, initially implemented by the Technical Office of Energy and currently by the General Office of Planning. The only requirement to satisfy the GHGs inventory system is to improve the comparison, which would be achieved by incorporating the National Energy Information System of the existing system.\(^6\)

Most of the mitigation actions are not being measured by a national system and therefore not being included in the National Communication to UNFCCC. Only the registered CDM projects have an appropriate monitoring and reporting system that allows them to keep track of their progress and emission reduction. Therefore, only some of the mitigation actions within the energy sector are properly accounted for. However, current efforts are being developed by MINAM to implement a National Information System for GHG accounting, called SINENGEI.

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To fill in those gaps, the efficient lighting NAMA proposes a different baseline and indicators for the NAMA MRV system. MINAM and MINEM have concluded that NAMAs should promote transformational changes and, at the same time, reduce emissions. Therefore, not only GHGs emission reductions should be measured, but also the transformational changes they are trying to boost. For this specific NAMA proposal, the team suggested the following indicators to develop a baseline, for MRV system:

- Energy Efficiency Projects funded by commercial banks (number of projects and amount)
- Knowledge surveys on energy efficiency
- Inventory of available case studies on energy efficiency and educational material.
- Existence of an information platform on energy efficiency

8. Financing

As has been mentioned in the two letters about voluntary mitigation actions sent by the Government of Peru to the Executive Secretary of the UNFCCC, Peru wished to finance its mitigation actions using national public and private funds as well as international cooperation funds and to trade emissions in the carbon market. In doing so, funds will be allocated in the annual national budget, and those NAMAs that seek for international cooperation will be placed in the registry that the UNFCCC Secretariat will establish, accordingly with the decisions adopted during COP 16 in Cancun. Regarding the carbon market, Peru will seek funding through the current mechanisms in force; as well those new mechanisms which are expected to receive approval during COP 17 in Durban.

For the Efficient Lighting NAMA, a mix of national and international sources, as well as carbon markets are suggested to fund the different actions. All the supported actions need technical assistance and international funding to implement them effectively. The proposed mitigation actions should be designed with a programmatic approach, taking into consideration CDM specifics regarding to methodology, to keep the possibility of obtaining economic benefit from trading emission reductions, either in the voluntary or CDM market. For the preparatory phase of this NAMA, Peru requires technical assistance and international financial aid in order to complete the design and also follow its implementation.

The exercise found that it was difficult to involve commercial banking institutions in the financing of energy efficiency projects because they do not take into consideration future savings originated by this kind of projects as sufficient guarantee to assume risks and provide funding at a reasonable interest rate. Therefore, international technical assistance in building capacity for the commercial banking is also needed.

9. Conclusions from Step 2

The most general conclusion about the NAMAs scheme is that they should boost transformational economic, social and cultural changes within the sector and the country where they are developed and at the same time, mitigate GHG emissions.

9.1 General Conclusions from the Energy Sector

Mitigation Actions in the Peruvian energy sector follow the logic of “deep transformational changes” and include the energy industries, energy demand and energy distribution. It is important to acknowledge that in order for deep transformation to occur,
changes in social behaviour, the financial system, policies and politics, support information systems need to be catalyzed. This also poses a big challenge in terms of going from plans to implementation.

There is a need to introduce the concept of Low Emission Development Strategies (LEDS) both at the national and sector levels. LEDS are umbrella strategies/plans for mitigation actions that allow countries to follow sustainable-development pathways. Among the known benefits of having such strategies are: ensuring climate strategy is consistent with existing national development plans, ensuring that MAs are prioritized for each sector considering development goals; providing coherence across MAs, sectors and ministries and facilitating funding for MAs.

The Energy Sector has better information systems than other sectors in Peru, and is taking many actions to continuously improve it. However, it still can improve its technical capacities to deliver more holistic projects that improve the energy sector and at the same time can be considered as mitigation actions.

Finally, it is clear that technical capacity in energy knowledge; information systems; MRV design and implementation and; funding schemes for energy efficiency projects need to be improved with the support of national and international cooperation funding.

9.2 Specific Conclusions from the Energy Efficiency Example

In Peru, energy efficiency mitigation measures represent an opportunity. The economic growth projection for Peru for the next 5 years is around 9%, and a growth in energy supply will be needed to sustain this growth. Energy efficiency contributes to the availability of electricity since it decreases demand, avoiding the problems of lack of capacity to meet short-term needs while avoiding the need for construction of new plants in the long term. Reduced power consumption is associated with lower CO₂ emissions and is therefore a mitigation measure. Also, lighting is a good entry to influence behavioural patterns towards mitigation, and to relate this term to a more familiar one of increased efficiency.

The proposed efficient lightning NAMA has a very clear policy context: it is based on an existing Energy Efficiency Plan that until 2011, was being updated. The former plan was not ready for execution as it did not identified funding sources or had allocated funds or defined MRV systems and private sector involvement. Still, it is the only sector policy that explicitly addresses emission reductions. Further regulation for the sector is still under development.

Even in a sub sector where it is considered relatively easy to implement cost effective mitigation actions, and that was prioritized because it was considered to be a sector in which immediate action could be initiated, there are significant cultural and financial barriers to implement actions. In terms of cultural barriers there is a very weak culture of energy saving and also a complexity of stakeholders. In terms of financial barriers perhaps the most significant is low energy prices and the lack of information that increases the risks that face large scale investments. Another barrier is that most funding schemes provide credits against the projection of higher incomes but not against the projection of future savings. Tariffs set by the regulator are also a topic to explore, since there could be room to promote efficiency by applying differentiated economic incentives.

MRV is a very complex topic, since it comprises a number of different measurements at different levels. Within the energy sector MRV relates to the way inventories are calculated from energy generation, distribution and use; it also includes the way mitigation actions are being registered and monitored and furthermore, how their contribution to emission reductions is being measured.
Relating to the latter and drawing from the example, although lighting efficiency programs in the residential sector can catalyze transformation, reductions are very difficult to measure; in the case of the industrial sector, confidentiality issues arise. Also a barrier for the industrial sector is the lack of reporting due to a highly informal industrial sector.

For the issue of program MRV there is a clear opportunity to use information and apply lessons learned from CDM, such as the developed baseline estimation methodologies, and the institutional arrangements that are needed for the mechanism to work well.

The proposed approach to MRV in Peru goes far beyond measuring and reporting emission reductions. It includes the monitoring and measurement of indicators of transformational changes and gives special attention to measuring benefits of mitigation. It also includes a registry of financial resources invested and involved stakeholders.

Finally, it is important to note that this is the first exercise of formulating a NAMA for Peru, and that part of the purpose of this study was to identify the steps to complete its design. Since it is a NAMA it has the potential to be implemented in the short term and broad possibilities of success and to be replicated, we conclude that it is advisable to apply for international cooperation to complete its design. The priority areas of focus for international cooperation could be: the establishment of the baseline and the MRV system, support for the implementation of GHG Report (the network of national GHG inventory), including updating the inventory of 2000 and the support in the design and implementation support to the financing program to catalyze public and private investment.
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Ley General del Ambiente (Ley 28611)

Ley de Creación, Organización y Funciones del Ministerio del Ambiente (Decreto Legislativo Nº 1013)

Ley Marco del Sistema Nacional de Gestión Ambiental (Ley Nº 28245)


Reglamento de la Ley Nº 28245, Ley Marco del Sistema Nacional de Gestión Ambiental (Decreto Supremo Nº 008-2005-PCM)


The National Environmental Management System Law (Law 28,245), retrieved on July 10, 2011 from http://www.google.com.pe/url?sa=t&source=web&cd=1&ved=0CBUQFjAA&url=http%3A%2F%2Fwww.minam.gob.pe%2Findex.php%3Foption%3Dcom_docman%26task%3Ddownload%26gid%3D664%26Itemid%3D7&rc=t&j&q=ley%2028245&ei=6rcfTo3hCOboQHey_moAw&usg=AFQjCNF22TgRVoOo-p_KGmXM0kdFt7Y2Yg

The Law for the Sustainable Use of Natural Resources (Law 26821), retrieved on July 12, 211 from http://www.fonamperu.org/general/documentos/leybiodiv.pdf


Prioritization and formulation of a Mitigation Action Study (under reviewing process). PPT Presentations from Rafael Millán, José Eslava and María Paz Cigarán to present the study.
LIST OF APPENDICES

Annex 1. Peruvian Institutional and Legal Framework

Institutional Framework

The National Environmental Authority in Peru is the Ministry of Environment (MINAM), established in May 2008. Since its creation, the MINAM has strengthened environmental institutions, has expanded the state’s role in environmental matters, and has assumed the functions of the former National Environmental Council (CONAM). Other national institutions pioneers in climate change research in the country are the National Service of Meteorology and Hydrology Service of Peru (SENAMHI), the Geophysical Institute of Peru (IGP), the Peruvian Institute for Research on Amazon (IIAP), and the National Institute of Natural Resources (INRENA), have also been ascribed to the MINAM. The Sea Institute of Peru (IMARPE), ascribed to the Vice-ministry of Fisheries at the Ministry of Production, and the Navy’s Directorate for Hydrography and Navigation also deploy a very important research effort on climate change, particularly with regard to the ocean and atmospheric phenomena.

The MINAM has a Directorate General for Climate Change, Desertification and Water Resources (DGCCDRH) which is the National Focal Point to the UNFCCC. The following tasks are the main responsibilities of the DGCCDRH:

- Develop of national communications to the UNFCC in which reports GHGs emissions and measures taken to implement the UNFCCC provisions.
- Promotion of capacity building for climate change scientific research, technical expertise, and management.
- Formulate and implementation coordination of both, the National Strategies for Adaptation and Mitigation.
- Formulate and periodically update the national inventory of GHGs emissions.
- Develop, implement, publish and update national, regional and local Administrations efforts to mitigate climate change.

Peru as part of the Kyoto Protocol is an active user of the Clean Development Mechanism (CDM). The MINAM is also the Designated National Authority (DNA) for CDM.

Both CONAM and MINAM, have conducted climate change programs and projects in coordination with other key governmental institutions related to climate change mitigation as the Ministries of Foreign Affairs, Economy and Finance, Energy and Mines, Industry, Agriculture, Transport and Communications, Health, National Council of Science and Technology, the National Civil Defense Institute, and Regional and Local governments. These programs have played a fundamental role on capacity building and generation of strategic information. The Ministries of Foreign Affairs, Economy and Finance, and Energy and Mines, have Departments and Units that directly work in the issue of climate change.

On the specific field of CDM, it is also important to highlight the role of the National Environmental Fund (FONAM), sponsor of the Mechanism in Peru and governing body of the CDM project portfolio.
Legal Framework

The National Constitution, which in its Article 2, states that “Everyone has the right to ... enjoy a balanced environment suitable for the right development of his life.”

The National Accord - signed in 2002 and poses a set of National Policies developed and approved on the basis of dialogue and consensus - which defines the direction for the country's sustainable development and assert their democratic governance.

In his 19th State Policy "Sustainable development and environmental management," the National Accord establishes the country's commitment to "integrate national environmental policy with economic, social, cultural and territorial organization, to help overcome poverty and achieve sustainable development in Peru and also to institutionalize environmental public and private management to protect biodiversity, to facilitate the sustainable use of natural resources, to ensure environmental protection, and to promote sustainable towns and cities; which will help improve the quality of life, especially of the most vulnerable inhabitants of the country”.

The General Environmental Law (Law 28611), which is the legal instrument that regulates the management of the environment and its components in Peru, based on the balanced integration of social, environmental and economic aspects of national development, as well the needs of present and future Peruvian generations. The Law states, as priority goal, that environmental management aims to prevent, monitor and prevent environmental degradation. The Law stipulates the use of mitigation measures when it is not possible to eliminate the causes that generate such environmental degradation.

The National Environmental Management System Law (Law 28245), which aims to ensure the effective implementation of the national environmental objectives, strengthening mechanisms for cross-sectoral environmental management. This Act states that the MINAM is the institution responsible for participatory design and management strategies for the progressive implementation of the Peru’s obligations arising from the implementation of the provisions of the UN Framework Convention on Climate Change.

The Law for the Sustainable Use of Natural Resources (Law 26821), which aims to promote and regulate the sustainable use of natural resources, renewable or not, establishing a framework for the promotion of investment, ensuring a dynamic balance between economic growth, conservation of natural resources and the environment, and the development of the human beings.

The National Environmental Policy - NEP (DS-MINAM 012-2009), sets out the national policy guidelines and encourages the adoption of preventive measures to mitigate and adapt to climate change. The NEP also promotes the development of forestry, waste management activities, and the use of renewable energies as instruments to help climate change mitigation. The NEP also ensures the dissemination of knowledge about the consequences of climate change and improves training skills for the use of appropriate technologies for both adaptation and mitigation.

The National Climate Change Strategy - NCCS (DS-PCM 086-2003), which is the instrument that guides the management of climate change in Peru. The NCCS is mandatory for all entities of the National Administration, and the Regional and Local Governments. The National Strategy sets the strategic lines to promote scientific and technological research on mitigation to climate changes, the development of policies and measures oriented to manage GHGs emissions to reduce the impact of climate change, considering the
mechanisms available in the Kyoto Protocol and other economic instruments, as well to promote the implementations of projects that are intended to alleviate poverty, and mitigation of GHGs.

The National Environmental Action Plan - NEAP 2011-2021 (DS-MINAM 014-2011), that sets mitigation targets for wastewater, solid waste, and forest fields, with implementation horizons for 2012, 2017, and 2021. The NEAP aims to ensure that, for 2021, a 100% of urban wastewater is treated and 50% of them are reused. In relation to rural areas wastewater, the NEAP aims to ensure that 50% of them are treated and 30% are reused. Regarding solid waste, the NEAP seeks to reach the goal of 100% of non-reusable solid waste coming from local administrations (municipalities) are properly treated and disposed, and 100% reusable solid waste is recycled. The NEAP also looks to reduce in a 100% the average annual rate of deforestation of primary forests, for the period 2000-2011, promoting its conservation and sustainable use. The NEAP also aims to include all forests identified as non-categorized under the current forest management, and reduce 100% of GHGSs emissions generated by land use, land use change and forestry (LULUCF), compared to the year 2000.

The Action Plan for Climate Change Adaptation and Mitigation - APCCAM (MINAM 2010), that identifies and points out the national and global priorities in terms of Peru’s contribution to global mitigation of climate change; promotes the inclusion of actions addressing climate change in investment and development activities of short and medium term that have been undertaking for the National Administration and the Regional Governments; sets the priorities of public spending and investment in terms of insertion approach to climate change programs and development projects in the country; guides the negotiation efforts to obtain technical and financial international support for the implementation of mitigation actions in the country; and helps to lay the groundwork for sustainable low carbon intensity economic development in the country.

The National Mitigation for Climate Change Guidelines - NGCCM (MINAM NGCCM 2011), that state that the challenge of a mitigation policy is to keep it decoupled from increased emissions of GHGs and attuned to a low carbon economy, but without compromising the national goals of sustainable development, and poverty reduction. The NGCCM combine components and criteria of national policy, with international ones. For that reason, the national mitigation effort relies on a foreign policy that promotes global mitigation to climate change.

The Organic Law of Regional Governments (Law 27,867) and its amendments (Law 279 029), that, among other provisions, determines that each region should have Regional Climate Change Strategy.

The Bicentennial Plan: Peru to the 2021 (DS-PCM 054-2011), which in its Strategic Axis 6 promotes, for the three levels of government and based on scientific studies and research, the adoption of mitigation and adaptation strategies to face climate change impacts in the country.

The Multi-annual Macroeconomic Framework (MEF 2010), which has incorporated the phenomenon of climate change on economic and financial policy of the country, and requires its consideration and impact in all planning activities made by the National, Regional and Local Administrations.

Annex 2. Criteria used to Prioritize a Sector for NAMA development

<table>
<thead>
<tr>
<th>Selection criteria sector / sub sector for PRONAMI’s development</th>
<th>Indicators</th>
<th>Information sources</th>
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</thead>
<tbody>
<tr>
<td>Potential emissions reductions in the short (2020) and long term (2050)</td>
<td>Contribution of sector/sub-sector to the country GHGs emissions</td>
<td>Emissions’ Inventory for the year 2000 (MINAM, 2009)</td>
</tr>
<tr>
<td></td>
<td>Projected total increase of emissions for sector/sub-sector</td>
<td>Emissions projected (MINEM, 2009)</td>
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<td></td>
<td>Potential reduction emissions of mitigation measures identified by sectors/sub-sectors</td>
<td>Perú’s Second National Communication to the UNFCCC (Table 5.12) – Tons of CO₂ emissions with and without application of mitigation measures Referential Plan for the Efficient use of Energy 2009-2018 (MINEM 2009)</td>
</tr>
<tr>
<td>Economic Feasibility</td>
<td>Cost per unit of reduced emissions (Euros/Ton of CO₂eq) of the mitigation measures identified in different sectors/sub-sectors</td>
<td>Abatement cost curve for Latin America (Mckinsey, 2009)</td>
</tr>
<tr>
<td>Alignment with political priorities</td>
<td>Voluntary commitments and proposals presented to the UNFCCC and other Forums</td>
<td>Voluntary commitments sent to be included en Annex II of the Copenhagen Accord (MINAM, 2010) Mitigation measures proposed in Perú’s Second National Communication to the UNFCCC (MINAM 2010)</td>
</tr>
<tr>
<td></td>
<td>Existence of sectoral/sub-sectoral Policies and Plans related to mitigation</td>
<td>Second National Communication to UNFCCC (MINAM, 2010)</td>
</tr>
<tr>
<td></td>
<td>Number of projects of Clean Development Mechanism (CDM) by sector as reported by the Executive Board</td>
<td>Data base on registered projects in de CDM Executive Board (cdm.unfccc.int)</td>
</tr>
<tr>
<td></td>
<td>Feasibility Level of an implementing emissions reporting system/ information available</td>
<td>Developing countries, monitoring and reporting on greenhouse gas emissions, policies and measures, Country Report Peru (Euroconsult Mott Macdonald, 2010)</td>
</tr>
<tr>
<td>Socio/Cultural Conditions</td>
<td>Is it required to reverse a trend or promote and starting one?</td>
<td>Low-carbon development (World Bank, 2009) Others (news)</td>
</tr>
<tr>
<td></td>
<td>Social co-benefits</td>
<td>Low-carbon development (World Bank, 2009)</td>
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<tr>
<td></td>
<td>Adaptation Potential</td>
<td>Experts opinion</td>
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</tbody>
</table>

*Source: Working document from ongoing consultancy for MINAM/ UNDP.*
## Annex 3. Gaps and Proposed Actions for Planning, Designing, Implementing and Evaluating NAMAs

<table>
<thead>
<tr>
<th>Gap/Barrier</th>
<th>Classification</th>
<th>Action</th>
<th>Focal stakeholders</th>
<th>Other stakeholders involved</th>
<th>Overall estimate of cost</th>
<th>Past, ongoing and planned activities by other donors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planning</td>
<td></td>
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<td></td>
<td>Mitigation Action Plans and Scenarios (MAPS) project, CIF is contributing US$ 450,000 for preparatory phase, NAMA development, facilitation and backstopping.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Policy</td>
<td>Develop (detail) the National Zero Deforestation Plan in the Amazon, which should be based on:</td>
<td>MINAM, MEF, RREE</td>
<td>MINEM, MINAG, Regional Governments Universities/ Research institutions Facilitation team Indigenous peoples organizations, private sector, civil society</td>
<td>US$ 2,500,000 (for this sector only)</td>
</tr>
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<td></td>
<td>The vision on the value of forests and their use is divergent within the government at the sectoral level (MEF, Ministry of Transport, MINAM, MINAG, MINEM) and territorial level (the various Regional and Local Governments), and between the business sector and the civil society, including indigenous peoples.</td>
<td>Develop alternative investment scenarios and land uses of forest areas as input to the consultation processes (economic variables: costs, investments and benefits; social variables: job creation; environmental variables: GHG emissions and other impacts.) Develop and implement a strategy at the highest level (meetings with government leaders, businessmen and community leaders). Develop training, awareness and exchange of knowledge activities with indigenous communities in relation to: the value of forests, their sustainable management, the carbon market, and developing monitoring and registry systems of environmental change that combine science technologies with ancient knowledge.</td>
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<tr>
<td>Designing</td>
<td>There are no reference level studies (baselines) for the regions on deforestation and degradation, or methodologies that can be applied to the diverse forest ecosystems of Peru. The lack of core information is: Forest inventories (the latest national inventory)</td>
<td>Develop and validate methodologies and reference levels of deforestation and forest degradation for the country regions (projects / programs such as REDD+), as well as guidelines and protocols for articulating the three levels required for a MRV system (early action - project-, regional and national). It is necessary to: Update the national forest inventory, especially the Amazon region one, and establish a funding system for regular updates.</td>
<td>MINAM, MINAG, Regional Governments</td>
<td>Universities and research centers, IIAP</td>
<td>n.d.</td>
<td>The San Martin Region has had various sources of funding (Carnegy, WWF) for the development of regional reference levels (Annex 11, number 13).</td>
</tr>
<tr>
<td>Gap/Barrier</td>
<td>Classification</td>
<td>Action</td>
<td>Focal stakeholders</td>
<td>Other stakeholders involved</td>
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<td>was elaborated on 1970)</td>
<td></td>
<td>• Estimate the biomass and the ability to capture the main forest ecosystems of Peru, at the regional level.</td>
<td></td>
<td></td>
<td></td>
<td>Annex 11, number 14</td>
</tr>
<tr>
<td>• Biomass and carbon stocks by major forest ecosystems and / or species.</td>
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<tr>
<td>Information is not available for stakeholders for the design of adequate policies and programs to address emissions from forestry</td>
<td>Information and Systems</td>
<td>Conducting research on forest dynamics and their ability to capture CO$_2$ as well as on the valuation of ecosystem services, taking into account the diversity of major ecosystems that exist in Peru and the costs of degradation and deforestation in the Amazon region. Design and implement a mechanism for dissemination, maintenance and public access to research and information generated related to sustainable forest management (the platform of the Scientific Research Agenda can be used) and incentives for conservation and sustainable use. The platform may include topics such as environmental services and recovery; forest dynamics, causes and implications of changes in land use, biomass and carbon sequestration capacity, carbon markets (regulated and voluntary) investment opportunities and financing.</td>
<td>MINAM MINAG Regional Governments</td>
<td>MINEM COFOPRI Regional Governments Local Governments Universities</td>
<td>US$ 1’000,000</td>
<td>Annex 11, number 13</td>
</tr>
<tr>
<td>Implementing</td>
<td>Policy</td>
<td>Intensify efforts for the Economic Ecological Zoning and the Land Management Plans (so they allocate land uses in a consensual way), mainly in the regions of the Amazon rainforest: Loreto, Ucayali, San Martin, Madre de Dios and Amazonas, The EEZ and POT should be developed where possible, at the micro level, and agreed with the Local Governments. Establish a coordination mechanism among the institutions that grant rights to the territory, in order to establish a single cadastre system at the national level, and criteria for approval of land use (territorial-based approach rather than sectoral).</td>
<td>MINAM MINAG Regional Governments Local Governments</td>
<td>Organization of indigenous peoples, NGOs</td>
<td>n.d.</td>
<td>Annex 11, numbers 4, 8 and 10</td>
</tr>
<tr>
<td>Gap/Barrier</td>
<td>Classification</td>
<td>Action</td>
<td>Focal stakeholders</td>
<td>Other stakeholders involved</td>
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</tr>
<tr>
<td>There are various initiatives and plans for the development of information systems that have potential of overlapping. These initiatives can be the basis for an MRV system for the sector of land use change and forestry, SIVAN - SIPAN, SININGEI, MINAG Information Systems, SINANPE, OSINFOR, etc.</td>
<td>Information and Systems</td>
<td>Systematize information on the various information systems related to conservation and forest management, their objectives, scope and needs of capacity strengthening. Analyze points of complementarity, coordination and inputs for the two systems: the SININGEI and the National Deforestation Monitoring System</td>
<td>MINAM MINAG</td>
<td>OSINFOR</td>
<td>US$ 50,000</td>
<td>Annex 11 numbers 15 and 16</td>
</tr>
</tbody>
</table>
| The technical staff both in the Ministry of Environment (Directorate of CC), the SERNANP / MINAM and MINAG (Forestry Department) are relatively new and are learning about the CC issue and becoming familiar with the sector itself. Capacities are being transferred from the Forestry Department (MINAG) gradually to the regional governments. This transfer does not have the technical resources, infrastructure and funding required to allow the regions to exercise their function fully. | Institutional Issues | Develop a capacity building program in the central institutions of the government (MINAM, SERNANP, Forest Management MINAG, OSINFOR and regional governments) to develop, agree, implement and monitor the National Zero Deforestation Plan. The items to be addressed are: the management of climate change, opportunities of development with low carbon emissions, developing the Deforestation Program, and the design and implementation of systems for monitoring, reporting and verification of its implementation and compliance, and tools to control various sectors to enforce compliance; feasibility tools for analysis and prioritization of measures under the Plan. Using the findings and work already done under this project, the capacity building program would have the National Zero Deforestation goal as its main objective. Some of the specific activities that could be part of the program are:  
  - Workshops (both training and experience sharing, with international forest experts)  
  - Development, gathering and evaluation of relevant Information  
  - Project management  
  - Communication and incidence strategy (including a project website) | MINAM MINAG SERNANP MINAG Regional Governments | OSINFOR | US$ 2'000,000 | Annex 11, number 4 |
<table>
<thead>
<tr>
<th>Gap/Barrier</th>
<th>Classification</th>
<th>Action</th>
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<th>Other stakeholders involved</th>
<th>Overall estimate of cost</th>
<th>Past, ongoing and planned activities by other donors</th>
</tr>
</thead>
<tbody>
<tr>
<td>The control and supervision of the activities of conservation (Protected Areas) and forest concessions, to its various uses (plantations, tourism, etc), needs to be strengthened to be effective both at national institutions and regional ones.</td>
<td>Institutional Issues</td>
<td>Define roles and responsibilities of the central government (sectors), regional governments and communities in relation to monitoring of deforestation and degradation, and its compatibility with sectoral information systems planned or in progress. Define the legal and institutional framework of the forestry sector. We recommend: Develop a strategy of the forest sector, establish the legal framework on environmental services, specifically about its ownership, constitute the regulatory and institutional framework for the implementation of REDD+ schemes (if regional governments are developing baselines for REDD+, it is necessary to define who validates them), establish an institutional framework articulated that includes a forest MRV system; and determine the tax rules related to the economic benefits obtained as a result of the implementation of REDD+.</td>
<td>SERNANP MINAG</td>
<td></td>
<td>n.d.</td>
<td>Annex 11, number 1, 2 and 5</td>
</tr>
</tbody>
</table>

| While there are underway efforts for intersectoral coordination for the management of CC, especially in the field REDD+, the MINAG and the MINAM manage parallel programs, which have a high potential for synergy. Strengthened coordination is required within ministries and with the various ministries and levels of government (sub-municipal). | Institutional Issues | Establish a working space between the Forestry and Wildlife Directorate and OSINFOR (MINAG) and the Ministry of Environment (Directorate for Climate Change, the Directorate of Valuation, and SERNANP) to:  
  - Exchange information on the various programs and projects underway and planned in relation to: Conservation and sustainable management of forests, and current and potential market incentives (REDD and CDM)  
  - Articulate programs / projects / initiatives of the Ministry of Environment and the Ministry of Agriculture and deploy efforts with the Amazonian regions.  
  - Develop plans and / or joint programs and unified guidance on the issue for regional governments.  
  - Complement and make compatible the content and processes of the Forestry Law and the Law on Environmental Services (both in consultation processes for approval)  
This working space could include a combination of | MINAM SERNANP MINAG | Regional governments of the Amazon | US$ 200,000 | There is currently a consultancy in course for the implementation of a Climate Change Agency that could systematically analyze complementarity and centralize financial incentives (UNDP) |
<table>
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<tr>
<th>Gap/Barrier</th>
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</thead>
<tbody>
<tr>
<td>There are several REDD+ initiatives by the private sector and NGOs, in coordination with some regional governments and/or communities. However, they don’t respond to Central Government guidance (MINAM and MNAG).</td>
<td>Institutional Issues</td>
<td>Establish a voluntary central registry with regional nodes of the REDD+ projects and programs being developed at national and regional levels.</td>
<td>MINAM, MNAG</td>
<td>Regional governments, NGOs, Private investors</td>
<td>US$ 150,000</td>
<td>There is currently a consultancy in course for the implementation of a Climate Change Agency that could systematically analyze complementarity and centralize financial incentives (UNDP) ANNEX 11 no 3, 11 and 12</td>
</tr>
<tr>
<td>There are several sources of cooperation and funding in Peru, and proposals from the private sector, but the projects are not necessarily articulated. The estimated funding amount is not enough yet (it is estimated that it is require at least U.S. $ 400 million annually for the Zero Deforestation Program in Peru).</td>
<td>Financing and incentives</td>
<td>Systematically analyze the complementarity of the various programs and projects aimed at reducing or avoiding emissions. Analyze financing schemes offered by the private sector (e.g., National Society of Industries, ADEX, Aseorandes) and its ability to complement the initiatives of the Government. Structure an incentives system for conservation and sustainable use of forests, where REDD+ is an alternative.</td>
<td>MINAM, MEF, MRE</td>
<td></td>
<td>US$ 150,000</td>
<td>There is currently a consultancy in course for the implementation of a Climate Change Agency that could systematically analyze complementarity and centralize financial incentives (UNDP)</td>
</tr>
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</table>

* Evaluating  
**Absence of culture of reporting, evaluating and giving feedback for future policy making.**  
Policy  
Develop indicators and a methodology for evaluation that is incorporated in the National Communications’ preparation process and helps retrofit future NCs and projects in general. This project could aim at having a mechanism to evaluate global country mitigation goals and establish guidelines for project and program evaluation.  
MINAM, MEF Ombudsman office, Comptroller office | NGOs | US$ 200,000 | The Peruvian Government is already seeking funds for the Third National Communication Process. |

Source: Euroconsult Mott Macdonald, 2010