

# Towards a national financing pathway for climate action in Peru

---

**Libélula Comunicación Ambiente  
y Desarrollo with E3G**

---

**August 2014**

**Libélula Comunicación Ambiente y Desarrollo** Pía Zevallos, Rodrigo Castro, María Paz Cigaran, Aida Figari, Ramzi Tubbeh, Angélica Ramos, Claudia Parra, Maria Gracia Aguilar and Diego Carrasco

---

**E3G** Chantal Naidoo, Taylor Dimsdale, Marcela Jaramillo and Amal-Lee Amin

## About Libélula

Libélula is a consulting firm specialised in climate change and communications.

Since 2007, Libélula has helped companies and institutions undertake initiatives that integrate sustainability into their operations.

Libélula leads innovative projects that guide private, public and civil organisations in the design of policies and actions that are leading to a better, low carbon future.

More information is available at [www.libelula.com.pe](http://www.libelula.com.pe)

## About E3G

E3G is an independent, non-profit European organisation operating in the public interest to accelerate the global transition to sustainable development.

E3G builds cross-sectoral coalitions to achieve carefully defined outcomes, chosen for their capacity to leverage change.

E3G works closely with like-minded partners in government, politics, business, civil society, science, the media, public interest foundations and elsewhere.

More information is available at [www.e3g.org](http://www.e3g.org)

---

## Libélula Comunicación Ambiente y Desarrollo

Calle Alfredo León 211,  
Miraflores, Lima  
Perú

Tel: +511 480 0078

[www.libelula.com.pe](http://www.libelula.com.pe)

## E3G (Third Generation Environmentalism)

47 Great Guildford Street, London SE1 0ES  
United Kingdom

Tel: +44 (0)20 7593 2020

Fax: +44 (0)20 7633 9032

[www.e3g.org](http://www.e3g.org)

© E3G 2014

---

Correct citation: Zevallos, P., Castro, R., Paz Cigaran, M., Figari, A., Tubbeh, R., Ramos, A., Parra, C., Gracia Aguilar, M., Carrasco, D., Naidoo, C., Dimsdale T., Jaramillo, M. and Amin, A. L. (2014) *Towards a national financing pathway for climate action in Peru*, Lima and London: Libélula Comunicación Ambiente y Desarrollo and E3G, August 2014.

---

This work is licensed under the Creative Commons Attribution-NonCommercial-ShareAlike 2.0 License.

You are free to:

- Copy, distribute, display, and perform the work.
- Make derivative works.

Under the following conditions:

- You must attribute the work in the manner specified by the author or licensor.
- You may not use this work for commercial purposes.
- If you alter, transform, or build upon this work, you may distribute the resulting work only under a license identical to this one.
- For any reuse or distribution, you must make clear to others the license terms of this work.
- Any of these conditions can be waived if you get permission from the copyright holder.

Your fair use and other rights are in no way affected by the above.



# Table of contents

---

Table of contents .....	3
List of tables and figures .....	4
List of acronyms .....	5
Acknowledgements .....	6
Key messages and summary .....	7
<b>1. Introduction .....</b>	<b>9</b>
<b>2. Methodology .....</b>	<b>10</b>
<b>3. Development and climate policy progress in Peru .....</b>	<b>11</b>
3.1 Development policy context .....	11
3.1.1 Environmental Management Multi-sector Commission .....	11
3.1.2 Multiannual Macroeconomic Framework (MMF) .....	12
3.1.3 Bicentennial Plan .....	12
3.1.4 Related government statutes applicable to LEDES .....	13
3.1.5 Sectoral regulatory frameworks applicable to LEDES .....	13
3.2 Climate change context .....	13
3.3 Current climate responses .....	15
3.3.1 Mitigation pledges .....	15
3.3.2 Sectoral efforts .....	15
3.3.3 Subnational efforts .....	16
3.4 Current climate change programme and project initiatives .....	18
3.5 Analysis of opportunities & barriers for LEDES in Peru .....	19
3.5.1 Challenges .....	19
3.5.2 Opportunities .....	19
<b>4. Readiness of Peruvian financial system for climate investment .....</b>	<b>21</b>
4.1 Financing climate action in Peru .....	21
4.2 National public finance .....	22
4.2.1 Primary public financial institutions involved in climate finance .....	22
4.2.2 Climate-related public financial system components and instruments .....	24
4.2.3 Tax instruments .....	26
4.2.4 National funds .....	26
4.2.5 Mechanisms for public-private investment .....	27
4.2.6 Conclusions .....	27
4.3 National private finance .....	28
4.3.1 Financial regulation in Peru .....	29
4.3.2 Private investment promotion agency .....	29
4.3.3 Main financial institutions .....	29
4.3.4 Capital markets .....	29
4.3.5 Instruments promoting private investment in LEDES .....	30
4.3.6 Private environmental funds .....	31
4.3.7 Capacity building programmes for finance sector .....	31
4.3.8 Conclusions .....	33
4.4 International finance .....	33
4.4.1 Foreign direct investment .....	33

# Table of contents

---

4.4.2 International co-operation.....	34
4.4.3 International climate finance funds .....	34
4.4.4 Institutional arrangements for climate finance.....	35
4.4.5 Conclusions .....	36
<b>5. Considerations for financing pathways for Peru.....</b>	<b>37</b>
5.1 Challenges & recommendations.....	37
5.2 Unlocking economic opportunitie.....	39
5.3 Unlocking finance for implementation.....	40
5.4 Developing a financing pathway for Peru .....	40
5.4.1 Short term – Build a sound base to finance implementation.....	41
5.4.2 Medium term – Pilot and build benchmarks .....	42
5.4.3 Long term – Financial ecosystem for climate investment .....	42
5.5 Conclusions .....	44
<b>6. References.....</b>	<b>45</b>

## List of tables and figures

---

Table 3.1 Main regulatory and policy instruments relevant to LEDS in priority sectors .....	14
Figure 3.1 Economic growth and emissions .....	15
Figure 3.2 GHG emissions composition years 1994, 2000 and 2009 .....	15
Figure 3.3 GHG emission scenarios for Peru.....	16
Table 3.2 Status of the voluntary commitments presented by Peru to the UNFCCC.....	17
Table 3.3 Status of the voluntary commitments presented by Peru to the UNFCCC.....	17
Figure 3.4 Regional climate change strategies status as of December 2013 .....	18
Figure 4.1 Climate finance flow diagram – Peru 2013.....	21
Table 4.1 Offices in MEF that deal with climate change issues and related actions.....	23
Figure 4.2 PIPs by (mitigation) sector .....	25
Figure 4.3 Investment in PIPs by (mitigation) sector.....	25
Figure 4.4 Financial flow (credits) towards the private sector (USD MM).....	28
Figure 4.5 Composition of companies in the Lima stock exchange.....	30
Table 4.2 Stock market indicators (yearly average) .....	30
Table 4.3 Results of renewable energy auctions .....	31
Figure 4.6 FDI flows.....	33
Figure 4.7 International cooperation disbursement channels – Peru.....	34
Figure 4.8 MINAM project portfolio.....	35
Table 4.4 Institutional arrangement requirements deriving from COP decisions.....	36
Figure 5.1 National financing pathways in the context of policies and plans .....	39
Figure 5.2 Milestones for national financing pathways over time.....	40
Figure 5.3 A pilot on integration and resource requirements.....	43

# List of Acronyms

---

<b>AF</b>	Adaptation Fund	<b>LULUCF</b>	Land use, land-use change and forestry
<b>AFB</b>	Adaptation Fund Board	<b>MAPS</b>	Mitigation Action Planning Scenarios
<b>BAU</b>	Business as Usual	<b>MEbA</b>	Microfinance for Ecosystem-based Adaptation
<b>CDKN</b>	Climate and Development Knowledge Network	<b>MEF</b>	Ministry of Economy and Finance
<b>CDM</b>	Clean Development Mechanism	<b>MEM</b>	Ministry of Energy and Mines
<b>CEPLAN</b>	Centro Nacional de Planeamiento estratégico	<b>MINAM</b>	Ministerio del Ambiente
<b>COFIDE</b>	Corporación Financiera de Desarrollo	<b>MMF</b>	Multiannual Macroeconomic Framework
<b>COFIGAS</b>	Programa de Financiamiento de Conversión a Gas Natural	<b>NAMA</b>	Nationally Appropriate Mitigation Actions
<b>COP</b>	Conference of the Parties	<b>NCCS</b>	NASA Center for Climate Simulation
<b>COSUDE</b>	Agencia Suiza para el Desarrollo y la Cooperación	<b>NFP</b>	National Financing Pathways
<b>DIGESA</b>	Dirección General de Salud Ambiental	<b>NGCCM</b>	National Guidelines for Climate Change Mitigation
<b>DNA</b>	Designated National Authority	<b>NIE</b>	National Implementation Entities
<b>ENSO</b>	El Niño Southern Oscillation	<b>NPL</b>	Non-Performing Loans
<b>FDI</b>	Foreign Direct Investment	<b>OEFA</b>	Organismo de Evaluación y Fiscalización Ambiental
<b>FIDECOM</b>	Fondo de Investigación y Desarrollo para la Competitividad	<b>OSINFOR</b>	Organismo de Supervisión de los Recursos Forestales y de Fauna Silvestre
<b>FIP</b>	Forest Investment Program	<b>PACC</b>	Programme for Climate Change
<b>FISE</b>	Fondo de Inclusión Social Energético	<b>PCM</b>	Presidencia del Consejo de Ministros
<b>FONAM</b>	Fondo Nacional del Ambiente	<b>PIGARS</b>	Planes Integrales de Gestión Ambiental de Residuos Sólidos
<b>GCF</b>	Green Climate Fund	<b>PIP</b>	Public Investment Projects
<b>GDP</b>	Gross Domestic Product	<b>PlanCC</b>	Planning for Climate Change
<b>GEF</b>	Global Environment Facility	<b>REDD</b>	Reducing Emissions from Deforestation and Forest Degradation
<b>GHG</b>	Greenhouse gas	<b>RES</b>	Renewable energy sources
<b>GIZ</b>	Gesellschaft für internationale Zusammenarbeit	<b>SERNANP</b>	Servicio Nacional de Áreas Naturales Protegidas por el Estado
<b>GRADE</b>	Grupo de Análisis para el Desarrollo	<b>SNIP</b>	Sistema Nacional de Inversión Pública
<b>IADB</b>	Inter-American Development Bank	<b>UNEP</b>	United Nations Environment Programme
<b>IDB</b>	Inter-American Development Bank	<b>UNFCCC</b>	United Nations Framework Convention on Climate Change
<b>INDECI</b>	Instituto Nacional de Defensa Civil		
<b>JICA</b>	Japan International Cooperation Agency		
<b>KfW</b>	Kreditanstalt für Wiederaufbau		
<b>LEDS</b>	Low Emission Development Strategy		
<b>LMM</b>	Lima's Metropolitan Municipality		

# Acknowledgements

---

Libelula Comunicación, Ambiente y Desarrollo are grateful for the contributions of the Peruvian government and associated entities who have offered access to information and engaged in interviews to develop this report. In particular, Libelula would like to acknowledge the specific contributions of the Government of Peru and COFIDE.

The report has benefitted from the financial and technical support of E3G and CDKN. The report has been co-authored, supervised and edited by E3G, in particular Chantal Naidoo, Marcela Jaramillo, Taylor Dimsdale and Amal-Lee Amin.

The authors also appreciate the comments from Leo Roberts, Nella Canales Trujillo and Ari Huhtala from CDKN and the support of Paula Rolffs, Gabriela Moya and Emma Fisher from E3G.

Libelula and E3G sincerely hope that the insights and material contained herein would advance Peru's efforts towards a financing pathway for a low emission climate resilient economy.

# Key messages and summary

---

This paper describes Peru's current state of climate change policy at the national level as well as its public and private finance systems in order to assess the state of readiness for such systems to implement and allocate investment in climate action. The insights gained from the study provide the basis to identify and develop key considerations towards a financing pathway for Peru's transition to a low emission resilient development path and presents proposed guidelines to develop financing pathways. The paper aims to provide a sound baseline of information from which further work and analysis should emerge, which may support the Peruvian government, private sector and its international development partners in effectively mobilising resources for such a transition.

The paper is organised in terms of a high level landscape of Peru's development and climate environment (Section 3) in the context of the Peruvian private financial system (Section 4) in order to establish guidelines and priorities that may guide a national financing strategy for Peru (Section 5). The report concludes with recommendations for further support for the development of a comprehensive NFP for Peru.

The development context within which Peru's climate efforts should be contextualised are highlighted in detail in Section 3, most notably:

1. Peru currently has three high level development objectives, i.e. continuing its economic growth, reduce poverty and reduce conflict, that have the potential for close links with Peru's low emission climate resilient development objectives.
2. Peru is among the ten most vulnerable countries to climate change in the world and presents four out of the five vulnerability characteristics recognised by the UNFCCC (low coastal zones; arid and semiarid zones; zones exposed to floods; drought and desertification; and fragile mountainous ecosystems). Population growth continues, as well as the occupation of territories with increasing threats due to hydrometeorological events related to the El Niño Southern Oscillation (ENSO). Vulnerability is also configured by the persistency of poverty, endangered ecosystems, retreat of tropical glaciers, the distribution of water resources, economic activity highly dependent on climate, and low level of institutional capacity, organisational capacity and resources to face climate change impacts.
3. The Peruvian economy is poised for strong economic growth with escalating infrastructure needs. The infrastructure gap in Peru has been calculated to be approximately USD 88 billion of investment required from 2012 to 2021 (AFIN, 2012) including water and energy coverage. Key investment sectors are energy and transport both highly relevant in terms of carbon intensity.

Within the context of these objectives, Peru's efforts towards low emission climate resilient development is unfolding:

4. Peru is in the process of finalising its National Climate Change Strategy and at present, there is no one governing policy in Peru that guides low emission resilient development. There is however an existing framework of environmental and sectoral legislation and policies that form the basis for developing an integrated Low Emission Development Strategy (LEDS), which may include climate resilience, for Peru.
5. A framework for low emission development is given by the three voluntary pledges for 2021 that the government – lead by the Ministry of Environment and submitted as Nationally Appropriate Mitigation Actions (NAMAs) included under the UNFCCC's Cancun Agreement in the forestry, energy and waste sectors.
6. The public finance system has several policy instruments which are being used to different degrees to promote climate action, including public – private partnerships, national funds, tax instruments, investment effectiveness mechanisms and a national development bank that is offering innovative climate specific financial products.
7. Since the announcement that Peru will be hosting the UNFCCC's 20th Conference of the Parties, there are encouraging signs of higher levels of awareness and political support for climate change, including the drafting of a Climate Change Law to be presented to Congress.

The study enabled an analysis of the current opportunities and challenges facing implementation and financing for low emission climate resilient development in Peru. Emerging from this analysis are the following high-level recommendations for consideration by the Peruvian government:

8. Although Peru has several individual overarching development, environmental and climate related strategies and policies, a clear cohesive strategy for climate change is needed, which integrates economic and social development, environmental management, emission reductions and climate resilience goals into a single LEDS. Such a strategy should include specific priorities in the short, medium and long term based on the scientific and technical evidence and should be aligned and integrated into Peru's national development priorities.
9. Harnessing and unlocking the economic opportunities with climate priorities integrated therein calls for a strategic approach to resource mobilisation. This approach would require Peru to define its specific resource requirements, assess its national capacity to absorb investment and clearly articulate the international climate finance support necessary to advance implementation of its plans. This would help Peru to more effectively utilise the international cooperation that is available.
10. A new harmonised, coherent and clear regulatory framework could have great impact both on public and private finance,

as low emission resilient options could be framed as being prudent and relevant approach in terms of value for money and long term sustainability of investments.

11. Developing a clear and comprehensive agenda to improve data quality and availability in Peru could help empowering all stakeholders to voluntarily engage in response programmes, adopt and innovate based on their unique circumstances and most importantly, have equitable access to the required resources necessary for implementation.
12. There is a need for integration and framing of actions on climate risk and GHG emissions management into existing public finance instruments in a more direct and precise manner. Such framing should also take into account the impact of any other public finance instruments, which may unintentionally reverse the positive benefits of the revised public instruments towards climate action.
13. Within national and subnational government, as well as the private sector, there is a need of adequate capacities to formulate and execute climate action. An assessment of the capacity needs across public and private sector and a benchmarking of Peru against other developed and/or developing countries may generate options to increase design and implementation capacities.
14. There is a need to work closely with the private finance system to incorporate climate change criteria in private financial instruments. Peru may consider engaging in partnership between government and the private finance system to develop a “Green Protocol”. This could serve as a foundation to engage the private finance institutions on any regulatory, investment and risk appraisal.
15. There are very few financial instruments today in Peru that specifically facilitate or promote mitigation actions to climate change. Through public-private sector dialogues financial instruments such as clean energy /green bonds, insurance mechanisms and guarantees may be co-developed with financial institutions.

Some clear opportunities are evident to promote low emission climate resilient development in a socially and economically inclusive manner, most notably:

16. The high liquidity in the Peruvian financial system is a strong indicator of growth and absorption capacity for investment and bodes well for climate investment, provided that the necessary public-private finance sectors cooperate effectively to blend their resources.
17. The growth of the microfinance sector in Peru is also an immense opportunity for private sector climate investment (in an economically and socially inclusive manner). This dynamic reflects the structure of the Peruvian economy, which is mainly made up of smaller enterprises. Unlocking these opportunities would facilitate the creation of new businesses and ensure that at the sub-national level, implementation is supported by municipal and rural banks as well as consumer finance.

18. There is an immense opportunity to “green” the new infrastructure that Peru requires as result of the projected economic growth. Approximately 88.000 million Soles (USD 32.56 million) are needed for critical infrastructure sectors such as water, energy and transport. Responding to these investment needs through low emission resilient technology options would provide a strong basis to attract significant investor interest in Peru and encourage innovation and entrepreneurship within the Peruvian economy.

Building on these findings, this paper concludes with specific short, medium and long term actions for consideration as part of a national financing strategy/ pathways for climate action in Peru, taking into account the immense economic opportunities available at present in the country (Section 5.4). These recommendations commence with building a support base for financing action, establishing benchmarks for investment and mainstreaming climate considerations into the public and private financial system.



---

# Introduction

---

Climate change is one of the biggest environmental, social and economic challenges of our time. Adapting to climate change and reducing greenhouse gas (GHG) emissions at scale requires an unprecedented mobilisation of financial resources (GIZ, 2013).

Mitigation action in fast growing developing countries like Peru is crucial because economic growth is closely linked with the growth of GHG emissions. Sustainable development is a true challenge for Peru, which is heavily dependent on primary activities such as mining and energy production, and is experiencing growing degradation and deforestation.

Reducing emissions while building resilience in Peru is crucial and increasingly challenging, because local economies are based largely on climate dependent activities (i.e. mining, agriculture, fishing, forestry) and because of the diversity of climates and ecosystems in the Peruvian territory. “Peru is one of the 10 mega diverse countries in the world; it has the second largest Amazon forest, the most extensive tropical mountain range, 84 of the 104 life zones identified in the planet and 27 of the 32 world climates. Of the four most important crops for human nutrition (wheat, rice, potato and corn) Peru holds high genetic diversity for the last two. It is also rich in glacier areas (71% of the tropical glaciers of the world) of utmost importance for providing water for human consumption, agriculture, mining, and electric power generation” (MINAM, 2010).

Action must be therefore well designed, planned and implemented and may translate into different policy instruments. Regardless of the chosen instrument – whether a more comprehensive national, sub national or sectoral Low Emission Development Strategy (LEDS) or more narrow Nationally Appropriate Mitigation Actions (NAMAs) – resources must be leveraged and reallocated for implementation, and for the ultimate achievement of sustainable development goals. Many activities and mechanisms are under consideration in Peru to effectively facilitate a transition to a low emission and climate resilient economy. Among these is PlanCC<sup>1</sup> (i.e. Planning for Climate Change) which aims at generating the scientific and technical base to determine GHG scenarios, evaluate mitigation options and assess appropriate mitigation measures to be adopted. There are three key phases to PlanCC, which commence with independent studies on development scenarios and strategic planning working with the National Centre for Strategic Planning. It then progresses to supporting government in design of policies, plans and instruments that are climate specific and finally, implementation to enable the transition. The outcome of these phases is intended to a Peruvian low carbon strategy and sectoral mitigation action plans.

These represent robust scientific and technical enquiries, with the right steps being taken towards implementation. However, these individual efforts lack at the present moment a framework policy which draws them together in a crisp and strategic manner. For this reason, the proposed Peruvian Low Carbon Strategy or similar framework policy that comprehensively addresses low emission and resilience for Peru is necessary. Such a strategy would be beneficial to communicate effectively to the private sector and its development partners the country’s long term transformation vision and objectives. There is an array of mitigation and adaptation options many of which pose interesting opportunities for the advancement of competitiveness, growth, poverty reduction and social inclusion.

Mobilising resources (including finance, technology and capacity) will be critical as a means of implementation for any actions taken response to projected climate change impacts for Peru. Navigating the landscape of international climate finance options has been historically complex and Peru has benefitted from a number of initiatives and support from its development partners in advancing its climate response. Despite the positive benefits of international support, the underlying international climate finance landscape is fragmented with many institutions, support structures and now emerging new processes which tend to overwhelm developing countries. Historically, international climate finance has been supply driven; this landscape appears to be slowly shifting with certain developing countries focusing on strategic approaches to climate (Naidoo, Amin, Dimsdale & Jaramillo, 2014).

For the time being, climate finance efforts at country level are at the risk of further fragmentation and therefore Peru is committed to a process whereby it can develop an understanding of its resource requirements in a manner that is truly aligned with both development and climate objectives. Based on the work of E3G on Strategic National Approaches to Climate Finance published in April 2014, Peru is keen to further develop National Financing Pathways (NFP) to implement its LEDS and climate resilience plans. It is believed that such strategic approaches which require national planning, priority setting and knowledge of domestic financial capacity will significantly contribute to status-quo-changing actions that are sufficiently and adequately financed.

---

<sup>1</sup> Peru is engaging in this process as part of the Mitigation Action Planning Scenarios (MAPS) Programme. Refer to <http://www.mapsprogramme.org/projects/peru-projects>

---

# Methodology

---

The purpose of this paper was to gain a high level understanding of the landscape of Peru's low emission and resilient development strategies with a particular focus on the financial aspects relating to implementation. From this basic landscape, the paper aims to propose components of a national strategy for climate finance that Peru may consider as it progresses towards implementation of its climate action plans.

The report is premised on the understanding that an indepth understanding of the national financing systems and its respective capacities is essential in developing an effective and pragmatic NFP. Each component of the national finance system (i.e. public budget, private finance institutions, capital markets, commercial and retail banks, microfinance and development agencies) has an important role in the creation of economic growth in a country. For this reason, it is important to consider LEDS in the context of investment and economic opportunities in order to facilitate the flow of capital and to ensure that environmental and social benefits are also derived (Naidoo et al, 2014).

The scoping methodology adopted by the authors involved desktop analysis of relevant literature and analysis both nationally and internationally, discussions and interviews with key Peruvian government officials and business associations based on the following key questions:

- i) What are the primary development priorities for Peru and what is their link to LEDS?
- ii) What is the structure of the national financial system i.e. type of institutions in public and private sector, including the degree and impact of international cooperation?
- iii) What are the key challenges in terms of future implementation of LEDS?
- iv) What are key building blocks for Peru to develop a national financing strategy based on the current landscape?

The primary outcome of the report is to present a high level landscape of Peru's development and climate environment (Section 3) in the context of the Peruvian financial system (Section 4) in order to establish guidelines and priorities that may guide a national financing strategy for Peru (Section 5). The report concludes with recommendations for further support for the development of a comprehensive NFP for Peru.

# Development and climate policy progress in Peru

Peru is included among the ten most vulnerable countries to climate change in the world (Tyndall Centre, 2004); and presents four out of the five vulnerability characteristics recognised by the UNFCCC (low coastal zones; arid and semiarid zones; zones exposed to floods; drought and desertification; and fragile mountainous ecosystems). Additionally, population growth continues, as well as the occupation of territories with increasing threats due to hydrometeorological events related to the El Niño Southern Oscillation (ENSO). Vulnerability is also configured by the persistency of poverty, endangered ecosystems, retreat of tropical glaciers, problems with the distribution of water resources, economic activity highly dependent on climate, and low level of institutional capacity, organisational capacity and resources to face climate change impacts (MINAM, 2010).

Against this backdrop, the Peruvian economy is poised for strong economic growth with escalating infrastructure needs. The infrastructure gap in Peru has been calculated to be approximately 88.000 million soles (USD 32.560) of investment required from 2012 to 2021 (AFIN, 2013) including water and energy coverage. The sectors with the highest investments needed are energy (37.5%) and transport (23.8%), both highly relevant in terms of carbon intensity. The growing economy highlights the immediate urgencies to integrate the climate response into Peru's national development agenda.

This Section 3 describes the development and climate context for Peru, showing that there are several national and subnational regulatory frameworks, policies and initiatives that can be drawn upon to develop an integrated LEDS strategy. The need for an integrated policy effort is crucial to guide the growing Peruvian economy towards low emission resilient development.

## 3.1 Development policy context

Resource efficiency, preparedness for natural disasters, reducing the socio-environmental conflicts and ensuring socially inclusive economic growth are major focus areas of three policy instruments which are likely to be the primary drivers of Peru's integrated development and climate response. These are: the Report of the Environmental Management Multi-sector Commission (2012), the Multiannual Macroeconomic Framework 2014-2016 (2013) and the Bicentennial Plan (2011). Read together, these three policy instruments provide a strong anchor for developing an overarching policy that integrates low emission climate resilient development into the Peruvian development agenda.

At present, there is no one governing policy in Peru that guides low emission resilient development, however there is an existing

framework of environmental and sectoral legislation and policies that form the basis for developing an integrated LEDS implementation strategy for Peru. At present, Peru has sought to operationalise its international voluntary mitigation pledges through various policy mechanisms; these would also inform and impact an integrated policy effort which would in turn deepen the impact of the individual efforts.

### 3.1.1 Environmental Management Multi-sector Commission

The Multi-sectorial Commission on Strategic Guidelines for Environmental Management (the Commission) was created by Supreme Resolution of the Presidency of the Ministerial Council N° 189-2012-PCM and was comprised of nine Ministries: Agriculture (MINAG), Culture, Energy and Mines (MEM), Economy and Finance (MEF), Health (MINSa), Production (PRODUCE), Development and Social Inclusion (MIDIS) and Environment (MINAM).

The Commission has a core focus on economic activities in particular extractive industries but with a special emphasis on social inclusion and improvement of environmental conditions for a sustainable growth, incorporating climate change into development strategies. According to a 2012 report from the Commission, Peru currently has three high level development objectives (Multi-sectorial Commission, 2012):

- i) Continuing its economic growth and macroeconomic stability in order to provide quality public services and encourage sustainable development and redistribution of wealth. In the first quarter of 2013, GDP grew 4.8% with respect to the same quarter in the previous year and the Peruvian economy is expected to grow between 5.6%- 6.0% by 2014 (BCR, 2014).
- ii) Reducing poverty and promoting social inclusion. Sustained economic growth in recent years has been the main driver of poverty reduction (a fall from 58.7% in 2004 to 25.8% in 2012), mainly from a few key economic areas and sectors (i.e. agriculture and fishery), but leaving behind important segments of the population (MEF, 2013).
- iii) Reducing conflict. The latest report on social conflicts released in September 2013 states that 66% of the 223 conflicts identified are due to socio-environmental issues and most of them are related to mining or hydrocarbon activities. The main concern regards the risks related to the availability and quality of water sources. (Ombudsman Office, 2013).

These three priorities are tightly linked to Peru's development agenda, with high potential for the creation of synergies (or tradeoffs) amongst them. These priorities have the potential for close links

with Peru's low emission climate resilient development objectives, particularly the country's focus on higher levels of resource efficiency. The following opportunities exist to embed LEDS into these priorities and the associated policy and programme responses i) higher environmental standards; ii) increased energy efficiency; iii) job creation in the green sector; iv) providing an engine of growth in "trying economic times" (while reducing emissions); and v) enhancing funding flowing to community based/related projects, and restoration programmes (which increase resilience and sequester and store carbon). Effective poverty reduction and socially inclusive economic growth based on low emission resilient options would directly support Peru's conflict reduction goals.

As a result of the work of the Commission, four strategic pillars for environmental management were established including natural patrimony, conservation and sustainable use. Among the objectives of these pillars is to incorporate climate considerations in development strategies. This pillar proposes to strengthen and develop governmental and societal readiness for climate change adaptation and mitigation needs. The report of the Commission also highlights Planning for Climate Change (PLANCC) as a national priority project, together with the definition of adequate institutional arrangements for climate change management and adequate climate finance (also referred to as PRONAGECC) and the update of the National Strategy on Climate Change (MC, 2012).

### 3.1.2 Multiannual Macroeconomic Framework (MMF)

On the economic front, the Ministry of Economy and Finance provides short term strategic guidelines on development priorities through the Multiannual Macroeconomic Framework<sup>2</sup> (MMF). The latest version covers the period 2014-2016 and was updated and approved by the Ministerial Council in August 2013.

In summary, the MMF states that "Peru can grow (...) and remain as one of the most dynamic countries in the world, as long as the global economy recovers gradually, important private investment projects materialise, and confidence of economic agents remains high. Maintaining a 5.7% growth rate (...) requires significant efforts to promote and facilitate private investment and increase productivity and competitiveness. (...) Without sustained high growth, it will not be possible to reduce poverty at a significant pace and achieve the desired social inclusion. On the fiscal policy side, after reaching a fiscal surplus in structural terms in 2012, it will be important to increase expenditures in accordance with permanent revenues in the coming years, in a context in which export prices remain historically high but with a downward trend. (...) On the tax revenue side, to gradually meet the Government's objectives it is important to raise the tax burden (...). To the extent that this increase in permanent tax revenues is achieved, public spending will expand and focus on the priority areas of the current administration (social spending, infrastructure, security and internal order)".

Economic policy guidelines for the coming period include (MEF, 2013):

- i) Greater social inclusion: poverty reduction, lower inequality, access to equal opportunities, greater presence and effectiveness of the state in rural areas of the country.

- ii) Growth with stability.
- iii) Improving the productivity and competitiveness of the economy.
- iv) Increasing permanent fiscal revenues.
- v) Improving the quality of public expenditure through the Performance Budgeting strategy.

Since 2011-2013 the MMF has considered climate change explicitly as a factor that will influence competitiveness and sustainable development and refers to opportunities arising from mitigation (MEF, 2011). The current MMF (2014-2016) also incorporates concepts and strategic guidelines that are relevant (both positive and potentially negative) from a low-emission resilient development finance perspective.

For instance, when calling for significant efforts to increase the country's productivity and competitiveness it proposes seven strategies:

- i) substantial improvement of human capital;
- ii) reduction of the infrastructure gap through Public-Private Partnerships (which depending on how implemented could increase or decrease vulnerability and may include low carbon considerations);
- iii) administrative simplification to encourage investment and facilitate business formalisation and development (which in the past has translated into weaker environmental enforcement);
- iv) promotion of science, technology and innovation;
- v) production diversification based on a value-added strategy that promotes quality, new tools for productive development, free competition and internationalisation;
- vi) further financial deepening and capital market development; and
- vii) proper design and implementation of actions for environmental sustainability.

When considering fiscal policy the MMF explains that maintaining a small fiscal surplus is important for the ability to face the consequences of possible natural disasters. The latter relates to resilience. Finally, when referring to tax policy for the period, the MMF explains that for the Excise Tax "the government will seek to link the burden of the tax to the negative externality generated by the consumption of goods levied, without affecting the tax burden objectives and macroeconomic stability". (MEF, 2013)

### 3.1.3 Bicentennial Plan

The Bicentennial Plan (the Plan) is the third policy instrument that sets development priorities focused on a medium term timeframes up to 2021 and developed by the CEPLAN. Approved by supreme decree in 2011, the Plan incorporates sectoral and regional (sub-

<sup>2</sup> The complete version of the MMF can be found online at file:///C:/Users/Pia/Documents/Libelula/NFP/mmm-2014-2016-agosto.pdf

national) inputs and is comprised of a shared vision for 2021 and six strategic axes including: (i) Fundamental rights and human dignity; (ii) Opportunity and access to services; (iii) State and governance; (iv) Economy, competitiveness and employment; (v) Regional development and infrastructure; (vi) Natural Resources and Environment. The Bicentennial Plan explicitly considers climate change as fundamental global issue; in the context of its 6th Strategic Objective (Natural Resources and Environment), the stated priorities are as follows: i) Sustainable use and management of natural resources; ii) Environmental quality improvement (air, water and soil); iii) Ensure sufficient water availability throughout the territory; iv) Climate change adaptation; v) Implementation of the National Environmental Management System.

Each of the strategic axes in the Bicentennial Plan includes objectives, guidelines, priorities, goals, actions and strategic programs (CEPLAN, 2011). In some instances, costs have been attributed to the strategic programmes. For example, the National plan for preparedness and adaptation to climate change has an estimated cost of USD 3.5 billion, which includes better coordination among different government levels for preparedness to emergencies and systems for early warnings. The Plan is currently under review, and the newest version of the 6th strategic axis includes the concept of green growth, and objective number four will refer to “reducing vulnerability to climate change and promoting green growth, fostering forest conservation”.<sup>3</sup>

### 3.1.4 Related government statutes applicable to LEDS

There are several overarching government statutes such as the National Constitution (1993), which states the universal right to a balanced environment suitable for the right development of life; and the National Accord, signed in 2002, which defines the direction for the country’s sustainable development and asserts its democratic governance.

Environmental statutes and planning instruments include climate change mitigation. The National Environmental Policy, adopted in 2009, is the more general environmental planning tool which provides a framework for sectoral, regional and local policies. It aims “to achieve adaptation to climate change and establish mitigation measures to achieve sustainable development.” (MINAM, 2009) The National Environmental Action Plan (PLANAA), approved in July 2011, is a long term (2021) environmental planning instrument aimed at meeting the National Environmental Policy, and reflects the provisions of the National Accord (MINAM, 2011).

Other sectoral policies such as the National Energy Policy (which has a target of 5% participation of non-conventional energy sources), the National Programme for Energy Efficiency, the National Forest Conservation Programme and the National Waste Management Programme are also relevant for LEDS.

More directly, the NCCS is the instrument that guides climate change management in Peru. The NCCS is a reference framework for all central government entities, and for Regional and Local Governments. One of its strategic lines is “the development of policies and measures oriented to manage GHG emissions to reduce the impact of climate change” (MINAM, 2011a). The NCCS has been undergoing a review process

since 2009. Recently, this process involved the creation of seven ad-hoc groups that treated the themes of: REDD, adaptation, mitigation, finance, education, negotiations, and science and technology; trying to articulate it with existing governmental instruments and involve different sectors in its implementation process, expecting to be promulgated on 2014.

The Action Plan for Climate Change Adaptation and Mitigation (APCCAM), and the National Guidelines for Climate Change Mitigation (NGCCM), both developed within the Climate Change Directorate in the MINAM, show the way Peru conceptualises mitigation actions. These instruments, while useful, only serve as guidelines and recommendations.

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, agriculture, transportation, and industry. Later, the buildings/housing sector was also included. NGCCM also states broadly that each PRONAMI should be coordinated by the respective sector and/or MINAM, and have a register to account for mitigation actions and emission reductions.

Finally, a recent sectoral initiative is in line with a future LEDS. MEM, with the help of the IADB has worked on what has been called the “New Sustainable Energy Matrix” (NUMES), which is a Strategic Environmental Evaluation, serving as a planning instrument for the energy sector for the period 2011-2040. Its main purpose is to diversify the energy matrix, prioritising renewable sources.

### 3.1.5 Sectoral regulatory frameworks applicable to LEDS

The following table summarises the main regulatory instruments that are relevant to LEDS in priority sectors (related to the voluntary commitments of Peru to the UNFCCC). These regulatory and policy instruments present an opportunity for LEDS integration and mainstreaming into the planning and budgetary processes.

## 3.2 Climate change context

Peru is a highly vulnerable country. If the maximum temperature were to rise 2°C and rainfall variability were to increase 20%, there would be a 6% loss of potential GDP in 2030, whereas in year 2050 such losses would exceed 20%. The adoption of appropriate global measures aimed to stabilise the climate in 2030 would allow the reduction of such losses to less than one third (Vargas, 2009). More recent studies confirm losses of billions of USD in the next few decades (Gil et al, 2013).

The “Investment and Financial Flows for Climate Change Study” calculated that Peru will require more than USD 2.4 billion until 2030 to implement priority adaptation measures in the agricultural, water and fisheries sectors (UNDP, 2011). These measures include sectoral projects to reduce vulnerability together with institutional strengthening. Among the policy recommendations of that report are the improvement of environmental standards, increased efficiency of public expenditure and the involvement of the private sector and specifically finance institutions.

3 Interview with Paola Alfaro Mori, Environmental Specialist, CEPLAN (October 1st, 2013)



Table 3.1 Main regulatory and policy instruments relevant to LEDS in priority sectors

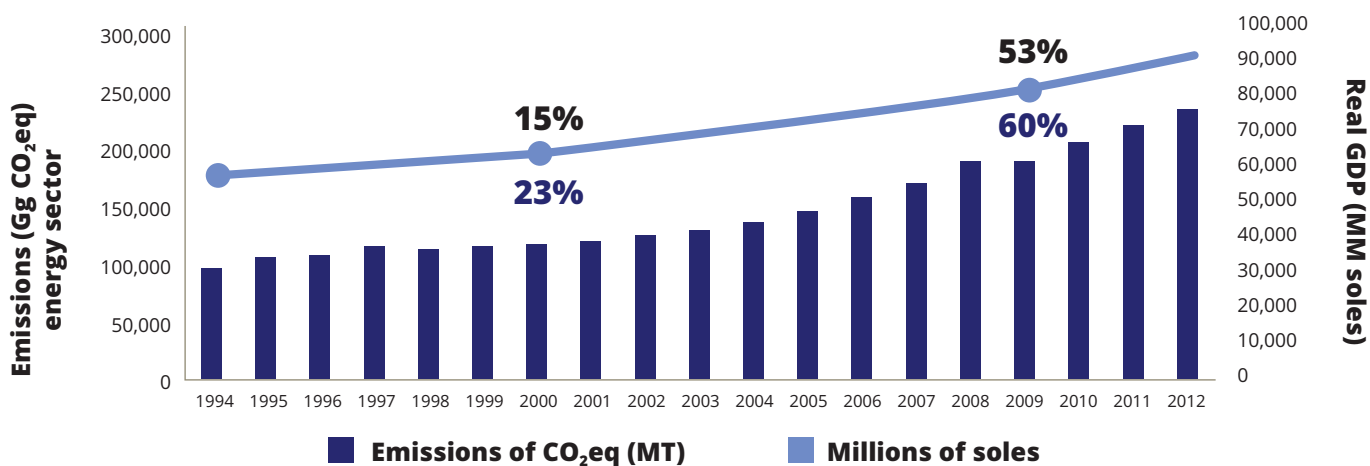
Priority sector	Instrument	Effect
Solid waste	General Solid Waste Law	Generates enabling conditions for adequate waste management: <ul style="list-style-type: none"> <li>• Mandates local governments to elaborate PIGARS (Solid Waste Integral Management Plans).</li> <li>• Prohibits solid waste disposal in dumps not authorised by DIGESA (General Directorate for Environmental Health).</li> <li>• Prohibits transport of solid waste by companies not authorised by DIGESA.</li> <li>• Additional incentives/ regulation would be needed to enable GHG reductions</li> </ul>
	General Health Law	Establishes how hazardous waste must not be treated, and that its final disposition is responsibility of the generator.
	Municipality Organic Law	States that management and legislation of solid waste treatment is responsibility of provincial or district municipalities, depending of capacities. Also, indicates that one of Lima's Metropolitan Municipality (LMM) function is to organise the Metropolitan Treatment and Elimination System of Solid Waste.
	General Environmental Law	Establish that domestic or commercial solid waste treatment is responsibility of local governments, and those from different origin are responsibility of the generator until its appropriate final disposal.
	Law Rulebook that regulates Recyclers activity	Contributes to the protection, capacitation and promotion of recycling workers social and labor development, promoting their formalisation and association, contributing to improve solid waste reuse management.
Energy	Electric Concessions Law (L.D. N°25844)	Establishes differentiated requirements for granting final consents for electricity generation with renewable energy resources (RER) with installed capacity below 20 MW, as incentives.
	L.D. 1002 Promotion of Investment for Electricity Generation with RER	Prioritises electricity generation with RER in the System Operations Committee (COES) daily dispatch. It does so by establishing a zero variable production cost. Entrusts the regulator (OSINERGMIN) with RER Project premiums auctioning faculties.
	General Rural Electrification Law (N° 28749)	Promotes the efficient and sustainable development of rural electricity, isolated localities and frontier towns. Government assumes a subsidiary role through the execution of Rural Electric Systems. Promotes the use of RER as electricity generation sources for rural areas.
	L.D. 1058 that promotes investment in electricity generation with hydro and other renewable sources.	Establishes a tax incentive (accelerated depreciation of machinery, equipment and civil Works) for private investment in electricity generation activities with hydro, wind, solar, geothermic, tidal and biomass.
	Law for the Promotion of Efficient Energy Use	Proposes measures to reduce energy consumption in 4 priority sectors (residential, productive and services, governmental and transport).
	Reference Plan for Efficient Energy Use	Establishes concrete measures to reduce energy consumption in the 4 sectors mentioned above.
	National Energy Policy 2010 - 2040	Includes as an objective to have a diversified energy matrix, giving emphasis to renewables and energy efficiency. Establishes long term policy guidelines to fulfill the stated objective.
Forestry	New Forestry and Wildlife Law (N° 29763)	Supports forestry governance needed for emissions control. Some of the main improvements are: <ul style="list-style-type: none"> <li>• Creates the National Forestry Service (SERFOR) entrusted with forestry zoning, while maintaining MINAM as national authority for forest planning.</li> <li>• Creates the forest land system.</li> <li>• Forbids land use change for agriculture.</li> <li>• Allows permit issuance for small land holders that want to install agro forestry systems or use areas of forest remains as long as the forest cover is maintained.</li> <li>• Assigns forest management functions to regional governments, through the Forest and Wildlife Management Units (UGFFS).</li> </ul>

Source: Libélula, Comunicación, Ambiente y Desarrollo.

While Peru's current contribution to global emissions is less than 0.5% (PLANCC, 2013), the country's sustained economic growth is highly linked to rising emissions, as showed on Figure 3.1.

With an emissions composition that shows the predominance of the LULUFC sector and the growing importance of the energy sector (Figure 3.2), from 2000 to 2009 Peru's emissions rose from

Figure 3.1 Economic growth and emissions



Source: Economic statistics from BCRP. 2nd National Communication. PLANCC preliminary data.

115.3 Mt CO<sub>2</sub>eq to 146.8 Mt CO<sub>2</sub>eq. Growth of emissions in the agricultural, energy, transport and industry sectors were 61%, 55%, 49% and 50% in 9 years, respectively; while emissions in the waste sector increased by 30% (MINAM, 2012).

Recent estimates conducted under the PLANCC Project (MAPS Peru) show that a Business as Usual (BAU) scenario would lead to emissions levels of up to 8 tCO<sub>2</sub>eq per capita (under an assumption that population grows up to 40 million) by 2050. (PLANCC, 2014). Figure 3.3 shows the emission reductions “gap” to 2050 taking into account BAU, Required by Science and Equity scenarios developed under the PLANCC Project.

### 3.3 Current climate responses

There is conclusive scientific and economic evidence that business as usual will lead Peru into a complex and dangerous scenario, and therefore as a growing economy could benefit from a clear policy effort to integrate economic and social development, environmental management, emission reductions and climate resilience goals. Such a policy effort would embed low emission climate resilient development into every intervention at the national and sub-national level. For example, this may take the form of a comprehensive low emission and climate resilient development strategy. Despite the lack thereof, there are positive initiatives within the public and private sector that are actively promoting low emission objectives. Based on the emerging short, medium and long term responses underway, Peru may be classified as being in the preparation phase of its climate response with a major focus on “readiness” work, at policy, planning, implementation including technology assessment and institutional levels.

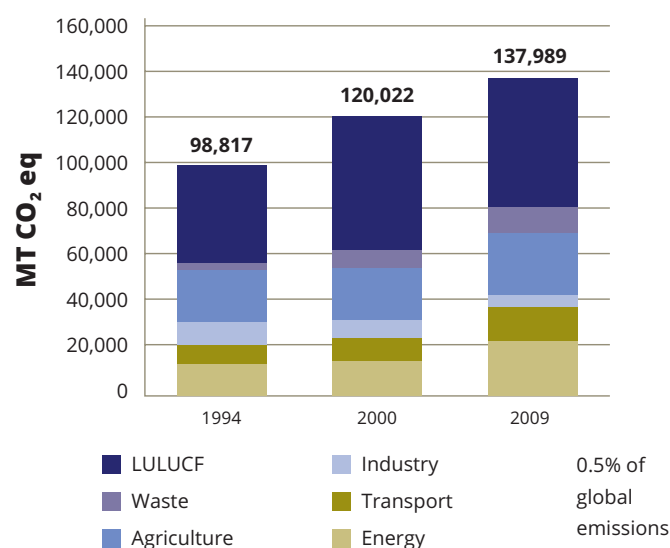
#### 3.3.1 Mitigation pledges

A framework for low emission development is given by the three voluntary pledges for 2021 that the government – lead by the Ministry of Environment – put forward as NAMAs included under the UNFCCC’s Cancun Agreement<sup>4</sup>:

- i) A net declining zero-equivalent emissions rate in the Land Use, Land Use Change and Forestry GHG category, with an estimated emissions reduction of 45% from 2000 emissions and a potential of around 50 Mt CO<sub>2</sub>eq in avoided emissions.
- ii) Modification of the national energy matrix so that non-conventional renewable energy and hydropower, together, will represent at least 40% of the total energy consumed in the country, with an estimated emissions reduction of 28% from 2000 sectoral emissions, and a potential of 7 Mt CO<sub>2</sub>eq avoided emissions.
- iii) Reduce emissions from solid waste management, with an estimated 7 Mt CO<sub>2</sub>eq in avoided emissions.

#### 3.3.2 Sectoral efforts

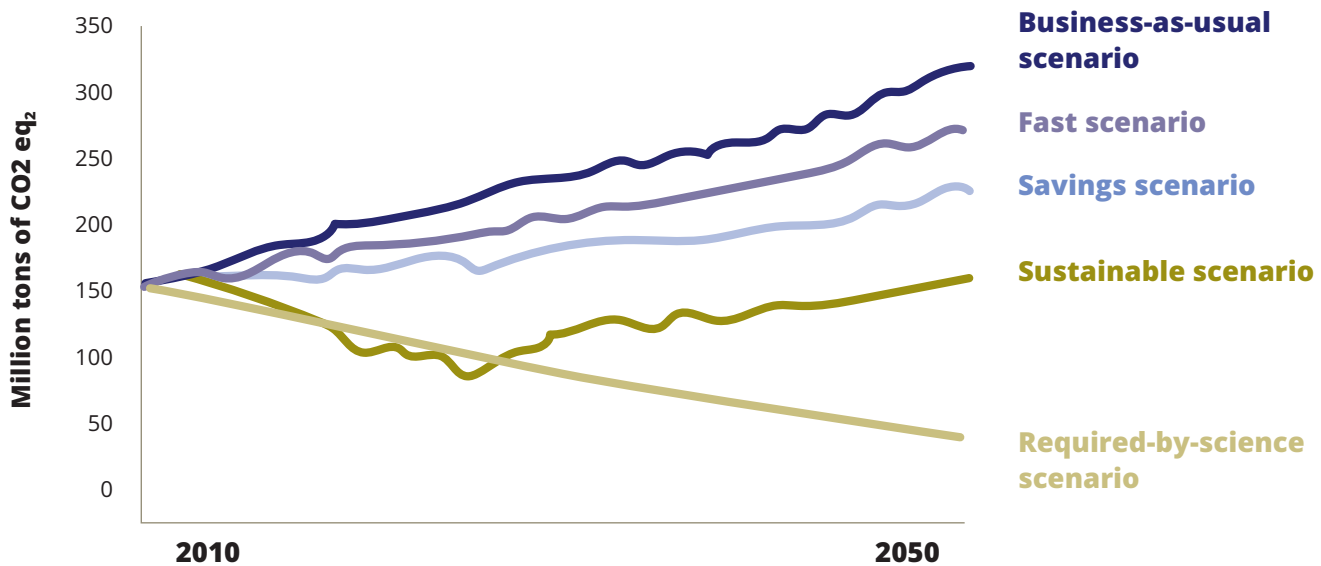
Figure 3.2 GHG emissions composition years 1994, 2000 and 2009



Source: PLANCC. Presentation to the National Foresight Team, 4 July 2013.

<sup>4</sup> Note OOI/2010/03 of the Peruvian Embassy in Germany to the Secretariat of the UNFCCC of June 21, 2010. Available at [http://unfccc.int/files/meetings/cop\\_15/copenhagen\\_accord/application/pdf/perucphaccord\\_app2.pdf](http://unfccc.int/files/meetings/cop_15/copenhagen_accord/application/pdf/perucphaccord_app2.pdf) [consulted on July 19, 2011]

Figure 3.3 GHG emission scenarios for Peru



Source: PLANCC 2014.

Considering a long term process of transformation to low emission resilient development, Peru is still in the pre-investment or “readiness” phase.

Notwithstanding the importance of the many different stakeholders involved in this preparatory process for LEDS development, it is worth highlighting the crucial role that four particular Ministries play:

- i) the Ministry of Environment, entrusted with climate change management and focal point of two of the three sectors covered by Peru’s international voluntary mitigation pledges; forests (conservation and sustainable management) and waste management;
- ii) the Ministry of Economy and Finance, as authority for economic, fiscal and tax policy;
- iii) the Ministry of Energy and Mines (MEM) as the main authority of sectors that account for most of the GDP growth, foreign direct investment and also the ones most related to rising social-environmental conflicts; and
- iv) The Ministry of Agriculture and Irrigation (MINAGRI), dealing with agriculture and forest production.

Investment in science, technology and innovation is key for low emission resilient development and thus the ecosystem of institutions that deal with these issues in Peru is also relevant. The National Council for Science, Technology and Innovation (CONCYTEC) has been involved in climate change projects but does not deal with climate change explicitly. According to the Inter-American Development Bank (IADB), Peru’s investment is five times lower than the average investment in the region. However, it is possible that the gap will be reduced by half in the next five years due to the projected increase in investment.<sup>5</sup> In 2012 investment doubled from 0.11% of GDP to 0.23%.

Since the first real mandate was given by Peru’s voluntary pledges to the UNFCCC, it is worth keeping track of them. Table 3.2 summarises the stage of development of these pledges.

Also, five NAMAs have been registered in NAMA-database.org, from which four are in concept phase and one is making its feasibility study, as shown in Table 3.3.

### 3.3.3 Subnational efforts

Two statutes provide a framework for subnational integration of future LEDS initiatives. Since 2002, Organic Law on Regional Governments (N° 27.867) states that all Regional Governments must “formulate, coordinate, conduct and supervise the application of Regional Strategies on (...) Climate Change, within the framework of related national strategies”. Consequently the NCCS establishes that Regional Governments are responsible for the accomplishment of the objectives included therein.

As Figure 3.4 shows, as of December 2012 only nine out of twenty-five regions had elaborated Regional Climate Change Strategies (most of them focused on adaptation over mitigation), but most of the remaining ones have created official working groups in order to elaborate them (Libélula, 2011).

Both the Organic Law on Regional Governments and the NCCS confer and share initiative and responsibility for climate change to the Regional Governments, promoting decentralisation of environmental planning and management. This creates the basis for economic autonomy by Peru’s Regional Governments as they are able to utilise an important portion of the public budget for implementing programs and activities with a direct regional focus. There are however constraints on the ability of these subnational governments to implement in terms of the resources and capacities available to them.

Efforts to find ways to make forest conservation more attractive by

<sup>5</sup> <http://www.elperuano.pe/edicion/noticia-bid-inversion-tecnologia-se-duplico-2012-8820.aspx#.UpTBLcRLMms>



Table 3.2 Status of the voluntary commitments presented by Peru to the UNFCCC

Mitigation goal	Stage of development
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 CO <sub>2</sub> eq.	The National Forest Conservation Programme has been established within MINAM and – in coordination with the Climate Change, Desertification and Water Resources Directorate – serves now as an umbrella which articulates instruments and efforts toward the goal: <ul style="list-style-type: none"> <li>• New Forestry Law</li> <li>• Forest Investment Plan</li> <li>• REDD+ Strategy</li> </ul>
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 7 Mt CO <sub>2</sub> eq.	<p><b>Renewables:</b> A National Policy States goals for renewables (40%) and non-conventional renewables (5%). In 2010, hydro and biomass accounted for 26% of the total final consumption. Non-conventional renewable sources (solar, wind, geothermal) have negligible participation. In this sense, Peru is currently 14% short from reaching the goal.</p> <p><b>Energy efficiency:</b> Energy Efficiency Plan that is being updated, and is partially implemented. Recent studies suggest that Peru's main economic sectors may achieve reductions in energy consumption of up to 20% in some cases, through energy efficiency (RENOVO SAC, 2013).</p> <p><b>Rural electrification:</b> Recently on July 2013, MEM launched the National Photovoltaic Household Electrification program, which intends to invest over USD 200 MM with the objective of reaching 95% of total population with access to electricity by the end of 2016 (Planet Save). Only regarding rural electrification with the use of renewable energy, a total investment sum of USD 1,200 MM has been calculated for the period 2012-2021 (RENOVO SAC, 2013).</p> <p><b>NAMAs:</b> NAMA design efforts in efficient lighting, building sector and waste-to-energy activities in the agricultural sector.</p>
Undertake a national programme focused on the construction of landfills in 31 large and medium cities around the country which will reduce an estimated 7 Mt CO <sub>2</sub> eq.	MINAM articulates instruments and efforts toward the goal, which is included in the National Environmental Action Plan: <ul style="list-style-type: none"> <li>• Solid Waste Law and instruments</li> <li>• Large scale landfill implementation Project funded by JICA.</li> <li>• NAMA development</li> </ul>

Source: Updated from Postigo et al., 2011

Table 3.3 Status of the voluntary commitments presented by Peru to the UNFCCC

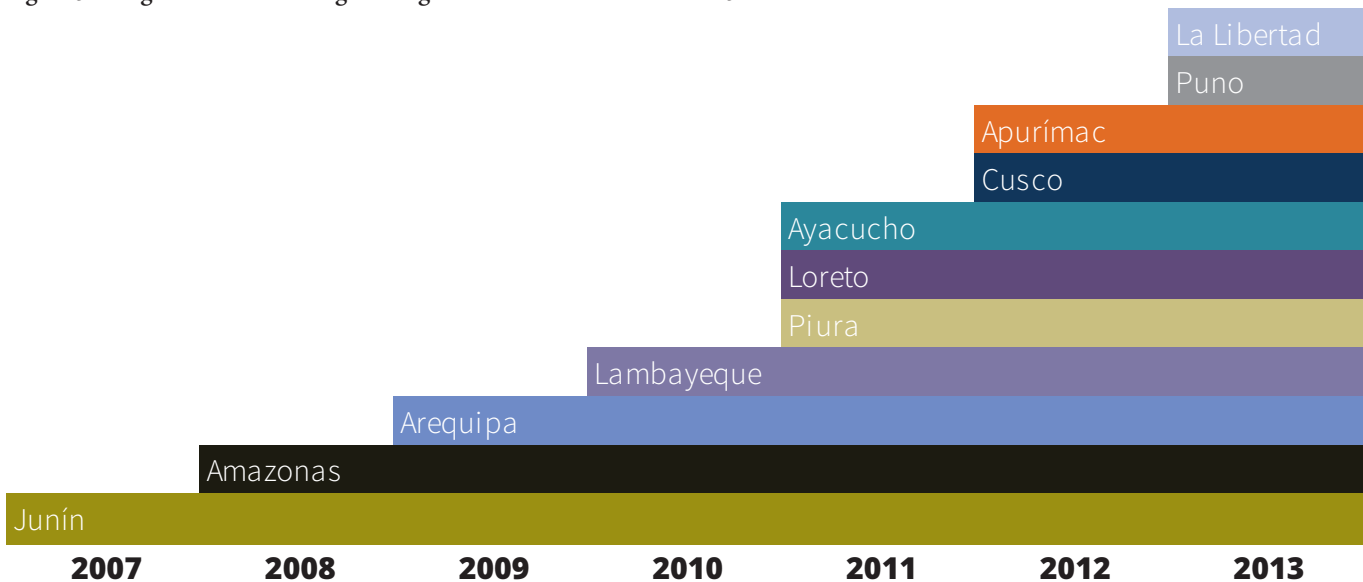
Stage	Name	Sector	Description
Concept	Construction industry: cement, brick and iron and steel industry	Construction	Energy consumption reduction through the implementation of efficient lighting technologies in residential, industrial and public areas.
Concept	Renewable energy and energy efficiency (GEF)	Energy	Design and implement NAMAs in energy distribution sector and in different energy end-use sectors.
Concept	Agriculture waste use for energy production	Energy	Amplify and improve agriculture waste transformation into energy. Finance mechanisms that facilitate farmers and agro-industries to access the necessary capital that allow them to cover investment costs in technologies, infrastructure and maintenance.
Concept	Low carbon building	Construction	GHG emissions reduction through mitigation actions in low-carbon building.
Feasibility study	Waste inventory and NAMAs options identification	Waste	Preparation for a range NAMAs that allow accomplishing waste recollection and disposition goals, recycling and energy conversion.

Source: NAMA database. Libélula Comunicación, Ambiente y Desarrollo

raising the value of standing forests through the REDD+ mechanism is also relevant at the subnational level. Peru's approach to REDD+ is a "nested" one. This means that although there is a final goal to reduce deforestation at a national level – under the underlying assumption that a national monitoring system and national

goals and policies are in place – preparatory activities are being undertaken at all levels: national, regional (subnational) and project level. At project level, since there are still no official guidelines from the UNFCCC, projects are reducing deforestation in their areas of influence and generating offset credits for voluntary carbon markets.

Figure 3.4 Regional climate change strategies status as of December 2013



Source: Quijandría, Gabriel. Presentation at Interclima 2012. Libélula, Comunicación, Ambiente y Desarrollo

One of the main outstanding issues for subnational implementation is establishing arrangements for benefit redistribution.

Even though the REDD+ mechanism has not been fully implemented in Peru, twenty one REDD+ projects in nine Regions are under development or implementation. San Martín and Madre de Dios are two of the regions that are most advanced in REDD implementation, including four projects currently generating carbon credits on the voluntary market (Libélula, 2012).

Also, there is a promotion of initiatives and actions to mobilise significant resources oriented to reduce deforestation and forest degradation under the Forest Investment Program (FIP). The main purpose of the FIP is to backup Peru's efforts to reduce GHG emissions generated by deforestation and forest degradation, and increment carbon reserves in sustainable forest landscapes.

### 3.4 Current climate change programme and project initiatives

Many different stakeholders are involved in one or more mitigation and adaptation initiatives and will need to be engaged in LEDS development and implementation in order to avoid duplicity and make efficient and effective use of available resources. Appendix 1 presents a non-exhaustive<sup>6</sup> list of ongoing initiatives for climate change management, stakeholders involved and sources of funding, both cross cutting and for the three priority sectors; being forestry, energy and waste.

The table shows that there has been a rapid growth of initiatives in the past few years and increased interest from donors and cooperation entities. Interventions range from comprehensive programmes for policy development (such as PLANCC) to small interventions (several energy efficiency projects R&D projects supported by the Finish Cooperation). Public stakeholders such as MEF, MTC, MINAGRI and MEM are getting involved through the steering of strategic climate change projects and through

participation in NAMA design. There is also an increased provision of research and consultant services, although this is still very centred in a few organisations. Support for forest conservation and REDD+ programmes is large and is articulated by MINAM and MINAGRI.

Box 1 elaborates on PlanCC's objectives and approach. The project holds special relevance since – under the steering of four governmental entities led by MINAM – it has been entrusted with the task of undertaking the technical work to arrive at the possible nationally determined contribution for the 2015 Climate Agreement, additionally to the three voluntary pledges under the UNFCCC's Cancun Agreement.

#### Box 3.1 PLANCC project

The PLANCC project was designed as a way to verify the feasibility of voluntary pledges. The project aims to set the basis for low emission development by developing the required evidence and by providing a coordination platform for increasing mitigation initiatives. PLANCC has been conceived as the mechanism entrusted to develop the basis on which a Peruvian LEDS would be articulated, through a process that combines research and consultation under a strong governmental mandate.

The process aims to strengthen capacities for national dialogue and create a strong evidence base to tackle climate change mitigation and its integration into development planning.

Although there are significant initiatives underway in Peru and supported by several development partners, the landscape remains

<sup>6</sup> MINAM is undertaking an update of this non-exhaustive list with the help of the consultancy firm A2G under the preparation of a Roadmap for Mitigation, it has also asked GIZ to prepare a preliminary list containing more detailed information.

fragmented and uncoordinated with limited tracking of the impacts and sustainability of the interventions at national and subnational levels.

### 3.5 Analysis of opportunities & barriers for LEDS in Peru

Reflecting on the above development and climate context for Peru and its current state of transition and preparation for an integrated policy response, there are several opportunities, challenges and potentially new issues that emerge as a consequence of current status discussed below. These issues have potential to i) inform the further preparation efforts; ii) deepen the dialogue and engagement amongst government departments at national and subnational level and with the Peruvian communities, its private sector and development partners; iii) develop an integrated implementation plan and v) create sound financing pathways for Peru's climate change strategy that is based on its development and climate priorities, capacities and needs.

#### 3.5.1 Challenges

- Slow integration of climate into business as usual. Business as Usual (BAU) is still the default option for development, both in government and the private sector. MEM's interest in climate change (even environmental issues) has been scarce, and mainly related to social-environmental conflict situations around energy and mining activity. Any future progress on climate change must consider the energy sector as the engine of the economy and as an increasing source of GHG emissions under a BAU scenario. Also, consumer decisions are not driven by environmental considerations, but diffusion of climate change impacts to specific geographic locations in everyday living could raise awareness.
- Law enforcement capacity in process of consolidation: Many of the laws that comprise the enabling regulatory framework for LEDS are not yet regulated in detail and environmental institutions entrusted with enforcement such as the national Regulating Organisations (OEFA and OSINFOR) are relatively new. On the subnational level, many enforcement functions have been transferred to regional governments who are still in a learning process and lack the appropriate capabilities and resources.
- Un-harmonised regulatory framework: The current "rules of the game" for Peru –both for environmental management and climate change management- are in the process of harmonisation, which may increase the incorrect perception of key stakeholders that environmental management is an obstacle to investment. A new harmonised, coherent and clear regulatory framework would have great impact both on public and private finance.
- Updated National Climate Change Strategy under revision: There is a current lack of a cohesive "umbrella" policy that pulls together all the existing frameworks that are in place. The national climate change strategy is currently under review and has not yet been officially approved. Therefore, there is not a single clear pathway at national level, propitiating uncoordinated actions, hindering coordination, overlapping authorities/functions and disparate objectives.

- Poor data quality and availability: Information systems both for GHG emissions management (and deforestation as a source) and climate finance tracking are not in place. Moreover data quality on emissions is low and is not produced systematically.
- Limited investment in research, technology development and innovation: This barrier is generalised across all sectors but the investment in climate related R&D and innovation is particularly low.
- Financial absorption constraints: There is no clear structure within public finance to mobilise financial resources with a climate change perspective, despite having appropriate tools for funding (i.e. performance budgeting and Public Investment Programs). Also, Peru is receiving international funding, but this is not being utilised effectively because there are no appropriate institutional arrangements; neither is there clarity on investment needs. Therefore, multiple sources, such as international support, financial markets and private sector investment (in its various forms), along with public finance, need to be structured and assembled adequately to enable effective climate finance. At this stage, Peru is lacking the correct financial architecture to efficiently channel resources into climate change needs.
- Lack of capacities at a subnational level: Despite having statutes that provide a framework for subnational action, regional and local governments lack the necessary capacities to manage climate change. Therefore, it is difficult to align the behaviour of consumers and private sector actors with a LEDS plan from a subnational government perspective.

#### 3.5.2 Opportunities

- Peru's economic growth: Continuous economic growth and improving development indicators increase Peru's ability to raise and relocate resources and efforts towards climate change. In the context of the infrastructure and development choices available to Peru, active choices towards LEDS and resilience could influence increase and maintain competitiveness in the long term.
- Substantial infrastructure needs: the infrastructure gap in Peru has been calculated to be approximately 88.000 million Soles (USD 32.560) of investment required from 2012 to 2021 (AFIN, 2013) including water and energy coverage. The sectors with the highest investments needed are energy (37.5%) and transport (23.8%), both highly relevant in terms of carbon intensity. This gap could be filled using climate considerations for low emissions and increased resilience. The diversity of Peru's ecosystem offers a variety of non-conventional energy sources and the provision of environmental services.
- Social conflict management and increased efficiency/productivity at the top of the economic agenda: As the Multi-sectoral Commission's report and the MMF revealed, social conflict management and increased productivity are top governmental priorities. The fact that there are real, relevant connections between these priority areas and climate change (i.e. social conflicts related to water resources with the mining

industry, which availability is highly linked to climate change) represents an opportunity to advance climate change mitigation and adaptation while preventing future conflicts caused by the collision of economic and environmental interests and increasing economic efficiency. Private institutions have also become aware of the need to improve their environmental performance, as their usual way to conduct business has resulted in social instability and other costs.

- Raising the scientific and technical basis: Initiatives like the Study of Climate Change Impacts in the Peruvian Economy, PLANCC and Interclima (annual climate change forum) –together with the current Inter-sectoral Commission and engagement platforms led by MINAM in the context of COP20 – which increase the evidence base and provide spaces for knowledge management- are strong signals that Peru is willing to improve its information and evidence base which has been below average historically in the region, and include sharing, reporting and priority setting instances.
- Growing interest by public institutions: There is still a long way to go for it to be a central part of public and governmental activity and planning, but nevertheless current initiatives show an increase in climate awareness among relevant authorities. In the context of strategic climate change programmes and NAMA development national ministries and other institutions have started to work together in a coordinated manner.
- Potential Political support: Since the announcement that Peru will be hosting the UNFCCC's 20th Conference of the Parties, there has been increasing awareness and political support for climate action. The publication of a first draft of a Climate Change Law in Congress has launched the consideration of the issue amongst legislators. Along the same lines, GLOBE (Legislators for Climate Change Global Initiative) has started working with Peruvian legislators.

# Readiness of Peruvian financial system for climate investment

According to the last IMF staff report, Peru has emerged as one of the fastest growing and most stable economies in the region. Over the 2002-2012 period the Peruvian economy almost doubled in size, and real GDP grew at an average of 6.5% (IMF, 2013). This economic growth brought Peru from a factor driven economy to an efficiency driven one, where the country's economy will be primarily driven by higher education, efficient goods markets, developed financial markets, and large foreign markets (World Economic Forum, 2012).

The following section attempts to describe (and quantify to the extent possible) financial and investment governance, instruments and flows for low emission resilient development in Peru. Since there are no agreed definitions of "climate finance" for the country, nor mechanisms to systematically track and measure these flows, a categorisation of financial sub-systems and sources is first outlined in terms of national public, national private and international cooperation and support.

In addition, it was beyond the scope of this paper to reflect on the governance structure of the institutions, their individual capacities and rationale for supporting climate change. This is potentially an

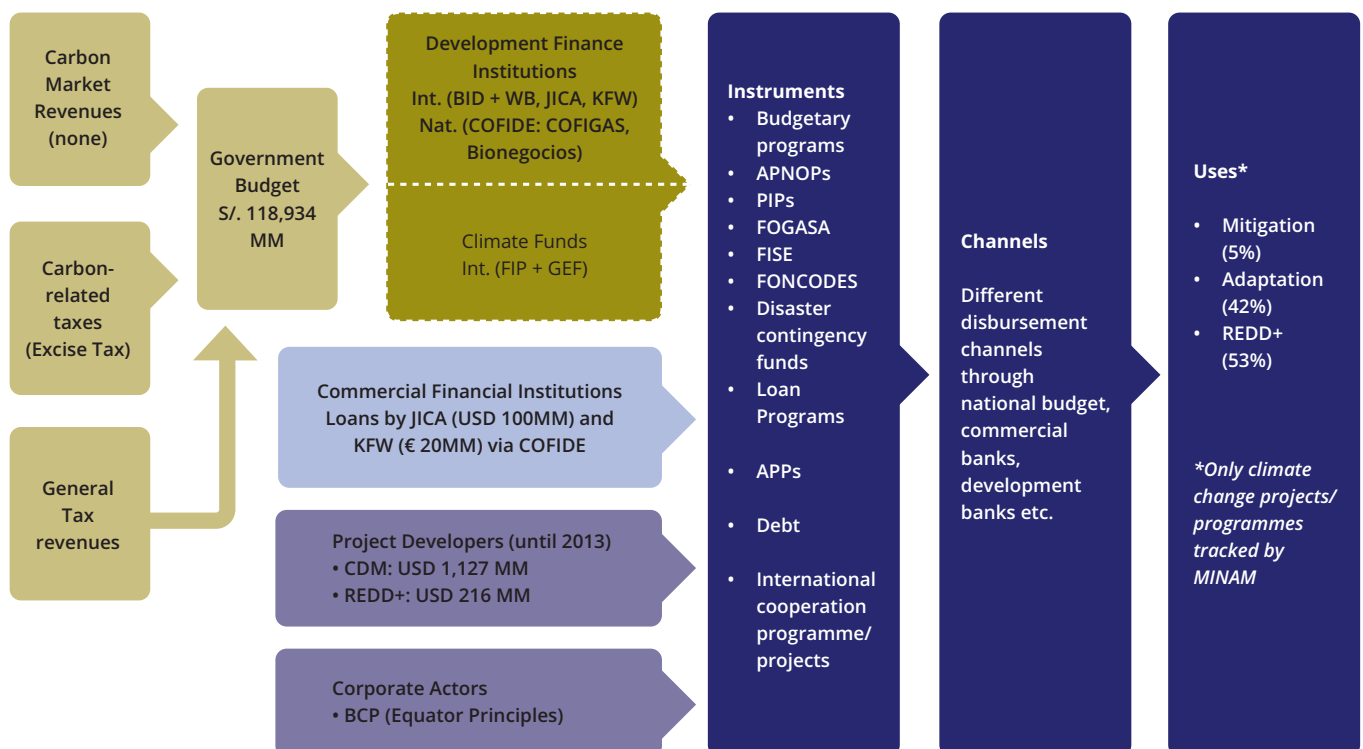
area of further work for Peru. Where possible, reflections addressing these issues have been added.

## 4.1 Financing climate action in Peru

Significant financial resources will be needed to help Peru deal adequately with climate change. Figure 4.1 shows an approximation of the current climate finance flows in Peru, considering both national and international sources. In terms of uses, several assumptions are also made on what constitutes low emission resilient development in Peru. It is intended only as a summary of information and it uses proxies to determine amounts and percentages that are indicative only. This profile would need to be matched with a financial needs assessment, derived from Peru's low emission strategies and related climate change policies.

Financial resources derived from the yearly approved Public Budget have been identified as relevant climate finance sources. Climate funds and development finance institutions, which are both international sources, are also important sources of climate finance. Commercial financial institutions could potentially provide increasing financial resources. Finally, private actors fulfil an important role in providing

Figure 4.1 Climate finance flow diagram – Peru 2013



Source: Adapted by authors from Climate Policy Initiative

financial resources, which include climate change project developers and corporate stakeholders including climate change risk measures to evaluate corporate loans.

#### 4.2 National public finance

Fiscal considerations are key for the successful elaboration and implementation of LEDS. Firstly, one of the main two objectives of a low emission strategy is to encourage development and transition towards a low emission resilient economy. On the other hand, the importance of the role of the government or public funding as a catalyst for private finance has been extensively studied.

The updated Multi-Annual Macroeconomic Framework (MMF) stated that public spending could be increased from 98 billion Soles in 2012 to 146 billion in 2016. The predictable expansion of public spending requires increasing the tax burden and reducing levels of evasion and avoidance. It is projected that by 2016 public debt should be reduced to levels of 17% of GDP. (MEF, 2013)

Public finance plays an important role in initiating the transition to a low emission resilient economy, and therefore, within the existing frameworks and budgets are opportunities to mainstream climate change. In terms of risk management and the aim of attracting private sector participation in government's climate change response, public finance applied effectively can establish strong foundations using various mechanisms, such as progressive policies, appropriate fiscal instruments and market mechanisms to advance climate action.

The following sub section presents a brief explanation of the public finance system, including its main institutions. It also presents public financial instruments and incentives currently used or of potential use for mobilising resources for climate risk management (adaptation) and emission reductions.

##### 4.2.1 Primary public financial institutions involved in climate finance

The Ministry of Economy and Finance (MEF) is an Executive Branch agency, whose organisation, jurisdiction and functioning is governed by Legislative Decree No. 183. It is responsible for planning, directing and controlling budgetary, treasury, debt, accounting, tax policy, public investment and economic and social policy issues. It also designs, establishes, implements and monitors national and sectoral policy<sup>7</sup>. The purpose of MEF is to harmonise national economic activity to promote the market operation and continuous improvements of productivity, economic growth and sustained development.

Based on the increasing awareness of the effects of climate change on the economy<sup>8</sup>, MEF has gradually incorporated environmental considerations within its faculties and organic structure with the objective of improving policy formulation and decision making (Galarza, 2012).

One of the main instruments used by MEF is the MMF, a group

of policies and economic projections based on a 3 year period. Its objective is the formulation of government actions and measures on a longer timeframe than the usual annual basis. Since the 2011-2013 period all MMF have considered climate change both as a risk and as an opportunity.

The State, through MEF, plays an important role in facilitating the mobilisation of resources for climate change. The role of MEF in this area focuses on three pillars<sup>9</sup>:

- 1) production of information on the effects of climate change on the economy (emission reductions and impacts) and the establishment of a portfolio of actions to address them;
- 2) development of financial and tax instruments for climate risk management; and
- 3) the generation of incentives that induce changes in the behaviour of economic agents and promote low carbon development.

It is very important to MEF how the channelling and adaptation of existing resources and instruments to climate change management are being managed. Table 4.1 outlines how climate change is being mainstreamed in the MEF and the instruments that have been created/ adapted to contribute to climate change management.

The Central Reserve Bank of Peru is a legal entity created and governed by public law (Law 4500 passed in March 1992) and recognised in the 1993 and 1979 constitutions. The bank has autonomy, its own capital and an indefinite term. The purpose of the Bank is to preserve monetary stability and its functions are to regulate the money supply, administer the international reserves, issue notes and coins and report on the nation's finances. The authorised capital of the Bank is S/. 100'000'000 (A Hundred Million New Soles) subscribed and paid by the Government.

In 2009 the Bank commissioned a study on climate change impacts on GDP. It estimated that a maximum temperature increase of 2°C and a 20% increase in precipitation variability would generate a GDP loss of 6% by 2030 and a loss larger than 20% by 2050. In a global mitigation scenario that stabilises climate change by 2030, these losses would be substantially reduced (Vargas, 2009).

The National Development Bank – Cooperación Financiera de Fomento (COFIDE) COFIDE is a mixed economy bank with 98.7% of capital owned by the Peruvian State. MEF is the Chair of the Board of Directors of COFIDE. National Development banks have been recognised as key stakeholders for national climate finance. In the case of Peru, COFIDE is slowly becoming more involved on these issues and is looking to strengthen its capacity. Currently, with the help of the IADB a study is being conducted on its potential role in the disbursement of climate related finance.

Regarding the structuring of financing for climate change, COFIDE has developed the COFIGAS product that is closely related to

<sup>7</sup> www.mef.gob.pe

<sup>8</sup> Up to 15% of Peru's GDP is associated with economic activities extremely sensitive to climate change effects. – Roca, J. (Julio de 2013). Exposición El Rol del MEF en un contexto de cambio climático. Lima.

<sup>9</sup> Roca, Javier (Director General of International Economic Matters, Competitiveness and Productivity, MEF). Presentation at INTERCLIMA: "Reflections on finance and markets in a context of climate change", 2012



Table 4.1 Offices in MEF that deal with climate change issues and related actions

MEF Office	Climate change related action
<b>Vice Ministry of Treasury</b>	
General Directorate for Public Budget (DGPP)	<ul style="list-style-type: none"> <li>• Public Budget (Including Results based Budget).</li> <li>• Strategic programme: Strategic Management of Natural Resources.</li> <li>• Public budget to reduce vulnerability and attend emergencies in the face of disasters (PREVAED).</li> <li>• Public budget for forest preservation.</li> <li>• Public budget for rural electrification.</li> <li>• Public budget to improve waste management.</li> <li>• Public budget to incorporate adaptation guidelines in the SNIP process (supported by GIZ).</li> <li>• Municipality Modernisation Programme and Incentives Plan, includes waste management and disaster risk reduction.</li> </ul>
General Directorate for Endowment and Public Treasury (DGETP)	<ul style="list-style-type: none"> <li>• Created new Directorate for Risk Management (Created in new Regulation of Organisation and Functions in 2009).</li> </ul>
General Directorate for Public Income Policy (DGPIP)	<ul style="list-style-type: none"> <li>• Tax policy for the use of fossil fuels. Selective Consumption Tax includes “noxiousness index”.</li> </ul>
<b>Vice Ministry of Economy</b>	
General Directorate for International Economic Matters, Competitiveness and Productivity (DGAEICYP)	<ul style="list-style-type: none"> <li>• Planning and coordination of climate change action at a national level.</li> <li>• International negotiations (follow and negotiates issues related to finance and carbon markets).</li> <li>• General Director was a member of the Transitional Committee for the Green Climate Fund.</li> <li>• Involved in multi sectorial groups for various climate change projects.</li> </ul>
General Directorate for Investment Policy (DGPI)	<ul style="list-style-type: none"> <li>• Vulnerability to climate change is considered in the analysis and design of Public Investment Projects (PIPs), as a result of guidelines prepared with the support of GIZ.</li> <li>• PIPs for adaptation and mitigation found in the official database.</li> </ul>
General Directorate for Financial, Labor and Private Markets	<ul style="list-style-type: none"> <li>• Related but not direct reference to climate change</li> <li>• In charge of the Guarantee Fund for the Land and Agricultural Insurance (FOGASA), which, as part of its objective, finance assurance mechanisms destined to reduce exposure of agricultural producers to climate risks and plague presence.</li> </ul>
General Directorate for Macroeconomic Policy (DGPM)	<ul style="list-style-type: none"> <li>• Climate change and sustainability incorporated in Multi-annual Macroeconomic Framework (MMF).</li> </ul>
Sectorial Loans Coordination Unit (UCPS)	<ul style="list-style-type: none"> <li>• 7 loan programmes related to environmental issues and climate change (with IADB, WB and KfW). One of the loans for the Study of the Economic Impact of Climate Change</li> <li>• Programme to reduce disaster vulnerability.</li> </ul>
<b>Other organs under MEF</b>	
ProCompite	<ul style="list-style-type: none"> <li>• Climate change has not been incorporated in its activities, but “environment” has.</li> </ul>
Proinversión	<ul style="list-style-type: none"> <li>• Climate change has not been incorporated in its activities. However, Public-Private Associations (APPs) is a mechanism that ProInversion could use to channel private investment<sup>10</sup> to tackle climate change, by creating, developing, improving, operating or maintaining public infrastructure or providing public services.</li> </ul>
COFIDE	<ul style="list-style-type: none"> <li>• It’s a second-tier bank that developed COFIGAS program, with the objective to provide services that increase the Vehicular Natural Gas market in Peru. However, as a co-benefit, COFIGAS addressed climate change by reducing GHG emissions through the replacement of polluting fossil fuels.</li> </ul>
National Bank	<ul style="list-style-type: none"> <li>• Implemented an Eco-efficiency programme to reduce energy, water, fuels, paper and materials consumption, and therefore, reducing also GHG emissions. This programme allowed earning the Business Eco-efficiency award, granted by MEM.</li> </ul>

Source: Adapted from Galarza E., 2012

10 Also incorporates experience, knowledge, equipment and technology. See: [http://www.mef.gob.pe/index.php?option=com\\_content&view=article&id=336&Itemid=100904](http://www.mef.gob.pe/index.php?option=com_content&view=article&id=336&Itemid=100904).

climate change mitigation, by promoting the extensive use of natural gas by taxi drivers in Lima (reducing the use of more polluting fossil fuels). In addition, COFIDE manages credit lines from JICA and KfW for renewable energy development.

It is important to mention that COFIDE has been developing a strategy to play a strategic role in climate finance, with the support of the IADB. This has involved launching two climate specific investment programmes:

- COFIGAS: Financing vehicle fuel conversion from fossil fuels to natural gas.
- BIONEGOCIOS: Co-financing green business (with national and international resources) related to energy efficiency, generation and distribution of Renewable Energy Resources (RER), transformation and preservation of environment, and social infrastructure to improve quality of life.

The National Environmental Fund – FONAM is an intangible Trust Fund, created as a non-profit private institution of public interest. The Minister of Environment presides over FONAM’s Board of Directors.

FONAM is a non-profit private Law fiduciary institution created by the Peruvian National Congress through Law 26793 in 1997 for the purpose of promoting public and private investment in planning, programs and activities focused on improvement of environmental quality, sustainable use of natural resources and capacity building for proper environmental management in Climate Change, Biodiversity and Desertification.

FONAM analyses and promotes investment in six areas: Climate Change and Carbon Market Promotion, Energy Efficiency, Clean Energy, Sustainable Construction, Forests and Environmental Services, Sustainable Transportation, Residual Water Management, Solid Residue and Sustainable Development. FONAM promotes and manages the Peruvian CDM portfolio.

#### 4.2.2 Climate-related public financial system components and instruments

Public mechanisms managed by MEF that are related to, or may be utilised for, low emission resilient development actions include the public budget, public investment projects under the National Public Investment System (SNIP), the Disaster Contingency Fund, the Program for the Modernization of Municipalities, tax incentives and several funds and other instruments that promote public-private partnerships for investment.

##### Public budget

Governed by the General Law of the National Budget System<sup>11</sup>, the public budget is the tool by which resources are allocated and costs are determined, in order to fulfil the functions of the State and meet the objectives outlined in the economic and social policy plans in the medium and long term (MEF, 2012). In this regard, the budget allocation that contributes to climate change adaptation and mitigation is an important funding mechanism.

The types of relevant budget allocations are budgetary programmes and budget allocations that do not result in products (APNOP). Budget programmes are formulated within the framework of performance budgeting, and can be articulated with public investment projects to achieve concrete results, which in turn are oriented to achieve final results in the context of state policies. In that sense, every year the programmes that show effective results with indicators can apply for additional funds. In contrast, APNOP do not have this advantage. Therefore, long term budgetary programs (when successful) tend to have greater continuity and a smoother flow of resources. However, not the entire public budget is under these modalities at present. It is desirable then, that the actions on climate risk and GHG emissions management are framed in this budgetary programme (Ferro, 2012).

Law N°30114 approved the 2014 public budget by the amount of S/. 118.9 thousand millions, of which only 1.8% will be destined to environmental issues. No further detail could be obtained about specific sources/destinations.

Two permanent budget programmes that help advance climate change objectives have been identified:

- PREVAED (Program for Vulnerability Reduction and Disaster Emergency Care). Focused on addressing intensive and extensive risks, the programme coordinates the activities of various institutions, both at the national, regional and local level, and had a fully open institutional budget of S/. 708 million soles (USD 260 million) in 2013 (Vladimir Ferro, How to generate budget and investment through performance budgeting. Implementation experience PP068 – PREVAED. Presentation at the INTERCLIMA 2012, 2012).
- Sustainable Management of Natural Resources and Biodiversity is a budget programme owned by MINAM. The programme includes activities that contribute to vulnerability reduction, climate change mitigation and adaptation to climate change. The programme includes modelling of climate change mitigation scenarios, promotion of renewable energy and management and promotion of the UN Framework Convention on Climate Change, among others.

Also important is the National Forest Conservation Programme, which implementation in its early phase was financed mainly by resources authorised in MINAM institutional budget corresponding to 2010 and 2011. Over the next years, it was financed by ordinary resources, international cooperation, private companies and multilaterals. However, the amount managed by the programme was not publicly available.

It is also worth mentioning that the Law for Financial Balance of the Public Sector Budget for the Fiscal Year 2010<sup>12</sup> established a contingency reserve of up to S/. 50,000,000 per year in favor of INDECI (National Institute for Civil Defense) to provide timely responses to high magnitude disasters.

Also of relevance is the Municipality Modernisation Programme created in order to generate conditions for “the sustained growth

11 Law N° 28411.

12 Ley N°29467.



of local economies” (MEF, 2010). MEF budgeted 600 million soles (USD 220 million) for the initial year of the programme (2010), which amount is defined yearly. This permanent programme budget works under an Incentive Plan, which implies a conditioned transfer of financial resources, additional to the municipalities’ institutional budget, for the fulfilment of specific goals that must be achieved in a defined term.

Defined goals of the programme include disaster risk prevention and adequate solid waste management. Thus the programme creates conditions and incentives and mobilises resources to reduce climate vulnerability and for mitigation in the waste sector.

It is important to mention that Phase II of the Programme for Climate Change Adaptation (PACC Phase II), listed in Appendix 1, is currently working with MINAM to include a set of specific goals aimed at promoting planning for adaptation to climate change at the municipal level, in the 2015 version of the Municipalities Modernisation Programme.

### National System for Public Investments – SNIP

The SNIP was created in the year 2000, as a tool for the social evaluation of public investment projects, ensuring a minimum cost-benefit benchmark for decision makers and public authorities to assign resources (MEF, 2012). The SNIP is a quality control system and distinct from the source of such funding.

The SNIP has implemented a risk analysis methodology to identify and assess the type and level of damage that could affect an investment (including infrastructure), from the identification and evaluation of its vulnerability (Multiyear Programming Directorate, Ministry of Economy and Finance, 2007). In that sense, the SNIP can be considered as a mechanism that imposes the restrictions necessary to reduce the vulnerability of infrastructure, and therefore the economy and population, to extreme climate events. On the other hand, criteria for incorporating climate change adaptation and climate risk reduction in the prioritisation and approval of public investment projects is being developed by the MEF (GIZ, 2012).

The SNIP also has a predetermined discount rate for environmental service or GHG emissions mitigation projects (4%), and is only applicable to this type of investment project (PIP). The benefits associated with positive externalities are discounted at this rate and added to the associated benefits, which are discounted at an overall rate of 10% (SNIP, 2012). The discount rate is an important factor in determining the future feasibility of climate related public investments, and has the potential to be further enhanced e.g. promote and incentivise higher project volumes and inclusion of positive environmental benefits in project valuations.

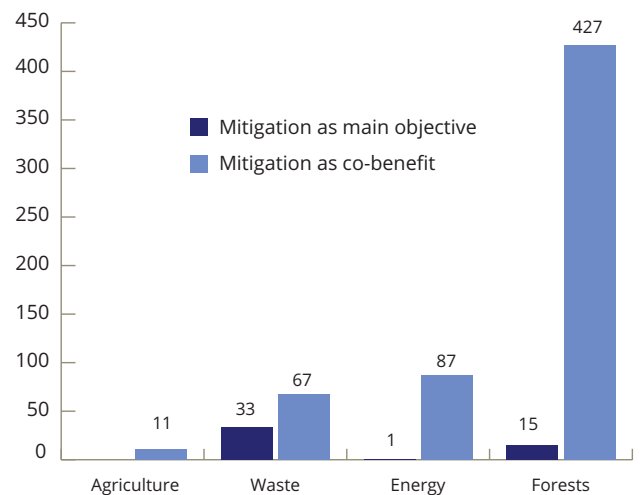
The Public Budget executed in 2010, 2011 and 2012 corresponding to climate change adaptation was S/. 615.12 MM, S/. 636.60 MM and S/. 911.64 MM, respectively; equivalent to 0.87%, 0.83% and 1.05% of total Public Budget executed by both government levels (National and Regional). Therefore, for every S/. 100 expended in the public sector, S/. 0.9 can be attributed to climate change adaptation actions. (Baca, 2013)

Galarza (2012) identified 1,565 investment projects (PIPs) related to environment and 45 PIPs related to climate change (adaptation and mitigation). The effects of climate change are considered in the risk analysis scenarios used for project design. (Galarza, 2012)

In early 2013, Libelula identified 43 projects<sup>13</sup> strictly linked to climate change adaptation, including viable projects in formulation and evaluation, with an amount of S/. 89 million (USD 33 million). A search was conducted specifically for this paper to find climate change mitigation projects in the PIPs database. Results from this search showed a total of 641 projects, 592 of which do not have a mitigation objective (reaffirming further the value of what are referred to as “co-benefits”. i.e. public health, energy security, energy efficiency, air pollution reduction, hydric regulation, etc.) and 49 of which have a mitigation objective. The total amount invested was 1,303 million Soles, with 1,165 million (89%) of that investment in projects that do not have a mitigation objective “per se”.

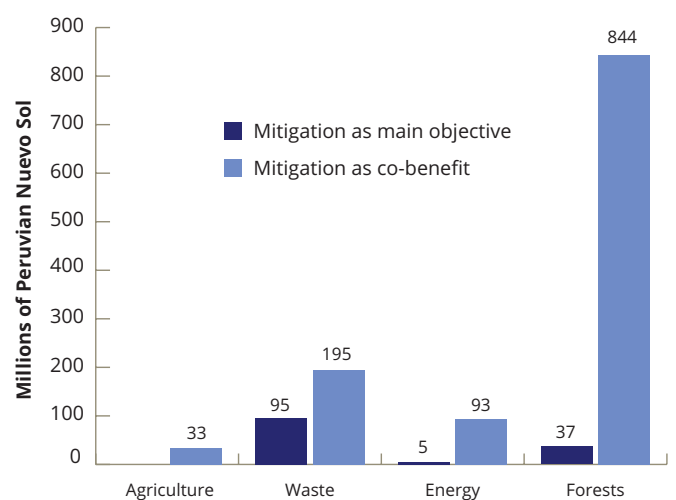
The division by sectors is shown in the graphs in Figure 4.2 and 4.3, with the notable predominance of the forest sector.

Figure 4.2 PIPs by (mitigation) sector



Source: Libelula Comunicación, Ambiente y Desarrollo.

Figure 4.3 Investment in PIPs by (mitigation) sector



13 As of June 2013.

### 4.2.3 Tax Instruments

#### Excise tax to fossil fuels

Although the General Directorate for Public Income Policy (DGPIP) does not have a specific mandate on the issue of climate change, it indirectly has an impact on the use of fossil fuels through tax policy. The Excise Tax on fuels (ISC) is based on proportionality and the degree of harmfulness of pollutants contained (“noxiousness index”).

Based on this, the table of fixed amounts of excise tax on fuels is determined, and it must be implemented progressively from 2008 to 2016. New vehicles using diesel fuel remain taxed through the excise tax and new vehicles that use gasoline, liquid gas or natural gas are exempted. This legal provision was issued in order to encourage a change in the energy matrix in road transport, promoting the use of cleaner fuels, which contributes to the health of the population and GHG mitigation. (Galarza, 2012)

#### Canon Law

The Canon Law was passed in 2001, and it imposes a distribution rule for tax income (up to 50%) deriving from economic activities that harvest natural resources such as minerals (metallic and non-metallic), fossil fuels, fisheries, forests, and water resources with electricity purposes. Regarding the mining industry, in 2012 a total of S/. 5.315 million<sup>14</sup> was distributed amongst the different regional and local governments where mining activities are conducted.

This distribution rule is compulsory for the Government, and it favours regional and local Governments, providing them with sufficient resources to finance public investment projects (which may be infrastructure or other types) as long as they provide public services and benefits to the whole local community. As such, these are subject to the SNIP for the respective social evaluation.

Even though the Canon Law was not originally conceived as a tool to tackle climate change and GHG emissions, it is a very useful instrument as it empowers subnational governments to design and execute infrastructure or other investment projects. These subnational governments may then consider upfront any low emission resilient options which could ensure a positive environmental effect.

Notwithstanding the resource-providing potential of the Canon Law regarding emission reduction, it is important to consider a difficulty that has been present since the Canon Law was introduced in Peru; which is the spending capacity, especially of local Governments. At this level, it is not about resource availability, but about lack of adequate capacities for the formulation and execution, which prevents effective spending of these resources. (Wilbert Rozas, 2012)

### 4.2.4 National funds

#### Disaster Contingency Fund

In 2010, by Supreme Decree No. 254-2010 – EF, contingent financing in the form of Catastrophe Deferred Drawdown Option (CAT DDO) was approved. These “Development policy loans for disaster risk management” of up to USD 100 million were provided by the World Bank, for a three year term and renewable for up to 15

years. The aim of the CAT DDO is to strengthen the government’s ability to mobilise resources and for promoting disaster risk reduction. The CAT DDO provides a source of immediate liquidity in case of natural disasters (World Bank, 2010), including those associated with climate variability.

#### Social, Energetic Inclusion Fund – FISE

FISE is a social inclusion mechanism that promotes the consumption of residential and vehicular natural gas in vulnerable populations, the development of new supplies in the energetic frontier, and promotes access to liquefied petroleum gas in vulnerable sectors (urban and rural). The resources are obtained through a surcharge in the monthly billing of the free electricity users, a surcharge to the transport through ducts of liquid hydrocarbon derived products, and a surcharge in the monthly bill of users of natural gas transport through ducts.

MEM is responsible for the administration of FISE and OSINERGMIN, and as the energy regulatory entity is in charge of establishing sanctions and compensations in order to verify the fulfilment of the obligations stipulated in the regulatory framework of FISE (Supreme Decree N° 021-2012-EM).

#### Science, Technology and Innovation Program – FINCYT

FINCYT is a public fund created in 2006 with funds from an IADB loan and a national counterpart fund from the Peruvian Government. The Fund is managed by a Coordination Unit, designated by the Presidency of the Ministerial Cabinet (PCM), being governed by IADB contracting laws and the national government’s transparency principles.

Beneficiaries are private enterprises and universities, and funds are allocated as co-financing grants. Its purpose is to improve the countries competitiveness through capacity building for research and technologic innovation. It manages USD 36 million (USD 25 million from the IADB loan). Since 2010 it has been assigning resources from another fund with similar objectives: FIDECOM (Competitiveness promotion fund, a public fund created by law and administered by an executive unit within PCM), which differs in promoting research and development of productive innovation projects for practical use in companies.

#### National Natural Protected Areas Promotion Fund – PROFONANPE

This is a private environmental fund created in 1992 under a private regime and autonomy. Its objective is to support conservation and management of natural protected areas. It was created with the support of the international cooperation and an “endowment” from the GEF and the World Bank.

The fund manages resources from its rents, funds from debt exchange and additional sources. It manages a patrimony fund of USD 5.2 million from GEF for fixed costs, being USD 14 million as a donation from GEF to support SERNANP (National Park System), and USD 20 million as debt exchange. Beneficiaries are public institutions, regional governments and NGOs, and funds are allocated as co-financing grants through public bids.

<sup>14</sup> Value based on information available provided by SUNAT SUNAT. (n.d.). SUNAT – Estadísticas y estudios. Retrieved 13 de August de 2013 from [http://www.sunat.gob.pe/estadisticasestudios/busqueda\\_actividad\\_economica.html](http://www.sunat.gob.pe/estadisticasestudios/busqueda_actividad_economica.html)

#### 4.2.5 Mechanisms for public-private investment

Public-private partnerships are regulated and promoted in Peru. A mechanism that has facilitated their growth is the “Works for Taxes” Mechanism, which is explained in Box 4.1.

##### Box 4.1 “Works for taxes”: an innovative mechanism for PPP

###### How was “Works for Taxes” originated and what is its rationale?

Law No. 29230 established this mechanism through which private companies can finance construction and maintenance of public works for local and regional development. Without relying on processes for public expenditure times and procedures are reduced and simplified. This created shared benefits: public institutions receive up front financial resources that are discounted the next year with simplified procedures and less technical resources invested for more expedite works that sustain and accelerate local economic dynamism; private companies associate their image with high social impact works, improve the efficiency of their social responsibility programmes, accelerate works that elevate their own local competitiveness and recover their total investment as tax reductions; and society is benefited through economic development, accelerated infrastructure investment, improved coverage and higher quality of public services, local employment and more competitive companies.

###### How does it work and what institutions participate?

A private company finances works today subtracting this investment from the fiscal tax for next year for up to 50% of the total tax. It is basically a swap and in no case does the company is abstained from paying taxes. On the other side, Regional and Local Governments and public universities are funded today and start paying the year after the work is finished and for up to ten years without interest, subtracting the investment from their mining canon resources, over-canon, mining royalties, customs revenues and shares. Since July 2013 the Law allows for regions that do not receive canon to take advantage of the mechanism using resources assigned to funds that MEF have created.<sup>15</sup>

MEF provides a step-by-step procedure for the mechanism. PROINVERSION is in charge of promoting the Law and conducting the consultation process, it also provides information about the mechanism, disseminates prioritised projects, gives advisory services to regional and local governments and support in the identification of companies, facilitates the relationship between both beneficiaries, helps in the selection process for prioritised projects and provides information on current projects.

###### Which are the sectors in which works are made?

Works that apply for the mechanism are included in 10 main sectors, most of them having direct or indirect linkages with climate change causes and impacts: health, education, water, local road infrastructure, regional transport infrastructure, irrigation infrastructure, public health (inc. integrated solid waste management), energy and telecommunication (inc. electric systems and rural electrification projects), tourism, sports and leisure and others including small bus terminals, theaters, food markets and wholesale markets.

###### Results so far

According to information available in the website<sup>16</sup>, we can see that the use of this mechanism has been increasing over the years (2009-2013). In 2015 the investment was 303.65 billion soles, adding to a total of 730.42 since its creation. The percentage of real investment is only 9% of the potential investment, which is still low, however this could be due to limited knowledge on the uses of this relatively new tool.

The total number of projects awarded and completed is 61. The two main sectors are transport and sanitation. Companies that are using this mechanism are mostly from the mining sector. According to the ranking of companies considering the amounts invested from 2009 to 2013, the first four are Southern Peru (mining), Banco de Credito de Peru (Commercial Bank), Minera Volcan (mining) and InterBank (Commercial Bank).

###### How it could be used to tackle climate change?

As mentioned, works that apply for the mechanism are included in sectors that have direct or indirect linkages with climate change causes and impacts. However, there are not explicit guidelines on how to address climate change through this mechanism. Considering the above mentioned, some recommendations could be made for it:

- Encourage private companies to develop projects with a climate change approach
- Include in the step by step procedure a climate risk analysis (how it would affect the work lifespan).
- Considering a low carbon infrastructure approach from the early stages of project implementation.

#### 4.2.6 Conclusions

Fiscal and market mechanism considerations are key for the successful elaboration and later implementation of LEDS because their aim is to procure development while catalysing private finance. The Peruvian public finance system under the leadership of MEF represents a strong foundation for national and subnational governance and integration of low emission resilient options into government’s public investment programmes. The public finance

<sup>15</sup> Still under reglamentation

<sup>16</sup> Works for Taxes. Available at: <http://www.obrasporimpuestos.pe>

system has several policy instruments which are being used to different degrees to promote climate action, including public – private partnerships, national funds, tax instruments, investment effectiveness mechanisms and a national development bank that is offering innovative climate specific financial products. Despite the capacity constraints which may inhibit the public finance system from achieving its full potential, with improved coordination, capacity support and regulation (where necessary) the directional trend for integration of climate into the Peruvian national public finance system is very positive.

In terms of opportunities derived from the national public finance sub-system, the following are scoped:

- Growing interest by public (financial) institutions: Growing international cooperation and an increase in public expenditure has resulted in more institutions outside the “environmental arena” looking into climate change management. The Ministry of Economy and Finance has been involved in climate change management for many years now and has led studies and developed and adapted financial instruments to address climate change. A more recent example is the National Development Bank (COFIDE), who was identified by MINAM and MEF, and by the Inter-American Development Bank as a key institution for catalysing climate finance. COFIDE has launched two climate specific investment programmes targeting alternative fuels and green business and is developing an institutional strategy to become a key stakeholder in climate change finance.
- Growth in public sector investment: Increasing investment in terms of infrastructure and at the sub-national level for climate change, through budget allocation for environmental and climate change management programmes should be encouraged as well as public investment in projects that promote adaptation and mitigation.
- Budget configuration: Shifting to a budget that is based on results for the public sector allows for the inclusion of mitigation objectives (and others related to climate change) in the list of indicators, which facilitates the allocation and utilisation of financial sources addressing climate change. There are existing frameworks in public finance system (e.g. SNIP) which allow for improved budget configuration and additional efforts such as performance based budgeting may deepen the effectiveness of public budget allocations.

While there has been some progress and various mechanisms and funds are in place, more work is needed to better coordinate and harmonise funds and programmes so that public finance allocations can be used more effectively to promote investment and climate action at scale and in the areas where more is needed. Therefore, embedding climate action across government and not as standalone response is critical. The commitment and leadership of key actors, especially productive sector Ministries, is crucial.

In this respect, and under the leadership of MINAM and each productive sector, MEF’s next step could be to identify which financial mechanisms could be used to address climate change (and

how) for each strategic adaptation or mitigation action, spreading and facilitating their access according to each sectors needs and aligning them with the desired LEDS.

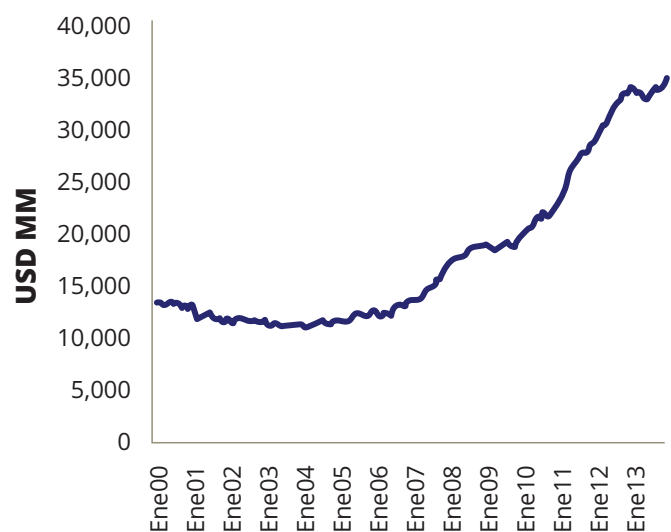
In a later stage COFIDE and other development banks could help by structuring mixed finance around strategic interventions and catalysing private finance. These banks and national fiduciary institutions and funds could also play an important role in accessing and using international climate finance.

Although there is already a series of GHG targets and measures which have already been identified for specific sectors, it is nevertheless necessary to deepen this process and determine the investment needed by each sector. As a means of demonstrating alternate pathways for financing these measures, sectors could prioritise a portfolio of low-emission resilient projects that are commercially viable, so that MEF’s work could focus on identifying and facilitating access to financial mechanisms that channel investment towards these projects<sup>17</sup>. This is in line with the purpose of MEF of harmonising the national economic activity to promote market operation and continuous improvements of productivity, economic growth and sustainable development.

#### 4.3 National private finance

The Peruvian banking and financial sector experienced steady growth over the past decade. According to the Central Reserve Bank, credit flow from financial institutions to the private sector has more than tripled since 2003. The Peruvian economy has demonstrated a strong capacity to allocate resources for important investments that has given the economy the necessary dynamism to sustain a continuous rate of economic growth. Figure 4.4 shows the evolution of financing flows towards the private sector since January 2000.

**Figure 4.4 Financial flow (credits) towards the private sector (USD MM)**



Source: BCRP, 2013

Overall, the positive financial system features for 2012 were a) growth in loans, b) reversal of the influence of short-term foreign

17 Interview with Rocío García Naranjo, MEF, January 2014



capital, c) improved liquidity in the financial system, d) low levels of unpaid debt, e) intervention of new participants, f) increased transparency, g) improvements in the quality of customer service, h) increasing trend of the micro finance sector, creating increased competition, i) adaptation to Basel III and j) regulatory changes to the Banking, Insurance and Pension Funds Supervisory Board (SBS). On the other hand, the negative features were: a) negative effect of the European crisis on export financing, b) possible slowdown in deposits, c) exchange market interventions by the Central Bank to maintain low volatility of local currency and d) slowing growth in consumer and commercial loans.

By the end of 2012, private sector liquidity registered an increase of 14.5%. In 2012 credit continued to grow, although to a lesser extent than the previous year (12.98% rate compared to 21.87% in 2011 and 14.31% in 2010). National currency loans grew at an annual rate of 15.14%, while foreign currency loans showed a slight increase of 17.23% compared to 29.23% in 2011. The slowdown in the growth rate of foreign currency loans evidences a de-dollarisation process amid international uncertainty.

Meanwhile, the Non-Performing Loans (NPL) ratio stood at 2.16% in 2012, 17% higher than the previous year, while the provision coverage ratio decreased from 190.42% to 171.35% in the same period. In terms of return on assets, this increased by 0.04% to 3.08%, while return on equity increased from 19.97% to 21.56%.

Private sector liquidity has continued to grow, although it showed a slight slowdown in 2012 (14.5%) compared to 16.4% in 2011. This result is explained by the reduction of fast deposits and savings deposits. On the other hand, foreign currency liquidity growth fell from 17.2% in 2011 to a 0.1% reduction by the end of 2012.

In terms of the capital market, the following aspects are highlighted: high volatility of the stock market, shallow market (with high concentration of large companies, need for new instruments and limited access for smaller companies) and sovereign debt market influenced by the international crisis. (COFIDE 2013)

#### 4.3.1 Financial regulation in Peru

There are two institutions responsible for regulating the financial system in Peru:

##### **Banking, Insurance and Pension Funds Supervisory Board – SBS<sup>18</sup>**

The SBS is a Public Law institution with functional autonomy recognised by the Constitution. The SBS is the organisation in charge of regulation and supervision of the Financial, Insurance and Pension fund systems in Peru, as well as preventing and detecting asset laundering and terrorist financing activity. Its main purpose is to preserve the interest of the savings, insurance and private pensions of end users.

##### **Financial Customer Defender<sup>19</sup>**

The Office of the Financial Customer Defender was created in April 2003 as an administrative procedure to prevent and resolve conflicts that may arise between customers and financial services institutions in order to develop among them a relationship based on good faith, fairness and mutual trust.

#### 4.3.2 Private investment promotion agency

The Agency for the Promotion of Private Investment – PROINVERSION is the official state agency for private investment promotion, and has existed since the 1990s. It was initially entrusted with the privatisation of public services, and currently promotes, facilitates and attracts private investment in the country and its regions, and public-private partnerships for infrastructure (including “works for taxes”). As an institution funded by the National Treasury, it manages technical cooperation resources and facilitates transactions in regions and, in particular, to small and medium enterprises.

#### 4.3.3 Main financial institutions

As of December 2012, the financial system was composed of 62 private institutions: 16 commercial banks, 11 finance companies, two leasing companies, 13 municipal banks, 10 rural savings and credit banks, and 10 small and micro enterprises development entities. Additionally, the system includes the following state agencies: the National Bank (Banco de la Nación), Agrobanco, Mivivienda Fund and COFIDE. (COFIDE, 2013)

The financial system has continued a process of consolidation that has resulted in an increased number of participants. With the presence of new participants and increased competition, greater transparency in the financial system is expected, allowing the entry of new financial technologies, improvements in the quality of customer service and reducing the cost of credit.

At the end of 2012, commercial banks accounted for 84.55% of direct loans, followed by municipal banks (6.61%), finance companies (4.84%), the National Bank (1.72%), rural banks (1.21%), EDIPYMES – Development Entities for Small and Micro companies (0.62%), leasing companies (0.24%), and finally Agrobanco (0.21%). 59.9% of total direct credit is classified as commercial, 20.3% as consumer loans, 14.4% as home mortgage and 5.4% as microenterprises.

Non-bank microfinance institutions have contributed to the increased decentralisation of banking and financial services, having a strong presence in geographic areas and market segments usually neglected by the banking system. Among these institutions, municipal banks showed the most dynamism.

#### 4.3.4 Capital markets

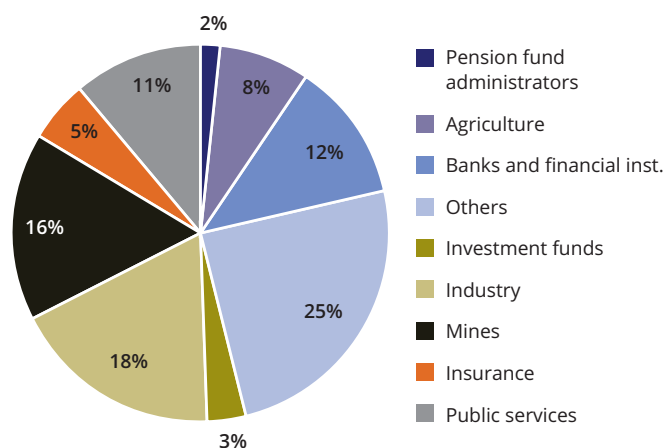
Figure 4.5 shows the composition of the 283 companies listed in the Lima Stock Market. Industry, mining and finance (including insurance) make up almost half of the total (46%). Table 4.2 shows some of the main Stock Market's indicators, comparing 2005 and 2012. Market capitalisation has increased but not as fast as GDP growth and there is a small increase in the value of shares and listed domestic companies.

There is no listing of green companies in the Lima Stock Exchange, but several of the listed companies are advancing climate change mitigation through the CDM and green corporate responsibility, mainly in the agricultural and energy sector. An insurance company (Pacífico Seguros) is also the first company to compensate for its carbon footprint.

18 [www.sbs.gob.pe](http://www.sbs.gob.pe)

19 [www.dcf.com.pe](http://www.dcf.com.pe)

**Figure 4.5 Composition of companies in the Lima Stock Exchange**



Institutional investors typically manage large portfolios representing retirement and pension savings and are regarded as a major source of future co-funding for climate change projects. Based on the structure of the Lima Stock Exchange, it appears that only 2% represent pension fund administrators and 5% represent investment funds. A further analysis into the funds under management by these administrators and investment funds would provide evidence of whether Peru has the domestic absorption capacity to finance its low emission resilient infrastructure and other climate action responses.

#### 4.3.5 Instruments promoting private investment in LEDS

##### Private investment in renewable energy: auctions

As part of the framework established by the New Sustainable Energy Matrix, Peru is trying to promote investment in electricity generation through the use of renewable energy sources (RES), to deliver electricity to the National Interconnected Electricity System (SEIN)<sup>20</sup>. From 2006 until 2012 the total investment in RES was USD 2.5 billion (Multilateral Investment Fund and Bloomberg New Energy Finance, 2013).

To promote investment in renewable energy, OSINERGMIN auction a determined amount of electricity generation with a fixed

price (there is no payment for firm power), paid for it, and established as a “roof price” (or price ceiling) not known by the tenders<sup>21</sup>. Only projects that generate electricity using RES can participate in the tender. Electricity will be assigned to projects that offer an energy price below the unknown “roof price” until the determined amount of electricity established by OSINERGMIN is met, prioritising projects with lower prices offered.<sup>22</sup>

Three auctions have been carried out by the Ministry of Energy and Mines, but only two had allocated renewable energy projects. In total, four wind projects, five solar projects, four biomass projects and twenty six hydro projects (with an installed capacity of 640 MW) have been allocated. In March 2013 only three solar projects, two biomass projects and nine hydros were operating. Only 36% of the target of 5% in the energy matrix has been covered by the auctions.

Both the price fixed by the regulator and the average price offered by potential investors have been declining. According to Rios, this lack of investment affects country competitiveness. Countries like Chile and Colombia attract more investments in electric generation because their sale prices are considerably higher, ranging from USD 55/MWh to USD 120/MWh.<sup>23</sup>

##### Voluntary initiatives: Equator Principles

The Equator Principles (EPs) is a risk management framework, adopted by financial institutions, for determining, assessing and managing environmental and social risk in projects and is primarily intended to provide a minimum standard for due diligence to support responsible risk decision-making. Currently, only two Peruvian commercial banks are listed as members: Banco de Credito del Perú, BCP (first domestic bank) and Scotiabank. The benefits of subscribing to the Equator Principles depends on the ability of these banks to apply the frameworks to their investment decisions and so enable more climate related investment. Engagement with the commercial banks that have adopted these principles would be beneficial to understand how they are applying them in their investment appraisals. Peru may benefit from a similar platform as Colombia has adopted, in its “Green Protocol” partnership between government and the commercial banks to promote environmentally sound investments and practices in the financial sector.

**Table 4.2 Stock market indicators (yearly average)**

Market capitalisation		Market liquidity – Value of shares traded		Turnover ratio – Value of shares traded		Listed domestic companies		S&P/Global Equity Indices			
\$ millions	% of GDP	% of GDP		% of market capitalisation		No.		% change			
2005	2012	2005	2011	2005	2011	2005	2012	2011	2012		
35,995	96,850	45.3	44.8	2.5	2.8	7.2	5.7	196	213	-21.3	17.4

Source: WB, 2013

20 Only the First Tender was made to deliver electricity to areas not connect to the SEIN.

21 OSINERMINING determines an electricity amount and a “roof price” for each type of RER technology, considering the potential offer.

22 Legislative Decree 1002.

23 <http://albertorios.eu/?P=1406>

**Table 4.3 Results of renewable energy auctions**

Auctions by RES type	Base price fixed by OSINERGMIN	Average offered price	Number of proposed projects	Number of allocated projects
<b>First auction – first call</b>				
Biomass (Ctv USD/kWh)	12.00	8.10	2	2
Wind (Ctv USD/kWh)	11.00	7.92	6	3
Solar (Ctv USD/kWh)	26.90	22.14	6	4
Hydro (Ctv USD/kWh)	7.40	5.99	17	17
<b>First auction – second call</b>				
Biomass (Ctv USD/kWh)	5.50	0.12	5	1
Solar (Ctv USD/kWh)	21.10		3	0
Hydro (Ctv USD/kWh)	6.40	5.92	17	2
<b>Second auction</b>				
Biomass agricultural waste (Ctv USD/kWh)	65		1	0
Biomass urban waste (Ctv USD/kWh)	Not revealed		1	1
Wind (Ctv USD/kWh)	Not revealed		6	1
Solar (Ctv USD/kWh)	Not revealed		13	1
Hydro (Ctv USD/kWh)	Not revealed		16	7

Source: Dammert, 2012

#### 4.3.6 Private environmental funds

##### Fund of the Americas – FONDAM

FONDAM is a private fund that promotes conservation and sustainable natural resources management in tropical forests. It was created in 1997 to administer and manage the resources of the debt exchange with the United States. The fund manages USD 25 million and its beneficiaries are mainly NGOs.

##### Aquafondo<sup>24</sup>

Aquafondo is a financial tool that aims to mobilise resources to preserve the three watersheds that provide water to the city of Lima (Chillon, Rimac and Lurin) and thus ensure sufficient clean water for its population. Resources are managed as an endowment fund. Companies and international cooperation can invest through two modalities:

- Contributions to the endowment fund, of which only interests are spent for programmes, projects and institutional capacity building.

- Project specific contributions.

Six institutions created Aquafondo: Backus (brewing company), Católica University, Grupo GEA and National Society for Environmental Law (SPDA, a local NGOs), FONDAM and The Nature Conservancy. It also has a steering committee comprised of the Municipality of Lima, the Ministry of Environment (MINAM) and the National Water Authority (ANA).

#### 4.3.7 Capacity building programmes for finance sector

Appendix 1 shows that there are a number of projects aimed at creating enabling environments for low emission resilience, however, only a few target the financial sector. One such programme is the Microfinance for Ecosystem based Adaptation (MebA) project, which is elaborated in further detail in Box 4.2. MebA project is an initiative for catalysing climate finance for adaptation at the rural household level and addresses gaps in the financial system, as rural microcredit is mostly uncovered by formal credit markets. This is an example of a climate finance initiative that seeks to be financially and socially inclusive, and relevant for the structure of the Peruvian economy.

<sup>24</sup> <http://aquafondo.org.pe/about.php>

## Box 4.2 The Microfinance for Ecosystem-based Adaptation (MEbA) Project

### Overview

Smallholding farmers in the Peruvian Andes are particularly vulnerable to climate change, as they rely on climate – sensitive ecosystem services, such as water provision, soil, and appropriate temperatures to obtain predictable and sustained crop yields. At the same time, although microfinance institutions (MFI) have increased allocation of credit rapidly in the city, the rural microcredit market is mostly uncovered by formal credit. In the areas that are covered, interest rates are very high, due to high risk perception and operational costs. Hence, reducing uncertainty of risk and operational costs on the MFI's side may encourage more rural microcredit allocation, which, in turn, can further finance adaptation measures at the household level. Moreover, since part of the underlying risk in rural areas is climate related (i.e. climate risks often create sudden shocks in the household's economy, reducing their capacity to pay debts), the implementation of adaptation measures by farmers ultimately reduces risk for MFIs as well.

With this in mind, MEbA project works to elaborate innovative financial instruments and mechanisms that will support smallholding farmers in the Peruvian and Colombian Andes in adapting to climate change. The underlying concept of MEbA is to encourage MFIs to invest in the resilience of ecosystems upon which these communities depend in order to secure and maintain their livelihoods (Rondón-Krummheuer, Knickel, & Shuford, 2012).

### How does it work?

The MEbA project proponents are partnering with three MFIs in Peru (and three others in Colombia) to link microcredit products with ecosystem – based adaptation measures aimed at reducing the vulnerability of smallholding farmers. Possible measures are numerous and diverse, ranging from agroforestry systems, rustic reservoirs, greenhouses, and organic fertilizers, to ancestral water management technologies.

A key component of the project is the credit methodology. Very few MFIs incorporate climate risk in their credit evaluation methodology. MEbA focuses on adjusting the MFIs' credit methodologies by incorporating climate risk variables and designing adequate financial products to meet the needs of the MFIs' clients, namely the farmers. A more efficient credit methodology is proposed through the standardisation and semi – automation of credit evaluation, thereby decreasing operational costs in rural areas.

The project will be piloted through alliances with three MFIs in Peru: Edyficar, Solidaridad, and

Fondesurco. Results and lessons learned from their experiences with the credit methodology and the implementation of adaptation measures financed by microcredits will be used to make possible improvements and promote replication with other MFIs.

### What are the main benefits deriving from this initiative?

The main benefits are:

- 1) Strengthened livelihoods and reduced vulnerability to climate change at the smallholding farmer level;
- 2) strengthened capacity for autonomous development at the smallholding farmer level;
- 3) reduced levels of extreme poverty and poverty;
- 4) reduced risk on the MFIs' side; and
- 5) increased allocation of microcredits and greater profits, on the MFIs' side

### Results so far

The MEbA project spans from mid-2012 to mid-2017. Progress to date includes building alliances with three partner MFIs, designing adaptation measures, gathering information about project beneficiaries (i.e. smallholding farmers), developing the credit methodology (still in progress), engaging partners from the public sector, and obtaining access to climate data (still in progress).

Some MFIs are already allocating credits for adaptation measures. A significant increase in allocation of credits is expected to occur in 2015, once the credit methodology is in place. No measureable results can be disclosed at the moment.

### Who funds and who implements the MEbA project?

**Implementation:** The project is implemented by the United Nations Environment Programme (UNEP) and the Frankfurt School UNEP Collaborating Centre for Climate and Sustainable Energy Finance. Three Peruvian pilot MFIs – Edyficar, Solidaridad, and Fondesurco, are involved as partners in project implementation.

**Funding:** The project is funded mainly by the German Federal Ministry for the Environment, Nature Conservation, and Nuclear Safety (BMU). However, private finance is also involved, since pilot MFIs themselves provide credit from their own resources for climate change adaptation.

There is room for additional capacity development and financial product innovation initiatives in the Peruvian finance sector.



### 4.3.8 Conclusions

Financing climate action requires that public and private finance institutions work together to achieve the transformation towards low emission resilient development. Without the mutually supportive participation and commitment of the private finance system, it will not be possible to mobilise the amount of resources needed for implementation.

The main opportunity arising from the national private finance sub-system is the current high liquidity of the financial system, which signals increased resources that could be channelled for climate related programs. However, this depends mostly on private sector needs (final destination of financial resources) and mechanisms provided by financial institutions to encourage the private sector to develop projects related to climate change. In sum, private finance is useful for climate change objectives only if investors can understand the climate-related investment risks and opportunities.

However, it should also be mentioned that increasing NPL levels may mean that investors exercise extreme caution and conservatism which may constrain credit extension for climate related investment (i.e. it may be perceived as having less of a track record).

Since the Peruvian economy is mainly made up of smaller enterprises (not big business), if the investment potential for new businesses from climate action can be supported, then there would be a large uptake by municipal and rural banks, as well as consumers. Thus, the growth of the microfinance sector is also an opportunity for private climate investment.

The private sector might already use financial resources to tackle climate change (i.e. energy efficiency projects) directly or indirectly, but the actual credit characterisation, and publicly available information, does not allow for identifying how financial resources are being used.

In terms of recommendations, it is important to identify sectoral low-carbon portfolios, aligning private investment with sectoral needs. Also, regulators could enhance climate change finance by

asking financial institutions to comply with international standards (i.e. the Equator Principles) to determine, evaluate and manage climate change risks within their loan operations.

Second-tier banks could apply as National Implementation Entities (NIEs) to channel climate finance for specific uses (i.e. mitigation, adaptation, REDD+, etc.). The process to become an NIE will force them to implement climate risk standards (accounting for resources addressing climate change) and make climate funds available to several relevant actors, reinforcing low-carbon investments and complementing voluntary initiatives.

### 4.4 International Finance

The domestic public and private finance sector in Peru does not have sufficient capacity to fully support the country's response to climate change. Therefore, significant financial resources will be needed to support an adequate and sustained response by Peru to climate change. International finance has a key role to play in complementing national resources in this effort.

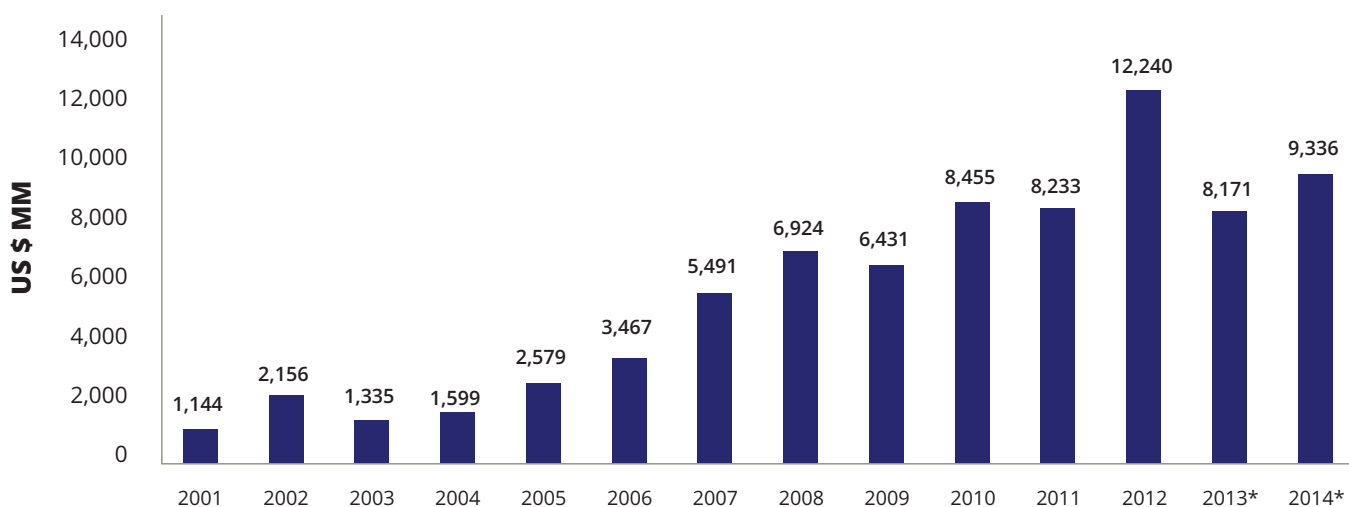
#### 4.4.1 Foreign direct investment

Peru has been experiencing encouraging economic performance in the last decade. As a result, Peru has become increasingly more attractive to foreign investors. From 2001 to 2012, foreign direct investment (FDI) grew more than 1000% from USD 1.114 million to USD 12.24 million. Figure 4.6 shows the evolution of FDI in Peru.

Information provided by the Ministry of Economy and Finance shows that until 2009, the sectors that benefited most from FDI were mining, communications, industry, finance and energy. The financial sector represented 15.1% of FDI, while energy represented a share of 13.82%.

Energy constitutes a key sector for low carbon resilient development. FDI for energy, although large, cannot necessarily be considered as "low carbon – resilient investment". Nevertheless, Figure 12 could be used as a proxy considering that more than half of the electricity mix

Figure 4.6 FDI Flows<sup>25</sup>



Source: Proinversion, 2012

25 Figures based on projected inflation – Dec. 2012

comes from a renewable source (hydro) and the fact that there has been a considerable entry of natural gas into the energy matrix in the last decade. However, the role of government in providing the right policy incentives is still fundamental for this growing sector. Further work is anticipated to understand what such policy incentives might be in the case of Peru as well as a critical assessment of the environmental and social impacts of mining and hydro power.

#### 4.4.2 International co-operation

The National Agency for International Cooperation within the Ministry of Foreign Affairs (APCI) is the institution entrusted with managing international cooperation. There are other institutions involved in the channelling of finance from international cooperation as well as several disbursement channels, resulting in a complex ecosystem. Figure 3.6 shows the complex interactions among the existing disbursement channels, and the main institutions involved.

The main institutions include Technical International Cooperation Foreign Entities that channel resources for direct implementation by Non-Governmental Organisations, private companies and academic institutions; as well as national, regional and local government organisations that also receive international cooperation resources.

The findings of the PRONAGECC (National Program for Climate Change Management) scoping study<sup>26</sup> showed that “cooperation resources to support climate change programs, projects and activities are mostly of public origin. These are divided between reimbursable and non-reimbursable financial and non-financial, and are almost entirely free. This cooperation is given in all modalities established by APCI” (Grade and Libelula, 2011). The study also identified “a diverse and growing supply of international cooperation, which flows through official and unofficial channels that will continue to

increase, as well as a new opportunity for national institutions to access multilateral climate resources directly, provided that fiduciary standards are met”.

The previously mentioned study presented results based on the scoping of 88 climate change projects (all in different stages of development) that sum up to USD 808,669,042. This amount combines both public funds and international cooperation.

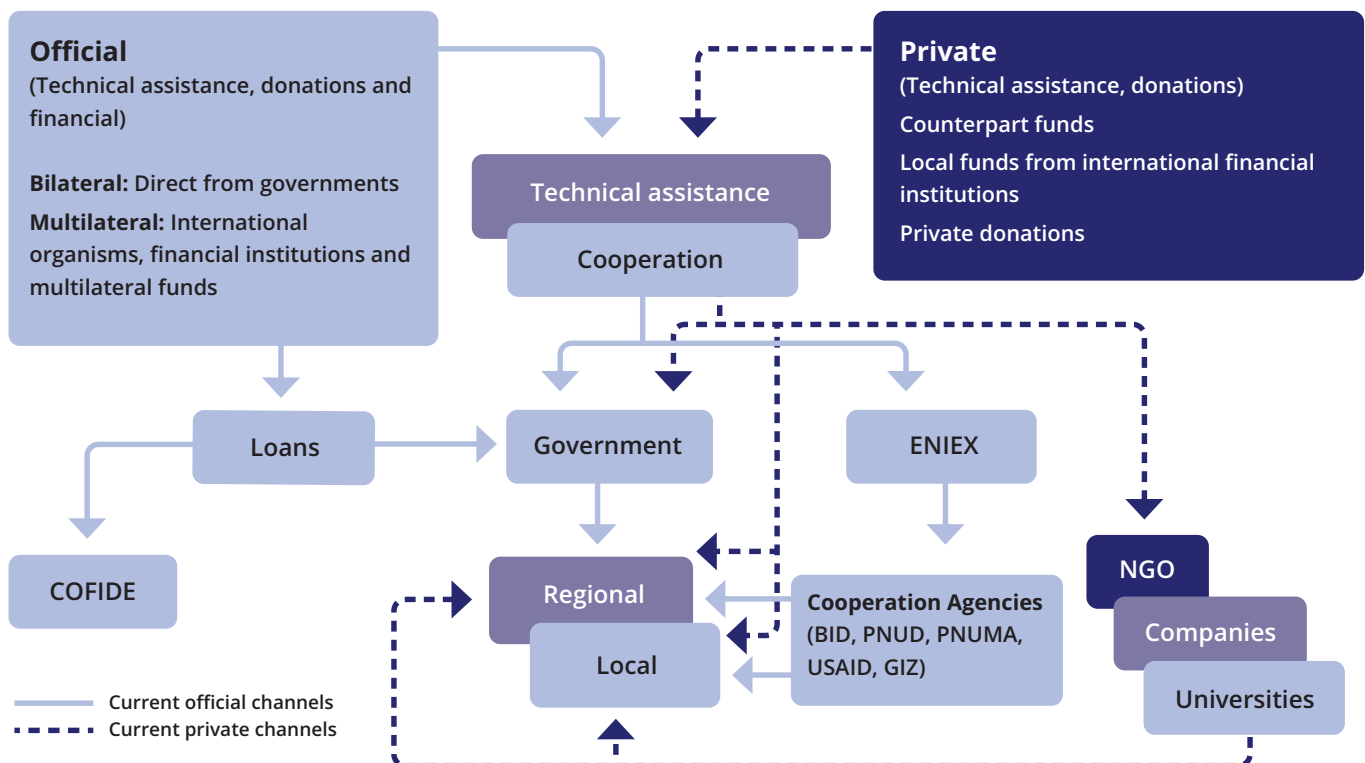
A recent report released by MINAM found that the total project/ programme portfolio only for MINAM in the first semester of 2013 includes 75 projects that sum up to USD 407.4 million. From these, 44 are in execution (USD 292.8 million). 57 of the 75 are under the Vice ministry that deals with climate change affairs (USD 244.4 million) and 34 (USD 141.5 million) are projects directly related to climate change adaptation and mitigation.

#### 4.4.3 International climate finance funds

From the institutions and channels mentioned in the previous section, there are some worth describing since they are currently providing important financial flows for capacity building and for creating an enabling environment for low emission resilient development. Complementing this information is the comprehensive list of projects and initiatives –many of which are financed by international cooperation- found in Appendix 1.

The Adaptation Fund (AF) is a fund established in 2007 under the Kyoto Protocol framework. The fund aims to finance adaptation projects and specific programs to reduce vulnerability to climate risks of populations in developing countries. It is managed by the Adaptation Fund Board (AFB), which in turn receives advice and secretariat services from the Global Environment Facility (GEF).<sup>27</sup> The fund is

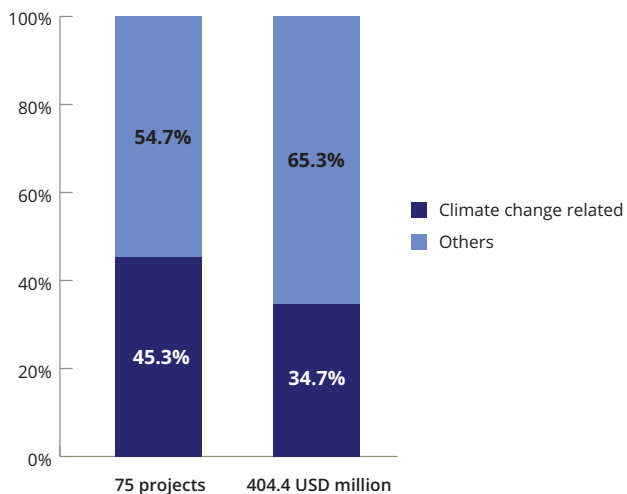
Figure 4.7 International cooperation disbursement channels – Peru



Source: Adapted from APCI.

26 Diagnosis of Institutional Arrangements for Climate Change Management conducted by GRADE and Libelula, 2011.

**Figure 4.8 MINAM project portfolio**



Source: MINAM, 2013

replenished through a share of proceeds from the CDM and voluntary contributions. An important innovation of the fund is that it allows for direct access through National Implementing Agencies (NIE). PROFONANPE was identified by MINAM as a suitable NIE for the AF, however, no Peruvian NIE has been accredited by the AF Board. Peru has submitted a funding request of USD 6,950, 239 to the AF for the project “Adaptation to climate change impacts on marine ecosystems and fisheries.” (Adaptation Fund Board, 2012) and a full project proposal has been requested. The AF endorsed the project concept, as supplemented by the clarification response provided by the Inter-American Development Bank (IDB) to the request made by the technical review on mid-2012. However, the project was not approved to the date of publication of this report<sup>28</sup>.

The Green Climate Fund has emerged as the mechanism that will probably centralise most climate finance from international cooperation towards low emission resilient development. Created under the UNFCCC but not completely operationalised as yet, it will include several windows (adaptation, mitigation, REDD+) and aims to provide direct access to its beneficiaries. Peru would need to keep track of and be engaged in the development and design of the GCF’s operating modalities so that as a country it is able to respond and engage effectively. MINAM is currently assessing the capacity of several institutions including COFIDE and FONAM to be Implementing Entities for the Fund.

Multilateral institutions providing development funds can be classified into two types: technical multilateral agencies and multilateral development banks. The first type (e.g. the Global Environment Fund – GEF), provide advice on national environmental policy development and undertakes project management. Appendix 1 includes a list of Peruvian GEF projects. Meanwhile, the latter type (i.e. the World Bank through the Climate Investment Funds CIF), provide loans and research/ consulting services. The funds of these institutions are especially useful for the preliminary stage of projects. In addition, they help to catalyse other sources of funding support. (UNDP, 2011). Peru accessed the Climate Investment Funds, specifically through the Forest Investment Program (see Appendix 1).

Multilateral institutions are major providers of funds for adaptation to climate change in Peru. Some projects funded by the GEF are the “Promoting Sustainable Land Management in Apurímac”, “National Capacity Assessment in Climate Change, Biodiversity, Desertification and Drought”, the “Andean Paramo” and “Towards an Ecosystem Approach to Management of Large Marine Ecosystem Humboldt Current”. A further project funded by the Special Climate Change Fund is the “Adaptation Programme Accelerated Impact of Glacier Retreat in the Tropical Andes” (PRAA). The total investment amount of the five projects mentioned is around USD 58 million, but this amount does not correspond exclusively to GEF funding.

The IADB and the World Bank funded several projects of climate risk management and adaptation in Peru, for a total combined investment of at least USD 4.7 million, including matching funds.

Bilateral cooperation agencies generally have a commitment to maximum cooperation within a project (about 30%), which facilitates the entry of other funding sources (UNFCCC, 2012). Peru, as a country vulnerable to climate change and a fast growing economy, receives funding for climate change projects from several bilateral agencies. Some entities cooperating in this type of project are COSUDE, the Ministry of Environment and Nuclear Safety of Germany, the German international cooperation agency (GIZ), the Belgian Cooperation, the Embassy of the Netherlands, USAID, UK cooperation, the European Union and the Canadian Agency for International Development.

According to a database compiled by V. Gálmez and P. Santa María, who take into account 217 projects between 1994 and 2010, the GIZ, the European Union, and aid agencies from Switzerland, the United States, the Netherlands and the United Kingdom report the greatest amount of adaptation actions in the Andean countries (Gálmez & Santa María, 2010).

A non-exhaustive list of funding (climate change cooperation projects executed by MINAM) is presented in Appendix 1, showing a similar proportion among REDD+ and adaptation projects.

#### 4.4.4 Institutional arrangements for climate finance

For many years, the Ministry of Environment was the only government entity coordinating climate finance, mostly from public and international resources. Through the national procedure for approving CDM projects it also had limited control over a portion of private finance.

Recently, the Ministry of Economy and Finance and sectoral ministries are becoming more involved as NAMAs are being designed and as climate change is beginning to be mainstreamed into other sectors. However, synergies are needed to establish a defined pathway by identifying: i) priorities; ii) how to involve private actors; and iii) how to account for money allocated to address climate change.

As mentioned in Section 1, in 2011, due to the increase in international cooperation and interest by both the Ministry of Environment and the Ministry of Economy and Finance to increase effectiveness in climate related expenditure, a proposal for a National Program for Climate Change Management (PRONAGECC) was

26 Diagnosis of Institutional Arrangements for Climate Change Management conducted by GRADE and Libelula, 2011.

27 unfccc.int

28 [https://www.adaptation-fund.org/funded\\_projects](https://www.adaptation-fund.org/funded_projects)

made by these institutions. Later, this proposal became the basis for a project that will test institutional arrangements for climate change management, including finance.

The credit proposal for the preparatory phase of the project includes the following outputs:

- 1) A proposal for a legal instrument that creates institutional arrangements for climate change management, validated by relevant stakeholders and an implementation plan with national and international resources committed to begin implementing the program.
- 2) Technical support and funding services to meet the demands of the project's pilots and prioritised institutions, packaged in order to increase scale.
- 3) Financial structuring models and institutional roles developed in coordination within projects and the main entities.
- 4) A MRV System for the National Climate Change Strategy and annual progress reports of implementation (advances, challenges and opportunities) as inputs to Biennial Reports and National Communications to the UNFCCC.
- 5) Critical mass of legislators and public officials with strengthened capabilities engaged in dialogue, project coordination, learning and knowledge management activities.

Phase I will cost approximately S./ 8.98 million and is being financed by COSUDE. It was expected to be awarded through a tender process in May 2014, beginning its implementation process in June of the same year. Its implementation will be conducted by an Executing Unit that will respond to a Steering Committee, integrated by institutions of the Peruvian Government. Tenders will propose a schedule of the main tasks and their execution<sup>29</sup>.

Moreover, decisions under the UNFCCC have resulted in "opportunities" for direct access to funds, but also have created new institutional arrangement requirements and the need to comply with additional fiduciary standards.

Currently, GIZ and KfW are providing countries such as Peru with technical assistance for direct access to the Green Climate Fund.

#### 4.4.5 Conclusions

Even though international climate finance and related resources seems to be increasing, current international financial flows for climate change do not necessarily respond to a process of prioritisation, coordination or articulation guided by national development and climate related objectives. This in turn causes fragmentation delivering low impact and future sustainability, duplication of efforts and superposition among programmes, projects and activities (Naidoo et al, 2014). In the case of Peru, this description applies in varying degrees of intensity. As the international landscape evolves, it would be important that creation of new international financial mechanism such as the Green Climate Fund simplifies and supports processes for deeper country ownership and access to developing countries (Naidoo et al, 2014).

In order for Peru to more effectively utilise the international cooperation that is available, it would be helpful to institute a process to identify its priorities, quantify its resource requirements, assess its domestic capabilities and define its precise requests for support from its international cooperation partners. A review of the actual and potential uses of existing funds, and the impact thereof would also be helpful for future policy development, planning and resource mobilisation. In addition, the communication and coordination amongst institutions and organisations involved in the process of channelling international cooperation will enhance efficient use of climate finance, avoiding dispersion and superposition, and facilitate common and more ambitious goals.

**Table 4.4 Institutional arrangement requirements deriving from COP decisions**

Purpose	Institutional Arrangement related Mandate	Status
National Approval Process for CDM projects.	Designated National Authority (DNA) needed to participate in the CDM.	CONAM and later MINAM was appointed as DNA.
National Implementation of Adaptation Projects presented to the Adaptation Fund.	National Implementing Agency (NIE) for adaptation project implementation. Party's Designated Authorities (DAs).	Several institutions were interested (FONAM, COFIDE, PROFONANPE) but no NIEs registered yet. MINAM is the DA.
Green Climate Fund will also have direct access through National Implementing Agencies.	NIEs for direct access to GCF.	No NIEs registered yet.
Coordination of support for the implementation of activities in relation to mitigation actions in the forest sector by developing countries, including institutional arrangements.	Decision -/CP.19 Invites interested Parties to designate a national entity or focal point on the coordination of support for the full implementation of activities and elements referred to in decision 1/CP.16, paragraphs 70, 71 and 73, including different policy approaches, such as joint mitigation and adaptation.	In process of implementation as at date of report.

<sup>29</sup> Simap.ch. See: <https://www.simap.ch/shabforms/COMMON/search/searchresultDetail.jsf>. Consulted on March 14, 2014.

# Considerations for financing pathways for Peru

The scoping paper has considered the current state of climate change policy at the national level as well as the public and private finance systems to assess the current state of readiness for such systems to implement and allocate investment in climate action. The insights gained from the study provided the basis to identify and develop key considerations towards a financing pathway for Peru's transition to a low emission resilient development path (Sections 4.1 to 4.3) and presents proposed guidelines to develop financing pathways (Section 4.5).

Additional research may be necessary to deepen the assessment of the development and climate context for Peru, taking into account areas that were outside the scope of this report (e.g. institutional assessments) as well as the capacity of the Peruvian financial system (e.g. domestic investment capacity). However, the authors' intention is that the scoping paper has contributed to a sound baseline of information from which further work and analysis may be considered by the Peruvian government, private sector and its international development partners.

This section outlines the high level challenges emerging from the analysis presented in this paper as well as recommendations for consideration by the Peruvian government. It then proposes short, medium and long term actions for consideration as part of a national strategy/pathways for climate finance in Peru, building on the immense economic opportunities available at present in Peru.

## 5.1 Challenges & recommendations

Based on the findings of the scoping paper, the challenges and proposed recommendations for Peru towards a financing pathway for climate action are described below:

- i) Although there are several individual overarching development, environmental and climate related strategies and policies, a clear cohesive strategy for climate change is needed. Overcoming this challenge will enable alignment of the behaviour of consumers and private sector with a LEDS plan, avoiding duplication of efforts and making efficient and effective use of available resources.

**Recommendation:** Develop a clear cohesive policy effort to integrate economic and social development, environmental management, emission reductions and climate resilience goals into a single Low Emission Development Strategy, building on the intended outputs of NAMAs under development, PlanCC and related climate policies. Such a strategy should include specific priorities in the short, medium and long term based on the scientific and technical evidence and should be aligned

and integrated into Peru's national development priorities. An integrated policy would establish the basic enabling conditions for effective climate change management in Peru – through political, regulatory and operational frameworks, along with the commitment of key actors, enabling the management of the inherent multi-sectoral and regional characteristics of climate change impacts and the respective projects.

- ii) Explicit inclusion in Peruvian development policies of climate considerations and linkages with poverty alleviation, conflicts reduction and social inclusion is presently lacking.

**Recommendation:** Strengthen and develop governmental and societal readiness for climate change adaptation and mitigation needs which is essential to demonstrate that climate actions have to address these issues in the long term. In so doing, it would facilitate scalable long term initiatives and attract the requisite public and private resources.

- iii) The current “rules of the game” for Peru – both for environmental management and climate change management – are in the process of achieving complete clarity and organisation as well as proper framing thereby, but are currently still contributing to the incorrect perception of key stakeholders that environmental management is an obstacle to investment.

**Recommendation:** A new harmonised, coherent and clear regulatory framework would have great impact both on public and private finance; one which highlights the environmental costs and benefits as being critical part of the investment decision. In so doing, low emission resilient options would be framed as being prudent and relevant approach in terms of value for money and long term sustainability of investments.

- iv) A greater clarity on investment needs for Peru's climate action is required. While Peru is receiving international funding, this is not being utilised effectively because there is no clarity on investment needs, nor do the appropriate institutional arrangements exist. As a result the impact of the international support is fragmented and poorly understood.

**Recommendation:** A process of prioritisation of Peru's climate action would facilitate greater clarity on its investment needs and facilitate identification of different resources necessary for implementation. Such a process should be largely led within Peru, in partnership with its domestic private sector to deliver the added development benefits (in particular the economic, social and environmental) of such climate action. Multiple



sources need to be structured and assembled adequately to enable effective climate finance. An outcome of this process could be the generation of a pipeline of programmes and projects to demonstrate climate action, to build the confidence and evidence base of the Peruvian economy and in turn, to facilitate the required capital necessary for implementation. Pilot projects among sectors and institutions are needed to articulate climate change management, climate finance and national mitigation contributions (towards the COP), and determining a cohesive financial strategy.

- v) The national mitigation and adaptation contribution will be more ambitious with more resources available. However, such resources would not be forthcoming unless Peru's priorities are outlined upfront – and in doing so, it is necessary to raise the level of ambition in priority setting. This would attract both national and international resources, prioritising sectors more related to development, aligned with clear mandates and incentives (nationals and internationals).

**Recommendation:** One of the ways in which the level of ambition may be increased is through generating interest in climate change and specifically, creating awareness of low emission resilient development as a new economic opportunity available to all within Peru. To date, such interest has been scarce mainly focused on social-environmental conflict situations around their specific activities. However, through dialogue and better dissemination and assimilation of information, and improved access to resources this situation can reverse.

- vi) There are no agreed definitions of “climate finance” for the country, nor mechanisms to systematically track and measure these flows. Therefore, information systems both for GHG emissions management (and deforestation as a source) and climate finance tracking are not in place. Moreover data quality on emissions is low and not produced systematically.

**Recommendation:** Develop a clear and comprehensive agenda to improve data quality and availability in Peru aimed at empowering all stakeholders to voluntarily engage in response programmes, adopt and innovate based on their unique circumstances and most importantly, have equitable access to the required resources necessary for implementation. It may be necessary to design a specific mechanism/s to achieve these outcomes.

- vii) There is currently no clear structure within public finance to mobilise financial resources with a climate change perspective. This happens despite having appropriate tools for funding (i.e. performance budgeting and Public Investment Programmes), enabling financial absorption constraints. At this stage, Peru is lacking the correct financial architecture to efficiently channel resources to climate change needs.

**Recommendation:** There is a need for integration and framing of actions on climate risk and GHG emissions management into existing public finance instruments in a more direct and precise manner. Such framing should also take into account the impact of any other public finance instruments, which may unintentionally

reverse the positive benefits of the revised public instruments towards climate action.

- viii) Within national and subnational government, as well as the private sector there is lack of adequate capacities to formulate and execute climate action. In turn, this prevents the effective use of the resources which are available within the public and private sector, and that available through international cooperation. Institutions, both public and private, that fulfil a key role in the financial system are not adequately prepared and possibly not sufficiently incentivised to channel resources since there is no formal incorporation of climate change in their strategies.

**Recommendation:** Assessment of the capacity needs across public and private sector and a benchmarking of Peru against other developed and/or developing countries may generate options to increase design and implementation capacities.

- ix) There is a need to work closely with the private finance system to incorporate climate change criteria in private financial instruments. The Banking, Insurance and Pension Funds Supervisory Board does not have explicit requirements for private actors to address and report climate change related risks. As the organisation is in charge of regulation and supervision of the Financial, Insurance and Pension fund Systems in Peru, it could regulate such a request.

**Recommendation:** Based on examples in the region (i.e. Colombia), Peru may consider engaging in partnership between government and the private finance system to develop a “Green Protocol”. This could be customised to suit Peru's unique circumstances, but serve as a foundation to engage the private finance institutions on any regulatory, investment and risk appraisal, financial innovations necessary to promote domestic investment in climate actions.

- x) There are very few financial instruments today in Peru that specifically facilitate or promote mitigation actions to climate change (e.g. COFIGAS, PIP and microcredit). Moreover, the governmental and business communities are not fully aware of the potential that such instruments might have. Private financial institutions can provide resources to address climate change, however this is mostly dependent their investment needs. Mechanisms offered to these institutions by international cooperation partners encourage the private sector to develop projects related to climate change. However, this does not generate the required scale and innovation needed for a long term transition and financing of climate action.

**Recommendation:** Through public-private sector dialogue taking into account Peru's investment priorities for climate action and policy direction, encouraging the innovation of financial instruments such as clean energy/green bonds, insurance mechanisms and guarantees which may then be co-developed with financial institutions. This recommendation is proposed on the basis of sound financial planning and principles, assuming the programme or project is ready for funding considerations.

## 5.2 Unlocking economic opportunities

Peru is experiencing strong economic growth and showing improvement in key development indicators such as job creation and social wellbeing; this growth trajectory is expected to continue for the foreseeable future. Peru is well positioned to mainstream low emission resilient development into its economic development while promoting competitiveness within its economy. Early signals within the Peruvian public finance system show an increased awareness of climate change and its impact on economic and social development among relevant authorities. There is also improved coordination between national ministries and other institutions in working together on strategic climate change programmes and the development of NAMAs. These are positive steps towards unlocking economic opportunities.

Addressing the challenges raised in Section 5.1 above in a systematic manner would assist in Peru to build on its positive momentum through programmes such as PlanCC and the potential is has to mainstream climate change into all development policies. In the context of Peru’s policies, planning and implementation considerations for climate action, it is critical that Peru prepare itself to secure the necessary resources to enable its transition. Developing a national strategy and/or pathways for climate finance may assist in building critical momentum towards implementation and more effective utilisation of the available resources (as depicted in Figure 5.1).

The diagram depicts how plans and finance assist in creating a portfolio of financial measures for implementation. Such a portfolio would be premised on the plans being able to identify specific priority actions and formulate these into investment programmes (which in turn would attract projects). Where national governments develop investment programmes, it attracts the interest of private finance and international cooperation, as it provides an “entry point” to a country which is uniquely driven by and aligned with that country’s demand/needs. Building on this work, the primary aim of a national financing strategy for Peru would be to create an

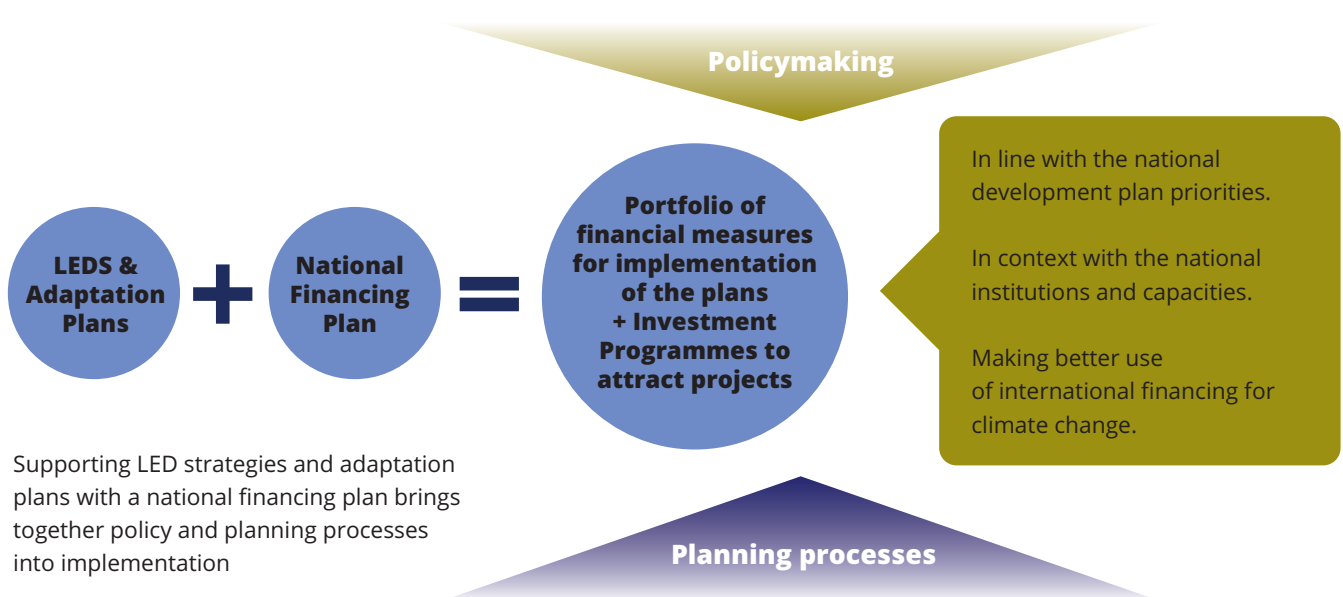
enabling investment environment to support implementation of the country’s climate response which attracts private capital and more effectively utilises international cooperation. It also facilitates the creation of an ongoing pipeline of programmes and projects as Peru’s experience and evidence base evolves over time.

There is an immense opportunity to “green” the new infrastructure that Peru requires as result of the projected economic growth. Approximately 88.000 million Soles (USD 32.56 million) are needed for critical infrastructure sectors such as water, energy and transport. Responding to these investment needs through low emission resilient technology options would provide a strong basis to attract significant investor interest in Peru and encourage innovation and entrepreneurship within the Peruvian economy. In order to unlock this opportunity which integrates economic growth and climate priorities, it is critical to translate Peru’s work in PlanCC on improving the scientific and technical basis for its climate change response strategy into pragmatic investment programmes to address low emission resilient development options.

Since the announcement that Peru will be hosting the UNFCCC’s 20th Conference of the Parties, there are encouraging signs of higher levels of awareness and political support for climate change, including the drafting of a Climate Change Law to be presented to Congress. This represents a significant milestone as the National Climate Change Strategy has not yet been updated and it remains challenging to promote and coordinate climate actions, secure agreement on objectives and assign roles and responsibilities at the national and sub-national level. A Climate Change Law also holds the potential to address the slow pace of integration of climate priorities into the national development objectives, with a distinct shift towards low emission resilient options that deliver economic, social and environmental benefits.

Peru is presently exploring various options to improve the absorption capacity of the public finance system and the effectiveness of international climate finance that it receives. Although tools such as performance budgeting and Public Investment Programmes

**Figure 5.1 National financing pathways in the context of policies and plans**



Source: Naidoo, Amin, Dimsdale & Jaramillo (2014)

exist, to date these have not been used optimally to support the mainstreaming of climate priorities into the national systems. As is the case in many other developing countries, Peru is also challenged with utilising international climate finance effectively. This is partly due to the high levels of fragmentation within the international ecosystem for climate finance and due to the lack of appropriate institutional arrangements at the national level.

Harnessing and unlocking the economic opportunities with climate priorities integrated therein will require a strategic approach to resource mobilisation. This approach would require Peru to define its specific resource requirements, assess its national capacity to absorb investment and clearly articulate the international climate finance support necessary to advance implementation of its plans.

### 5.3 Unlocking finance for implementation

Positive macroeconomic figures, a rapidly emerging microfinance sector, high liquidity, growing international and public investment for climate change related activities, and improved tools for public-private partnerships are the foundation of an enabling environment for climate finance. However, the Peruvian financial system does not fully integrate climate change into its investment decisions and risk management frameworks, and has limited capacity to effectively absorb and utilise international climate finance. There are, however, strong institutions, several public and private environmental related funds and mechanisms that have the potential to enhance the integration of climate change into the domestic public and private finance systems.

There is a growing interest in public finance institutions such as COFIDE which has been identified by MINAM and supported by the IADB as one of the important institutions to assist in catalysing investment towards climate responses. COFIDE has a track record in piloting two climate investment programmes, and able to offer valuable early lessons on how climate finance is being applied and utilised by project recipients. These lessons could contribute to informing the transformational policy and finance changes that

may be needed for further public investment programmes related to climate change.

A positive aspect of the Peruvian public finance system is the performance budgeting which allows for mitigation and other climate related objectives to be included as core indicators for government departments. This would enable Peru to assess whether it is utilising its public finance effectively in catalysing investment to support its climate response.

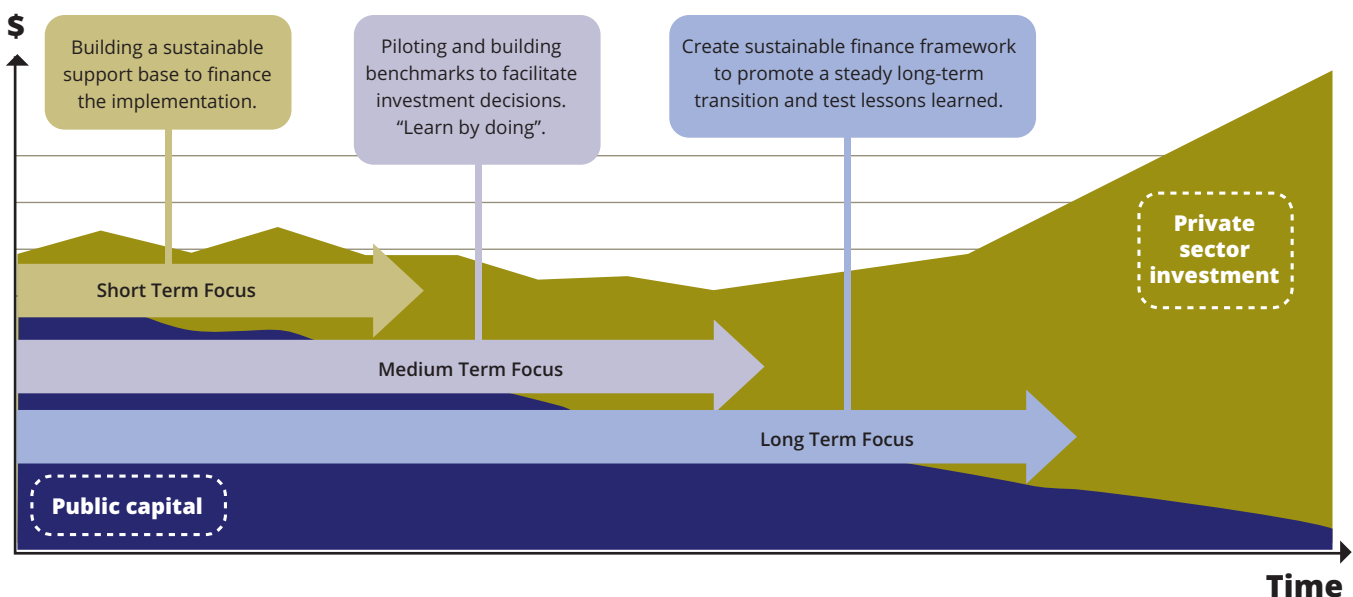
### 5.4 Developing a financing pathway for Peru

Shifting towards a strategic approach to financing Peru's low emission resilient development plans and developing financing pathways for climate change may be informed by the actions proposed below. The financing pathways would be derived from a national climate finance strategy for Peru, which "may be considered the strategic outcome of a process whereby a country determines, defines and mobilises the financial and other resources necessary for its transition to a low emission climate resilient path over a period of time" (Naidoo et al, 2014).

According to E3G, "NFPs may involve a focus on enabling policy and regulatory frameworks and mechanisms to ensure public financial resources, including international climate finance, are used most effectively to overcome barriers to private sector investment and facilitate an inclusive transition" (Amin, Naidoo & Jaramillo, 2013). Developing a national financing pathway recognises that there are milestones as depicted in Figure 5.2 which are achievable across a time scale, ensuring that public capital is deployed upfront to facilitate and attract private sector; collectively enabling the desired economic transformation.

The National Climate Change Strategy and proposed Climate Change Law should ideally be the primary drivers (i.e. goals both tangible and intangible) to develop a national financing strategy for climate change. These should be integrated with the proposed Low Emission Development Strategy and related plans emerging from PlanCC.

**Figure 5.2 Milestones for national financing pathways over time**



Source: Naidoo, Amin, Dimsdale & Jaramillo (2014)



Therefore, the national strategy for climate finance should determine, define and mobilise the necessary resources for the transition to low emission resilient development. In developing a financing pathway for Peru, there are several key questions to consider and prioritise based on Peru's national capacities. These questions are based on the diagnostic in Box 5.1 – Developing a national finance strategy.

The responses to these questions may be further prioritised in terms of different timeframes, which commence at the same time and aimed at contributing to a long term enabling investment environment within Peru. It is important for the implementation of Peru's climate actions that the domestic public and private finance sectors to embed (mainstream) low emission climate resilient development in its budget allocations and market mechanisms, investment criteria and risk management processes.

**Box 5.1 – Key questions in developing a national finance strategy for Peru**

- What are the national climate change priorities – is there an existing policy basis for implementation?
- What are existing climate initiatives and what long term strategic benefit can be derived from them?
- What are the resource requirements of these priorities – what exists and what is needed?
- What internal institutions/stakeholders are available to assist in implementation of these priorities?
- What international partners/ mechanisms are available to assist and how can they be accessed?
- What beneficiaries are being targeted and how can they secure access to such finance?
- How can the climate action and resources provided be tracked to ensure alignment with the national plan and its priorities?

Source: Authors

An iterative and ongoing engagement with stakeholders within government, communities and the private sector is an important element in developing the financing pathway – to both inform and seek collaboration as different sources of funding will be necessary for implementation.

Peru may develop a financing strategy for different time intervals, say 5 to 10 years. A more detailed short term plan for a two year period may be outlined as well, which includes demonstration through the proposed key pilots that will enable both the public and private sector to have examples upon which further investment may be mobilised at scale. These time based plans may inform the

parameters of institutional mechanisms needed for the measurement and reporting of investment and financial flows for low emission and climate resilient development. Such a mechanism would increase the capacity to receive and manage resources more efficiently.

The following sections highlight based on the results of the scoping study, the challenges identified in Section 5.1, high level priority actions to create a sustainable foundation for Peru's migration to a low emission climate resilient economy.

**5.4.1 Short term – Build a sound base to finance implementation**

- As the National Climate Change Strategy is being finalised by the end of 2014, it would be useful to include in such policy, references to resource mobilisation and the role of finance and market mechanisms as a means of implementation<sup>30</sup>.
- From an institutional perspective, developing a Finance Group under the Climate Change Commission as an entry point for engagement on the financial aspects of Peru's climate priorities and action plans. This arrangement can potentially contribute positively to the emerging plans by addressing the resource requirements upfront and provide a basis for engagement on sectoral basis between ministries, private sector and international cooperation partners. A positive outcome may be the co-development of different financing pathways for Peru.
- As the climate actions emerge from Peru's different stands of work (including PlanCC), it is necessary to prioritise themes (adaptation, mitigation, forests), and lines of action (Policy and regulation, institutions and coordination, capacities, technology, research and information systems, public awareness, MRV). This would enable Peru to match its major needs with the available sources of domestic finance and international channels of support that are available under these themes. These themes could be articulated as Peru's climate investment programmes and form part of a communication with the private sector and international development partners to identify the resource requirements. Therefore, the following actions are also proposed:
  - Identify the resource requirements for each theme (sector). It is necessary to first gauge the investment needed by each sector to establish an estimate of the resource requirements, including funding for policy, capacity and project level investment. For this, sectors could prioritise a portfolio of low-carbon resilient projects that are profitable, so MEF's work could focus on identifying and facilitating access to financial mechanisms that channel investment towards these projects<sup>31</sup>. This is in line with the purpose of MEF of harmonising the national economic activity to promote market operation and continuous improvements of productivity, economic growth and sustained development.
  - Identify stakeholders and institutions (key NFP beneficiaries, key executors, those actors with the most experience, influence and knowledge) and LEDS related

<sup>30</sup> The Governments of Kenya and South Africa have specifically added appropriate language relating to climate finance in their climate change policies which mention the role of the finance (public and private) as a critical partner in advancing the goal to transition to a low emission climate resilient economies.

projects/ programs and mechanisms (such as NAMAs) that could serve as starting points for a financing strategy.

- Commence engagement on the prioritised themes and its resource requirements with different stakeholders to early identify the risks and opportunities as well as prospective roles that each stakeholder can play in advancing Peru's climate action.
- Identify financial mechanisms that are in place and working for other purposes, or those that are working in other countries: public-private partnership vehicles, public finance mechanism, potential private finance instruments (such as a national climate fund), standards for institutional investors, etc.
- Identify public finance mechanisms to support sectoral actions. In this respect, and under the leadership of MINAM and each productive sector, MEF's next step could be to identify which financial mechanisms could be used to address climate change (and how) for each strategic adaptation or mitigation action, spreading and facilitating their access according to each sector's needs and aligning them with the desired LEDS.
- Develop an active project pipeline underpinning each of Peru's themes to build momentum towards implementation and a series of readily available investment options for both private sector, international cooperation and additional budget allocations/ market mechanisms where necessary.
- Map and consolidate Peru's existing international development partners and their areas of cooperation. This exercise would be aimed at identifying the landscape of supported climate activity in Peru at national and sub-national level to address how these align with the identified priorities emerging from PlanCC and other climate policy initiatives. These would include multilateral, bilateral, philanthropic and private sector support.
- Analyse the different international climate finance mechanisms available to and operational in Peru in terms of how each contributes to Peru's prioritised themes and resource/ capacity requirements e.g. NAMAs, NAPs, INDCs, the Green Climate Fund and similar mechanisms.
- Doing the "homework" on resource needs and communicating these together with the prioritised themes in a coherent manner. It is important to identify – and quantify to the extent possible – sources of international cooperation as well as climate finance flows, to determine actual and potential uses of existing funds. The communication and coordination among institutions and organisations involved in the process of channelling international cooperation will enhance efficient use of climate finance, avoiding dispersion and superposition, aiming for common and more ambitious goals.

#### 5.4.2 Medium term – Pilot and build benchmarks

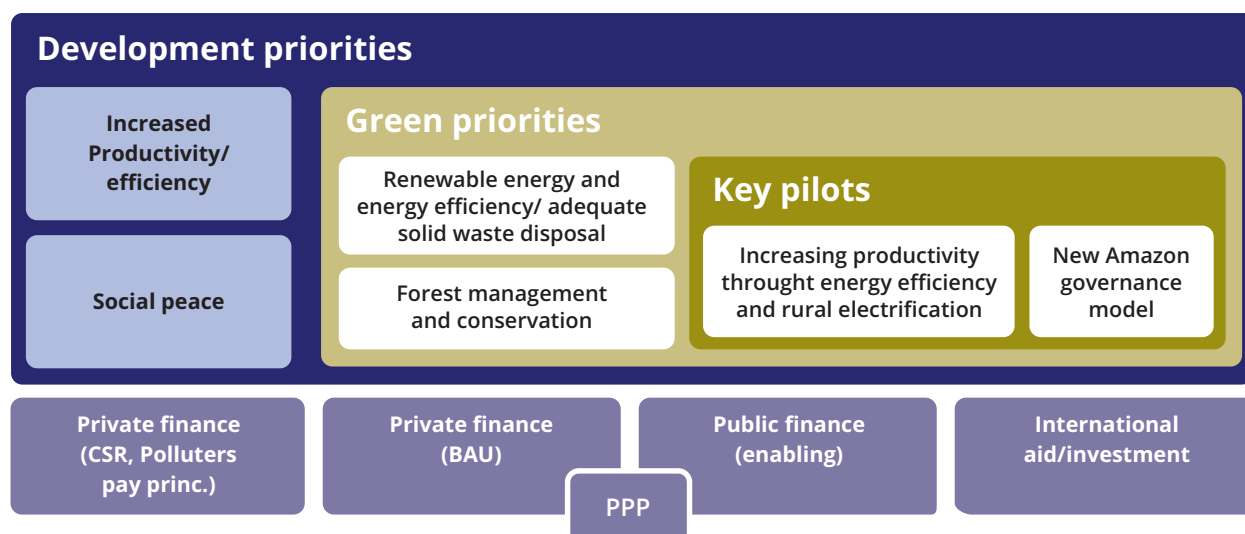
The medium term focus is intended to build investor confidence and facilitate investment decisions that mainstream climate action, including that finance is accessible for climate action. The activities in the short term described above, would continue and be refined in the medium term and contribute to "learning-by-doing".

- Engage with private sector banks on how best to integrate climate change into their investment decisions and risk management frameworks. This would be aimed at determining the "funding gap" in the domestic finance system so that climate finance can be used more effectively. It would also involve early work around the investment criteria and risk parameters employed by such banks as they assess climate investments. Several Peruvian banks have signed the Equator Principles so this is a good basis to facilitate this element of work.
- Encourage private sector banks to engage with the international climate finance mechanisms. Second-tier banks could apply as National Implementation Entities (NIEs) to channel climate finance for specific uses (i.e. mitigation, adaptation, REDD+, etc.). The process to become a NIE will force them to implement climate risk standards (accounting for resources addressing climate change) and make climate funds available to several relevant actors, reinforcing low-carbon investments and complementing voluntary initiatives.
- Prioritise pilots and their geographical scope (sectoral focus) to create a basis for learning-by-doing and assessing through comprehensive understanding of the resource challenges of specific sectors. A first proposal for pilots is provided by the conceptual framework in the illustrative example in Box 5.2- Increased productivity through energy efficiency and rural electrification, and a new forest governance model.
- Promote financial innovation at public institutions. COFIDE and other development banks could help by structuring mixed finance around strategic interventions and catalyzing private finance. These banks and national fiduciary institutions and funds could also play an important role of accessing and using international climate finance.
- Promote strategic use of existing resources. Climate finance can be additional to traditional finance but could also imply reallocation or a more "strategic" use of financial resources already at hand. Turning a national development programme into a NAMA, "greening" investment already allocated to infrastructure, and including climate change considerations or windows in existing instruments are some initial ideas. Moreover, carbon pricing (including scaling up CDM, credited NAMAs, a cap and trade system or voluntary initiatives) as an ultimate long term strategy to account for climate change externalities could be considered as a framework for climate finance.

#### 5.4.3 Long term – Financial ecosystem for climate investment

In the long term, the desired outcomes of Peru's national financing

Figure 5.3 A pilot on integration and resource requirements



Source: Authors depiction

Figure 5.2 shows a conceptual framework in which current development priorities (established in instruments such as the MME, the Bicentennial Plan and the MultiSectoral Commission’s Report) are used as “entry points” and are then linked to mitigation priorities (established by Peru’s voluntary commitments to the UNFCCC). By linking these priorities and conducting demonstration activities through key pilots, a NFP can begin to be outlined. These key pilots would have to test institutional arrangements and finance structuring together with capacity building, technology deployment and public awareness. The framework describes the aspiration to embed climate into the development priorities of Peru, and then systematically analyse such priorities in terms of their programme and resource requirements.

The analysis should yield important information such as:

- Detailed description of the resource requirements of Peru’s key priorities;
- Assessment of the potential roles of different sources of finance in fulfilling these resource requirements, including the use of existing environmental mechanisms;
- Understanding of the institutional and coordination arrangements required to mobilise and effectively utilise / access these resources; and
- Framework for the monitoring and evaluation of the key pilots in terms of technical and financial components to ensure lessons can be gleaned from the experiences and feed back into policy and planning decisions.

pathways should ideally be a financial system (both public and private capital) that sees climate investment as “business as usual”. In addition, Peru’s engagement with international partners and climate finance Mechanisms should be led entirely by its national priorities and capacities. A robust feedback system through tracking of climate flows against national priorities should also be in place.

- Adopting a country-led process for mobilising international climate finance. Although support from international climate finance channels appears to be rapidly increasing, they are not responding to, nor are they guided by, a Peruvian led process of priority-setting, coordination and integration with national development priorities. This reality is causing duplication of efforts and deep fragmentation among the many programmes, projects and activities, resulting in the lack of effective and lasting outcomes of both Peruvian and its development

partners’ resources. Unless addressed effectively, the complexity and continued fragmentation of efforts will continue.

- Harmonise and articulate financial and non-financial resources. This includes i) capacity building activities focused on key players; ii) mainstream climate change into current programs (i.e. development programmes, public investment and budgeting instruments, research and technology programmes); iii) use results-based budgeting to achieve low carbon goals, iv) create new programmes and instruments focused on a mix of instruments and financial vehicles that catalyse public and private investment and on new financial structuring tailored for LEDS; and iv) better coordinate the supply of international cooperation funds to the country demand and priorities, thereby adapting cooperation agenda to the needs of Peru.

- Test and legitimise institutional arrangements. The creation of flexible institutional arrangements that allow for efficient spending, capacity strengthening and effective coordination is key.
- Start developing a monitoring and evaluation system for climate finance. Initial estimations of national investment and financial flows, and tracking of these amounts over time will be key for evaluation of effectiveness. An estimation of how much Peru could get from the foreseen future international climate finance may also be helpful.
- Learn by doing and build on schemes that work (for other development goals or in other countries).

## 5.5 Conclusions

The scoping paper aimed to present a high level overview of Peru's efforts in the integration of development and climate priorities and its national finance system, extracting from these the key challenges that such information uncovers. The measures proposed as part of a national financing pathway for Peru may be considered based on its priorities and preparatory work as it prepares to host the 20th meeting of the Conference of the Parties in December 2014.

Further engagement with key stakeholders within the Peruvian government, the private sector and its development partners would be necessary to deepen the sectoral and sub-national specific challenges that would inform a national financing strategy for Peru's climate response.

## References

- Adaptation Fund Board, 2012, *Proposal for Peru*, Project and Programme Review Committee, Ninth Meeting, Bonn Germany, 8 June 2012. Viewed: 03 December 2013. [http://adaptation-fund.org/sites/default/files/AFB.PPRC\\_.9.6%20Proposal%20for%20Peru.pdf](http://adaptation-fund.org/sites/default/files/AFB.PPRC_.9.6%20Proposal%20for%20Peru.pdf)
- AFIN, 2012, AFIN: Faltan USD 88,000 millones para cerrar la brecha de Infraestructura, published on 26 October 2012, viewed: 03 December 2013. <http://www.serperuano.com/2012/10/afin-faltan-us-88000-millones-para-cerrar-la-brecha-de-infraestructura>
- Amin, Amal-Lee, Naidoo, Chantal and Jaramillo, Marcela. *Financing Pathways for Low Emissions and Climate Resilient Development. Working Paper*. October 2013.
- Buchner, Barbara, Angela Falconer, Morgan Hervé-Mignucci, Chiara Trabacchi, 2012, *The Landscape of Climate Finance 2012*, Climate Policy Initiative Report, December 2012, Julio, viewed: 03 December 2013. <http://climatepolicyinitiative.org/wp-content/uploads/2012/12/The-Landscape-of-Climate-Finance-2012.pdf>
- BCR, 2013. Macroeconomic expectations survey by the Central Bank of Peru, December 2013.
- CEPLAN, 2011, *Plan Bicentenario, El Perú hacia el 2021*, Centro Nacional de Planeamiento Estratégico, julio 2011.
- Clapp, Christa, Gregory Briner, Katia Karousakis, 2010, *Low-Emission Development Strategies (LEDS): Technical, institutional and Policy Lessons*, Organization for Economic Co-Operation and Development (OECD), International Energy Agency (IEA), November 2010.
- COFIDE, 2013, *Plan Estratégico 2013-2017*.
- FEDERAL MINISTRY FOR THE ENVIRONMENT, NATURE CONSERVATION AND NUCLEAR SAFETY, 2012, *Leveraging Private Capital for Climate investments in Developing Countries- The Role of Public Financing Mechanisms and Policy/ Technical Support Instruments*, Summary of the International Workshop, viewed: 03 December 2013, [http://mitigationpartnership.net/sites/default/files/summary\\_of\\_the\\_workshop\\_leveraging\\_private\\_capital\\_for\\_climate\\_investments\\_02\\_10\\_2012.pdf](http://mitigationpartnership.net/sites/default/files/summary_of_the_workshop_leveraging_private_capital_for_climate_investments_02_10_2012.pdf).
- Ferro, Vladimir, 2012, *How to generate budget and investment through performance budgeting*, Implementation experience PP068, PREVAED, Presentation at the INTERCLIMA 2012.
- Galarza, Elsa Patricia, 2012, *Estudio de la Institucionalidad del Tema de Cambio Climático en los Ministerios de Economía y Finanzas a Nivel Internacional*, Componente 1: “Fortalecimiento institucional en Materia de Cambio Climático”, Banco Interamericano de Desarrollo, Cooperación Técnica No Reembolsable N° ATN/OC-12529 –PE, Lima 15 May 2012.
- GIZ, 2013, *Ready for Climate Finance: GIZ's Approach to Making Climate Finance Work*, Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, May 2013.
- GIZ, 2012, *The Climate Finance Cascade: A NAMA financing mechanism in a nutshell*, Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, November 2012. Viewed: 03 December 2013. <http://www.mitigationpartnership.net/giz-2013-climate-finance-cascade-nama-financing-mechanism-nutshell>
- GIZ, n.d., *NAMA Financing, How to Structure Climate Financing Vehicles*, Power Point Presentation del Dr. Sebastian Wienges, Adviser, Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, viewed: 03 December 2013.
- Gil, V. EIECCP Study, preliminary results presented at Interclima 2013.
- Grade and Libélula, 2011, *Diagnosis of Institutional Arrangements for Climate Change Management*.

Libélula, 2012, *Documento de balance en relación a la gestión del cambio climático en el país, Tercer producto: Informe final del servicio*, por encargo del MINAM, diciembre 2012.

Limaye, Dilip R. & Zhu, Xianli, 2012, *Accessing International Financing for Climate Change Mitigation, A Guidebook for Developing Countries*, UNEP, GEF, August 2012, viewed: 03 december 2013. [http://mitigationpartnership.net/sites/default/files/tna\\_guidebook\\_mitigationfinancing.pdf](http://mitigationpartnership.net/sites/default/files/tna_guidebook_mitigationfinancing.pdf)

MEF, 2013, *Multiannual Macroeconomic Framework 2014-2016*, Abridged version from the original Spanish edition, approved by Council of Ministers in Session of May 22th, 2013.

MEF, 2012, *Política de inversión pública en ciencia, tecnología e innovación: prioridades 2013-2020*, Ministerio de Economía y Finanzas, Viceministerio de Economía, Dirección General de Política de Inversiones, diciembre 2012.

MINAM, 2013, *REPORTE DE MONITOREO: PROYECTOS DE COOPERACIÓN EJECUTADOS POR EL MINISTERIO DEL AMBIENTE AL PRIMER SEMESTRE DE 2013*, octubre 2013.

MINAM, 2012, *AGENDAMBIENTE Perú 2013-2014*, Agenda Nacional de Acción Ambiental, Consulta Pública R.M. No. 333-2012-MINAM, diciembre 2012.

MINAM, 2011, *Plan Nacional de Acción Ambiental (PLANAA – Perú 2011-2021)*. Aprobado por D.S. No. 014-2011-MINAM. Publicado en el diario oficial El Peruano el 09 de julio del 2011 y en Separata Especial el texto completo el 14 de julio del 2011.

MINAM, 2010, *El Perú y el Cambio Climático. Segunda Comunicación Nacional del Perú*, Fondo Editorial del MINAM, Lima, 2010.

MINAM, 2009, *Diagnóstico sobre evaluación del cumplimiento de metas asumidas en el marco de la Estrategia Nacional de Cambio Climático D.S. No 086-2003 y propuesta de mejora*, Ministerio del Ambiente, Viceministerio de Desarrollo Estratégico de Recursos Naturales, Dirección General de Cambio Climático, Desertificación y Recursos Hídricos, junio 2009.

Multilateral Investment Fund and Bloomberg New Energy Finance, 2013, *Climate Scope 2013. New Frontiers for Low-Carbon Energy Investment in Latin America and the Caribbean*, viewed: 15 August 2014. <http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=38168432>

Ombudsman Office, 2013. Defensoría del Pueblo, 2013, *Reporte de Conflictos Sociales*, N. 115, September 2013.

Naidoo, Chantal, Amin Amal-Lee, Dimsdale Taylor & Jaramillo Marcela, 2014. *Strategic National Approaches to Climate Finance*. E3G. United Kingdom. April 2014.

PLANCC, 2014, *ESCENARIOS DE MITIGACIÓN DEL CAMBIO CLIMÁTICO EN EL PERÚ AL 2050. Construyendo un desarrollo bajo en emisiones*. Proyecto Planificación ante el Cambio Climático de Perú, Resultados de la Fase 1.

RENOVO SAC, 2013, *Seguridad Energética y el Rol de las Energías Renovables y Eficiencia Energética*.

Roca, Javier, 2012, *Reflections on finance and markets in a context of climate change*, Presentation at INTERCLIMA, Ministerio de Economía y Finanzas, Dirección General de Asuntos de Economía Internacional, Competencia y Productividad, Lima, March 2012.

Rozas, Wilbert, 2012, *Charla informativa sobre la gestión pública a nivel regional y local*, presented on the 9th November 2012, at Lima – Peru.

David Sawyer, Jason Dion, Deborah Murphy, Melissa Harris, Seton Stiebert, 2013, *Developing Financeable NAMAs A Practitioner's Guide*, International Institute for Sustainable Development (IISD), March 2013, viewed: 03 December, 2013. [http://www.iisd.org/pdf/2013/developing\\_financeable\\_namas.pdf](http://www.iisd.org/pdf/2013/developing_financeable_namas.pdf)

Smallridge, Diana, Barbara Buchner, Chiara Trabacchi, Maria Netto, José Juan Gomes Lorenzo, Lucila Serra, 2013, *The Role of National Development Banks in catalyzing International Climate Finance*, Inter-American Development Bank, March 2013, viewed: 3 December 2013. <http://idbdocs.iadb.org/wsdocs/getdocument.aspx?docnum=37644150>

SUNAT, n.d., *Estadísticas y estudios*, viewed: 13 August de 2013. [http://www.sunat.gob.pe/estadisticasestudios/busqueda\\_actividad\\_economica.html](http://www.sunat.gob.pe/estadisticasestudios/busqueda_actividad_economica.html)



- UNDP, 2012, *Readiness for Climate Finance*, A framework for understanding what it means to be ready to use climate finance, United Nations Development Programme, March 2012, viewed: 03 December 2013. [http://www.undp.org/content/dam/undp/library/Environment%20and%20Energy/Climate%20Strategies/Readiness%20for%20Climate%20Finance\\_12April2012.pdf](http://www.undp.org/content/dam/undp/library/Environment%20and%20Energy/Climate%20Strategies/Readiness%20for%20Climate%20Finance_12April2012.pdf)
- UNDP, 2011, *Catalyzing Climate Finance*, A Guidebook on Policy and Financing Options to Support Green, Low-Emission and Climate-Resilient Development – Version 1.0, United Nations Development Programme, April 2011, viewed: 3 December 2013. <http://www.undp.org/content/dam/aplaws/publication/en/publications/environment-energy/www-ee-library/environmental-finance/low-emission-climate-resilient-development/in-focus/catalyzing-climate-finance/UNDP-Financing-v3-web.pdf>
- UNDP, 2011, *Blending Climate Finance Through National Climate Funds*, A Guidebook for the Design and Establishment of National Funds to Achieve Climate Change Priorities. United Nations Development Programme, September 2011, viewed: 03 December 2013. [http://www.undp.org/content/dam/undp/library/Environment%20and%20Energy/Climate%20Change/Capacity%20Development/Blending\\_Climate\\_Finance\\_Through\\_National\\_Climate\\_Funds.pdf](http://www.undp.org/content/dam/undp/library/Environment%20and%20Energy/Climate%20Change/Capacity%20Development/Blending_Climate_Finance_Through_National_Climate_Funds.pdf)
- UNEP, 2013, *Portafolio Carbon Measuring, disclosing and managing the carbon intensity of investments and investment portfolios, Why no is the time to get started*, UNEP Finance Initiative, July 2013, viewed: 03 December 2013. [http://www.unepfi.org/fileadmin/documents/UNEP\\_FI\\_Investor\\_Briefing\\_Portfolio\\_Carbon.pdf](http://www.unepfi.org/fileadmin/documents/UNEP_FI_Investor_Briefing_Portfolio_Carbon.pdf)
- UNFCCC, 2010, *Embajada de la República del Perú en la República Federal de Alemania*, June 21, 2010, viewed: 11 July 2011. [http://unfccc.int/files/meetings/cop\\_15/copenhagen\\_accord/application/pdf/perucphaccord\\_app2.pdf](http://unfccc.int/files/meetings/cop_15/copenhagen_accord/application/pdf/perucphaccord_app2.pdf)
- UNFCCC, 2009, *Investment and Financial Flows to Address Climate Change: An Update*, United Nations Framework Convention on Climate Change.
- Vargas, Paola, 2009, *El cambio climático y sus efectos en el Perú*, Banco Central de Reservas del Perú, junio 2009.
- WEF, 2013, *The Green Growth Action Alliance: Progress report from the first year of Catalysing private investment*, Industry Agenda, World Economic Forum, June 2013.
- World Bank, 2010, *Monitoring Climate Finance and ODA*, Issue Brief #1, May 2010, viewed: 03 December 2013. <http://climatechange.worldbank.org/sites/default/files/documents/DCFIB%231-web-June15.pdf>
- World Bank, 2013, *Accessing Climate Change related Finance in Latin America and the Caribbean*, Latin America, Spanish Fund for Latin America and the Caribbean, June 2013, viewed: 03 December, 2013. [http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2013/06/28/000442464\\_20130628142906/Rendered/PDF/ACS44310ESW0wh00Box377363B00PUBLIC0.pdf](http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2013/06/28/000442464_20130628142906/Rendered/PDF/ACS44310ESW0wh00Box377363B00PUBLIC0.pdf)



**libélula**

*Gestión en Cambio Climático y Comunicación*



**E3G**

