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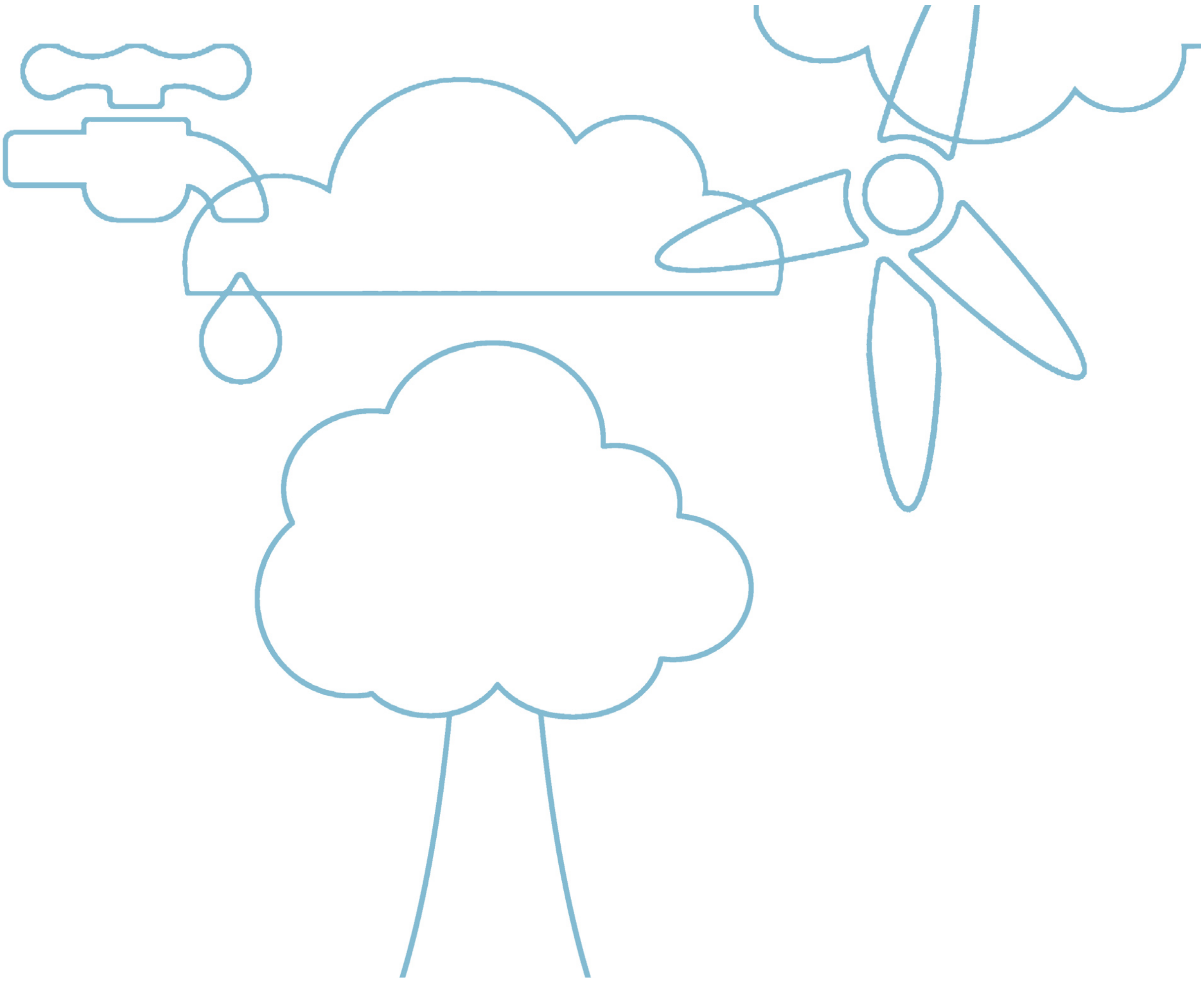
First Steps for Making Climate Finance Work in Lao PDR

Roman Roehrl & Dennis Tirpak



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Climate Protection Through Avoided Deforestation (CliPAD) in Lao PDR

Contents

Abbreviations

ADB	Asian Development Bank
AfDB	African Development Bank
AMME	ASEAN Ministerial Meeting on the Environment
BMZ	German Federal Ministry for Economic Cooperation and Development
CCAPS	Climate Change and African Political Stability
CDM	Clean Development Mechanism
CliPAD	Lao-German Climate Protection through Avoided Deforestation Programme
CPI	Climate Policy Institute
CSR	Corporate Social Responsibility
DAC	Development Assistance Committee
DfID	Department for International Development
DNDMCC	Department of National Disaster Management and Climate Change
EBRD	European Bank for Reconstruction and Development
EC	European Commission
EE	Energy Efficiency
EIA	Environmental Impact Assessment
EIB	European Investment Bank
ENSO	El Nino Southern Oscillation
EPF	Environment Protection Fund
EU	European Union
EUR	Euro
FDI	Foreign Direct Investment
FIP	Forest Investment Program
FRDF	Forest and Forest Resource Fund
GAP-CC	ASEAN-German Climate Change Programme
GCF	Green Climate Fund
GEF	Global Environment Facility
GHG	Greenhouse Gas
GIS	Geographic Information System
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH
IDA	International Development Association
IDB	Inter-American Development Bank
IFC	International Finance Corporation

IGA	Income Generating Activity
IPCC	Intergovernmental Panel on Climate Change
ITTO	International Tropical Timber Organization
JICA	Japan International Co-operation Agency
Ktoe	Kilotons of Oil Equivalent
LDC	Least Developed Countries
MDB	Multi-lateral Development Bank
MOF	Ministry of Finance
MoNRE	Ministry of Natural Resources and Environment
MoU	Memorandum of Understanding
MPI	Ministry of Planning and Investment
MRV	Measure, Report and Verify
MW	Megawatts
NAPA	National Adaptation Programme of Action
NGO	Non Government Organisation
NIE	National Implementing Entity
NRESWG	Natural Resources and Environment Sector Working Group
NSCC	National Strategy on Climate Change
NSCCC	National Steering Committee on Climate Change
NTFS	Non Timber Forest Product
ODA	Official Development Assistance
OECD	Organization for Economic Cooperation and Development
PES	Payment for Environmental Services
PRF	Poverty Reduction Fund
RE	Renewable Energy
REDD	Reduction of Emissions from Deforestation and Forest Degradation
REL	Reduction Emission Level
RS	Remote Sensing
SMEs	Small and Medium Enterprises
SNRM	Sustainable Natural Resource Management
UNEP	United Nations Environment Programme
UNFCC	United Nations Framework Convention on Climate Change
USD	United States Dollar
WB	World Bank

Foreword

As part of its aim to support economic growth and poverty alleviation, the Government of the Lao PDR is committed to a sustainable development path. Climate change and its effects on the environment and sustainable development has been identified as important threat to this development path specified within the Lao National Socio-Economic Developments plans. Lao PDR is fully committed to the fight of the international community against climate change and is a country most vulnerable to it. Lao PDR has already experienced the changes in climate and environmental damages associated with development: droughts and floods are increasing and food production is suffering. As a response to these threads, the National Strategy and Action Plan on Climate Change has been endorsed and is being implemented and mainstreamed into the long term workplan of Ministry of Natural Resources and Environment and National Socio-Economic Development Plan. Understanding "climate finance" in this context is important. The purpose of this report is to identify first steps that the Government of the Lao PDR can take to improve its capacities to tap and manage international climate change funding in order to achieve the national climate change-related goals as stipulated in the climate change strategy and action plans. The study is based on a review of the literature, available data, and interviews conducted with relevant stakeholders . It is hoped that this information can be used as an initial guide to understand the complex issue of climate finance and helps making first steps for making Climate Finance Work in the Lao PDR. The study was conducted within framework of the ASEAN-German climate change programme: agriculture, forestry and related sectors (GAP-CC) and the Lao-German Climate Protection through Avoided Deforestation Programme (CliPAD) of the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), with funding from the German Federal Ministry for Economic Cooperation and Development (BMZ). I would hereby like to thank all participants for their efforts in this very valuable initiative to bring Lao PDR's Climate Finance readiness forward.

Saynakhone Inthavong

Director General

Department of Planning and Cooperation
Ministry of Natural Resources and Environment

Section 1

Introduction

1.1 Mission Background and Objectives

Understanding "climate finance" is important because there are diverging developments in global efforts to curb climate change. On the one hand, the international community is working on a more potent "climate finance architecture" including the newly established Green Climate Fund (GCF). On the other hand, even with increased commitments for climate change aid and comprehensive national planning activities over the last decade, experiences from around the world indicate that developing countries are challenged by financing and, consequently, implementing necessary adaptation and mitigation activities on a required scale. Lao PDR is no exception, but the Government is considering taking action in order to better benefit from climate change funding in the near future.

The purpose of this report is to identify the first steps that the Government of Lao PDR can take to improve its capacities to accept and manage international climate change funding in order to achieve national climate change-related goals.

This report is based on a review of the literature, available data and interviews conducted with 30 representatives from the government, international organizations and civil society in Lao PDR. Some of the key ministries that were contacted included the Ministry of Natural Resources and Environment (MoNRE), Ministry of Agriculture and Forestry, Ministry of Energy and Mines, Ministry of Finance (MOF) and the Ministry of Planning and Investment (MPI).[1]

It is expected that GIZ will consider the findings of this report when determining appropriate ways to best support its partner countries – in particular in addressing priority needs for technical assistance and institution building.

1.2 Structure of the Report

This report is structured by following the GIZ concept of "**Ready for Climate Finance**"; a theoretical approach for GIZ technical assistance in the field of climate finance.[2] The approach proposes that technical assistance projects can support the following five domains to increase a country's climate finance readiness:

- strategic planning and developing policies
- strengthening institutions and good financial governance
- accessing international climate finance
- effective and transparent spending and implementation
- promoting private sector engagement.

- In this report
- Not in this report

In order to have this report focus on the feasible first steps that Lao PDR can take to increase its readiness ("low hanging fruits"), the authors chose three of the five readiness domains: (a) strategic planning and developing policies, (b) institutions and good financial governance, and (c) access to international climate finance.

1.3 Summary of Key Messages

1 In most countries worldwide, climate change is becoming mainstream policy. Not just because we all need to avoid dangerous climate change and adapt to inescapable consequences, but because the world is preparing for the next major industrial transformation. This transformation is mainly about economic competition over innovative ways of how we manage our energy and natural resources. Lao PDR, if it wants to progress, develop and grow sustainably, will have to do well in this competition. Making climate finance work is one important step toward preparing the grounds for this.

2 Lao PDR's *National Strategy on Climate Change* (NSCC, 2010) and its *Action Plan on Climate Change* for 2013-20 are important achievements. The Government of Lao PDR has recognized that the next phase of climate policy will require broader and deeper participation by all ministries and subordinated bodies, as climate change is not just an environmental issue but also a combined economic, energy, transport, industry, construction,

[1] This report is limited in its breadth and depth; for example, some important ministries, such as the Ministry of Public Works and Transport and the Ministry of Commerce and Industry, could not be contacted due to a lack of time.

[2] For details visit *http://www.giz.de/fachexpertise/downloads/giz2013-en-climate-finance-approach.pdf*

agricultural, forestry, waste management, health and education issue. The Action Plan being developed under MoNRE's leadership should be viewed not only as a means to respond to climate change as an environmental niche issue, but as an opportunity to promote economic growth and competitiveness in Lao PDR on a broader scale.

3 National plans, targets and timetables in planning documents are unlikely to be met unless financial support is available. This has been acknowledged in the NSCC under *Guiding Principle 5 – Innovative Financial Instruments:* "Elaborate appropriate financial packages to ensure optimal implementation of adaptation and mitigation action plans". The central importance of this Guiding Principle cannot be stressed enough.

4 On a global scale, financing flows for climate change from all sources, public and private, reached approximately USD343-385 billion annually in 2010/2011; with private finance in the range of USD230 billion. While these flows appear to be substantial, there are two factors to consider: (1) most private finance has been focused on developed countries as well as China, and (2) most public and private money is directed toward mitigation not adaptation, despite the fact that the latter is a particular need of Lao PDR and many other developing countries. In order to attract more adaptation finance, Lao PDR will have to become more active in increasing its climate finance readiness.

5 These global sums are not likely to meet the aggregated demand for climate finance by all developing countries to address their national climate change policy priorities. There will be competition over these resources. As a likely consequence, there will not be enough international public climate finance from development partners to fund the necessary climate-related activities in Lao PDR. Lao PDR will, therefore, have to actively increase its climate finance readiness.

6 As a consequence, building trust in the financial capacities of institutions and mechanisms for de-risking climate finance will likely become a decisive competitive element. An important pull factor for attracting climate finance will be a country's capacity to plan, access, deliver as well as measure, report and verify (MRV) climate finance. Even with the increasing availability of climate finance and spending pressures, it is likely that the perceived risks, especially associated with a country's capacity to deliver and MRV, will become a key factor in attracting climate finance. Small least developed countries (LDCs), such as Lao PDR, don't have the advantage of scale or proven financial institutions in their favor. This is partly why today most climate finance stays in industrialized countries and China. In order to mitigate funders' risks, Lao PDR will have to provide the right institutional and fiscal framework. This requires a long-term capacity and institution-building process. Lao PDR is currently considering initiating some careful first steps, but more can be done.

7 In the long run, much of the required climate finance will likely have to be generated domestically by the government and private sector in Lao PDR. International climate finance delivered by classic official development assistance (ODA) modalities over the last several years has proven to be hard to plan for, due to its exposure to political dynamics and economic priorities or shocks in developed nations.

8 Finally, there are a number of first next steps that Lao PDR may undertake and consider doing so under the umbrella of a "**Climate Finance Strategy**" for the next five to 10 years, to complement its *National Strategy on Climate Change* and other climate-related strategies and plans. Such a "**Climate Finance Strategy**" would enable Lao PDR to compete for international funds and achieve its development goals through both public and private investments. Crafting and implementing this strategy will require the MOF and the MPI to work more closely together to integrate ODA, loans and other financial instruments into the planning process and to link finance into the budgeting process of the MoNRE and climate-relevant activities in other ministries. Such a strategy could include the following elements:

a. Choosing a working definition of climate finance for Lao PDR should be the very first step. For this, drawing on the efforts of the international community is advisable. However, Lao PDR is in the best position to determine what should count as climate finance for the national context.

b. Undertake an assessment of how much (public) money is currently being spent on climate change-related activities, including by non-governmental organizations (see Annex 1). Match the detected funds with the priorities of the NSCC in order to determine the financial needs for the implementation phase. Identify investment gaps. As part of this exercise, consider estimating the monetary and other benefits of reducing vulnerability to climate change and the benefits of implementing the NSCC (e.g. reduced vulnerability to climate change etc.).

c. Undertake a mapping of available international funding sources and initiatives to determine which of them offer the most suitable funding options for implementing the NSCC. As part of this exercise, assess and determine the feasibility of including climate change markers in the systems for tracking grants and loans by the MOF and the MPI (e.g. the MPI's Aid Management Platform), including the possible challenges of integrating these two systems. This is required to understand whether or not NSCC priorities are met and, if so, whether they are met in an efficient manner with adequate finance.

d. Build strong climate finance institutions. It is usually advisable to have only one national climate fund to benefit from economies of scale and lower transaction costs. This fund should also be fitted to flexibly deliver finance for achieving the diverse goals of the NSCC and future climate change-related policies. The fund should be prepared to manage significantly scaled-up finance. It should move away from small projects toward funding large long-term programs in order to access international climate financing directly (such as the Adaptation Fund or the GCF).

e. Consider how and when climate financing may be responsibly devolved to provinces and districts. Build up the landscape of recipient implementation organizations for a larger national fund to deliver finance for local implementation.

f. Review and, as appropriate, reduce financial barriers and revise regulations governing investments in mitigation technologies and adaptation measures. Identify suitable investment measures used by other countries that aim to remove barriers and reduce financial risks.

g. Consider financial schemes to increase domestic revenues for climate change/development measures; for example, fees, charges and taxes. Domestic revenues can also be used to leverage and de-risk international climate finance as well as private investments with climate-related benefits.

h. Determine whether the current institutional arrangements and procedures for decision-making within the government for addressing the financing needs for adaptation and mitigation are appropriate for the coming decade. Consider how to improve coordination and clarify roles, responsibilities and best positioning of a broad-based coordinating committee on climate finance. The position within the Government of Lao PDR could have a significant bearing on its effectiveness.

1.4 What is "Climate Finance"?

There is no commonly agreed international definition of climate finance. However, a number of institutions, namely the Organization for Economic Cooperation and Development (OECD), Multilateral Development Banks (MDBs) and the United Nations Framework Convention on Climate Change (UNFCCC), are working on approaches to define climate finance.

This report does not discuss the various definitions of "climate finance" conclusively. However, in the absence of an established definition, this report uses the term "climate finance" to refer to all financial resources for activities that contribute to mitigation or adaptation activities as defined by the OECD.

The OECD has proposed that an activity should be classified as climate change mitigation if it contributes to the objective of stabilizing greenhouse gas (GHG) concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system by promoting efforts to reduce or limit GHG emissions or to enhance GHG sequestration. Accordingly, the OECD suggests that an activity should be classified as adaptation-related if it intends to reduce the vulnerability of human or natural systems to the impacts of climate change and climate-related risks by maintaining or increasing adaptive capacity and resilience.[3]

Other development organizations apply similarly pragmatic approaches to work with the term climate finance. Multi-lateral Development Banks, for example, have chosen to use a process of consideration rather than reliance on a single definition. For mitigation, the MDBs identify a positive list of mitigation-related activities. Examples include: energy efficiency improvements in lighting, appliances and equipment; renewable energy projects such as wind, solar and biomass; urban mass transport; livestock projects that reduce methane; and cross-sectoral projects, such as policy analysis of regulations and financial instruments.

Adaptation projects represent a more significant challenge as it is necessary to try to distinguish how adaptation projects differ from regular development projects. In some cases, the concept of "additionality" can help to define adaptation projects; for example, if incremental funding was added to an existing infrastructure project to make it climate proof, most analysts would term the increment as an adaptation project. The MDBs have chosen to address adaptation through the use of three design-process criteria for finance to be reported. It must:

- Include a statement of purpose or intent to address or improve climate resilience in order to differentiate between adaptation to current and future climate change and good development;
- Set out a context of climate vulnerability (climate data, exposure and sensitivity), considering both the impacts from climate change, as well as climate variability-related risks;
- Link project activities to the context of climate vulnerability (e.g. socioeconomic conditions and geographical location), reflecting only direct contributions to climate resilience.

For Lao PDR, as a first step for approaching the topic of climate finance, it may be a good option to choose a working definition of climate finance. For this, drawing on the efforts of the international community is advisable but it should be remembered that Lao PDR is in the best position to determine what should count as climate finance for the national context. The climate experts in Lao PDR have the best understanding of national circumstances and are in a position to define, in the case of mitigation, for example, which renewable resources are available for mitigation activities (like hydro, solar, biomass and wind power), and in the case of adaptation, which sectors in Lao PDR are considered vulnerable (as defined in the National Strategy on Climate Change (NSCC), the Second National Communication to the UNFCCC, the National Adaptation Programme of Action to Climate Change (NAPA)[4]).

It is important to recognize that defining climate finance is an important precondition to gather sound information on those financial resources that are available for implementing Lao PDR's national climate change goals, as well as tracking related financial flows throughout each fiscal year. This climate finance information can help decision makers in Lao PDR improve planning, coordination and management, identify gaps and raise more funds accordingly for a successful implementation of the required adaptation and mitigation activities. Understanding climate finance can help Lao PDR to draw lessons from the use of different financial instruments. This is necessary to increase effectiveness, efficiency and transparency, as well as expanding finance and scaling up adaptation and mitigation activities.

In addition, understanding climate finance in Lao PDR will also allow for the cross-checking of information reported by developed countries to the UNFCCC and the OECD, thus promoting transparency, completeness and accuracy internationally.

[3] OECD (2011): Handbook on the OECD-DAC Climate Markers. Available online: *www.oecd.org/dac/stats/48785310.pdf*
[4] Available online: *http://unfccc.int/resource/docs/napa/laos01.pdf*

Section 2

Country Information

2.1 Country Facts

Lao PDR has experienced intense economic growth, which has led to rapid improvements in human development and well-being. As a lower-income country, Lao PDR faces particularly difficult challenges. It must continue to reduce poverty among large segments of its population, reduce vulnerability to climate change and compete with countries intent on developing, deploying and exporting new technologies for the 21st century. A well-financed and implemented climate change strategy can contribute to successfully managing these challenges.

Of Lao PDR's total 23.6 million hectares of territorial area, about 17 million hectares are protected or conserved forests, 1.8 million hectares are production forests, while the remaining area is given over to agricultural and other land uses. Nearly three-quarters of the agricultural land consists of paddy land, with the remainder comprising other annual crops, fruit trees and grassland. Forest resources comprise one of the most important renewable resources in Lao PDR. These resources help regulate surface water runoff, preserve hydrological systems and protect watersheds, while contributing substantially to the national economy. Forest resources are decreasing rapidly, however. About 41.5 percent of the country's land area was covered by forest in 2002, compared to 64 percent in 1960 and 70 percent in 1943.[5] Moreover, in 2002, only 20 percent of the land area was covered by dense dominant and co-dominant canopy trees, a further warning sign of deteriorating resources.

There are three major sources of energy for domestic and economic activities in Lao PDR: biofuel, hydropower and fossil fuels. More than half the energy in the country comes from biomass, particularly wood fuel and charcoal. In 2002, wood fuel constituted about 56 percent of total energy consumption, followed by petroleum, at 17 percent. Electricity and charcoal each constituted 12 percent. Oil, electricity and charcoal comprised 18.11, 11.85 and 10.80 percent, respectively.

Hydropower development has become a critical focus of the *National Socio-Economic Development Plan* (NSEDP) and of the government's socioeconomic reform efforts. Numerous hydropower dams have been developed during the past decade to generate electricity, mainly for export. This has increased the total capacity of hydropower plants from 690 megawatts (MW) in 2005 to 2,583.73 MW in 2010 (Ministry of Planning and Investment, 2011). To further national efforts to become an "Asian battery" with regard to hydropower, the seventh NSEDP aims to develop an additional 10 hydropower projects with a capacity of more than 5,000 MW, costing USD11.2 billion (Ministry of Planning and Investment, 2011). It is expected that another 10 power plants with more than 4,300 MW of installed capacity will be in operation within a few years, while more than 50 prospective plants, with about 13,000 MW, are in the planning or feasibility-study stages. Assuming that the installed capacity operates at 50 percent per year with CO_2 reductions at 0.673662 gigagram per terajoule (Gg/TJ), Lao PDR may have contributed directly and indirectly to about 2,163 Gg of CO_2 reductions in the 2000s. Lao PDR also has many opportunities to improve energy efficiency. Every kilowatt hour (kWh) of electricity saved at home is another kWh available for export, where it may replace fossil fuel-based energy consumption.

2.2 Greenhouse Gas Emissions[6]

Lao PDR's national GHG inventory for the year 2000 recorded emissions of 43,811 Gg of CO_2 and the removal of about 2,047 Gg making net CO_2 emissions of about 41,764 Gg. This represents a substantial increase compared to a net sink of 104,570 Gg in 1990, only 10 years earlier. This is believed to be due in part to rapid socioeconomic development, and in part to improved technical capacities and data availability.

CO_2 emissions in the energy sector were related primarily to the use of biomass fuels derived from forest conversion. Fuel combustion from transport and other sources constituted less than 1 percent of the total. It is notable that all electricity in Lao PDR

[5] Ministry of Agriculture and Forestry (2005): *Report on the assessment of forest cover and land use during 1982, 1992, 2002.* Department of Forestry, Vientiane, Lao PDR.

[6] Lao PDR emits methane and N_2O emissions but given the relatively small amounts, this report focuses on CO_2 only.

is generated by hydropower; hence, emissions from this sector are negligible. Partly as a result of this and other socioeconomic factors, emissions from the conversion of forests and grassland thus dominated the sector.

In 2000, a total of 326,093 tons of fuel oil were imported into Lao PDR. Of this, 145,641 tons were diesel; 102,439 tons were gasoline; 68,109 tons were kerosene; and 522 tons were liquefied petroleum gas (LPG). The rest was composed of 6,473 tons of lubricant and 3,431 tons of residential oil. Coal production in Lao PDR is mainly for export; of the more than 175,000 tons produced in 2000, only 72 tons were consumed within the country.[7] Also produced were 300,000 tons of stink coal and 253 tons of lignite.

Energy combustion covers the power or energy industry, manufacturing and construction, transportation and residential establishments. Energy consumption in Lao PDR is projected to increase from 2,654 kilotons of oil equivalent (Ktoe) in 2010 to 3,036 Ktoe in 2015 and 3,667 Ktoe in 2020. Assuming 90 percent of fuel demand is consumed, CO_2 emissions will increase steadily from about 1,000 Gg in 2010 to more than 1,800 Gg in 2015 and nearly 3,000 Gg in 2020.

Lao PDR is in a unique position by being able to develop significant low carbon power production facilities for new electricity generation to reduce poverty and to move goods and people. However, this suggests that Lao PDR may consider its energy production, consumption and export needs in the context of broad regional GHG mitigation actions. In an industrialized regional economic zone, such as in Europe, this might be dealt with in the context of an emissions trading system; however, no such mechanism is currently available to Lao PDR and it may be some time before consideration is given to such a scheme.

As a long-term vision, engaging in a regional dialogue about the feasibility of a Pan-ASEAN Carbon Market may be a worthwhile public diplomacy strategy. The ASEAN Ministerial Meeting on the Environment (AMME) adopted the ASEAN Action Plan on a Joint Response to Climate Change (AAP-JRCC) in 2012, which may serve as a starting point as it requires all ASEAN Member States to explore the possibilities for a regional cap and trade system (compare AAP-JRCC C.2 iv). Nevertheless, even without access to a functioning cap and trade system, cultivating a progressive image as a source of low-cost and low-carbon electricity could provide significant dividends in the form of technical and economic cooperation, financing through the international carbon market as well as “green” foreign direct investment (FDI).

2.3 Potential Impacts of Climate Change

Over the past few years, an understanding of climate change impacts and adaptation in Lao PDR has gradually been developed. The National Adaptation Programme of Action (NAPA) process, under the UNFCCC, has particularly enhanced national capacities on climate vulnerability and extreme events. Among the potential impacts, flooding is the most likely hazard, followed by health epidemics (dengue, cholera, diarrhea and avian influenza), storms and droughts. Floods occur almost every year; most storms are followed by severe flooding, particularly after monsoon rains accumulate in the upper Mekong Basin. Areas most at risk are located along the Mekong and its main tributaries. Floods in Lao PDR have caused serious damage in all sectors, with the most severely-affected being agriculture, transportation, communications, housing and utilities. These sectors account for more than 80 percent of total flood impact. Assessments indicate that the people of Lao PDR are not adequately prepared for climate hazards, particularly floods.

[7] TVPK/VTE. *The Report on Coal Selling Overseas and Domestic*, 1995-2009. Vienphoukha Coal Mine Co. Ltd., Lao PDR, 20.

Climate hazards, particularly floods, have tended to become more frequent and intensified in recent years. It was found that about half of these hazards occurred between 1966 and 1992, a period of 26 years, while the other half occurred between 1992 and 2009, a period of only 17 years. Thus, the frequency of climate-related hazards in Lao PDR increased from about once every two years before 1992 to every year or even twice a year after 1992.

Given its vulnerability to changes in rainfall patterns, Lao PDR cannot afford investments in water systems, roads, dams and other infrastructure without ensuring that those investments will not be wasted. As recognized in the NSCC, integrating climate risk assessments in the planning of large-scale investments must be a mandatory component of all major spatial planning in particularly vulnerable sectors of the country. In addition, it has to be captured by related public budgeting.

Section 3

State of Climate Finance Readiness

This chapter examines the context for climate finance in Lao PDR regarding (a) strategic planning and developing policies, (b) institutions and good financial governance, and (c) access to international climate finance (see also Chapter 1.2).

3.1 Strategic Planning

Lao PDR has a number of strategies, plans and key documents addressing climate change, including:[8]

- The First National Communication to the UNFCCC - Lao PDR (2000)
- The Second National Communication to the UNFCCC - Lao PDR (2013)
- The National Adaptation Programme of Action to Climate Change (2009)
- The National Strategy on Climate Change of Lao PDR (2010)
- The Seventh Five-Year National Socio-Economic Development Plan 2011 – 2015 (2010)

As the key document for Lao PDR's climate change policy process, the *National Strategy on Climate Change* (NSCC) identified major strategic priorities for adaptation and mitigation in the following key sectors: (1) agriculture and food security, (2) forestry and land-use change, (3) water resources, (4) energy and transportation, (5) industry, (6) urban development, (7) public health.[9]

The NSCC provides a broad framework for responding to climate change impacts, while the Action Plan is expected to provide more specific tasks. The next phases of the planning process will require a balance between adapting to the impacts of climate change and efforts to reduce the rate of growth in greenhouse gas emissions in the energy sector, which are expected to increase by a factor of 3 by 2020. This will require broader and deeper participation by all ministries as climate change is not just an environmental issue, but also an economic, energy, transportation, industry, construction, agriculture, forestry, waste management, health and education issue.

The Action Plan being developed under MoNRE's leadership should be viewed not only as a means to respond to climate change but also as an opportunity to promote economic growth through the mainstreaming of climate change into all the plans. It will require cooperation with the Ministry of Planning and Investment (MPI) to promote investments and the Ministry of Finance (MOF) to encourage innovative fiscal measures.

It will be important that the Action Plan provides clear links to many related policies and programs, on energy production, industrial development, agriculture, forests, disaster risk reduction and water resources management in other ministries. These ministries' plans will need to be integrated with the Action Plan on Climate Change with concrete targets, steps, programs and projects for investment. The Action Plan will also require a strong national monitoring and reporting system as a means to promote continuous adjustments and improvements.

The government of Lao PDR has begun to integrate the NSCC into sectoral and national development policies and planning. Nevertheless, even more effective coordination, mainstreaming and financial resources will be needed.

[8] Various government initiatives complement the NSCC, or will do so in future. For example, several revisions of legal acts in recent years (laws on forest, land use, environmental, transportation, urban planning, electricity and related sectors), a Decree on Social and Environmental Impact Assessment, a Clean Development Mechanism Regulation, a National Green House Gas Inventory (forthcoming), Low-Carbon Development Strategy (forthcoming), a Renewable Energy Development Strategy and others.

[9] See Annex Table 1 for details.

The Lao PDR Strategy on Climate Change and the future Lao PDR Action Plan on Climate Change for 2013-20 are important first steps. In order to implement the NSCC, the forthcoming Action Plan, and achieve the climate change-related goals of the current and future Five-Year National Socio-Economic Development Plan, it is important to apply sound financial planning to complement the existing and future strategic planning. A useful step could be to dedicate modest resources to developing a Climate Finance Readiness Plan for Lao PDR.

3.2 Strengthening Institutions and Good Financial Governance

3.2.1 Key Ministries

The technical lead ministry for climate change matters in Lao PDR and for the UNFCCC process is the recently created Ministry of Natural Resources and Environment (MoNRE). To fulfill this role, MoNRE has established several new units, including the Department of National Disaster Management and Climate Change (DNDMCC), to carry out technical tasks related to climate change. MoNRE plays a leading coordinating role in several national climate change coordination bodies that partly still have to be made operational, including the National Steering Committee on Climate Change (NSCCC), a newly appointed Climate Finance Steering Committee, and a recently created Natural Resources and Environment Sector Working Group (NRESWG), co-chaired by Germany and the World Bank.

Three more ministries have roles regarding financial matters for adaptation and mitigation activities.

The Ministry for Planning and Investment (MPI) is responsible for the national development plan, integrating official development assistance (ODA) into the budget/plans and for promoting foreign direct investment (FDI) in Lao PDR by offering investment incentives, screening investment proposals, correcting investment data and monitoring investment practices. The MPI also undertakes a periodic mapping of available international aid flows and related projects using a newly established Aid Management Platform.

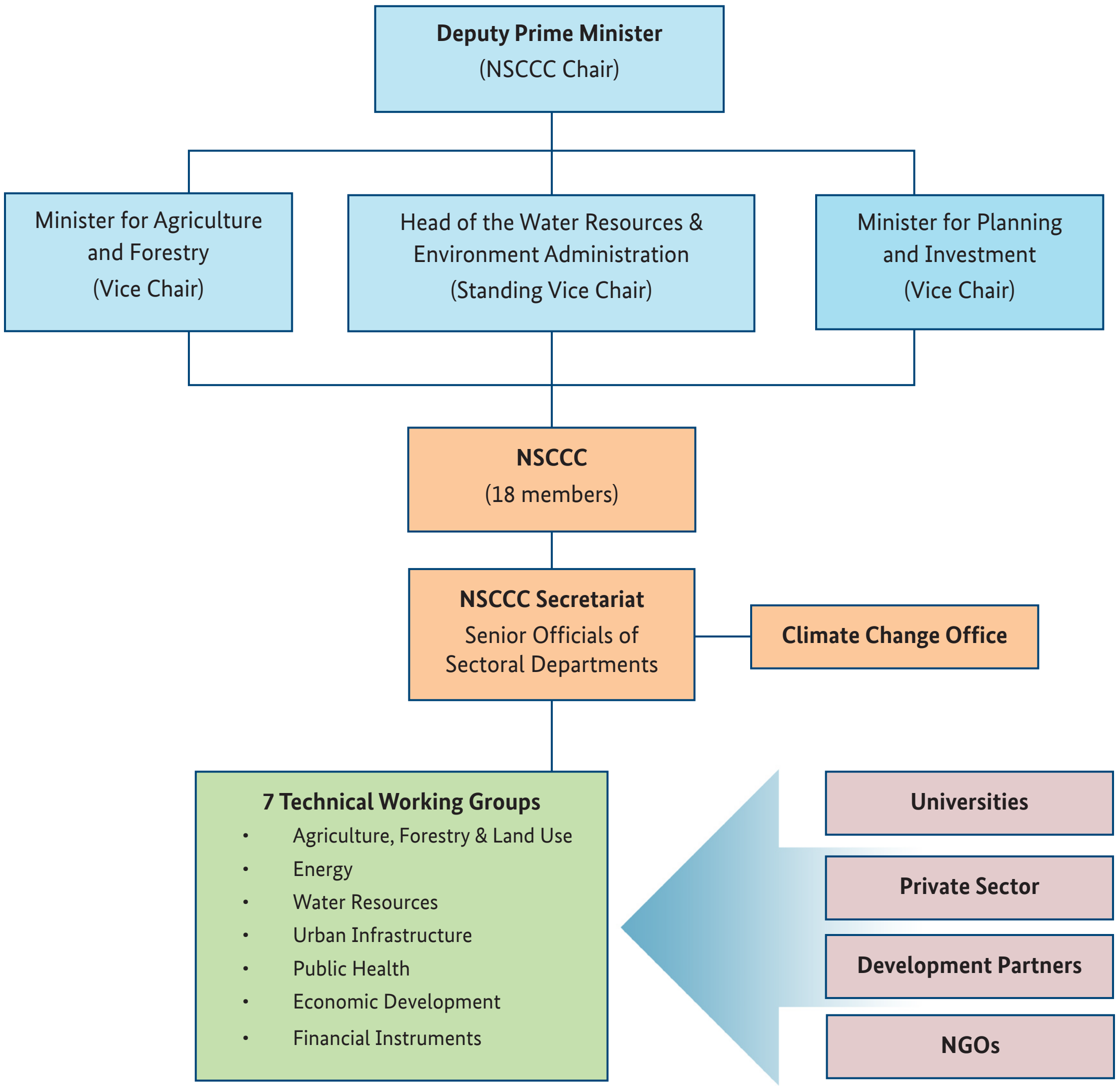
The Ministry of Finance (MOF) is responsible for coordination with major international organizations on loans, debt management and fiscal policy. There is no specialized unit in the MOF for climate finance and little data available. But awareness of the importance of climate finance for Lao PDR – especially in view of Lao PDR phasing out of LDC status – is growing at the MOF. In many other countries, the MOF is (becoming) the key actor in the design and implementation of climate change fiscal policies; particularly those involving economic instruments (compare, for example, Indonesia or the Philippines). The MOF's role usually is to have a comprehensive view of all sources of finance including climate finance, i.e., (i) internally/domestically-generated sources of climate funds, including private sector and public sector financing; (ii) foreign direct investment with climate benefits; (iii) the carbon market (as currently represented by the Clean Development Mechanism-CDM); and (iv) bilateral and multilateral development assistance for mitigation and adaptation, including important international climate funds like the Global Environment Facility (GEF) and Climate Investment Funds (CIF), since each of these sources is expected to play a critical role for climate finance in the near future. Also, in many countries, an MOF entertains a fiscal policy office charged with responsibility to analyze and assess the financial implications of schemes that may be proposed by other ministries; for example, environmental fiscal reforms, tax credits, direct payment programs, rebate programs, and the removal or introduction of taxes on goods and services.[10] All this is a potentially important field of capacity building for Lao PDR's MOF and may be regarded as an important element for improving Lao PDR's preparedness for scaled-up climate finance.

[10] MoNRE has been requested by the National Assembly to assess the potential role that taxes and charges could play as a source of additional funds for environmental protection. It is presumed that any such proposal would have to be coordinated with the MOF and other ministries.

Mitigation and adaptation and all related financial matters require cross-sectoral coordination. Lao PDR is well aware of this and has begun to establish coordinating institutions and bodies such as MoNRE. An important next step is to operationalize results-oriented cooperation processes among the ministries.

3.2.2 The National Steering Committee on Climate Change (NSCCC)

At present, the National Steering Committee on Climate Change (NSCCC), chaired by the Deputy Prime Minister, is the top body providing policy guidance on climate change policies in Lao PDR. The NSCCC oversaw the preparation of the *National Strategy on Climate Change* and the integration of climate change issues into the seventh Five-Year National Socio-Economic Development Plan (NSEDP).



The goals of the NSCC are aligned with the vision of sustainable development, poverty reduction, enhanced quality of the natural environment, and strengthened public health. Specifically, they aim to:

a. Reinforce the Sustainable Development Goals of Lao PDR, including measures to achieve low-carbon economic growth;

b. Increase the resilience of key economic sectors and natural resources to climate change and its impacts;

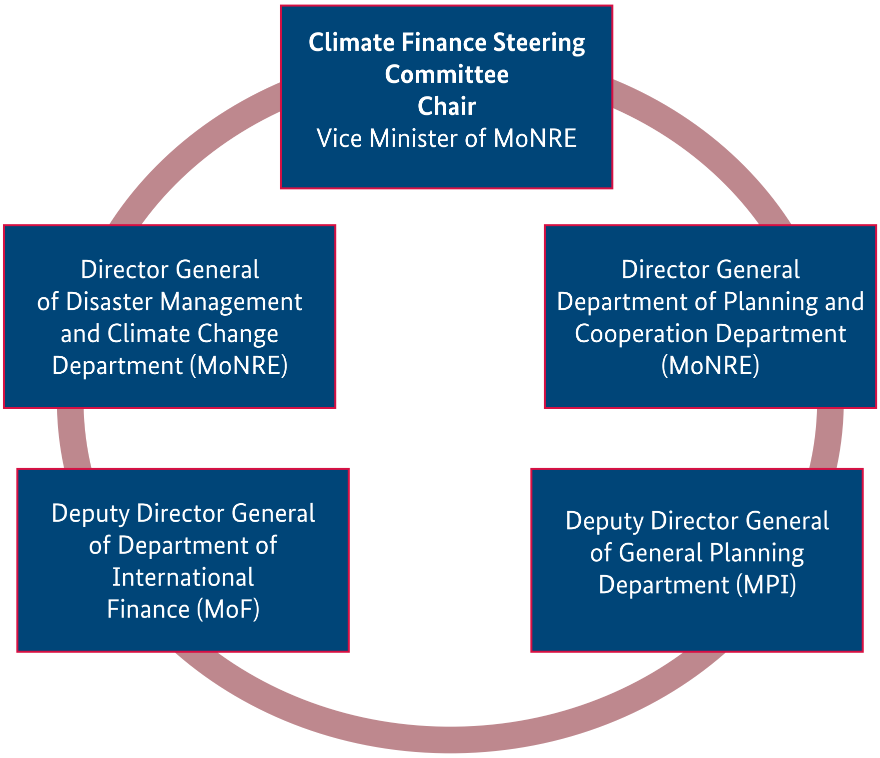
c. Enhance cooperation and partnerships with national stakeholders and international partners to implement national development goals;

d. Improve stakeholders' public awareness and understanding about climate change vulnerabilities and impacts, GHG emission sources and their relative contributions to climate change, and how climate change will affect the national economy, thereby increasing stakeholder willingness to take action.

3.2.3 The Climate Finance Steering Committee

On November 20, 2012, the Minister of Natural Resources and Environment decided to appoint a committee to analyze and consider mechanisms for accessing additional climate finance for Lao PDR (Decision Number 8037/MoNRE). The committee is charged with creating a secretariat and facilitating inter-ministerial coordination and action on climate finance.

At the time of writing this report, the committee was not yet staffed and operational. However, the first agreed task of the committee was to propose which existing national fund may be authorized to pursue the status of a National Implementing Entity (NIE) for directly accessing the Adaptation Fund. Since the Environment Protection Fund (EPF) is participating in the Climate Finance Steering Committee, it may be assumed that the EPF is Lao PDR's champion candidate for gaining NIE status.[11]



[11] It should be noted at this point that this report did not conduct an in-depth review of the capacities of existing funds in Lao PDR and, therefore, has no position on which fund may or may not be the best candidate for NIE status for international climate funds like the Adaptation Fund.

The present mandate of the newly established Climate Finance Steering Committee is comparatively limited in its scope. Potentially, the Committee could play an important role beyond providing guidance for an NIE accreditation of the EPF.

For this future role, the following points could be taken into consideration:

→ The NIE registration process can be a valuable experience for those involved in Lao PDR. But, if successful, it will likely yield little additional finance. According to a recent report by the World Bank acting as the Adaptation Fund interim trustee, the AF will have approximately USD20 million per year between 2013 and 2020 for global disbursement (UNFCCC/SBI/2013/INF.2). Even after an additional endowment top-up by the governments of Austria, Belgium, Finland, France, Germany, Norway and Switzerland in late 2013, the total available fund balance was USD172 million in January 2014.[12] This is still very little financing to allocate among successful applicant countries. Since the Adaptation Fund receives its financial resources through the sale of carbon credits, this projection of USD20 million per year is based on the current carbon credit market outlook, hence it will be subject to unforeseeable market-related change. Overall, the Committee should consider carefully, whether and when the effort is worth the reward.

→ In case Lao PDR decides to apply for NIE status, is accredited with the Adaptation Fund and gains direct access, this may create an important record that might be useful later, if Lao PDR decides to apply for direct access to the not-yet-operational Green Climate Fund, which is expected to distribute and leverage significantly higher volumes of climate finance. However, as the access modalities for the GCF are still to be finalized and industrialized countries have not yet committed to an initial budget for the GCF (to be expected at earliest by end of 2014), this assumption remains hypothetical at the moment.

→ Every climate finance institution in Lao PDR, including the Environment Protection Fund, so far lacks a record of managing higher volumes of finance per year. This is why it may in fact be an appropriate strategy to increase the volume of available funding in modest steps to not overburden the absorptive capacity of Lao PDR's contemporary climate-finance system. Aiming for a modest increase in available funds through direct access to the Adaptation Fund may fall into that line of thinking. But it may also aim too low, given the urgency and scale of the challenges in Lao PDR. To implement the NSCC, the NAPA and other future climate strategies, Lao PDR would very soon require a financial system to manage millions of US dollars for mitigation and adaptation activities.

The appointment of a Climate Finance Steering Committee is an opportunity for thinking more holistically and strategically about preparing Lao PDR for receiving more climate finance and implementing the *National Climate Change Strategy* along with other climate-related plans. If the Committee's mandate was to be broadened, its potentially very important roles could cover key elements of addressing climate finance readiness (compare Chapter 1.3). Those include:

- Suggest a working definition for climate finance for the Lao PDR;
- Analyze and monitor climate-related expenditures (e.g. CPEIR) and issue periodic reports on The State of Climate Finance in Lao PDR (for example to the NSCCC);
- Prepare/approve a "Climate Finance Strategy" to complement the National Strategy on Climate Change, the NAPA, and other future climate strategies (compare Chapter 4);
- Based on the functions above, support the NSCCC in donor coordination and inter-ministerial coordination (could include (a) review of grants and loans to determine consistency with national

[12] www.adaptation-fund.org

goals, (b) approval of proposed loans and grants, (c) recommendations for allocation of funds);

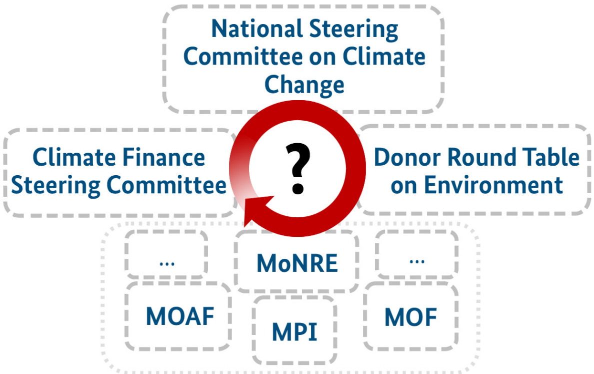
- Identify national implementing entities (NIEs), particularly in view of the Green Climate Fund (GCF);
- Review existing fiscal policies and impacts on climate finance;
- Identify and recommend options for new domestic sources of climate finance;
- Formulate national positions on climate change finance for the UNFCCC focal point to present to international negotiations.

3.2.4 Coordination – A Key Challenge

The establishment of coordinating institutions, such as MoNRE, and bodies such as the NSCCC, the new Climate Finance Steering Committee and active Donor Round Tables are crucial for effective climate change action. The institutional landscape in Lao PDR at the present time is still compartmentalized and not yet well-prepared for absorbing increased climate finance. Lao PDR has to maintain its efforts to coordinate and build capable, operational climate change institutions.

A first step is to clarify and consolidate institutional responsibilities. This affects, for example, MoNRE and its relationship with line ministries like the Ministry of Agriculture and Forestry as well as the links of the NSCCC with the new Climate Finance Steering Committee and the extended interaction with the Donor Round Table on Environment. In order to move on, clarifying responsibilities, mandates and decision-making power is crucial.

Many countries face similar challenges regarding coordination and responsibilities like Lao PDR. Some are presently undertaking steps similar to those in Lao PDR in order to improve cooperation and clarify roles and responsibilities.13 Looking beyond national borders to exchange experiences is often a worthwhile and recommended endeavor.



3.2.5 Climate Finance Institutions

At the time of writing this report, there was no dedicated national fund or funding window to support and finance the implementation of the National Strategy on Climate Change or any broader program of mitigation or adaptation action. Looking at some of the existing funds in Lao PDR, some are mandated to fund activities falling under one or more of the technical priorities of the NSCC. But judging by mandate and the volume of dispersible funds, none of Lao PDR's existing funds are able to contribute significantly within the current national setup. This should be addressed soon because it reinforces the standing challenge of coordination and consolidation of roles and responsibilities for driving climate change action in Lao PDR as argued above.

[13] For example, Colombia moved the authority for climate change policy development from the Ministry of Environment to the National Planning Department in order to more effectively mainstream climate change into development planning. Kenya has elevated coordination to the Office of the Prime Minister. El Salvador has introduced focal points or units for climate change in a number of ministries and established an Inter-institutional Committee for Climate Finance (CIFCC) to coordinate climate finance. In Indonesia, the National Climate Change Council under the office of the President is responsible for coordination of climate change finance. See also WRI 2012 at *www.wri.org/publication/monitoring-receipt-international-climate-finance-developing-countries*

Lao PDR has multiple funds that have been established to finance projects in different sectors. They include the Forest and Forest Resources Development Fund, the Rural Electrification Fund, the Renewable Energy Fund and Rural Electrification Fund, the Environment Protection Fund (EPF), the Public Management Trust Fund, the Multilateral Trade Fund and the District Development Fund. There is no specialized fund to support transport or energy efficiency activities; two important sectors in Lao PDR and the fight against climate change.

Examples of special-purpose funds created by the Lao PDR:

Name of Fund	Responsible Institution	Objectives
Environmental Protection Fund	MoNRE	Strengthen environmental management, biodiversity conservation, waste management and pollution control.
The Forest and Forest Resources Development Fund	MAF	Strengthen forest management, environmental protection and sustainable development of forest resources.
Rural Electrification Fund	MME	Support the installation of solar electricity systems in rural areas.
Renewable Energy Fund	MME	Assist the renewable energy and biofuels industry, remove barriers and build capacity.
Multilateral Trade Fund	MCI	Promote Compliance with WTO Requirements.
Public Management Trust Fund	MOF	Support program reforms and build capacity at local level.
District Development Fund	UNDP/UNCDF	Improve governance at the local level in areas of planning, technical inspections and procurement.

This landscape of funds is at the moment only theoretically positioned to contribute either directly to promoting adaptation and mitigation measures or indirectly by building the essential administrative measures to ensure that government funds are managed in an effective manner. Leadership and coordination is needed to align and focus the available finance to contribute to implementing the NSCC. Some steps in this direction are already on the way.[14] For example, the government is currently considering which among the national funds should apply to the UNFCCC Adaptation Fund (AF) to be designated as a National Implementing Entity (NIE). If successful, the chosen fund would empower Lao PDR and provide flexibility to manage an additional modest volume of international funds with less international oversight.

Each of Lao PDR's national funds has a steering committee composed of senior officials, some form of technical committee, a secretariat and – in most cases – an evaluation unit and an auditing routine. Their mandate usually enables them to accept both domestic and international resources. The way they solicit and review proposals differs somewhat, but the funds are essentially set up to function as most

[14] See pages 11-14 for details on the new Steering Committee and the prospects of direct access to the AF.

public funds do around the world. But there are also notable elements of success and innovation in the design of some of Lao PDR's funds:

The **Multilateral Trade Fund** stands out, as it is currently attracting increased support from international partners (USD14 million according to the World Bank). This may be due to the significant link between trade and economic growth, but also to other factors. For example, the Minister of Commerce and Industry strongly supported the need for the fund; it has received important technical support from the World Bank, and it has a good core management team and junior staff.

Lao PDR also has a **Poverty Reduction Fund** (PRF), which was established in 2003, and is now the largest multi-sector community-driven development project in Lao PDR. The PRF has provided basic services to the poorest rural, remote communities in the country and built local capacity and institutions. Specifically, the fund has supported the increase in better access to roads, primary education, clean water and health care. The PRF has enabled improvements in the quality of life for 650,000 beneficiaries, especially women and ethnic groups. In a country where top-down planning is the norm, the project's participatory and bottom-up approach is highly innovative. However, at this time its connection to climate change is somewhat remote, but it is building the infrastructure that will be needed in the future to make adaptation possible.

The **Forest and Forest Resource Fund** (FRDF) is an attempt to raise and redistribute finance domestically. Established after a presidential decree from 2005, the FRDF receives revenues from a benefit-sharing system linked to timber sales from production forestry. The revenues are meant to be used for the management, protection and development of Lao PDR's forest resources. Seventy percent of the revenue from timber sales goes to the state budget and 30 percent to the FRDF. Once the funds go to the FRDF, 60 percent is deposited in the FRDF's account and 40 percent is transferred directly to one of the communities that hold a forest management agreement for local activities. The operational and financial details as well as the achieved results of the FRDF are not documented sufficiently and are unavailable to the wider public. Hence, the FDRD is difficult to assess both in terms of its past performance and in view of playing a key role in preparing Lao PDR for receiving REDD (reducing emissions from deforestation and forest degradation) finance.

The **Environmental Protection Fund** (EPF) is mandated by a Prime Ministerial Decree to strengthen environmental protection, sustainable natural resource management, biodiversity conservation and community development in Lao PDR. It was established in 2005 as a financially autonomous organization, supported by the World Bank (International Development Association - IDA), the Asian Development Bank (ADB) and the United Nations Educational, Scientific and Cultural Organization (UNESCO). Since its inception, the EPF provided project funding of approximately USD6 million, while managing revenues of approximately USD14 million including a sinking endowment of about USD7 million for generating capital gains. In its present design, it stands outside of the government budgetary system and cannot receive funds from ministries. It has a successful record of small-scale project financing. Considering its mandate and funding windows, the EPF comes close to how a domestic climate change fund could work. It will depend on the Climate Finance Steering Committee to design a role for the EPF in supporting climate change activities. This will require an in-depth assessment, which this report cannot provide. However, it is recommended that the EPF be considered when thinking more holistically and strategically about preparing Lao PDR for receiving more climate finance and implementing the *National Strategy on Climate Change* along with other climate-related plans.

3.2.6 When Are Funds Actually Useful?

Specialized funds can be of advantage. They sometimes promote inter-ministerial cooperation, because steering committees are often composed of members from different ministries. They can respond to the interests of donors and may be an efficient, flexible, and fast administrative mechanism for receiving finance and passing it through to recipients.

It has to be recognized that specialized trust funds have become a more common and popular vehicle for delivering aid on a national level. But it is important to evaluate if and when a fund actually is useful because creating a specialized fund can fall short of expectations and be risky.

The World Bank's Independent Evaluation Group has conducted a comprehensive review of the Bank's trust fund portfolio, and paints a mixed picture. While "trust funds add value as a distinct aid vehicle by providing coordinated financing and grant resources for individual countries, [and] targeted development issues [...]"[15], they also sometimes achieve the opposite result. "They do not necessarily integrate well with countries' own programs, nor do they foster coordination on the ground with other sources of aid".[16]

Attributes of successful funds:

- Strong leadership at the ministerial level
- Strong links to national priority policies
- Clear procedures for soliciting and evaluating proposals and monitoring project performance
- A head of a Secretariat with broad experience and proven leadership in government, technical knowledge and administrative competence.
- A highly motivated staff with experience in monitoring and evaluating projects
- A flexible structure to enable new topics to be supported
- An independent auditor
- Transparent reports to donors and other government ministries on the use of funds
- Capable implementing partners for making financing work locally

The design of the fund and its links to the national context is crucial for its success (compare box).

The creation of a specialized fund also bears risks. Sometimes it generates significant attention and raises expectations that need to be managed carefully. One of those expectations is that a fund will leverage additional financing. In many cases, this is not easily achieved and can damage its initiators' reputation if it isn't. Establishing a fund can raise serious questions: Why can't the normal budget process be used to address the highest priorities of the government? What signal does it send if a program does not have a fund to support its activities? What administrative reforms would be necessary to make the normal budget process equally attractive as a mechanism for addressing high-priority national goals?

However, if executed and managed properly, specialized funds can perform well, particularly in promoting new development issues like mitigation and adaptation, and in governing activities to safeguard public goods, again like mitigation and adaptation.

3.3 Lao PDR's Access to International Climate Finance

International financing flows for climate change from all sources, public and private, for 2010/2011 reached approximately USD343-385 billion annually with private finance in the range of USD230 billion, according to the Climate Policy Institute (CPI).[17] Total Multilateral Development Bank finance in 2011 (established by applying the MDB marking approach retroactively) was USD4.5 billion for adaptation, and for mitigation was USD19.6 billion. The OECD estimates that overall bilateral commitments for 2010 for adaptation was approximately USD4-9 billion, and for mitigation in the range of USD13-18 billion for a total of between USD15-23 billion.[18]

[15] IEG (Independent Evaluation Group). 2011: *Trust Fund Support for Development: An Evaluation of the World Bank's Trust Fund Portfolio.* Washington, DC: Independent Evaluation Group, the World Bank Group, p. iv.

[16] IEG (Independent Evaluation Group). 2011: *Trust Fund Support for Development: An Evaluation of the World Bank's Trust Fund Portfolio.* Washington, DC: Independent Evaluation Group, the World Bank Group, p. iv.

[17] *The Current Landscape of Climate Finance*, Presentation by Barbara Buchner of the Climate Policy Institute (Venice), WRI Seminar, April 2013.

[18] *Financing Climate Change Action*, OECD report prepared for the UN conference in Doha (COP18).

While these flows appear to be substantial, there are two important factors to consider:

1. Most private finance is focused on developed countries and China, and
2. Most public money is directed toward mitigation not adaptation, which is a particular need of Lao PDR and many other developing countries.

Consequently, there is likely to be significant competition for climate financing. Lao PDR will need to use international funds wisely and efficiently and consider how to use its own domestic funds for leveraging finance from the private sector and international public sources to maximize their utility.

3.3.1 OECD Data on Adaptation and Mitigation Finance Flows to Lao PDR

Some available data on climate finance in Lao PDR is in the OECD Rio Marker dataset, which tracks mitigation and adaptation aid commitments from OECD countries since 2010. According to the OECD Rio Marker data, OECD countries committed USD107.95 million of climate finance for Lao PDR to receive in 2011 (see tables below). The commitments are divided up into USD53.375 million for adaptation and USD54.575 million for mitigation activities. Double-counting of adaptation and mitigation activities is prevented by marker attribution rules.

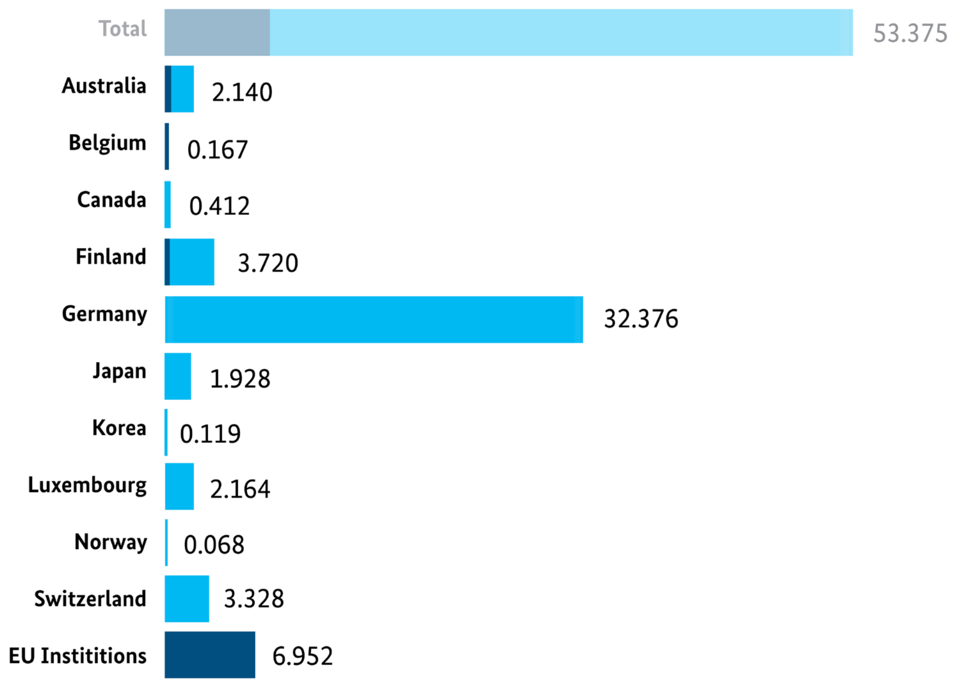
It should be noted that the OECD dataset does not reflect all relevant climate finance flows (for example, it does not capture the Clean Development Mechanism). But more importantly, the dataset contains commitment data on aid and does not give a picture of the funds dispersed to Lao PDR. It is the responsibility of the Government of Lao PDR to monitor dispersed climate flows domestically. This is challenging, but necessary.

At the time of writing this report, Lao PDR had no means to verify and monitor the international commitments as reported to the OECD or by any other party claiming to support Lao PDR in fighting climate change. For example, the newly established Aid Management Platform under the MPI – assuming that operational and maintenance costs are acceptably low – could provide this service by adopting the OECD Rio Markers and requesting donors in Lao PDR to submit climate disaggregated data as part of their regular periodic reports.

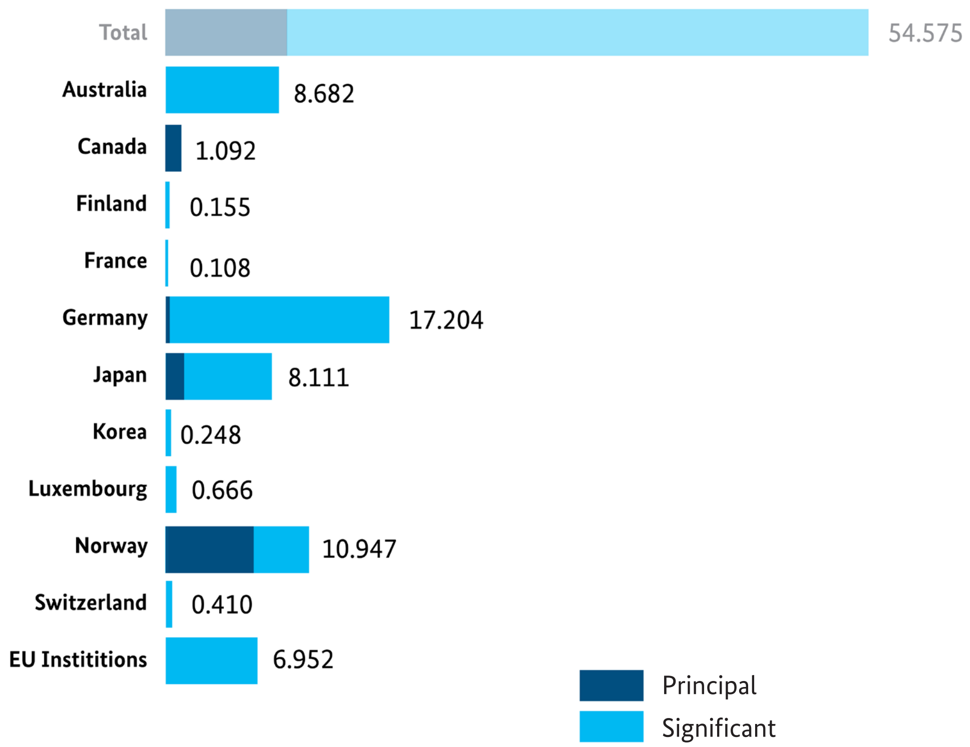
In the absence of domestically verified data on dispersed climate finance, looking at aid flows in climate-relevant sectors shows that Lao PDR has indeed begun tapping into some forms of international finance for mitigation and adaptation activities. This applies exclusively to climate finance delivered by international implementing partners; for example, using finance from the Global Environmental Facility (GEF) or the Forest Investment Program (FIP) under the Climate Investment Funds (CIF). The Government of Lao PDR has also approved 10 Clean Development Mechanism (CDM) projects with a total mitigation potential of 1,450 Gg of CO2 per year. Of these, six projects are hydropower, with the remainder comprising one each from agro-forestry, biogas, energy efficiency and alternative fuel. Out of the 10 projects, two have been approved by the CDM Executive Board – the Beer Brewery Energy Efficiency Project and the Xekaman 3 Hydropower Project. However, given the continued uncertainty about the carbon market, it is unlikely that certified emission reductions (CERs) will make a significant contribution in the short term.

Other international partners (bilateral development agencies and multilateral banks) are providing support, too. They include GIZ, the Japan International Cooperation Agency (JICA) and the United Nations' Food and Agriculture Organization

OECD Data on Adaptation Finance Commitments to Lao PDR (USD millions) 2011



OECD Data on Mitigation Finance Commitments to Lao PDR (USD millions) 2011



Note: The OECD may also be able to provide a project list for Lao PDR. Currently, the list cannot be extracted from the online dataset.

Data extracted on 19 July 2013 from OECD Stat.

(FAO), which are supporting work on forestry; the International Finance Corporation (IFC), which is providing consultant and technical support to MoNRE to improve water laws and regulations, their enforcement and the implementation of integrated water resource management; and the Asian Development Bank (ADB), which is supporting work on adaptation.

Foreign direct investment for dams, forestry and mining projects has grown rapidly over the last 10 years. Vietnam has become the largest foreign investor in Lao PDR. According to the latest report from the Lao Ministry of Planning and Investment, from 1989 to 2012 Vietnam invested about USD4.9 billion, becoming the largest foreign investor in the country. The second-largest foreign investor in Lao PDR is Thailand. From 1989 to 2012, it invested in 742 projects with a combined value of about USD4 billion. The third-largest foreign investor is China with a combined investment value of about USD3.9 billion. In the same time period, among the other top 10 foreign investors in Lao PDR was the Republic of Korea, which conducted projects with a combined investment value of about USD748 million.

The future effects of these investment projects on GHG emissions and the ability of Lao PDR to adapt to climate change are not known. However, domestic investment is 5.3 percent of gross national product (GNP) or three times less than foreign investment. Moreover, not all sectors are benefiting, as investment in the non-resource sector has decreased relative to the natural resource sector in recent years.

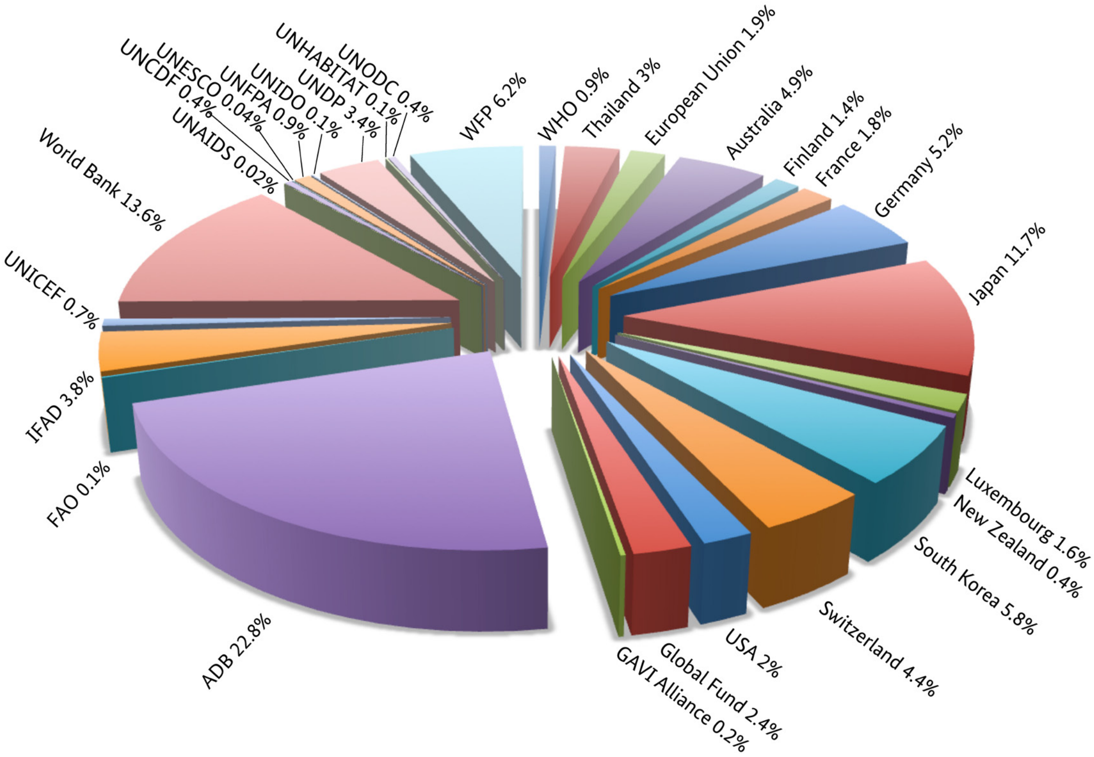
Lao PDR has also recognized the need for resources to address adaptation in its NAPA, although activities implemented thus far have been small compared to the priority needs identified. It is hoped that the LDC Fund of the UNFCCC, the Adaptation Fund and, in future, the Green Climate Fund (GCF) will serve as the key financial mechanisms for the country's adaptation needs. At the time of writing this report, Lao PDR was dependent on financial and technical support from multilateral and bilateral development partners to access any form of international climate finance.

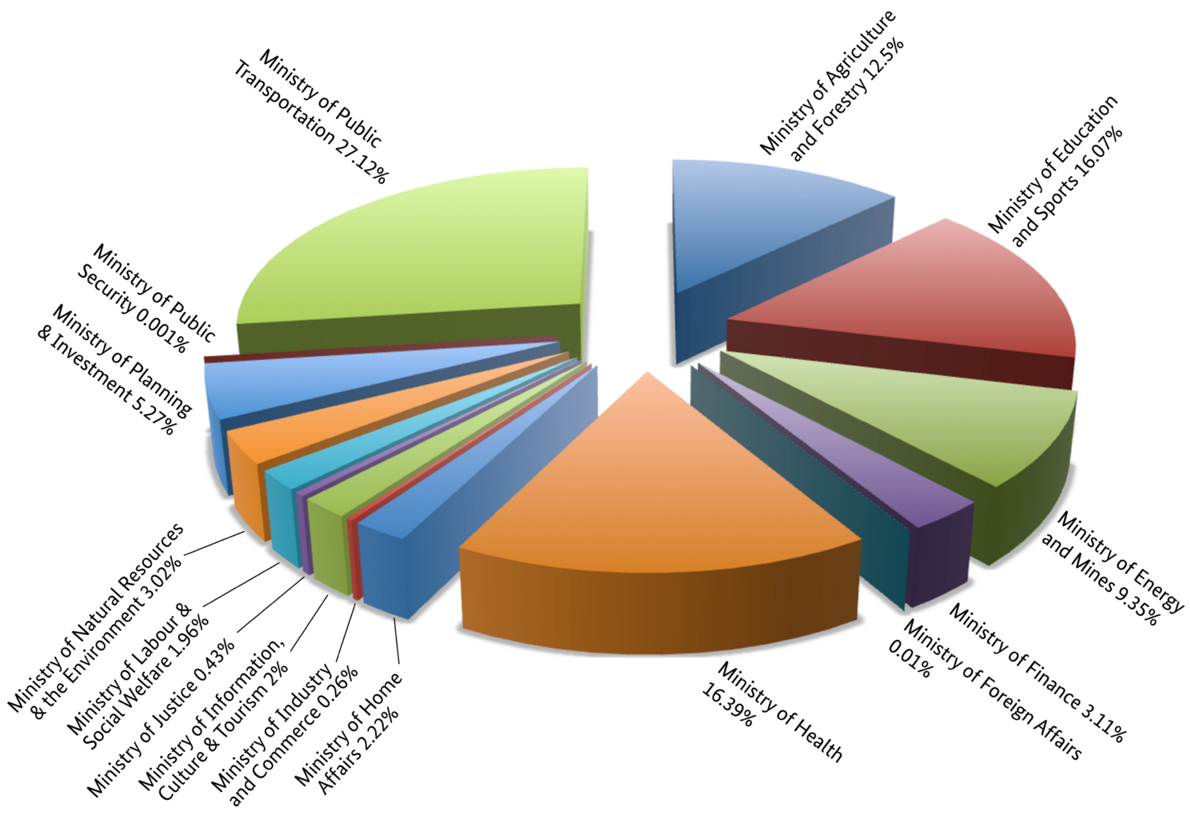
3.3.2 How are Climate Change Grants and Loans Monitored in Lao PDR?

There is presently no mechanism that allows the tracking of climate finance in Lao PDR. As previously noted, the responsibility for tracking aid grants and loans (but not climate-disaggregated) is shared between the MPI and the MOF. The MOF didn't disclose a tracking system. The MPI recently began to use a commercial Aid Management Platform, which was modified with support from the United Nations Development Program (UNDP), to meet the specific needs of the government. There is a newly established routine under which most bilateral and multi-lateral development organizations in Lao PDR report their commitments and disbursements to the Aid Management Platform team. Examples of two of its outputs are provided in Figure 1 (a) (b). While the software presently does not include markers for climate change, it could be further modified to include such markers.[19] It does allow users to input an OECD-Development Assistance Committee (DAC) marker, which can be used as a surrogate to obtain at least some basic information on the objectives of development assistance, including some climate change-related activities.

[19] For more details on climate change markers see: *www.oecd.org/dac/environment-development/rioconventions.htm*

Commitments of development partners and disbursements of development aid to ministries in Lao PDR in term of percentages[20]





[20] Lao PDR (2013): *Foreign Aid Implementation Report* (FAIR), FY 2011/12, Ministry of Planning and Investment, Department of International Cooperation, Vientiane, Lao PDR.

One major challenge inherent to climate finance monitoring efforts, whether by a contributor or a recipient, is the need to define climate finance in order to distinguish it from other forms of finance, such as official development assistance. This is challenging because countries and donor institutions use a variety of definitions in identifying climate finance, with significant implications for questions regarding the quantity and characteristics of this finance.[21] A narrow definition of climate finance might include finance that supports discrete climate activities, but excludes activities in which climate considerations are mainstreamed into traditional development assistance through a "climate-proofing" process. A broader definition might include some or all of the finance to support projects that include climate benefits in any development project. While the UNFCCC employs no definitions or criteria for climate finance, the OECD-DAC has developed definitions and criteria for its climate change mitigation and adaptation Rio Markers. In the case of adaptation, the Rio Markers ask for projects to be identified as principle, significant, or not targeted and to further identify them as either enabling or sectoral activities. The multilateral development banks (MDBs), including the African Development Bank (AfDB), the Asian Development Bank (ADB), the European Bank for Reconstruction and Development (EBRD), the European Investment Bank (EIB), the Inter-American Development Bank (IDB), the World Bank (WB), and the International Finance Corporation (IFC), have developed a joint approach to tracking adaptation and mitigation finance in which they identify a set of criteria and categories for defining climate finance for adaptation and mitigation. Both the systems of the OECD-DAC and the MDBs have limitations and complexities that affect their application.

The UNDP's Climate Public Expenditure and Institutional Review (CPEIR) process and the Overseas Development Institute (ODI) have also developed a classification system for relevant climate change activities and a weighting approach (high, medium, low and marginal) for estimating climate expenditures in national budgets. The World Bank's efforts to identify climate change co-benefits and the Climate Change and African Political Stability program (CCAPS) take a similar approach in that they attempt to identify the components of individual projects. The CCAPS program uses four categories: Ambiguous Development; General Development; Capacity Development; and Climate-Oriented Development. Considerable information on coding and tracking of just adaptation projects may also be found in a paper prepared by the ODI for the United Kingdom's Department for International Development (DFID). One conclusion that can be drawn from the above body of work is that there are many experiments under way to develop or improve definitions and criteria to classify adaptation projects. It may take several years of additional research and testing of these systems before the international community converges on a particular approach.

> Lao PDR would benefit from assistance to build capacity relating to definitions of climate finance, indicators for tracking finance, and other means to classify climate finance. In order to do so, the government would need to decide on the level of detail for a marker system (for example, a continuum showing an increasing level of detail in classifications could be as follows: climate change - mitigation - energy - renewables - wind) that is both practical and meets internal policy needs. Moreover, Lao PDR would need to consider how to identify climate and, in particular, adaptation projects with respect to national development plans and programs and development assistance projects.

Recognizing that all these approaches have limitations, it is suggested that Lao PDR pilots one or more of the systems identified above to determine which approach best suits its national circumstances and capacities. To do so, Lao PDR may wish to select a representative set of project documents to review and classify by applying one or more approaches. Based on the pilots, Lao PDR could select indicators to be included in its aid data management system and/or other financial management systems.

[21] Nakhooda et al. (2013): *Mobilising International Climate Finance: Lessons from the Fast-Start Finance Period.* WRI, ODI, IGES.

Section 4

Conclusion: Lao PDR Would Benefit from a "Climate Finance Strategy Process"

There are a number of first steps that Lao PDR can undertake but instead of taking isolated single steps, the government should consider setting up a coordinated "Climate Finance Strategy Process" for the next few years. A "Climate Finance Strategy Process" should enable Lao PDR to build capacities and institutions to plan, access, deliver as well as measure, report and verify (MRV) climate finance. In the light of the limited supply of climate finance, this can be considered as a necessary requirement for Lao PDR to successfully compete for international funds, which can then be used to achieve Lao PDR's development goals through both public and private investments. MoNRE, MOF and the MPI will have to work closely together to integrate ODA, loans and other financial instruments into the planning process and to link finance into MoNRE's budgeting process and climate-relevant activities in other ministries. The basic principles of GIZ's "Ready for Climate Finance", as outlined in Chapter 1.2, could be used as orientation.

This report argues that the government should create a strong executive body to steer all climate finance activities in Lao PDR. This role could be taken up by the newly appointed Climate Finance Steering Committee, but will require very strong ministerial support and high-level leadership.

Choosing a working definition for climate finance for Lao PDR should be the very first step for this body. For this, it is advisable to draw on the efforts of the international community, but it must be remembered that Lao PDR is in the best position to determine what should count as climate finance for the national context.

It will be necessary to undertake an assessment of how much (public) money is currently being spent on climate change-related activities, including by non-governmental organizations (see Annex 1). The detected funds should be matched with the priorities of the NSCC and other climate-related plans in order to determine the financial needs for the implementation phase. Investment gaps need to be identified and financing needs have to be estimated. As part of this exercise, consider also estimating the benefits of reducing vulnerability to climate change and the benefits of implementing the NSCC (e.g. reduced vulnerability to climate change etc.) in order to have a basis for cost-benefit analyses to support decision making.

Available international funding sources and initiatives should be mapped in order to determine which of them offer the most suitable funding sources for implementing the NSCC. As part of this exercise, assess and determine the feasibility of including climate change markers in the systems for tracking grants and loans by the MOF and MPI (e.g. the MPI's Aid Management Platform) including the possible challenges of integrating these two systems. This is required to understand whether NSCC priorities are met and, if so, whether they are met in an efficient manner with adequate financing.

Building strong (effective, efficient and transparent) climate finance institutions is crucial. It is usually advisable to have only one national climate fund to benefit from economies of scale and lower transaction costs. The fund(s) should be carefully fitted to deliver the NSCC and also other or future climate-related strategies. For this, the fund should be prepared to manage significantly scaled-up finance. In order to operate at a relevant scale, funding operations have to grow beyond small grants or projects in order to support long-term programmatic activities for transforming selected economic sectors throughout Lao PDR and to be ready to access large larger amounts of international climate financing directly (such as the Climate Investment Funds or the GCF).

The recipient implementation organizations of a larger national fund ultimately have to deliver local impacts. To make climate finance work in Lao PDR, the funding mechanisms need to work across the sub-national level. For this, it needs to be considered how and when climate financing may be responsibly devolved to provinces and districts.

Review and, as appropriate, reduce financial barriers and revise regulations governing investments in mitigation technologies and adaptation measures.

Identify suitable investment measures used by other countries that aim to remove barriers and reduce financial risks.

Consider financial schemes to increase domestic revenues for climate change/development measures, for example fees, charges and taxes. Domestic revenues can also be used to leverage and de-risk international climate finance as well as private investments with climate-related benefits.

Determine whether current institutional arrangements and procedures for decision making within the government to address the financing needs for adaptation and mitigation are appropriate for the coming decade. Consider how to improve coordination and clarify roles, responsibilities and best positioning of a broad-based coordinating committee on climate finance. The position within the Government of Lao PDR could have a significant bearing on its effectiveness.

Section 5

Additional Elements of Climate Finance Readiness

The mission and this report can only provide an entry point to discuss climate finance readiness in Lao PDR. Not all relevant aspects of climate finance readiness as outlined in Chapter 1.2 could be covered. In order to complete the picture, additional aspects should also be examined, including (a) an assessment of Lao PDR's capacities for effective, efficient and transparent spending and implementation, and (b) exploring ways for engaging the private sector.

Lead questions for effective, efficient and transparent spending and implementation:

- To what extent are project development and implementation capacities available in the public and private sectors (identify appropriate technology, management and technical execution capacities, financial planning);
- Is there a sufficient pipeline of potential high-quality projects and programs to be funded?
- To what extent are public and private investors using a monitoring and evaluation system for climate impacts and is it able to calculate results and estimate impacts (GHG impacts, adaptation hypotheses)? Is there experience with monitoring and evaluation (M&E) of adaptation projects? Is there experience of the MRV of GHG emissions?
- To what extent are institutions able to execute funded programs (contracting, hiring and procurement?)
- Does the country have a track record of effective and efficient public interventions to achieve its development targets?

Lead questions for engaging the private sector:

- How far is the national financial sector (commercial banks, insurance companies etc.) engaged in funding climate change-related activities or factoring in climate risks (credit lines for renewable energy (RE), energy efficiency (EE), adaptation measures, insurance products)?
- How favorable is the business environment and investment climate for climate change-related activities by the private sector? What is the general state of the investment climate?
- How far are businesses (large corporations and small and medium enterprises-SMEs/informal sector) aware of the opportunities and risks created by climate change (incl. regulatory incentives, impact of climate change on value chains etc.)?
- Are there policy dialogues between policy makers and the private sector, especially around climate change-related subjects?

Annex I

Table 1: Strategic sectoral priorities of the **National Strategy on Climate Change** of the Lao PDR

Agriculture & Food Security	Adaptation	1. Mainstreaming climate change into the agricultural sector's policy, strategies and action plan through planning and designing future investment programs (irrigation, agricultural assets and production system), which take into account climate abnormality and climate change issues including the enhancement of adaptive capability for the agricultural sector;
		2. Enhancing productivity through promoting Conservation Agriculture (e.g. no-tillage agriculture), utilizing agricultural biomass for rehabilitating soil quality instead of burning, development of suitable plant species including climate-resilient and disease-resilient crop varieties using indigenous knowledge for adaptation to climate change at the national and local levels;
		3. Improving and monitoring water resources and water-supply system, and rehabilitation of the flood-control system;
		4. Strengthening financial instruments and capacity development for farmers, improving the development of small- and medium-sized farming in rural areas and supporting community-based adaptation measures;
		5. Undertaking country-specific, sector-based research on the vulnerability, impacts and adaptation options of the agricultural sector in Lao PDR at the macro level as well as the village level;
		6. Enhancing information dissemination and extension support to technical staff and Lao farmers in regard to climate change preparedness and responses; and
		7. Improving cooperation mechanisms among concerned sectors and strengthening regional and international cooperation.
	Mitigation	1. Reducing methane emissions from paddy fields by exercising water management, soil amendments, organic matter management, different tillage, rotation and cultivar selection;
		2. Reducing methane emissions from enteric fermentation by improving production efficiency;
		3. Reducing emissions from livestock manure through balanced feeding, lowering the N content of the animal feeds, anaerobic digestion for methane production for use as a source of cleaner energy, waste application (dosing and injection) and the introduction of household-based, community-based and animal farm-based biogas facilities; and
		4. Promoting new technology transfers such as biogas digester for electricity and bio-ethanol production as a means of wastewater treatment generated from agro-processing industries.
Forestry & Land Use Change	Adaptation	1. Mainstreaming climate change to policy and forestry management activities; establishing forest planning and development programs consistent with the productivity of the forest;
		2. Seeking and developing plant species tolerant to the increasing pest and climate change impacts;
		3. Strengthening information gathering, modeling of climate change-forest dynamics, and vulnerability assessment;
		4. Improving forest management system to support rural incomes;

Forestry & Land Use Change		5. Providing other appropriate carriers or arranging suitable dwelling for villagers living close to forests to support climate resilience and to adapt to climate change; and
		6. Enhancing biodiversity conservation and management to ensure sustainability and prepare for the adaptation to climate change.
	Mitigation	1. Stop "slash and burn" agriculture by forest managements, afforestation of degraded forests and reforestation to increase forest cover to 65% by 2015 and 70% by 2020. Enhance carbon sink by making sustainable agricultural land available and encouraging alternative livelihood opportunities such as eco-tourism, non-timber forest products and handicrafts;
		2. Reducing off-site burning by providing alternative fuels for forest-dependent communities, such as biogas, small hydro, energy-saving stoves, use of harvest residues and community-based wood-fuel plantations;
		3. Reducing forest fires by setting regulations and necessary measures to intercept and stop forest fires, and providing awareness-building and training to villagers on the harmful effects of forest fires and fire prevention;
		4. Integrating forest management including forest-food production systems, use of NTFP (Non-Timber Forest Products) and community-based forest management;
		5. Effectively mapping and planning the land use for different purposes over medium and long terms to minimize the issue of land encroachment into the National Protected Areas; and
		6. Pursuing carbon-market opportunities and the early introduction of pragmatic, flexible mechanisms, particularly the REDD-plus (Reduced Emissions from Deforestation and Forest Degradation and Conservation in developing countries) by implementing more reforestation and afforestation programs.
Water Resources	Adaptation	1. Given the growing importance of the hydropower industry in the national socioeconomic development in Lao PDR, it is urgent to assess the industry's vulnerability to climate change effects;
		2. Developing climate change scenarios for the river basins, which can be used to simulate future river flows using hydrological models adjusted to reflect the results of global and regional climate models; impacts of climate change on river bank erosion, hydropower structures and production can thus be projected and adaptation strategies formulated;
		3. Developing reliable early warning systems to reduce disaster impacts through floods and drought risk management;
		4. Downscaling climate and hydrological models to a watershed level, ensuring greater access to climate and hydrological data;
		5. Integrating climate change measures into current risk-management strategies and planning processes; and
		6. Planning and designing criteria for hydropower structures, which need to be robust to withstand changes in climate; designing hydropower dams and reservoirs so as to accommodate the potential changes in water levels as a result of climate change.

Energy and Transportation	Adaptation	1. Incorporating a range of possible climate change effects into transportation-investment decisions and management strategies;
		2. Developing long-range transportation plans and investment strategies that are sufficiently robust to accommodate unanticipated future events; and
		3. Identification of at-risk critical infrastructure, monitoring of conditions (both climate and infrastructure), changes in operation and maintenance practices, changes in infrastructure design and redesign and the relocation of vulnerable infrastructure;
	Mitigation	1. Electrification: reaching the target of 70% by 2010 and 90% by 2020, as set in the National Growth and Poverty Eradication Strategy (NGPES);
		2. Renewable energy: accelerating the development of renewable energy sources such as solar and wind as well as hydropower including mini-hydro –– household-based, institution-based and/or community-based –– especially for remote communities;
		3. Cleaner energy: by making use of coal-bed methane and coal-mine methane, and seeking cleaner technologies for the development of the country's abundant lignite resources;
		4. Energy efficiency and savings: by introducing energy-efficient lighting and appliances, and energy-efficient buildings;
		5. Low-carbon transport: by promoting the use of alternate energy-operated motor vehicles, including cars and motorcycles, and pursuing environmentally sustainable transportation strategy;
		6. Improving public awareness on energy saving through implementing initiatives such as car free days, Earth Day and World Environment Day; and
		7. Seeking the opportunities under the CDM or other flexible, pragmatic financing mechanisms to undertake the development of climate-friendly renewable resources, such as hydropower (including mini-hydro), biogas, solar, coal-bed and coal-mine methane, non-emission transport modes, and energy-efficient lighting and buildings.
Industry	Adaptation	1. Access to clean energy technology and clean production technology with emphasis on SMEs.
	Mitigation	1. Improving energy efficiency during the production process;
		2. Reducing wood waste through the enhancement of furniture-manufacturing skills; and
		3. Promoting the use of waste biomass or agricultural residues to produce renewable energy or thermal energy for drying and heating products through combustion, gasification or pyrolysis.
Urban Development	Adaptation	1. Developing climate-proofed urban environmental development plans, formulation of climate proofing to the climate change policy and action plan;
		2. Conducting climate change risk audits for each of the key infrastructure services, to identify climate vulnerability;
		3. Climate-proofing the most vulnerable existing infrastructure to protect current assets;
		4. Building storm surge barriers for wastewater treatment plants and landfills; and
		5. Developing new design criteria for infrastructure that reflect non-stationary hydrological processes.

Urban Development	Mitigation	1. Reduction of GHG emissions from the solid-waste sector in Lao PDR through applying the 3Rs (reduce, reuse and recycle);
		2. Upgrading solid waste collection services for full coverage of major urban centers and neighborhoods, so as to avoid GHG releases from open burning and decomposition;
		3. Building recycling facilities in order to reduce the amount of waste to be disposed in landfills;
		4. Composting organic contents to manufacture organic fertilizers;
		5. Effectively managing sewage sludge removed from domestic septic tanks and slurry removed from waste treatment plants;
		6. Constructing new landfill facilities that can capture methane; if financially viable, retrofitting existing landfills;
		7. Promoting environmentally sustainable urban development, integrating the issues of waste management, low carbon transportation; and
		8. Encouraging the participation of the private sector and international partners in GHG emission reduction from waste under the CDM and other financing mechanisms.
Public Health	Adaptation	1. Providing access to safe water and improved sanitation to reduce diarrheal diseases, and implementing surveillance programs to identify and respond to outbreaks of malaria and other infectious diseases;
		2. Incorporating current climate change concerns into ongoing programs and measures, along with regular evaluations to determine a program's likely effectiveness to cope with projected climate risks;
		3. Raising public awareness, effectively using local resources, appropriate governance arrangements and community participation; and
		4. Strengthening existing capacity and applying new approaches to examining the risks associated with a changing climate and increased climate variability.

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