



# ກອງທຶນປົກປັກຮັກສາສິ່ງແວດລ້ອມ<sup>2</sup> Environment Protection Fund

**Government's Office  
Environment Protection Fund  
Lao Environment and Social (LENS) Project**



**Project Completion Report  
Annex  
Volume II**

**Final Report, 30 June 2013**

# Volume II Annexes

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## Abbreviations and Acronyms

BLKX	Bolikhamsay province	MEM	Ministry of Energy and Mines
CA	Concession Agreement	M-IWRM	Mekong-Integrated Water Resources Management
CAR	Compensation and Resettlement	MOF	Ministry of Finance
CBI	Community and Biodiversity Investments	MOIC	Ministry of Industry and Commerce
CCN	Community Conservation Network	MONRE	Ministry of Natural Resources and Environment
DAFO	District Agriculture and Forestry Office	MW	Megawatt
DESIA	Department of Environment and Social Impacts Assessment	NREM	Natural resources and environmental management
DMH	Department of Meteorological and Hydrology	NT2	Nam Theun 2 project
DOE/ MEM	Department of Electricity of the Ministry of Energy and Mines	NT-NKD	Nam Theun-Nam Kading
DOE/ WREA	Department of Environment of the Water Resources and Environment Administration	NPSH	National Policy on Environmental and Social Sustainability of the Hydropower Sector in Lao PDR
DOF	Department of Forestry	NUOL	National University of Lao
		NREM	Natural resources and environmental management
DWR	Department of Water Resources	PA	Protected area
		PPA	Provincial protected area
ECC	Environmental compliance certificate	PAFO	Provincial Agricultural Forestry Office
EIA	Environmental Impact Assessment	PCR	Project Completion Report
		PDO	Project Development Objective
EMP	Environmental Management Plan	PICE	Policy Implementation and Capacity Enhancement
EMMP	Environmental management and monitoring plan	RBC	River Basin Committee
EMSP	Environmental Management Support Project	RBCS	River Basin Committee Secretariat
EPF	Environmental Protection Fund	RBO	River Basin Organization
ESIA	Environment and Social Impacts Assessment	SESO	Standard Environment and Social Obligations
ESSF	Environment and Social Safeguards Framework	SIA	Social Impact Assessment
FM	Financial Management	SMMP	Social management and monitoring plan
GOL	Government of Lao PDR	SOE	Statement of Expenditure
HMTA	Technical Assistance for Capacity Building in the Hydropower and Mining Sectors project	STEA	Science Technology and Environment Agency
ICR	Implementation Completion Report	SVK	Savannakhet province
IDA	International Development Agency	TOR	Terms of Reference
IEE	Initial environmental evaluation	WB	The World Bank
IPP	Independent power producer		
KM	Khammouane province	WERI	Water Resources and Environment Research Institute
LAF	Lao Environment and Social project additional financing	WMU	Window Management Unit
LENS	Lao Environment and Social project	WREA	Water Resources and Environmental Administration
MAF	Ministry of Agriculture and Forestry		

ANNEX A  
SECTOR REVIEW

## Annex A. Sector Review

This annex presents the review of the natural resources and environmental management (NREM) sector in Lao PDR considered during the assessment of relevance of the project objectives. It comprises 5 sections: A1: Background; A2: Current Institutional and Legal Frameworks; A3: Sector Challenges and Ways Forward.

### **A1: Background**

As highlighted in the LEnS<sup>1</sup>Project Appraisal Document (PAD) and Project Paper (PP) for additional financing<sup>2</sup> that with high levels of poverty and limited economic diversification, Lao PDR relies heavily on its natural resources to support national development and poverty reduction and that effective management of environmental and social issues related to sustainable use of natural resources is critical for ensuring sustainable development in the country. Key sector issues related to natural resources and environmental management (NREM) identified during the appraisal of LEnS project and its additional financing included: (a) depletion of natural resources, especially forest and biodiversity; (b) hydropower development and social challenges, especially those related to relocation of ethnic groups; (c) national policy on economic growth and poverty reduction, especially through hydropower and mining development; and (d) weak legal and institutional framework for natural resources and environment. During the past seven years, the Government of Lao PDR (GOL) has taken actions to address these concerns and the key ones included: (a) issuing a national policy<sup>3</sup> (No. 561/CPI) on environmental and social sustainability of the hydropower Sector in Lao PDR (NPSH) in June 2005; (b) promulgating the compensation and resettlement (CAR) decree at the end of 2005 (Decree 192); (c) implementing LEnS during 2006-2013; (d) implementing the technical assistance for capacity building in the hydropower and mining sectors (HMTA) project during 2010-2014; and (e) undertaking a number of institutional and legal reforms (see Section A2 below). However, given limited human and financial resources for the agencies and provinces and rapid development in the country during the past five years it is necessary to make more efforts on capacity building to assist the key agencies and the provinces in monitoring and supervision of environmental and social impacts/issues associated with development activities, especially hydropower and mining projects. Operation of Environmental Protection Fund (EPF) provides an opportunity for GOL to strengthen capacity of the provinces and agencies as well as to engage active participation of local community and other key stakeholders. With adequate policy support, EPF could also be an effective financing mechanism for tapping additional fund from various sources to promote conservation of natural resources and environment and/or facilitate effective cooperation among the agencies, the provinces, and key stakeholders.

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<sup>1</sup> Lao Environment and Social Project (LENS) aims to strengthen capacity of the country to mainstream environment and social safeguards in infrastructure development, strengthen biodiversity conservation in Central Lao and increase public 's knowledge of and support for environmental management. The project was implemented through the Environmental Fund using the sub grant mechanism with a grant of about \$4 million during 2006-2010 and \$3 million during its additional financing (2011-2013).

<sup>2</sup> PAD dated June 8, 2005 and PP dated December 18, 2009

<sup>3</sup> as part of the Government Letter of Implementation Policy (GLIP) of the Nam Theun 2 (NT2) project by the Deputy Prime Minister who was the chairman of the Committee on Planning and Investment and Chairman of Lao National Committee for Energy.

## A2. Current Institutional and Legal Frameworks

During 2006-2012 there were significant changes in institutional and legal aspects related to the sector agencies responsible for energy, mining, and industry development as well as those responsible for natural resources and environmental management in Lao PDR. In 2006, the Ministry of Industry and Handicrafts was separated into two ministries: the Ministry of Industry and Commerce and the Ministry of Energy and Mines (MEM) in which the latter comprising the Department of Electricity (DOE), the Department Energy Promotion Development (DEPD), and the Department of Mines (DOM). In 2007-2009, the Water Resources and Environmental Administration (WREA) was established comprising the Department of Environment (DOE), the Department of Meteorological and Hydrology (DMH), the Department of Water Resources (DWR), the Department of Environmental Impact Assessment (DESIA), and the Water Resources and Environment Institute (WREI) in which DWR and DESIA are two new agencies. In 2007, to enhance effectiveness of forest and biodiversity conservation, the Ministry of Agriculture and Forest (MAF) established a new agency (the Department of Forest Inspection or DFI) to take the lead in the regulation, monitoring, and enforcement of forest utilization while the Department of Forestry (DOF) is responsible for managing the forestry sector through its Division of Forest Reserve and Conservation (DFRC). In late 2011, another major institutional reform was carried out to clearly separate agencies with utilization function of natural resources from those for conservation function. The Ministry of Natural Resources and Environment (MONRE) has been established by merging WREA's agencies with other agencies responsible for conservation of forest, land, and minerals under the responsibility of MAF and MEM and the new mandates were issued in March 2012. MONRE national agencies<sup>4</sup> comprise one cabinet office; fourteen departments including the two divisions with a status equal to a department; and two specialized agencies while those at local level comprises the section on natural resources and environment of the provinces (PONRE, the Vientiane Prefecture and the office of natural resources and environment at district and municipality.

MEM and MAF agencies have also been reorganized in line with the new mandates. At present MEM's national agencies comprise the Department of Energy Policy and Planning (DEPP), the Department of Energy Management (DEM), the Renewable Energy Institute (REI), and the Department of Energy Business (DEB) and the provincial office responsible for energy and mines (PDEM). Other key ministries<sup>5</sup> related to natural resources and environment has similar organization structure at national and local levels.

From legal aspect, to improve effectiveness and governance of the EIA process, in 2010 the 2000 Environmental Impacts Assessment (EIA) decree was revised, promulgated, and effective in March 2010(Decree 112). The 112 Decree clearly separate the initial environmental

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<sup>4</sup> There are about 800 staff at central (300 are temporary) and 2,200 staff at local level (50% are temporary). The national agencies include Human Resources Department; Inspection Department; Planning and Cooperation Department; Land Allocation and Development Department; Land management Department; Water Resources Department; Environmental Quality Promotion Department; Pollution Control Department; Protection of Forest Resources Department; Geology and Minerals Department; Meteorology and Hydrology Department; Management of Natural Disaster and Climate Change Department; Environment and Social Impact Assessment Division; and Lao National Mekong Committee Division; the Institute of Natural Resources and Environment (NERI); and the Natural Resources and Environment Information Center.

<sup>5</sup> MAF key agencies comprise Department of Forest, Department of Forest Inspection, Department of Fisheries, and local offices (PAFO).

evaluation (IEE) and EIA process and responsibility of agencies during the review and issuance of the Environmental Compliance Certificate (ECC). The decree also explicitly requires the preparation of a Social Impact Assessment (SIA), public involvement, consultation, information disclosure, monitoring of the ECC compliance, and the responsibility of the project owner to pay for the IEE/EIA review, mitigation measures, and monitoring costs. A number of technical guidelines have been prepared and/or finalized with technical assistance from the World Bank and other donors (Sweden, Finland, ADB, and UNDP) including the technical guideline for the implementation of the Decree 192 and the technical guidelines for preparation of the IEE and EIA, including procedure on public involvement. In 2010, with LENS support, a new decree on River Basin Committee (RBC) was promulgated to provide a legal basis for facilitating effective implementation of an integrated river basin management and addressing cumulative and/or cross-cutting issues. In late December 2012, the National Assembly approved the revised 1999 Environmental Protection Law (EPL) and the 1992 Water and Water Resources Law is being reviewed and updated.

There are also revision of key sector laws and regulations related to hydropower, mining, forestry and biodiversity. In line with the institutional arrangement, the 1997 Electricity Law was updated in 2008 and revised again at the end of 2011<sup>6</sup> to clarify the IPP process, promote renewable energy, and strengthen clarity regarding responsibility of the private investor. For the mining sector, the 1997 Mining Law was revised and approved by the National Assembly in December 2011. The revised Electricity Law and the revised Mineral Law have also incorporated clear provisions related to safety, environment, and social aspects including obligations of the project owners to submit periodic reports; to mitigate the potential negative impacts; and to pay for all taxes, fees, charges, and contribution to community development and EPF. MEM is building its technical and management capacity to strengthen its planning, technical, and oversight functions with technical and financial assistance from the Bank<sup>7</sup> and other donors (JICA and GIZ). In forestry sector, in 2007 - 2008, MAF revised the Forestry Law (1996) and the Wildlife and Aquatic Law (1996). Given operation of MONRE a number of laws and regulations related to forest, land, and mineral resources are being reviewed and revised. In addition, Decree on National Protected Areas Management was developed and has been submitted for approval by the government.

### **A3. Sector Challenges and Ways Forward**

Lao PDR is moving toward poverty reduction and sustainable development. One national challenge on maintaining the right balance between rapid development and conservation activities in light of limited human and financial resources in the country as well as increasing external pressures, uncertainties, opportunities, and costs. In 2009-2010 the WB conducted a study<sup>8</sup> on sustainable natural resources management focusing on hydropower and mining. The study concluded that (a) the country could achieve the national target of becoming a middle-income country as defined in the national social and economic development plan (NSED) without trading for all its natural wealth; (b) the Government should ensure that speed of the natural resources development is in line with the government capacity to control and

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<sup>6</sup>The Electricity Law, revised January 2012.

<sup>7</sup> The Technical Assistance for Capacity Building in the Hydropower and Mining Sectors (HMTA) project being implemented (2011-2015).

<sup>8</sup> Lao PDR Development Report 2010: Natural Resource Management for Sustainable Development: Hydropower and Mining, including a number of technical notes and papers (see reference).

monitor the quality of projects and its ability to close the governance gap; and (c) this can be done by improving both horizontal and vertical inter-agencies coordination at the licensing stage and across the value chain. The conclusion was based on a number of background papers and technical notes which were prepared by a group of national and international specialists in macroeconomic, finance, natural resources, institutional, and social aspects. Key findings from this study reflect complexity and linkages between development activities, socioeconomic development, natural resource management, and well being of local population as well as highlights the need for addressing these issues strategically through a good combination of management measures (policy, regulatory, institutional capacity building, investment, economic/finance, social/participatory, etc.). The study noted that while policy, laws, regulations, and institutional frameworks appear adequate most agencies have limited human and financial resources to ensure effective implementation of the policy and regulations. Strengthening capacity of key agencies and providing financial support to agencies to conduct monitoring and enforcement of regulations, especially at local level, investing in governance, and forging effective cooperation among agencies and key stakeholders are critical for achieving sustainable development in Lao PDR. The specific findings and recommendations related to NREM from the WB study ([Box A1.1](#)) suggested that building technical and management capacity of agencies to address environment and social impacts of hydropower development and cumulative impacts in a river basin identified as the priority for LEnS project is relevant to the current condition in the country. Therefore the LEnS project development objective (PDO) and its three specific objectives<sup>9</sup> are considered “*highly relevance*”. Nonetheless, additional technical assistance and investment on capacity building for improving effectiveness of government actions related to NREM, especially on governance and cooperation among key agencies and provinces, will be critical for ensuring achieving sustainable development in Lao PDR. This section highlighted the three specific challenges facing the NREM sector in Lao PDR.

**Box A1.1** Key findings and recommendations from the WB study (Lao Development Report 2010, see reference)

- While Lao PDR is rich with natural resources and hydropower and mining development could become the main contribution to the country’s long-term economic growth there are significant risks related to the opportunity costs of large scale investments, environmental impacts and social impacts on local people, and an increasing institutional and governance gaps between the natural resources utilization and the government’s capacity to manage their sustainable uses.
- To translate its natural resources endowment into social and economic development gains in line with the NSEDP the following principles should be applied: (a) setting the pace of natural resource development to balance a long-term development goals and sustainability *i.e. do not*

<sup>9</sup>PDO to strengthen the management of environmental and social issues associated with the sustainable use of natural resources in Lao PDR. Specifically the project will (a) Strengthen institutions and instruments for assessment, monitoring and compliance for environmental and social sustainability, and broaden the constituency for environmental change; (b) Invest in on-the-ground environmental improvement activities, with emphasis on sustainable biodiversity management, community environmental management and livelihoods enhancements; and (c) Operationalize the EPF to become a permanent entity that is eligible to use NT2 revenues for priority environmental protection activities by developing two Windows that serve as models for EPF operation and potentially become permanent structures within EPF.

*rush*; (b) Raising adequate revenues while maintaining a competitive investment regime; (c) Choosing well-designed projects rather than those that will yield rapid but unsustainable gains; (d) Spending the collected revenues on the country development needs while at the same time maintaining and protecting macroeconomic stability; and (e) Striking a sensitive balance among the risks, benefits, and distributional effects of natural resource exploitation.

- Doing projects well is the key to sustainable natural resource exploitation in Lao PDR. In particular, the government's oversight and monitoring need to be strong and well-informed. In addition, incentives should be created to encourage developers to plan ahead and to include environmental and social impact assessments and mitigation measures in the design of their projects. At the national and provincial level, implementing and enforcing the existing environmental regulations in the hydropower and mining sector while at the same time building monitoring and enforcement capacity of agencies at national and local levels will be crucial for ensuring sustainability of the country's socioeconomic development as large natural projects can create significant additional costs for government.
- To manage the risks related to the opportunity costs, the negative impacts, and institution and governance gaps between the natural resources utilization and the government's capacity to manage their sustainable uses, special attention must be given to (a) Mitigating any negative social effects of large-scale development of natural resources; (b) Forging environmental sustainability of natural resources production by ensuring the effective implementation of existing regulations and effective cooperation among key agencies; (c) Adopting an overarching and comprehensive strategy for hydropower and mining development to mitigate any cumulative negative effects of resource extraction or existing forests, protected areas, the biodiversity base, and on agriculture lands and peoples livelihoods; (d) Introducing simple fiscal rules for spending will ensure that volatility in mineral revenues; and (e) Improving the investment climate in the non-natural resource sectors to reduce the high transaction costs facing traders.
- Global experience suggests that large exports of natural resources tend to inhibit manufacturing growth. Therefore, how quickly the resources are developed and the amount and kind of spending from resource revenues affect the country's long-term growth and employment. The spending and saving of the proceeds from the exploitation of resources need to be based on sound fiscal rules that ensure fiscal sustainability and macroeconomic stability and to be invested in ways that will increase productivity and reduce poverty.
- In selecting specific investment projects that utilizes and/or affect natural resources projects the WB study (2010) highlighted that the following principles should be applied:
  - Taking a strategic approach in ensuring that the investment projects to be selected are

financially viable and have few manageable environmental and social effects including those related to trans-boundary and/or cumulative impacts of multi projects on the environment and social landscape. This will require careful advance planning of projects at the sector, river basin, local and national levels as well as the development of mitigation strategies to offset any negative impact on local people and on the environment.

- Strong governance is the key for ensuring that resource extraction has a positive impact on growth and socioeconomic development, including effective accountability, transparency, and public participation in the management of all natural resources. International experience suggests that tapping into natural resources has not automatically translated into gains for local communities. In fact, it has in many cases caused harm and has disturbed people’s lives and the local environment. This is why special benefit-sharing arrangements are needed at the project, local, and national levels to protect the affected populations.
  
- Increasing regulatory standardization and transparency and creating a non-discretionary regulatory framework and fiscal regime in the hydropower and mining sectors are likely to attract responsible investors and ensure that appropriate revenues are raised from projects in these sectors.

### **(a) Building institutional capacity in light of rapid development in the country – The first challenge**

Rapid development in hydropower and mining by the private investors in light of limited human and financial resources for agencies to control and manage them is considered the most critical challenge for NREM in Lao PDR. As of 2012 there are 112 hydropower projects (small and large size)<sup>10</sup> comprising 27 projects under operation and/or construction, 21 projects under PDA (Project Development Agreement) stage, 56 projects under MOU (memorandum of Understanding) stage, and 8 projects with unknown status. Of the 112 projects 73 projects have capacity larger than 50 megawatts (MW) of which 15 projects are under operation and/or construction and about 28 projects are under advanced preparation stage and most of them are co-invested with the private sector (IPP<sup>11</sup> projects). [Figure A1.1](#) presents the increasing trend of hydropower development in Lao PDR while [Figure A1.2](#) presents locations of hydropower projects.

[Table A1.1](#) lists the large projects under operations and advance preparation (PDA stage) as of the end of 2012. In mining, the two large mining industries (Sepon mining) and lignite power generation plant (Hongsa Lignite) are under operation and/or construction along with hundreds of other small and medium size mining activities. Industrial development and plantations (mostly rubber) have also increased in number all over the country while urban

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<sup>10</sup>Based on the Ministry of Energy and Mines (MEM) database

<sup>11</sup> Independent Power Purchase (IPP) project

development, especially in Vientiane and other major cities (e.g. Thakhek, Champasak, etc.), has also been rapid.

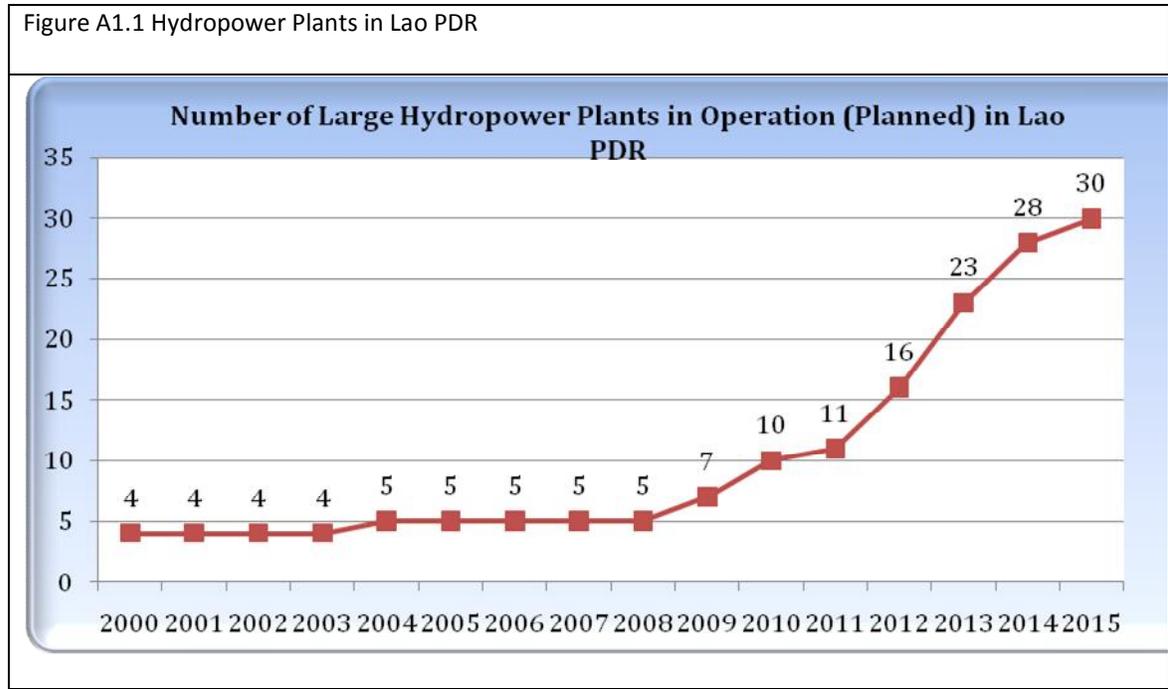


Figure A1.2: Locations of hydropower projects in Lao PDR (MRC report 2012)

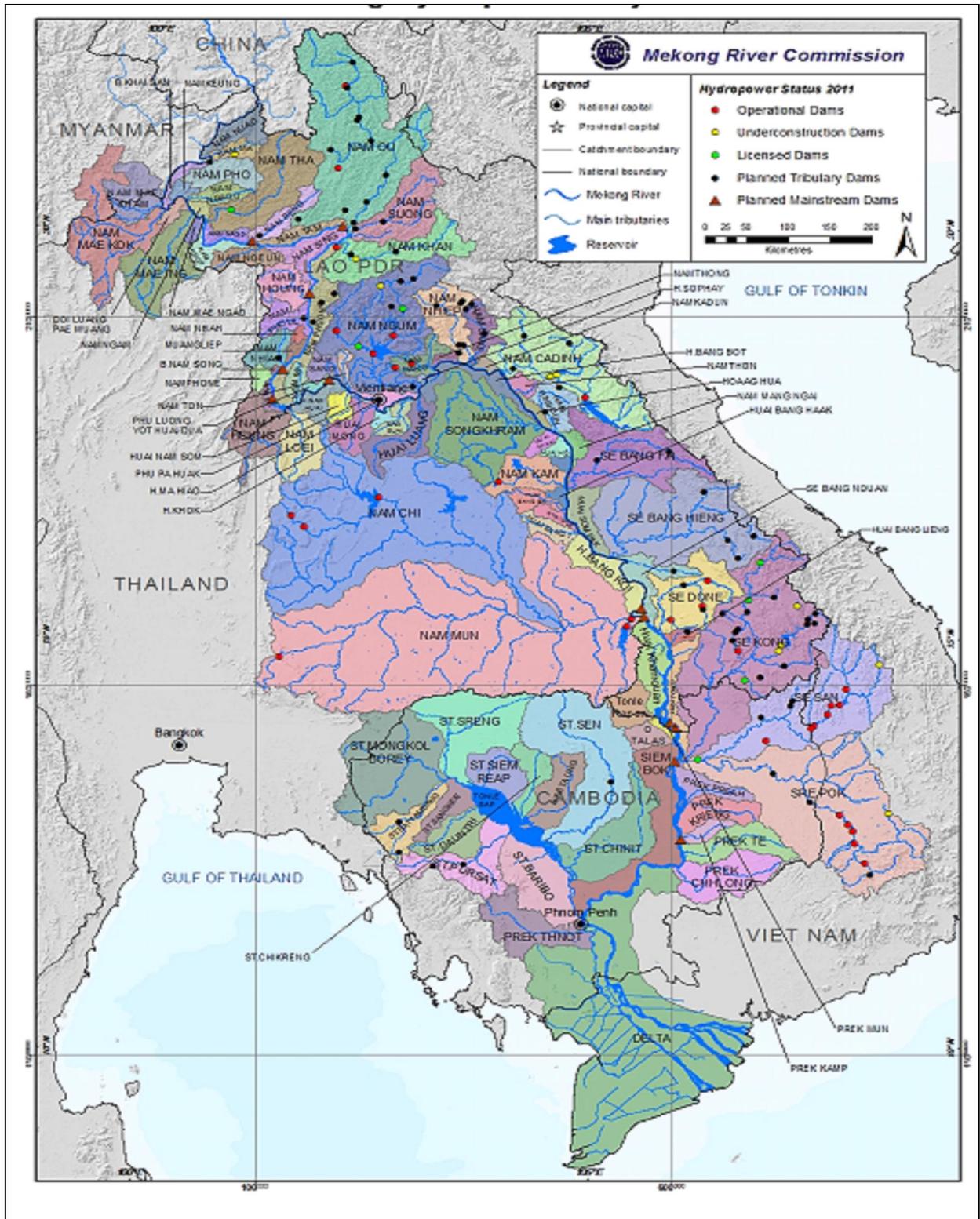


Table A1.1 Hydropower projects (larger than 50 MW) under operation, construction and advance

Preparation (PDA signed) (DEPP database)				
	Provinces (River basin)	Capacity (MW)	COD	Remarks
<b>Mekong Mainstream</b>				
1. Mekong Pakbeng (IPP)	Oudomxay	855	2018	Preparation (PDA); China; EIA
2. Mekong Xayabuly (IPP)	Xayabuly	1,285	2019	Construction: Thailand; EIA; ECC signed in 2010; Ca included SESO in 2012.
3. Mekong Sanakham (IPP)	Vientiane	660	2018	Preparation (PDA); China
4. Mekong Don Sahong (IPP)	Champasak	240	2017	Preparation; Malaysia
5. Mekong PhouNgoy (IPP)	Champasak	651	2018	Preparation; Thailand
<b>Northern Tributaries</b>				
1. Nam Pha (IPP)	Luongnamtha/Bokeo (Mekong stream)	130	2016	Preparation (PDA); EIA TOR;
2. Nam Tha 1 (IPP)	Bokeo/Luongnamtha (Mekong stream)	168	2015	Preparation (PDA); EIA; ECC signed 2008;
3. Nam Ou (IPP) comprises a series of 7 dams	Pongsaly/Luangprabang (Nam Ou basin)	1,156	2013-2016	Preparation; China (Shino Hydro); EIA; negotiation to include SESO for dams 2, 5, 6 is on-going
4. Nam Seuang 1 (IPP)	Luangphrabang (Nam Seuang basin)	63 MW	2017	Preparation; EIA TOR stage
5. Nam Seuang 2 (IPP)	Luangphrabang (Nam Seuang basin)	141 MW	2017	Preparation; EIA TOR stage
6. Nam Lik 1-2 (IPP)	Vientiane (Nam Ngum basin)	100 MW	2010	Operation: EIA; ECC signed in 2008
7. Nam Lik 1 (IPP)	Vientiane (Nam Ngum basin)	60 MW	2014	Planning; EIA; ECC signed 2011; CA included SESO in 2012.
8. Nam Ngum1 (EDL)	Vientiane (Nam Ngum basin)	155 MW	1971	Operation; IEE; ECC signed 2010
9. Nam Ngum 2 (IPP)	Vientiane (Nam Ngum basin)	615 MW	2012	Operation; EIA; ECC signed in 2004
10. Nam Ngum 3 (IPP)	Vientiane/Xiengkhoung (Nam Ngum basin)	460 MW	2017	Preparation; EIA; ECC issued 2011; negotiation to include SESO in CA is on-going.
11. Nam Ngum 5 (IPP)	Vientiane (Nam Ngum basin)	250 MW	2012	Operation; EIA; ECC signed 2008; CA included SESO in 2009
12. Nam Leuk (EDL)	Vientiane (Nam Ngum basin)	60 MW	2000	Operation; EIA; ECC issued 1995
13. Nam Mo	Xiengkhoung (Nam Mo)	120 MW	2015	Preparation (PDA); Vietnam;

(IPP)	basin)			ECC signed 2011;
14. Nam Sane 3 (IPP)	Xiengkhoung (Nam Sane basin)	65 MW	2016	Preparation; no record
<b>Central Tributaries</b>				
1. Nam Mang 1 (IPP)	Bolikhambay (Nam Kading basin)	57 MW	2015	Preparation; EIA; CA included SESO in 2012
2. Nam Ngiep 2 (IPP)	Bolikhambay or Xiengkhoung (Nam Ngiep basin)	180 MW	2015	Construction; Japan; EIA; ECC signed in 2010; CA included SESO in 2011.
3. Nam Ngiep 1 (IPP)	Bolikhambay or Xiengkhoung (Nam Kading basin)	262.9 MW	2018	Preparation; EIA; Negotiation to include SESO in the CA is on-going
4. Nam Theun 1 (IPP)	Bolikhambay (Nam Kading basin)	523 MW	2018	Preparation; ECC was issued in 2005; the project owner changed and the new process is on-going
5. Theun Hinboun (IPP)	Bolikhambay (Nam Kading basin)	220 MW		Operation; THPC; EIA; ECC signed in 1994
6. Thuen Hinboun extension (IPP)	Bolikhambay (Nam Kading basin)	200MW+60MW	2012	Operation; THPC; EIA; ECC signed in 2008; CA included SESO in 2008
7. Nam Theun 2 (IPP)	Khammouane/Bolikhambay (Nam Theun-Nam Kading, Xebangfai)	1,075MW	2010	Operation; NTPC; EIA; ECC sign in 2005
<b>Southern Tributaries</b>				
1. Houya Ho (IPP)	Chappasak/Attapeu (Sekong basin)	152	1999	Operation; HHPC
2. Xeset 2 (EDL)	Saravan (Sekong basin)	76	2009	Operation; ESIA; ECC signed 2004
3. Xekaman 3 (IPP)	Sekong (Sekong basin)	250	2010	Operation; Vietnam; EIA; ECC signed 2006
4. Xekaman 1 (IPP)	Attapeu (Sekong basin)	322	2013	Construction; Vietnam; EIA; ECC signed 2008; CA included SESO in 2011
5. Xe Nam Noy 1	Chamasak/Attapeu(Sekong basin)	148	2013-2014	Preparation; ECC signed 2010; CA included SESO in 2012
6. Sekong 5 (IPP)	Sekong (Sekong basin)	330	2016	Preparation; ECC signed 2010;
7. Xepien-Xe Nam Noy (IPP)	Attapeu/Champasak(Sekong basin)	390	2016	Preparation; Korea (SK Eng); ECC signed 2011; negotiation to include SESO in the CA is on-going.
8. Nam Kong 1 (IPP)	Attapeu (Sekong basin)	150	2016	Preparation; ECC issued in 2011; negotiation to include SESO in the CA is on-going.
9. Sekong 4 (IPP)	Sekong (Sekong basin)	300	2017	Preparation; ECC issued in 2011; negotiation to include SESO in the CA is on-going.
10. Xekatam (IPP)	Champasak (Sekong basin)	61	2017	Preparation; Japan; EIA; ECC was issued in 2007

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**Ways forward:** Addressing this challenge requires effective planning and monitoring capacity of the agencies and the provinces to mitigate the potential negative impacts on local community and local environment and when possible enhance the positive impacts, including facilitating adequate involvement of local authorities and communities and ensuring effective protection of watershed and effective use of water resources. While capacity of key agencies responsible for EIA/SIA regulation, water resource management, forest management, and hydropower and mining sectors have been increased during the past few years, additional technical assistance and financial supports will be necessary to ensure that the GOL regulations are implemented effectively and transparently and that adequate budget will be available for the agencies to carry out their tasks, especially those who are responsible for monitoring and management of sustainable hydropower and mining development. Experience from other countries suggested that forging effective coordination and cooperation among key agencies through an integrated planning and management, establishing an “outsourcing strategy”, engaging local community and other constituencies, and ensuring effective management of a financial mechanism could help bridging the institutional gaps and ensuring effective implementation of the policy and regulations related to environment and social safeguard. Priority for technical assistance should be given to strengthening technical and management capacity of the provinces and local authorities in reducing potential negative impacts on local community and local environment and when possible enhancing the positive ones. Increasing knowledge and active engagement of other key stakeholders and general public will also be critical for improving good governance and protecting the national interests (see (b) below). Priority for capacity building should be determined in the context of a river basin management and willingness of the agencies and/or provinces to implement the activities. It is also necessary for ensuring that MONRE agencies could work closely and effectively with other sector agencies both at national and local levels. This effort is critical for enhancing and unifying the national forces in moving toward sustainable development in Lao PDR. It should be noted that most of MONRE agencies are new and require extensive capacity building and technical assistance both at national and provincial levels.

**(b) Building capacity of local community, engaging other constituencies, and promoting benefit sharing approach—the second challenge**

Active engagement of local community and involvement of private investors are considered the second challenge for NREM in Lao PDR. Most local communities in Lao PDR remain live in poverty with low literacy and limited access to public services. Given topographic condition and high cost for providing public services it is likely that while the country could significantly benefit from rapid development some local communities, especially the ethnic groups and disadvantage groups, could be left behind. In Lao PDR, there are a number of ethnic groups living in remote and/or mountainous areas and depending on subsistence agriculture including activities involving slash and burn practices, wildlife hunting, and/or unsustainable harvesting of non-timber forest products (NTFP). Resettlement of these people and/or limiting/prohibiting their activities for the benefit of biodiversity conservation could create serious impacts on their ability to survive. Therefore it is necessary to provide appropriate compensation and/or restoration of their livelihoods that could enhance (at least to maintain) their living standards as well as to improve their knowledge and understanding on the needs for conservation of natural resources and wildlife and on various livelihood options. Similar

concerns should also be extended to cover other disadvantage groups (especially the family with women-head and/or old people). Cumulative and/or other indirect impacts of development activities on local community and environment could also be significant and efforts have to be made to address these issues. Experience from LENS implementation regarding the NT-NKD RBC, capacity building in protected areas, the CCN and other community sub grants could provide some lessons learnt that could be considered and/or applied to the new technical assistance and/or investment projects. *Providing additional technical assistance and/or investment in conservation of protected area and biodiversity values as well as livelihood options for local communities and ethnic groups is considered critical for achieving sustainable development and conservation of forest and biodiversities in Lao PDR.*

**Benefit sharing opportunities:** Given that development of large hydropower and mining projects could adversely affect local community especially when relocation, land acquisition, and ethnic groups are involved. The WB study (2010) suggested that large-scale natural resource exploitation could also provide an opportunity to reduce poverty and to improve the nutrition of the population and recommended for the establishment and implementation of a benefit-sharing scheme (see [Box A1.2](#)) which could be an integral part of the national poverty reduction strategy. Applying the benefit-sharing arrangements can also mitigate the risks and potential impacts due to cumulative and/or indirect impacts as well as giving local communities access to opportunities to generate more income. Effective implementation mechanism should be developed and explored to ensure that national project benefits are shared with the poor and with the most affected local people.

**Box A1.2:** Key suggestions on the benefit sharing schemes (Lao Development Report 2010, see reference)

- Increased tax and royalty revenues can benefit the poor if part of the fiscal windfall is used to increase government spending on proactive poverty reduction initiatives. These might include the provision of infrastructure such as roads and the delivery of services that benefit the poor. Mining and hydro projects themselves can be another source of local investment in infrastructure and services.
- Benefit-sharing schemes can be implemented at the local level. Benefit sharing is understood to be the sharing of profits or advantages to improve the lives of those directly involved, or affected by, an activity or activities that result in unspecified benefits. Benefit-sharing approaches are particularly useful for reducing poverty and malnutrition as well as increasing access to services in remote rural areas where people are not yet benefiting from broader economic growth.
- Locally, households can also benefit from an increased employment and income opportunities, either directly by being employed in the project itself or indirectly in businesses created through the local sourcing of products or from the increased demand for goods and services coming from the influx of new workers. Increased incomes can help households to escape from poverty and can contribute to improved food security and nutrition. However, these gains will not be automatic. A major study of resettlement associated with over 50 dam projects around the world concluded that, in the case of over 80 percent of the dams studied, the majority of people who resettled were left worse off. There is poverty and the social risks related to the exploitation of hydropower and mining resources and the need to carefully mitigate any negative effects so that positive and sustainable results can be obtained from the exploitation of natural resources.
- International experience suggests that the final impact of the exploitation of resources on

poverty, nutrition, and other social outcomes depends heavily on what preemptive measures are taken to manage risks and that it is possible to mitigate any adverse effects. How households in Laos will experience these benefits and risks will depend on a variety of factors such as the extent to which each household is dependent on natural resources and on the socioeconomic and demographic profile of the affected population. Poor households, particularly those in rural areas, typically depend heavily on broadly defined natural resources such as land, forests, and rivers. Therefore, the impact on these households will depend on the availability and quality of these existing natural resources and the extent to which access to these resources becomes restricted to local communities.

- The benefits and costs of large-scale hydropower and mining projects accrue at different times. In the case of hydropower, most negative effects occur during the early construction phase, whereas the most significant benefits are realized only once the project is fully operational. In the case of mining, while many negative effects may occur early on, they will also continue when new areas of the concession are opened up to active mining. Likewise, while local communities located close to mining or hydro sites may benefit from increased employment opportunities, many other benefits (such as royalties and tax revenues) will likely to be realized mostly at the national level.
- Cumulative effects further complicate matters. In Laos, several planned natural resource development projects will be located in the same geographical area, which will compound any negative effects on local communities. The most prominent example of this in Laos is the Nam Ngum Catchment, which has a number of operating and planned large-scale mining (Phu Bia Mining's Copper-Gold Operation and Gold Heap Leach Operation) and hydropower projects (Nam Ngum1, Nam Ngum 2, Nam Ngum 3, Nam Ngum 5, and Nam Lik 1 and 2), as well as plantations and other development projects. The way in which benefits and risks translate into outcomes will also be determined by how access to and the use of natural resources is determined and what compensation is made available for loss of access or other negative effects on local people.
- Mitigation and compensation efforts can only be effective if the capacity of the local government is sufficient, if any private entities concerned are committed to it, and if there are enough alternative local resources (such as equivalent land) available.

### **(c) Ensuring effective operation of financial mechanism for NREM --The third challenge**

In Lao PDR *there are several challenges regarding the application of funding mechanism for NREM given limited funding sources and competing demands for funding supports for capacity building of agencies and other key stakeholders at national and local levels.* There are policies, laws, and regulations stipulate the need for contribution, collection, and/or payment for environmental conservation, water resources, watershed protection, and government's services especially those related to NREM. However specific regulations and/or procedures on implementation of these requirements according to the policy, laws, and regulations have not been established and effective coordination and cooperation among key agencies has been difficult mainly due to the lack of financial and human resources. In Lao PDR, three types of funding mechanisms are being applied (see Box A1.3). On NREM, the Forest Reserve Development Fund (FRDF) was established for forest protection and funding is made available to

MAF agencies following Government financial procedures. The EPF provides financial support to agencies (national and local) and local communities using fund from external sources (WB, UNDP, private sector) following its own operation and/or specific agreement with donors. There is also a project specific fund between the agencies-investors where the fund transferred is made according to specific agreements mostly for monitoring by agencies and/or implementation of the environmental and monitoring plan and/or the social management and monitoring plan. Despite the different advantages and disadvantages of these mechanisms all of them appear to suffer from limited funding and human resources. Role and responsibility of the FRDF and EPF operations are being reviewed and considered in light of MONRE operation while EPF sustainability has become a major concern. There are also challenges regarding the complexity in setting appropriate royalty and taxes related to NREM that could maintain competitive investment, in tapping additional funds from private investors and forging benefit sharing, and in dealing with external funds and uncertainties.

Box A1.3: Type of funds being operated in Lao PDR<sup>12</sup>

- First is the autonomous fund, which has been operated by on-government officials under the policy direction of Board of Director (BOD) chaired by a Deputy Prime Minister. The advantage of this type of fund is that it is very flexible and can provide financial support to wider beneficiaries and can absorb and/or responsive to various kinds of contributions from developers and donors while the major disadvantage is the difficulty in getting access to government budget. EPF and the Poverty Reduction Fund (PRF) are the two funds under this category.
- Second type is the budgetary fund established specific for a sector and is managed by specific agency. The advantage of this type of fund is that it follows the national budget planning and auditing process and has access to government budget while two main disadvantages are the difficulty in tapping additional fund from donors and developers which often have specific requirements and the recipient is limited to the agencies of the sector. The Forest and Forest Resources Development (FRDF) operated under MAF and the Road Maintenance Fund (RMF) operated under the Ministry of Public Works and Transportation (MPWT) can be classified under this category.
- The third type of fund is the specific funds established per agreement between the project owner and agency. As required by many of decrees and regulations, the project developer is responsible for paying for the implementation and monitoring costs to be conducted by agencies to ensure full compliance with specific agreements and/or government regulations. It is a common practice, especially in hydropower and mining sector, for the project owner to transfer fund to the agencies according to specific work plan to be prepared and submitted by the agency responsible for implementation of the activities and/or compliance monitoring of regulations. There are also policies to encourage financial contributions from the private sector for conservation and environmental protection, especially from large hydropower and mining projects, however clear operation mechanism on fund transferred has not been established. Advantage of this arrangement is that it is easy and convenient for the agency to establish specific agreement with the project owner and carry out the activities per specific work plan however in a longer term this approach could increase the risks related to accountability and good governance.

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<sup>12</sup> Options for the Development of a River Basin Fund for Nam Ngum River Basin, Loa PDR; Prepared for MRC-GIZ (Watershed Management Project (WSMP) by Lucy Emerton and DouangchanhLopaying; Final draft; March 15, 2011.

International experience suggested that an environmental fund mechanism can play an important role in forging effective implementation of government policy and regulations related to NREM both in developed and developing countries. While specific objectives, funding sources, and management and operation mechanisms of these funds varied from country to country one common feature is that all environmental funds receive strong government supports by providing clear policy directions as well as funding sources. In the US, large amount of budget has been provided by the government mainly for building environmental infrastructure focusing first on protection of public health and management/control of pollution while smaller budget has been made available for promotion of conservation purpose and some fund has incorporated energy conservation objective. The federal government also provides additional fund (as incentives) for the state government to take proactive actions on NREM. Active contribution from local community, the private sector, and the general public is an important funding source. In developing country the application of financial mechanism for NREM is more difficult due to limited human and financial resources and most mechanisms has been developed with assistance from international agencies and the implementation experience and sustainability also varied depending on the country situation and commitment of the government. However, operation of an environmental fund in Bhutan<sup>13</sup>, which is a small country with rich natural resources, suggested that it is also possible to benefit from the financial market but this approach would requires adequate capacity to manage financial risks. Nonetheless, one may concluded that with strong leadership and commitment of the government, with active participation of local communities and the private sector, and/or with assistance from international agencies, application of an effective financial mechanism could play an important role in NREM. Moreover, there are also opportunity for a country to benefit from the global efforts to establish a number of financial mechanisms that could be used for protection and conservation of natural resources and environment, including climate changes. Box A1.4 provides a summary of this type of funds including the Payments for Ecological Services (PES), the National Climate Fund (NCF), the Clean Development Mechanism (CDM), the Reducing Emissions from Emissions from Deforestation and Forest Degradation (REDD/REDD+), and voluntary carbon markets. However operations of these funds are complex and require specific actions, technical assistance, and capacity building.

Box A1.4: Brief background on additional global funds

- *Payment for Ecological Services (PES):* PES arrangement offers an opportunity for Lao PDR to benefits from conservation of forest and water resources. The 2009-10 study<sup>14</sup> concluded that PES are particularly useful funding mechanism for RBO which lack other sources of self-generated revenues; PES schemes usually involve payments to upstream land and resource users, not just to RBOs; There is no “standard” PES model; PES work best when they are founded on a clean and scientifically-proven link between particular land uses and the provision of specific ecosystem services; PES require that there is a clear demand and willingness to pay among users; PES schemes must be feasible in financial terms; PES are founded on negotiation and stakeholder participation; PES require a supportive regulatory and institutional framework; and PES schemes require close monitoring of compliance and the on-going provision of services.
- Review of international experience suggested that the following PES mechanisms are being applied in other countries:

<sup>13</sup> <http://www.bhutantrustfund.bt/>

<sup>14</sup> Options for the Development of a River Basin Fund for Nam Ngum River Basin, Loa PDR; Prepared for MRC-GIZ (Watershed Management Project (WSMP) by Lucy Emerton and DouangchanhLopaying; Final draft; March 15, 2011.

- Fiscal transfers within government (Ecological Value Added Tax in Brazil), downstream water user payments to government agency (Cuenca Water Fee in Ecuador),
  - Company payment to NGO (La Esperanza Hydropower/Monteverdi Conservation League in Costa Rica),
  - fiscal revenues channeled through national government fund to upstream land and resources users (National Fund for Forest Financing in Costa Rica),
  - Downstream water user payments channeled through national government fund to upstream land and resource users (PES/Forest Promotion and Development Scheme in Vietnam),
  - Company to upstream land and resource users (Perrier-Vittel scheme in France), and
  - Downstream water users to upstream land and resource users (Cauca Valley Water Users Association in Colombia)
- *Reducing Emissions from Deforestation and Forest Degradation (REDD/REDD+)*: REDD+ goes beyond the deforestation and forest degradation to include forest, sustainable management of forest, and enhancement of forest carbon stocks. The REDD+ arrangement offers an opportunity for Lao PDR to benefit from conservation of forests and protected areas in Lao PDR. In 2011, a study<sup>15</sup> was carried out to review legal and institutional frameworks relevant to possible establishment of the fund including benefit sharing mechanism in Lao PDR. The study reviewed advantages and risks of the operations of EPF, PRF, and FRDF and suggested that it is necessary to create a REDD+ Special State Fund for the purpose of pooling and distributing monies being made available from the international community for REDD+ activities, including donor funds that are earmarked for the implementation of the REDD+ Strategic Plan that is scheduled to be drafted and approved later this year. The fund can then be modified as necessary over time in conjunction with the institutional capacity at local, provincial, and national level and phased approach. In addition to financial resources contributed by donors in supporting REDD+ activities, a portion of the revenues generated from the various sub-national private sector/voluntary carbon market or future cap & trade related sub-national projects could also be fed directly into the fund in order to ensure that monies generated from these projects go directly back to the local communities that are associated with the forest resources where the carbon credits were generated. These revenues, while located within the same REDD+ State fund as the financial resources contributed by various donors, could be placed into a specially created financial window that is designed specifically to handle such revenues and earmark their use to supporting the communities associated with the forest resources as already mentioned.
  - *The Climate Funds (CFs)*. During the past decade a number of funding operations have been established by international and regional agencies, the governments, and the private sectors to address the issues related to adaptation, mitigation, capacity building, and technology development and/or sharing at global, regional, and national levels. It has been estimated that developed countries have committed to raising \$100 billion per year by 2020 to assist developing countries in addressing climate change and a guideline has been developed by UNDP<sup>16</sup>. For Lao PDR, a case study<sup>17</sup> on EPF management and operation was carried out to provide inputs for discussion in Asia-Pacific region on the design and management of the National Climate Funds. EPF was selected for the case study due to the following characteristics: The existing structure of the EPF that manages endowment and sinking funds, EPF capacity to meet international standards in financial integrity and social environment safeguards, and the provision of reaching local beneficiaries to provide financial support in environmental protection. The study suggested that EPF should be considered as a possible funding mechanism for NCF due to its hand on experience in managing endowment and sinking funds, its capacity to meet international standard in financial management and safeguard requirements, and its capacity to reach local

<sup>15</sup> Supporting REDD Implementation in Laos Through the Design of a REDD-compliant Benefit Distribution System -*Rapid Study supported by a small grant from by the Swedish Environmental Secretariat for Asia (SENSA)*, By Christoph Muziol (IUCN), Dr. Nguyen Quang Tan (RECOFTC), and Robert Oberndorf (Legal consultant).

<sup>16</sup> UNDP “Catalizing Climate Finance: A Guidebook on Policy and Financing Options to Support Green, Low-Emission, and Climate-Resilience Development –version 1.0; April 2011.

<sup>17</sup>Case Study Report: Environmental Protection Fund in Lao PDR –A case study providing to discussion in Asia-Pacific region on the design and management of National Climate Funds, jointly prepare by UNDP and the EPF, UNDP, the Environment and Energy, by Silvia Irawan et al., 2012 (<http://www.snap-undp.org/elibrary/default.aspx>)

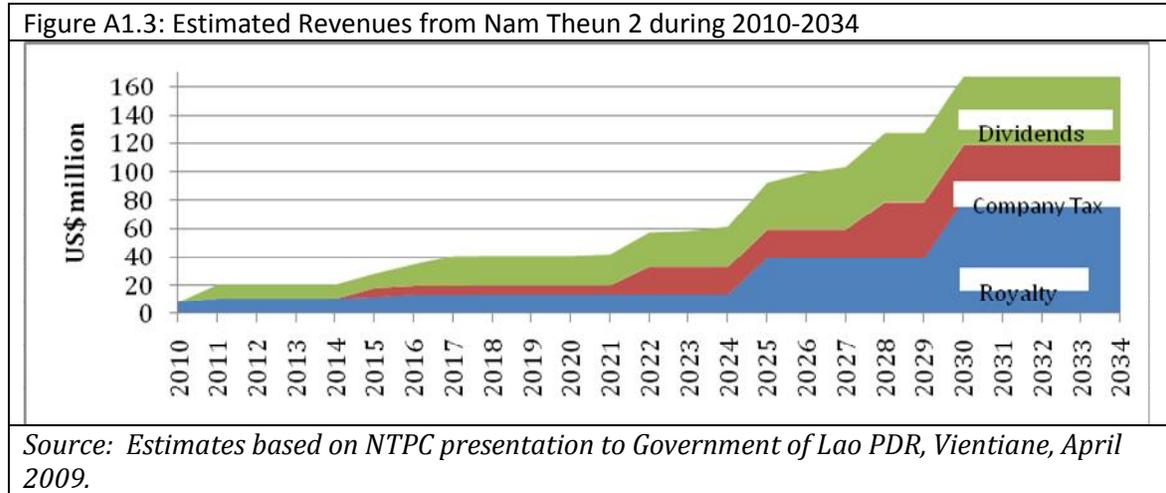
**Ways Forwards.** GOL is taking actions to address these challenges seriously and availability of NT2 revenue during 2010-2040 provides an opportunity for the agencies and provinces to tap additional budget for conservation of NREM. The revised EPL approved by the National Assemble in late December 2012 also provide some clarity on the funding mechanism for NREM. Article 44 calls for the establishment of a financing mechanism to ensure funding sources for facilitating environmental protection and conservation activities and the funding source could be royalty and import tax from natural resources; GOL budget; grant and loan from in country or outside the country; Contribution for environment and social impacts from projects in country and outside the country; rehabilitation and recovery cost from investment projects; and penalty and environmental damage. Operation of EPF (Art 45 and Art 46) as well as the operation of other financial mechanisms, including payment of natural resources uses (art. 26—user fee) and payment for ecological services (PES) (art 27-PES) have been stipulated in the revised EPL while the revenue and benefit sharing and contribution to EPF have been explicitly described in the national policy for sustainable hydropower development, the revised Electricity Law and the revised Mineral Law in 2012. During 2011-2012, the EPF Board of Director discussed the issue related to EPF organization and sustainability in light of MONRE operation and issued its decision to maintain EPF autonomous function and organization arrangement in March 2013. In 2012 the Ministry of Finance (MOF) promulgated a decree on environmental tax and is undertaking studies related to setting specific regulations related to the level of royalty and taxes and ways to implement the revenue/benefits sharing from hydropower and mining projects. Results from the studies (expected to be completed in 2013-2014) could help improving clarity on funding mechanism as well as increase funding sources to support for NREM investment and capacity building of key agencies. It is also noted that promulgation of the RBO decree in 2010 has created a policy question regarding the establishment of a river basin organization fund and the water law is being reviewed and the revision is expected to be completed in 2014. There are also opportunities to access technical assistance and financial supports from many international agencies (including WB, IFC, ADB, Finland, UNDP, UN, AFD, JICA, MRC, etc.) as well as from the private sectors. It is necessary to build technical and management capacity of the agencies to tap NT2 revenue as well as additional resources from these international agencies and the private sector.

**NT2 Revenue:** As part of the implementation of Nam Theun 2 (NT2) project, it has been agreed that priority for using the NT2 revenue will be provided to support the activities aiming to address poverty reduction, sustainable development, and environmental conservation according the specific eligible criteria (see [Box A1.5](#)). Allocation of additional budget from NT2 revenues could significantly improve performance of key agencies, the provinces and districts. During the design of NT2 revenue it was anticipated that part of NT2 revenue<sup>18</sup> should be used for NREM therefore the agencies responsible for ensuring effective implementation of policy and regulations related to development project and conservation of NREM must be pro-active and build their capacity to prepare eligible programs and to deliver the expected outputs and outcomes (see criteria for NT2 revenue in [Box A1.5](#)). In 2010, about US\$ 8 million could be made

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<sup>18</sup> NT2 is a large hydropower project designed to export electricity to Thailand and is expected to be in operation in early 2010. Over the life of the project (25 years), it is anticipated that GOL will receive an income stream estimated at some US\$ 1.9 billion or an average of about US\$ 78 million annually (equivalent to 10% of total expenditure in 2007/08) through three separate streams - royalties, company tax on profits, and dividend payments on its equity.

available for supporting eligible programs and this amount could increase to US\$ 20 to 30 million in the following years (see Figure A1.3 for an estimate). GOL has established a clear mechanism for program monitoring and performance evaluation and the agencies, including EPF, should make an effort to tap additional resources from this funding source. In 2011-2012, a budget of about 3% of NT2 revenue has been allocated for the NREM.



Box A1.5 Eligibility criteria for receiving NT2 revenue

- Allocation of NT2 revenue will be determined through the public sector expenditure planning and budget process, as part of the allocation of overall public resources. The authorities will prepare a list of eligible programs that may benefit from NT2 revenues through close consultation with key agencies.
- The eligible programs will be selected in accordance with the country's priorities and each program should demonstrate a significant and verifiable poverty reduction impact, providing public goods, services and infrastructure used by the poor in rural areas; and/or a significant and verifiable reduction on conservation or environmental impacts. The eligible sectors for initial years include: basic health, basic education, rural roads, and specific environment and poverty reduction programs. These priorities can be changed.
- Eligible programs must have: (a) clear objectives; (b) key performance indicators (KPI); (c) monitoring systems; and (d) mechanisms for performance evaluation by key stakeholders at or close to service level. Government plans to develop (b)-(d) above, once eligible program selection is finalized. Eligible programs with clearly defined objectives, performance indicators and systems in place for monitoring performance in terms of the volume and quality of services provided are expected.
- NT2 revenues will provide additional resources to support eligible programs and will not substitute financing from other sources. **Additionality** of budgeted and actual expenditures for eligible programs will be verified against base expenditures which will be determined as follows: (a) budgeted expenditures in the previous year expressed in real terms for the comparator year; (b) the average expenditures in the three previous years, also expressed in real terms for the comparator year; and (c) eligible programs' percent share of budgeted and actual total expenditures, excluding expenditures related to debt servicing, in the previous year.

**ANNEX B**

**PROJECT BASIC DATA**

## Annex B. Project Basic Data

This annex summarizes key basic data for LEnS project and its additional financing. It comprises 4 parts: B1.1: Safeguard Policy Applicable to the Project; B1.2: Key Project Dates; B1.3: Key Data on Project Cost; B1.4 Summary of Project Cost by Beneficiaries; and B1.5: List of the Sub grants by Component.

### B1.1 Safeguard Policy Applicable to the Project

- Safeguard category: B (partial assessment)
- Safeguard policy triggered: Environmental Assessment (OP4.01); Natural Habitat (OP/BP 4.04); Involuntary Resettlement (OP/BP 4.12) and Indigenous Peoples (OD 4.20)
- Safeguard documents:
  - Environmental and Social Safeguards Framework (ESSF) dated June 7, 2005
  - Updated ESSF for additional financing

### B1.2 Key Project Dates

	LEnS (P090693; Loan no IDA-H1770)		LAF (P116734; IDA-H54000)		Remarks
	Planned	Actual	Planned	Actual	
Appraisal	11/05/2005	24/05/2005	08/12/2009	08/10/2009	
Negotiations	6-7/06/2005	7-8/06/2005	16/12/2009	03/12/2009	
Board approval	30/06/2005	30/06/2005	12/01/2010	12/01/2010	
Signing	15/08/2005	15/08/2005	-	08/02/2010	
Effectiveness	15/12/2005	14/04/2006	-	21/04/2010	
Closing date	30/12/2010	Extended	30/06/2013	30/06/2013	
* see appraisal document dated 08/06/2005 and project paper dated 18/12/2009					

### B1.3 WB Supervision Missions

WB carried out 4 missions per years and the mid term review for LenS additional financing was carried out in November 2011 and the overall project performance was found *moderately satisfactory* given uncertainty related to EPF sustainability. Below highlights the project performance ratings was assigned during the WB missions:

ISR#	1	2	3	4	5	6	7	8	9	10	Remarks
	PDO	Overall IP	FM	Project Manage	Count. Fund	Procurement	M&E	C1	C2	C3	
1	S	S	S	S	S	S	S	S	S	S	12/29/2005
2	MU	MU	S	MU	S	S	MU	MU	MS	MU	03/12/2007
3	MS	MS	MS	MS	S	S	MS	MS	MS	MS	12/05/2007

4	MS	MS	MS	MS	S	S	MS	MS	MS	MS	30/03/2009
5	S	S	S	S	S	S	S	S	S	MS	10/08/2009
6	S	S	MS	S	S	MS	MS	MS	S	S	29/03/ 2010
7	S	S	S	S	S	S	S	S	S	MS	20/09/2010
8	S	S	MS	MS	S	MS	U	S	S	MS	03/05/ 2011
9	MS	MS	MS	MS	S	MS	MS	S	S	MS	01/11/ 2011
10	MS	MS	MS	MS	S	S	MS	MS	MS	MS	04/06/ 2012
11	MS	MS	MS	MS	S	S	S	MS	S	MS	13/05/ 2013

#### B1.4 Key Data on Project Cost

Table B1.3 Cumulative Estimated and Actual Disbursements for LEnS and LAF

	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13	Remarks
Appraisal estimated (\$M) –LEnS	0.6	1.3	2.0	2.8	3.7	4.0	-	-	Date of final disbursement 30/10/2013
LAF	-	-	-	-	0.3	1.5	2.5	3.0	
Actual (\$M)	Xx								
Actual as % of appraisal	Xx								

Table B1.4 Disbursement arrangements for LEnS\* (P090693; Loan no IDA-H1770)

Item	Expenditure Category	Budget Allocations (SDR)—as amended in July 2009	Financing %	Remark (original SDR per GA)
(1)	Sub grants	2,011,024 (74.5%)		2,065,000 (76.5%)
	(a) PICE	1,053,186	100%	945,000
	(b) CBI	957,838	100%	1,120,000
	WMU cost	688,976 (25.5%)		635,000 (23.5%)
(2)	Consultants' Services	490,000	100%	490,000
(3)	Training/workshops	92,948	100%	50,000
(4)	Goods	55,000	100%	55,000
(5)	Incremental Operating Costs (IOC)	51,028	100%	40,000
	Total Project cost	2,700,000		2,700,000
*Total WMU cost is \$1,147,550 equivalent (per PAD)				

Table B1.5 Disbursement arrangements for LAF (P116734; IDA-H54000)

Item	Expenditure Category	Allocation in SDR		Finance-%	US\$ allocation (per PP)
		LENS	LAF		
(1)	Sub grants	2,011,024 (74.5%)			2,650,000 (88.3%)
	(a) PICE	1,053,186	1,160,000	100%	2,050,000
	(b) CBI	957,838	340,000	100%	600,000
	WMU cost	688,976 (25.5%)			350,000 (11.7%)
(2)	Consultants' Services	490,000	150,000	100%	236,000
(3)	Training/workshops	92,948	40,000	100%	64,000
(4)	Goods	55,000	10,000	100%	10,000
(5)	Incremental Operating Costs (IOC)	51,028	30,000	100%	40,000
(6)	Un-allocation	-	170,000		
	Total project costs	2,700,000	1,900,000		3,000,000
	US\$ equivalent	4,000,000	3,000,000		

Table B1.6 List of project cost by component in US\$ million (as of June 30, 2013)

	LEnS (P090693; Loan no IDA-H1770)			LAF (P116734; IDA-H54000)			Total actual (LEnS+LAF)	% Total
	Appraisal	Actual		Appraisal	Actual			
	08/06/2005	30/11/2011	% Total	18/12/2009	31/01/2013	% Total		
Grand Total cost (IDA+GOL)	4,800,000	4,102,350*	-	3,000,000	2,868,987*	-	-	-
IDA Grants	4,000,000	4,102,350*	100%	3,000,000	2,868,987*	100%	6,971,337	
(1) Total PICE and CBI	3,652,450	3,100,256	75.6% of IDA grant	2,650,000	2,509,086	87.4% of IDA grant	5,609,342	80.5% of total grant
PICE: Policy implementation and capacity enhancement	1,911,600	1,596,107	51.5% of total sub grant	2,050,000	1,828,984	72.9% of total sub grant	3,425,091	61.1% of total sub grant
A1: Environmental and social monitoring and policy implementation support comprising <ul style="list-style-type: none"> <li>• BLKX: 3 PESAPs under LENS +1 PESAP under LAF+1 SIMU under LAF;</li> <li>• KM (3 PESAPs under LENS+ 1 PESAP under LAF+1 SIMU under LAF);</li> <li>• SVK (3 PESAPs under LENS+ 1 PESAP under LAF)</li> </ul>	280,700	277,066	17.4% of total PICE	450,000	353,993	18.5% of total PICE	615,985	18.0% of total PICE
A2: Integrated river basin management [NT-NKD RBC (2 sub grants under LENS+ 1 sub grant under LAF)]	466,600	395,775	24.8% of total PICE	340,000	339,998	18.6% of total PICE	735,773	21.5% of total PICE
A3: Hydropower sector sustainability initiative [DOE/MEM for NPSH (two sub grants under LENS)]	479,800	366,073	22.9% of total PICE	-	-	-	366,073	10.7% of total PICE
A4: Env and Social safeguard management: <ul style="list-style-type: none"> <li>• DESIA 2 sub grants under LENS+ 1 sub grant under</li> </ul>	390,600	413,154	25.9% of total PICE	1,100,000	989,998	54.1% of total PICE	1,403,152	41.0% of total PICE

LAF; <ul style="list-style-type: none"> <li>DOE/WREA (several sub grant under LENS (\$100,000) and 1 sub grant under LAF)</li> <li>Cabinet/WREA 1 sub grant under LAF)</li> </ul>								
A5: Environmental education and awareness: <ul style="list-style-type: none"> <li>Multi small sub grants under LENS;</li> <li>NUOL sub grant under ALF;</li> <li>LFNC sub grant under LAF</li> </ul>	293,900	144,040	9.0% of total PICE	160,000	159,998	8.7% of total PICE	304,038	8.9% of total PICE
CBI: Community and Biodiversity Investments	1,740,850	1,504,149	48.5% of total sub grant	600,000	680,102	27.1% of total sub grant	2,184,251	38.9% of total sub grant
B1: PA management activities mostly in BLKX, KM, and SVK.	1,165,850	1,058,413	70.4% of CBI	150,000	155,002	22.8% of total CBI	1,213,415	55.6% of total CBI
B2: Community environmental development activities mostly in BLKX, KM, SVK.	575,000	445,736	29.6% of CBI	450,000	525,100	77.2% of total CBI	970,836	44.4% of total CBI
WMU: Management and monitoring support	1,147,550	1,002,093	24.4% of IDA grant or 32.3% of total sub grant	350,000	248,974	12.2% of IDA grant or 13.2% of total sub grant	1,352,093	

**B1.7 Summary of Project Cost by Key Beneficiaries (LENS and LAF)**

Table B1.7 Summary of project cost by key beneficiaries (estimated)

Beneficiaries	LEnS	LAF	Total	% Total sub grant	Remarks
<b>Total Sub grants (PICE+CBI)</b>	<b>3,100,256</b>	<b>2,509,086</b>	<b>5,609,342</b>	<b>100</b>	
<b>(1) MONRE</b>	<b>800,687</b>	<b>1,379,996</b>	<b>2,180,683</b>	<b>39%</b>	
National agency responsible for development and capacity building on integrated river basin management for NT-NKD	395,775	339,998	735,773	13%	3 sub grants under PICE A2
National agency responsible for social and environmental safeguard (DESIA/WREA)	314,968	630,000	944,968	17%	6 sub grants under PICE A4 including five sub grants for DOE/STEA
National agency responsible for tapping NT2 revenue and planning (DPC/DHR)	-	225,000	225,000	4%	1 sub grant under PICE A4
National agency responsible for climate change and environmental planning (DOE/DEQP)	89,944	134,998	224,942	4%	3 sub grants under original LENS and 1 sub grant under LAF
National agency responsible for management of protected areas (DFRM/DFRC)	-	50,000	50,000	0.9%	1 sub grant under CBI B1
<b>(2) MEM</b>	<b>366,073</b>	<b>-</b>	<b>366,073</b>	<b>6.5%</b>	
National agency responsible for NPSH (DOE/MEM)	366,073	-	366,073		2 sub grants under PICE A3
<b>(3) BLKX</b>	<b>593,738</b>	<b>710,967</b>	<b>1,304,705</b>	<b>23.2%</b>	
Provincial agencies responsible for social impacts and environmental management (PWREO/SIMU)	92,355	152,999	245,354	4.4%	4 PESAPs and SIMU
Provincial agencies responsible for protected area (PA) management (PONRE/PWREO/PAFO)	352,804	32,868	404,471	7.2%	B1
Communities interested in the projects	148,579	525,100	673,679	12.0%	B2
<b>(4) KM</b>	<b>593,738</b>	<b>192,131</b>	<b>785,869</b>	<b>14.0%</b>	
Provincial agencies responsible for social impacts and environmental management (PWREO/SIMU)	92,355	152,993	245,348	4.4%	4 PESAPs and SIMU
Provincial agencies responsible for protected area (PA) management (PONRE/PWREO/PAFO)	352,804	39,138	404,471	7.2%	B1
Communities interested in the projects	148,579	-	148,579	2.6%	B2

(5) SVK	593,738	65,994	659,732	11.8%	
Provincial agencies responsible for social impacts and environmental management (PWREO/SIMU)	92,355	32,998	125,353	2.2%	4 PESAPs
Provincial agencies responsible for protected area (PA) management (PONRE/PWREO/PAFO)	352,804	32,996	404,471	7.2%	B1
Communities interested in the projects	148,579	-	148,579	2.6%	B2
(6) Others	44,040	159,998	204,038	3.6%	PICE A5
NUOL	-	79,998			
LFNC	-	80,000			

Table B1.8 List of sub grant costs by components (based on budget data as of 30 June 2013)

No	Code	Prov	Sub-grant	Act	Start date	End Date	Total Grant (\$)	Beneficiaries	Remarks
			<b>Total PICE+CBI</b>				<b>5,586,372</b>		173 sub grants and 58 sub grants (34%) were reviewed
			<b>Total PICE (including (\$935,000 of 3 remaining sub grants)</b>				<b>3,402,121</b>		58 sub grants, 37 were reviewed (64%)
			<b>Total PICE A1</b>				<b>615,985.38</b>		22 Sub grants, 14 were reviewed (64%)
			<b>PICE A1 –BLKX</b>				<b>233,173.1</b>		6 sub grants; 5 were reviewed
1	PICE-0021	BLKX1	Strengthening the implementation provincial environment planning in districts (PESAP I)	A1	09/05/2007	22/01/2008	9,299.32	BLKX/PWERO	1
2	PICE-0053	BLKX2	Strengthening capacity of district staff on the implementation of natural resources management in upstream	A1	14/09/2007	15/09/2008	10,344.06	BLKX/Cabinet office of Vienthong district	-
3	PICE-0091	BLKX3	Strengthening the implementation of environment strategy (PESAP II)	A1	01/02/2008	01/07/2008	8,429.33	BLKX/PWERO	2
4	PICE-021-3	BLKX4	PESAP III	A1	27/01/2009	30/03/2011	52,101.82	BLKX/PWERO	3
5	PICE-LA011	BLKX5	Strengthening the PESAP Implementation (PSAP IV )	A1	25/11/2010	30/06/2012	32,998.57	BLKX/PONRE	4
6	PICE-LA003	BLKX6	Building Social Impact Assessment and Management Capacity for BKX	A1	04/06/2010	31/12/2012	120,000.00	BLKX/PONRE	5
			<b>PICE A1-KM</b>				<b>240,332</b>		8 sub grants, 5 were reviewed
7	PICE-0012	KM1	Strengthening the implementation provincial environmental strategy up to 2020 and action plan up	A1	10/05/2007	10/01/2008	9,428.09	KM/PWERO	6

			2010 (PESAP I)						
8	PICE-0049	KM2	Women involvement on solid waste management	A1	16/10/2007	16/07/2008	7,656.95	KM/Provincial women Union	-
9	PICE-0099	KM3	Strengthening the implementation of environment strategy (PESAP II)	A1	22/01/2008	01/07/2008	9,118.33	KM/PWERO	7
10	PICE-0103	KM4	State of the provincial Environment Status	A1	23/06/2008	23/12/2008	7,147.80	KM/ PWERO	-
11	PICE-0105	KM5	Strengthening Youth Volunteer for SWM	A1	16/07/2008	01/08/2009	9,688.53	KM/ PWERO	-
12	PICE-012-3	KM6	PESAP III	A1	27/01/2009	30/03/2011	44,299.34	KM/ PWERO	8
13	PICE-LA002	KM7	Strengthening Social Impact Assessment and Management	A1	03/06/2010	31/12/2012	119,996.92	KM/ PONRE	9
14	PICE-LA009	KM8	Strengthening the PESAP Implementation (Phase IV )	A1	23/11/2010	30/06/2012	32,996.00	KM/ PONRE	10
			<b>PICE A1-SVK</b>				<b>104,744.28</b>		4 Sub grants, 4 were reviewed (100%)
15	PICE-0013	SVK1	Strengthening the implementation provincial environmental strategy up to 2020 and action plan	A1	11/05/2007	11/01/2008	10,912.72	SVK/ PWERO	11
16	PICE-0104	SVK2	Strengthening capacity to implement PESAP Phase II in the province and district	A1	28/05/2008	01/02/2009	8,051.74	SVK / PWERO	12
17	PICE-013-3	SVK3	PESAP III	A1	27/01/2009	30/03/2011	52,781.56	SVK / PWERO	13
18	PICE-LA010	SVK4	Strengthening the PESAP Implementation (Phase IV )	A1	24/11/2010	30/06/2012	32,998.25	SVK/ PWERO	14
			<b>PICE A1-HD</b>				<b>37,736</b>		4 Sub grants, none was reviewed (0%)
19	PICE-0038	HD 1	An environmental education and awareness campaign	A1	19/06/2007	01/07/2008	6,442.36	Sekong PSTEO	-
20	PICE-0040	HD 2	Capacity building on land and natural resources management	A1	11/07/2007	07/11/2008	10,535.46	Land Authority/ Prime Minister's	-

								Office	
21	PICE-0054	HD 3	Dissemination of Environment Strategy & Monitoring Environment in Bokeo Province	A1	23/11/2007	01/08/2008	10,700.41	Bokeo PSTEO	-
22	PICE-0102	HD 4	Strengthening the implement provincial environmental strategy up to 2020 and action plan up 2010	A1	30/05/2008	28/06/2010	10,057.73	Office of Water Resources & Environment	-
			<b>Total PICE A2—DWR/NT-NKD RBC</b>				<b>735,773.03</b>		3 sub grants, 3 were reviewed (100%)
23	PICE-0006	HD 1	Nam Theun-Nam Kading Integrated River basin Management-phase 1	A2	19/03/2007	01/12/2007	109,969.17	WWRC/STEA	15
24	PICE-006-2	HD 2	Nam Theun-Nam Kading Integrated River Basin Management Phase 2	A2	16/03/2009	30/12/2010	285,805.86	DWR/WREA	16
25	PICE-LA005	HD 3	Nam Theun-Nam Kading River Basin Management (NT-NK-RBM)	A2	09/07/2010	31/12/2012	339,998.00	NT-NKD RBC secretariat/MONRE	17
			<b>Total PICE A3-DOE/MEM</b>				<b>366,072.57</b>		2 sub grants, 2 were reviewed (100%)
26	PICE-0005	HD 1	Sustainable hydropower sector policy support	A3	19/03/2007	01/12/2007	96,212.20	DOE/MEM	1
27	PICE-005-2	HD 2	Support Sustainable Hydropower policy Phase 2	A3	26/03/2009	26/06/2011	269,860.37	DOE/MEM	2
			<b>Total PICE A4 (including \$855,000 for DESIA and Cabinet)</b>				<b>1,388,752</b>		12 sub grants, 7 were reviewed (58%)
28	PICE-0004	HD 1	Resettlement and compensation	A4	19/03/2007	01/10/2007	72,477.23	DOE/STEA	1
29	PICE-004-2	HD 2	Strengthening the Resettlement and compensation Management	A4	31/03/2009	30/06/2011	212,490.71	DESIA/WREA	2

Phase 2									
30	PICE-0100	HD 3	Strengthening Hin Heub District staff on Resettlement and compensation	A4	28/01/2008	01/11/2008	8,241.61	Hin heup District Office	-
31	PICE-0106	HD 4	Climate Change Policy	A4	24/11/2008	24/05/2009	5,052.37	DOE/WREA	-
32	PICE-0107	HD 5	Support on the study of climate change impacts	A4	30/01/2009	30/06/2010	16,000.00	DOE/WREA	-
33	PICE-0050	HD 6	Strengthening GoL's Capacity for resettlement management through a study visit to the successful resettlement	A4	23/10/2007	23/11/2007	10,000.00	DOE/WREA	3
34	PICE-0051	HD 7	Strengthening GoL's Capacity for resettlement management through a study visit to the successful rest	A4	23/10/2008	23/11/2008	10,000.00	DOE/WREA for KM/RMU?	4
35	PICE-0052	HD 8	Strengthening GoL's Capacity for resettlement management through a study visit to the successful rest	A4	23/10/2007	23/11/2007	10,000.00	RMU/NT2/Khammuan	5
36	PICE-0106-2	HD 9	Climate Change Policy	A4	27/1/2009	30/3/2011	68,892.15		
37	PICE-LA006	HD10	National action plan update and climate change	A4			134,998	DEQP/MONRE	6
38	PICE-LA007	HD11	EESMC of DESIA	A4			630,000	DESIA/MONRE	7
39	PICE-LA004	HD12	WREA Cabinet Capacity Building	A4			225,000	Cabinet/HD/MONRE	-
			<b>Total PICE A5 (Including \$80,000 for LFNC)</b>				<b>295,538</b>		19 Sub grants, 7 were reviewed(39%)
40	PICE-0041	BLKX	Awareness through pupil spectacle on environmental conservation for community and schools	A5	05/06/2007	01/07/2008	8,903.62	BLKX/ Division of Information and culture	-
41	PICE-0016	SVK	Environmental awareness through media	A5	11/05/2007	11/05/2008	9,880.88	Provincial Information and Culture Office	-
42	PICE-0001	HD 1	Capacity building on integration of	A5	08/01/2007	01/08/2008	9,989.37	National Research	18

			Environment Education into formal school curriculum.					Institute for Educational Sciences (NRIES)	
43	PICE-0002	HD 2	Improvement of the Herbarium of the National University of Lao P.D.R. project	A5	08/01/2007	31/10/2007	10,000.00	NUOL/Faculty of Science	-
44	PICE-0007	HD 3	Technical material development for NTFPs and Eco-tourism management subject	A5	07/11/2007	07/11/2008	9,600.00	NUOL/ Forestry Faculty	-
45	PICE-0009	HD 4	Using recycled waste for making teaching materials in primary schools	A5	08/01/2007	31/01/2008	10,000.00	National Research Institute for Educational Sciences (NRIES)	-
46	PICE-0010	HD 5	Management and utilization of Non-Timber Forest Product in Napo Village Sang thong District, Vientiane	A5	27/04/2007	27/03/2008	9,151.15	NUOL/ Faculty of Science	-
47	PICE-0020	HD 6	Biodiversity garden 14 km, Vientiane C	A5	02/05/2007	02/12/2007	9,592.26	Ecological garden Unit Km14/ STEA	-
48	PICE-0027	HD 7	Raising awareness on Wildlife Trade and Hunting through enhancing capacity of Civil Society in Thong	A5	27/04/2007	01/05/2008	9,684.05	Lao Front for Construction (cooperation with PAFO)	19
49	PICE-0034	HD 8	Free chemical vegetable promotion to reduce contaminated food	A5	14/09/2007	15/07/2008	9,498.24	Bio Association, Vientiane	20
50	PICE-0035	HD 9	Dissemination on the state of contaminated vegetables and fruits in Vientiane	A5	11/07/2007	15/05/2008	10,470.90	Plant Protection Center	-
51	PICE-0036	HD 10	Environmental awareness through Hmong and Khmu radio, Vientiane	A5	11/07/2007	15/07/2008	10,249.87	Mhong and Khmou Radio Division, MIC	21
52	PICE-0042	HD 11	Presentation and dissemination of the Lao Environment Monitoring	A5	08/05/2007	14/06/2007	4,090.00	ERI/STEA	-

			2006						
53	PICE-0044	HD 12	Support for World Environment Day	A5	27/05/2007	27/05/2008	3,999.62	DOE/STEA	-
54	PICE-0045	HD 13	Organize student camps in villages for environment awareness	A5	25/05/2007	28/06/2007	696.87	NUOL/ Student Organization	-
55	PICE-0048	HD 14	Environmental awareness through Khmu radio, Vientiane	A5	11/07/2007	15/07/2008	9,733.04	Mong and Khmou Radio Division, MIC	22
56	PICE-0056	HD 15	Development of EV.Awa.through Cartoon program	A5	5/12/2007	5/06/2008	8,500.00	National Youth Union	
57	PICE - LA 001	HD 16	NUOL	A5			79,998.00	NUOL, Faculty of Social Science	23
58	PICE-LA008	HD 17	Ethnic group	A5			80,000	LFNC	24
			<b>Total CBI</b>				<b>2,184,251</b>		115Subgrants, 34 were reviewed (30%)
			<b>Total CBI B1</b>				<b>1,213,415</b>		59 Sub grants, 17 were reviewed (29%)
			<b>CBI B1—BLKX</b>				<b>317,858.77</b>		15 Sub grants, 6 were reviewed (40%)
1	CBI-0001	BLKX1	Phoukoud Forest Conservation and Management	B1	27/05/2008	27/01/2009	9,793.37	BLKX/ Muongmai Forestry School	-
2	CBI-0002	BLKX2	Phou Kadan Forest Conservation and Management	B1	01/02/2007	01/07/2007	8,605.09	BLKX/PAFO	-
3	CBI-0071	BLKX3	Agar wood species conservation and management	B1	08/04/2008	07/02/2009	9,898.94	BLKX/PWREO	-
4	CBI-0072	BLKX4	Houya Ngoua Forest Conservation and management	B1	09/01/2008	11/03/2009	19,946.81	BLKX/PAFO	-
5	CBI-0072-2	BLKX5	Houya Ngoua Forest Conservation and management	B1	29/09/2009	31/03/2011	66,820.23	BLKX/PAFO	25
6	CBI-0108	BLKX6	Conservation outreach in community near the Nam Kading Protected Area	B1	18/12/2007	11/01/2009	9,385.99	BLKX/Nam Kading Protected Area Unit	-

7	CBI-0110	BLKX7	Aquatic resources conservation and management zone in Nam Kading river	B1	08/04/2008	07/06/2009	5,793.95	DAFO of Pakkading district	26
8	CBI-0111	BLKX8	Feasibility study of Phou Chomvoy Forest Conservation, Xaybouathong and Khamkeut District	B1	13/12/2007	17/02/2008	4,342.63	BLKX/Forestry Section	-
9	CBI-0145	BLKX9	Phou Chomvoy Forest Conservation and management	B1	29/09/2008	10/05/2009	31,004.67	BLKX/PAFO	27
10	CBI-0145-2	BLKX10	Phou Chomvoy Forest Conservation and management	B1	13/11/2009	31/03/2011	91,641.61	BLKX/ PAFO	28
11	CBI-0179	BLKX11	Houya Ngang Biodiversity Conservation Thaphabad District	B1	29/09/2008	11/09/2009	9,984.22	BLKX/Thaphabat DAFO	-
12	CBI-0180	BLKX12	Head Water Zone Forest Protection at Phoukhean-Ngothor, Viengthong District	B1	29/09/2008	11/11/2009	8,804.85	BLKX/Viengthong DAFO	29
13	CBI-0181	BLKX13	Forest and Land Allocation Management	B1	29/09/2008	11/11/2009	8,968.34	BLKX/Viengthong DAFO	-
14	CBI-LA003	BLKX14	Livelihood Development and capacity Building on Non-Timber Forest Products Management of Phou Chomvoy	B1	31/03/2011	30/06/2012	18,000.00	BLKX/PAFO	-
15	CBI-LA004	BLKX15	Livelihood Development and Capacity Building on Houya Ngoua PA	B1	31/03/2011	30/06/2012	14,868.07	BLKX/PAFO	30
			<b>CBI B1-KM</b>				391,920.84		21 Sub grants, 7 were reviewed (33%)
16	CBI-0017	KM1	Provincial Forest Conservation and Management, Pha Tham Bing	B1	16/10/2007	30/03/2011	92,235.78	KM/PAFO	31
17	CBI-0018	KM2	Namsanam Forest Conservation and Management, Hin Boun District	B1	02/02/2007	27/02/2008	9,449.83	KM/PAFO, DFRC of Khammouane and DAFO of Hinboun District	-

18	CBI-0018-2	KM3	Namsanam Forest Conservation and Management, Hinboun District	B1	12/07/2009	12/07/2010	11,292.51	KM/PAFO, DFRC and Hinboun DAFO, Khammouane	-
19	CBI-0081	KM4	Fish and Bat conservation at Tham Load (Cave), Nong Ping Village, Boualapha District	B1	07/03/2008	28/04/2009	8,788.72	KM/Planning and Investment Office	-
20	CBI-0098	KM5	Ecotourism development related to Bat Cave Conservation connect to Khun Kongleng, Hinboun District	B1	22/01/2008	22/01/2009	10,677.30	KM/Provincial Tourist Office	-
21	CBI-0112	KM6	Guar & Banteng habitat Survey & wildlife sanctuary boundary demarcation, Hinboun District	B1	22/01/2008	25/01/2009	9,949.65	KM/DAFO of Hinboun District and PSTEO	-
22	CBI-0113	KM7	Aquatic resource Conservation, Nam Pakane, Hinboun District	B1	18/12/2007	25/03/2009	9,624.01	KM/Hinboun District Governor's Office	-
23	CBI-0119	KM8	Aquatic resource Conservation, Nam Uola, Mahaxay District	B1	6/3/2008	28/4/2009	9,065.46	DAFO, Governor's Office, Phonmeuang Focus Zone Mahaxay District	-
24	CBI-0120	KM9	Bamboo regenerated and conservation Ban Sangphook, Ban Phonxay, Mahaxay District	B1	28/05/2008	08/07/2009	10,041.56	KM/DAFO, PWREO and villages administration of Mahaxay District	-
25	CBI-0121	KM10	Rock Rat Conservation and Management, Thakek, Mahaxay and Ngommalath	B1	18/12/2007	28/03/2009	10,965.63	KM/DAFO of Mahaxay, Ngommalath and Thakhek Districts and village	32
26	CBI-0121-2	KM11	Rock Rat Conservation and Management, Thakek, Mahaxay and Ngommalath	B1	29/04/2010	30/06/2010	4,935.41	KM/DAFO of Mahaxay, Ngommalath and Thakhek Districts and village	-

27	CBI-0124	KM12	Aquatic Resources Conservation, Houya Soakbo, Nongbok District	B1	05/03/2008	28/04/2009	6,638.97	KM/DAFO and DWREO of Mahaxay District	33
28	CBI-0125	KM13	Dong Nong Chao Forest Conservation and Management, Nong Bok District	B1	09/04/2008	25/06/2009	9,256.13	KM/DAFO and Tourist Office of Nong Bok District	34
29	CBI-0127	KM14	Three Zone Forest Conservation and Management, Xebangfai District	B1	05/03/2008	28/04/2009	10,164.23	KM/ DAFO of Xebangfai District	35
30	CBI-0127-2	KM15	Three Zone Forest Conservation and Management, Xebangfai District	B1	29/04/2010	30/06/2010	2,410.36	KM/DAFO of Xebangfai District	-
31	CBI-0159	KM16	Three Zone of Forest Conservation and Management, Ngommamad District	B1	28/05/2008	08/07/2009	10,022.16	KM/DAFO, DWREO Ngommamad District,	-
32	CBI-0160	KM17	Feasibility Study Forest Conservation and Management Khounxe Nongma, Boualapha District	B1	21/04/2008	26/07/2008	4,798.80	KM/PAFO of Khammouane	-
33	CBI-0160-II	KM18	Feasibility Study Forest Conservation and Management Khounxe Nongma, Boualapha District	B1	17/11/2009	30/03/2011	107,202.21	KM/PAFO	36
34	CBI-0184	KM19	Feasibility Study on Elephant Garden Building, Gnomalad	B1	03/11/2008	30/09/2010	15,264.40	KM/PWREO and Ngommamad DAFO	-
35	CBI-LA005	KM20	Pha Them Bing Forest Conservation and management	B1	31/03/2011	31/12/2012	13,206.71	KM/PAFO	-
36	CBI-LA006	KM21	Khounxe Nongma Forest Conservation and management	B1	31/03/2011	30/06/2012	25,931.00	KM/PAFO	37
			<b>CBI-B1-SVK</b>				<b>366,621.73</b>		17 Sub grants, 2 were reviewed (12%)
37	CBI-0021	SVK1	Xebangnouane Forest	B1	06/02/2008	11/03/2009	6,899.10	SVK/Thapangthon	-

			Conservation and Management, Thapangthong District					g DAFO	
38	CBI-0023	SVK2	Management and Protection of Dong Non Louang Wetland	B1	01/07/2009	30/06/2010	15,000.00	SVK/ PAFO	-
39	CBI-0024	SVK3	Management and Protection of Forest for Water Resource Protection in Phou ka Sad, La Ving and La Veun	B1	17/10/2008	17/10/2009	10,973.41	SVK/PAFO	-
40	CBI-0024-II	SVK4	Management and Protection of Forest for Water Resource Protection in Phou ka Sad, La Ving and La Veun	B1	23/09/2009	23/03/2011	74,197.18	SVK/PAFO	38
41	CBI-0066	SVK5	Forest Reservation Management, sustainable biodiversity application and Natural Tourist Development	B1	13/12/2007	30/03/2011	159,950.00	SVK/Provincial Cabinet, PSTEO, PAFO and Provincial Tourism Office	39
42	CBI-0089	SVK6	Houya thouad Basin Management for sustainable use	B1	21/01/2008	14/08/2008	7,419.51	SVK/Irrigation Office of Province, Houya Thouad management Project	-
43	CBI-0090	SVK7	Tortoise pond Conservation and management, Donedeng Village	B1	02/06/2008	02/12/2008	7,681.09	SVK/Donedeng Villagers/ District Tourist Office	-
44	CBI-0090-2	SVK8	Tortoise pond Conservation and management, Donedeng Village	B1	11/05/2010	11/11/2010	4,608.69	SVK/ Donedeng Villagers/ District Tourist Office	-
45	CBI-0091	SVK9	Natural and Cultural Site Conservation Buddha Cave & Dong Nai Sacred forest Outhumphone	B1	21/01/2008	12/03/2009	10,547.61	SVK/ District Tourism Office, Outhoumphone District	-
46	CBI-0094	SVK10	Biodiversity conservation mgt and human elephant conflict mitigation	B1	09/04/2008	18/02/2009	2,104.35	SVK/ DAFO, Nong District	-

			in Ban Savu, Dong Phouvieng NPA						
47	CBI-0139	SVK11	Monkey and its habitat conservation for sustainable use of natural tourism site	B1	09/04/2008	25/06/2009	6,041.83	SVK/ Champhone District Tourist Office	-
48	CBI-0148	SVK12	Cervus Eldii deer Conservation and Management	B1	09/04/2008	25/06/2009	6,037.96	SVK/ Savannakhet PAFO	-
49	CBI-0149	SVK13	Feasibility study on head water conservation focus zone	B1	06/03/2008	29/10/2008	2,240.52	SVK/ Rural Development Office/ Provincial Governor's Office Savannakhet	-
50	CBI-0171	SVK14	Improve Bungxang lake for White bird conservation and sustainable tourism site	B1	04/11/2008	19/11/2009	9,981.84	SVK/ Xonebouly DAFO	-
51	CBI-0172	SVK15	Aquatic biodiversity conservation for sustainable development in wetland Nongsim	B1	04/11/2008	19/11/2009	9,942.41	SVK/ Xonebouly District Office	-
52	CBI-LA007	SVK16	Forest Conservation and Management in Laving Lavern PA	B1	31/03/2011	31/12/2012	16,496.46	SVK/ PAFO	-
53	CBI-LA008	SVK17	Forest Conservation and Management in Dong Natad PA	B1	31/03/2011	31/08/2012	16,499.77	SVK/ PAFO	-
			<b>CBI- B1-HD</b>				<b>137,013.67</b>		6 Sub grants, 2 were reviewed (33%)
54	CBI-0073	HD	Biodiversity Survey and Forest Regeneration, Bolikhan District	B1	07/01/2008	07/01/2009	9,398.99	NAFRI	-
55	CBI-0075	HD	Medical plant study within Phou Kao Khouy NBCA	B1	14/09/2007	24/09/2008	10,159.77	NUOL/Faculty of Forestry	-
56	CBI-0140	HD	Improving and strengthening co-management of Hin Nam No Protected Area with Local Communities	B1	28/01/2008	30/06/2010	49,000.00	DFRC	40
57	CBI-0150	HD	Research Project: Case study on land use impact for rubber	B1	27/05/2008	30/06/2010	10,148.92	NUOL/ Forestry Faculty	-

			plantation						
58	CBI-0158	HD	Research Proposal: Frog feeding in the rice field, NongBok District	B1	29/04/2008	19/05/2009	8,305.99	Lao Aquatic Resource Research Center	-
59	CBI-LA002	HD	Development of Prime Ministerial Decree on National Regulations on Protected Areas	B1	27/12/2010	30/12/2012	50,000.00	DFRC/MAF	41
			<b>Total CBI-B2</b>				<b>970,836</b>		56 Sub grants, 17 were reviewed (30%)
			<b>CBI-B2-BLXX</b>				<b>695,290.13</b>		21 Sub grants, 6 were reviewed (29%)
60	CBI-0004	BLXX1	Nongkok Eco tourism site	B2	05/06/2007	20/02/2008	7,550.50	BLXX/Tourism Office	-
61	CBI-0006	BLXX2	Nongsamanh Eco tourism site	B2	09/05/2007	20/02/2008	6,638.66	BLXX/Tourism Office	-
62	CBI-0008	BLXX3	Community Dev. and Env Conservation Using Clean Water Building (water gravity)	B2	05/06/2007	05/06/2008	9,471.45	BLXX/Health Office	-
63	CBI-0032	BLXX4	Aquatic resource conservation Nam Ngiep & Nam Xane	B2	05/06/2007	20/06/2008	8,325.63	BLXX/Section Livestock and Fishery	42
64	CBI-0070	BLXX5	Agar wood species conservation and management	B2	04/03/2008	07/04/2009	8,181.15	BLXX/VangPe Village of Vienthong District	-
65	CBI-0074	BLXX6	Community development by constructing small irrigation	B2	23/01/2008	27/02/2009	5,428.24	BLXX/DAFO of Vienthong District	-
66	CBI-0096	BLXX7	Biodiversity conservation & community development	B2	04/03/2008	04/03/2009	8,669.33	BLXX/PWREO, Thaphabat District	-
67	CBI-0100	BLXX8	Village Fund Establishment and	B2	18/12/2007	18/12/2008	10,331.18	BLXX/Planning	-

			Development to reduce harvest of NTFP					Office of khamkeut,	
68	CBI-0101	BLKX9	Pha Phihong Environmental Conservation and eco-tourism promotion	B2	18/12/2007	11/01/2009	9,941.16	BLKX/ Tourism Office of Khamkeut District	-
69	CBI-0104	BLKX10	Increasing land use Suitability for maize plantation and reducing forest disturbance and NTFP	B2	04/03/2008	07/04/2009	6,852.57	BLKX/ Thaveng Village of Khamkeut District	-
70	CBI-0105	BLKX11	Community development by promotion clean vegetation planting	B2	23/01/2008	19/02/2009	4,207.96	BLKX/ DAFO Paksan, BLKX	-
71	CBI-0106	BLKX12	Land suitability promotion for sugarcane planting within 5 villages Bolikhan District	B2	23/01/2008	14/02/2009	7,385.20	BLKX/ DAFO Bolikhan	43
72	CBI-0109	BLKX13	Land use promotion using style specie plantation for upgrading land suitability and animal feeding	B2	27/05/2008	01/07/2009	6,680.43	BLKX/ DAFO Bolikhan	-
73	CBI-0146	BLKX14	Research project: Rain worm feeding for the community and environmental protection	B2	31/03/2008	28/04/2009	10,446.57	WREA/ Research Institute	-
74	CBI-0153	BLKX15	Strengthen community for NTFP management around Phou Ngou Protected area	B2	23/07/2009	01/07/2010	19,934.68	BLKX/ DAFO Pakkading	44
75	CBI-0154	BLKX16	Biodiversity conservation and management in Ban Phonsy Zone, Nam Kading NPA	B2	11/07/2008	02/07/2009	8,630.03	BLKX/ Environment section of DWREO of Pakkading	-
76	CBI-0155	BLKX17	Community development by promotion clean vegetable plantation, Pak Kading District	B2	08/04/2008	07/06/2009	6,114.74	BLKX/ DAFO of Pakkading district	45
77	CBI-0161	BLKX18	Nang Phom Hom Cave conservation and management	B2	27/05/2008	01/03/2009	8,089.99	BLKX/ Information and culture division of Bolikhan District	46

78	CBI-0163	BLKX19	Water Gravity building, Ban Phaphae, Viengthong District	B2	17/02/2008	20/08/2009	9,763.38	BLKX/ district health Office of Viengthong District	47
79	CBI-0169	BLKX20	Community development by promote making bio gas for community	B2	17/07/2008	02/09/2009	7,547.28	BLKX/ Agriculture section, DAFO of Bolikhamxay	-
80	CBI-LA001	BLKX21	Community Conservation Network ( CCN )	B2	04/06/2010	31/12/2012	525,100.00	BLKX/ Cabinet office	-
			<b>CBI-B2-KM</b>				<b>122,453.38</b>		16 Sub grants, 7 were reviewed (44%)
81	CBI-0039	KM1	Bio sand Water filter: Clean water for life, Thakek District	B2	10/05/2007	22/05/2008	3,035.00	KM/ PWREO	-
82	CBI-0040	KM2	Mull berry-Silkworm and Silk Production	B2	10/05/2007	24/09/2008	9,588.43	KM/Industry and trade Office	-
83	CBI-0084	KM3	Cow rising project, Ban Gna Vaeth, Boualapha District	B2	28/05/2008	09/07/2009	9,100.31	KM/ District Planning Office and Village	-
84	CBI-0085	KM4	Community and Environmental Conservation by Promotion Villagers	B2	16/10/2007	07/11/2008	4,997.53	KM/ Ban Kapor Village and administration Xaybouathong District	-
85	CBI-0114	KM5	Community development by providing traditional handicraft promotion, Hin Boun District	B2	09/04/2008	26/06/2009	8,053.02	Ban Khounkham development zone group, Hinboun District	-
86	CBI-0141	KM6	Road Safety	B2	16/07/2008	14/08/2009	9,448.60	KM/ Public work & Transport Office Hinboun District	-
87	CBI-0142	KM7	Environment Conservation Awareness Provide by Buddhism	B2	09/04/2008	25/06/2009	9,507.76	KM/ Provincial Bhuddish	-

			Conservation Disclosure Media					School/Information and culture Office	
88	CBI-0143	KM8	Tham Nanglord- Phalabo ecotourism Natural Resources Conservation	B2	22/01/2008	25/03/2009	9,353.78	KM/ Governor's Office,	48
89	CBI-0144	KM9	Environment conservation and community development by providing clean water supply for the minority	B2	09/04/2008	01/07/2009	10,119.36	KM/ PSTEO	-
90	CBI-0156	KM10	Environment Conservation and Community Development by providing latrine construction, Thakhek Dist.	B2	09/04/2008	25/06/2009	4,474.53	KM/ Ban Naningom Village	-
91	CBI-0157	KM11	Land use suitability for fruit trees plantation, Thakek District	B2	09/04/2008	25/06/2009	8,589.95	KM/ Nadone-Khungsi development zone, Khammouane	-
92	CBI-0165	KM12	Community Development by Promotion Traditional Handicraft for The Village Group, Hinboun Dist.	B2	28/05/2008	08/07/2009	5,701.95	KM/ Ban KhounGneun development zone, Khammouane	-
93	CBI-0166	KM13	Ecotourism and Community Development of Nanglod and Nong Phiangxang Caves	B2	28/05/2008	08/07/2009	6,339.50	KM/ District Tourist Office	-
94	CBI-0167	KM14	Natan Aquatic Conservation Project	B2	17/07/2008	18/08/2009	6,553.01	KM/ Nakai Environment Unit/ Natan Community	-
95	CBI-0168	KM15	Long Term Sustainable Bamboo Management For Rural Communities management	B2	17/07/2008	18/08/2009	9,593.01	KM/ Nakai Environment Office	49
96	CBI-0185	KM16	Nampied Biodiversity Conservation	B2	03/11/2008	30/06/2010	7,997.64	KM/	50

			Project					Xaybouanthonng DAFO, Khammouan Province	
			<b>CBI-B2-SVK</b>				<b>126,202.07</b>		16 Sub grants, 4 were reviewed (25%)
97	CBI-0028	SVK1	Community Training Fund Development	B2	03/02/2007	27/11/2007	2,040.70	SVK/ Lao Women Union	-
98	CBI-0067	SVK2	Community development fund emphasis on commercial bananas plantation	B2	11/05/2007	25/04/2008	9,631.25	SVK/ Villagers of Ban Dong	51
99	CBI-0092	SVK3	Feasibility study on Protection and Community Development around Nong Luang wetland	B2	17/10/2007	08/02/2008	4,407.39	Lao Development and cooperation association (LADCA)	-
100	CBI-0093	SVK4	Natural and significant Cultural Site Conservation for Stone Temple Park	B2	19/12/2007	19/12/2008	6,872.73	SVK/ Ban Heuan Hine, Sayphouthong District	-
101	CBI-0128	SVK5	Environmental Community fund focusing on upgrading land use, Ban Palor, Nong District	B2	06/03/2008	14/03/2009	10,417.64	SVK/ Palo-Asing production group	52
102	CBI-0129	SVK6	Sacred Forest Conservation and Management, related to community development Ban Mak keua, Atsaphangt	B2	21/01/2008	27/02/2009	9,418.90	SVK/ Na makkeua Villagers	-
103	CBI-0131	SVK7	Community development by upgrading land use shifting cultivation	B2	06/03/2008	28/04/2009	5,880.58	SVK/ Villager Naphanci and DSTEO	-
104	CBI-0135	SVK8	Bungva aquatic resources conservation and management and Eco tourism Site	B2	09/04/2008	25/12/2008	5,362.76	SVK/ Kaysone DSTEO	53
105	CBI-0136	SVK9	Strengthening for the sectoral eco- tourism Dong Phouvieng	B2	14/07/2008	20/08/2009	8,618.56	SVK/ Tourist Office of Phin	-

			Conservation					District	
106	CBI-0138	SVK10	Establishment forest conservation and Management	B2	06/03/2008	19/11/2008	10,079.12	SVK/ DAFO of Vilabouly District	-
107	CBI-0173	SVK11	Head watershed conservation and community development at Xiengtoup	B2	01/07/2009	30/06/2010	8,617.32	SVK/ SavannakhetPAFO , Xeponé DAFO and Tourism Office	-
108	CBI-0175	SVK12	Dinosaur foot print conservation for tourism site	B2	04/11/2008	04/12/2009	7,773.92	SVK/ Savannakhet PAFO	-
109	CBI-0176	SVK13	Keanglinh lake conservation for significant tourism site	B2	26/08/2008	10/11/2009	9,974.23	SVK/ Nong District Office	-
110	CBI-0177	SVK14	Nong Lamchanh improvement and Hotay conservation for significant tourism site	B2	26/08/2008	10/11/2009	9,984.45	SVK/Champhone district office	-
111	CBI-0178	SVK15	Community Development and Dong Khoi forest conservation and management	B2	26/08/2008	10/08/2009	8,100.83	SVK/ Atsaphangthong District Administration Office	-
112	CBI-0182	SVK16	Community Development around the Bamboo Buffer Zone	B2	04/11/2008	04/04/2010	9,021.69	SVK/ Songkhone DAFO	54
			<b>CBI-B2-HD</b>				<b>26,890.46</b>		3 sub grants, none was reviewed (0%)
113	CBI-0037	HD1	Agro forestry in 4 villages Kengbit, Naphong, Phonkham and Phonsy	B2	27/04/2007	13/05/2008	8,260.00	NUOL/of forestry	-
114	CBI-0038	HD2	Participatory status of Nam Kading NBCA Management	B2	27/04/2007	13/05/2008	8,582.00	NUOL/of Forestry	-
115	CBI-0164	HD3	Community herbal garden building	B2	01/08/2008	13/08/2009	10,048.46	Herbal Research Center/MoH and Science and Technology Research	-

								Institute	
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## ANNEX C

### Key Findings from PICE A1, A2, and A5Subgrants

## Annex C. Key Findings from PICE A1, A2, and A5Subgrants

This annex presents the key activities, outputs, and outcomes of the PICE A1, A2, and A5 sub grants identified during document reviews, field visits, and meetings conducted by the national consultant in November 2012-February 2013, including pictures and evidences observed on the ground. The potential impacts and possible contribution to PDO were identified based on the key findings and professional experience in Lao PDR. Figures C1.1, C1.2, and C1.3 show locations of the sub grants selected for investigation in Bolikhamxay (BLKX), Khammouane (KM), and Savannakhet (SVK).

Figure C1.1  
Locations of  
focused sub  
grants for  
investigation in  
Bolikhamxay  
(BLKX)

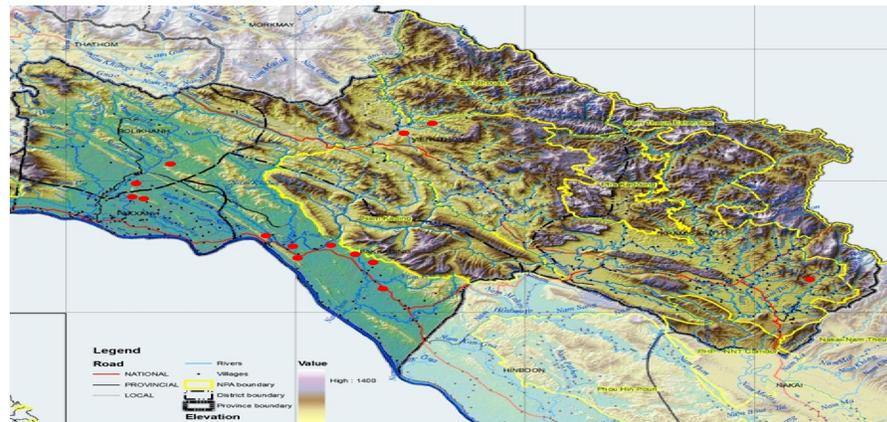
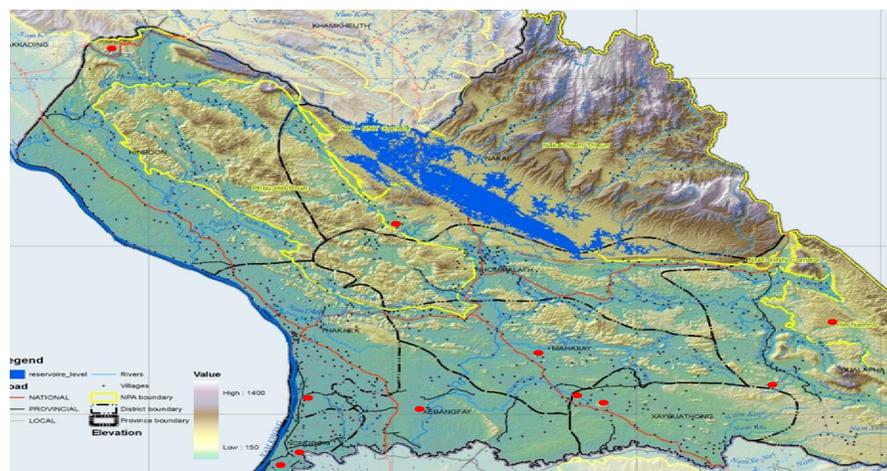


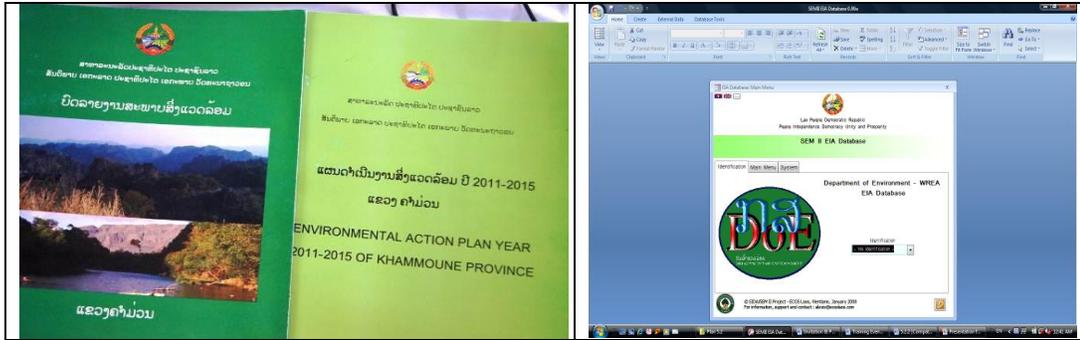
Figure C 1.2  
Locations of  
focused sub  
grants for  
investigation in  
Khammouane  
(KM)





- Through the PESAP a number of activities completed such as dissemination workshops on LENS project orientation & strategy for funding eligibility at early project stage. The sub grant conducted workshops in provinces and districts on environment issues and identified district priority and environment action plans started from 3 districts for each target province, to then complete almost all districts of the target province made a total of 27 districts. District environment priorities identified in these 27 districts and shortlisted for the provincial priorities. This is important exercise that each target province used this for developing PESAP. A total of 218 small grant project proposals developed, of which 71 were funded. Environment statement reports of three target provinces published (ca. 1,000 copies each). Then, made availability of provincial environment strategies and action plans (2011-2015) for KM and SVK but BLKX has the strategy for 2020, with each province has 500-600 copies, distributed in the provinces, disseminated since 2010 (see Figure C1.4).
- At the same time, the project held meetings with development project proponents on environment issues and management mitigation measures following the Environment Protection Law and Decree no. 122/PM on EIA (effective on February 16, 2010). Following that, the project conducted training on monitoring and evaluation of hydropower and mining projects – in class and field practice as 21 participants from relevant provincial sectors and districts. Most importantly, environment indicators and database system in 3 provinces for tracking project types have been developed such as a list of project with EIA, IEE, and EMP or without this category (see Figure C1.4).
- Upon the approval of the Provincial Environment and Action Plan it has been important material and formulated into sectoral planning of the districts and projects. Provincial and district staff have been trained in a series of capacity in support environment performance and joined in a number of study tours on varying topics.
- Alongside, environmental awareness campaign had been conducted through various means e.g. TV, radio program and public events such as National Wildlife Day, World Environment Day, and schooling activities.
- Other provinces: Bokeo and Sekong which EPF supported on developing provincial environment strategy and enhancing environmental knowledge and propagation the Environment Protection Law.

Figure C1.4. Example of environmental action plan and database program



**Social aspect**

- Within this sub-window assisted the two provinces in developing a grievance mechanism which grievance guideline available to exercise. Prior to this grievance guideline developed a series of small and wider stakeholder workshop held at provincial and district level. The first consultation workshops conducted at district and provincial levels for identifying key social issues associated with development projects especially mining, hydropower and large plantation projects, established village and district grievance committees.
- The project conducted trainings for provincial and district officials on grievance, EIA, social safeguard, legislations, policies etc. These legal materials are important for trainees, the involved officials who are responsible for grievance issue. In practice, the trainees – both officials and villagers were exercised on the application of the grievance guidelines including data forms.
- The grievance work designed just the same for KM and BLKX but varying in size. As for 13 districts (82 villages) conducted in these provinces, of which 4 districts of BLKX and 9 districts of KM. These officials and villagers were trained and participated in several study tours organized by the project and other held both within and outside the country.
- In order to ensure the trained officials and villagers able to implement the grievance effectively. Real exercise according to the grievance guideline with village and district grievance committee had been conducted. The participants were brought to on site where some issues of development projects as to record the form, do eye witness and practice how to address some issues in step-by-step from local level to higher level.
- At the same time, the project had developed Term of Reference for Social Management Unit (SMU) or originally was Social Impact Management Unit (SIMU) and this unit has been established officially and adhered to PONRE today. Also, database system for grievance of SMU has been developed and updated monthly with some data back up regularly.
- In comparison, the sub-grants under this sub-window on average have completed for 81% against the proposed activities and expected objectives in the two provinces.

## **C1.2 Key Outputs for PICE A1**

A number of staff trained, study tours carried out, materials developed to support and enhance the capacity of government officials in environment management such as provincial and district strategies and action plans, guidelines and environment statement reports. Detailed descriptions for environment and social work as following:

### **Environment**

- Environment Statement Report of all 3 provinces ca. 1,000 copies each, 70% were distributed widely in the provinces and all the districts. PESAP is available in all 3 provinces with some 600 copies that distributed in each province including the districts. Also, district environment action plans developed and some 500 copies made and distributed. This, 3 districts for Bolikhamxay and 4 districts of each Khammouane and Savannakhet provinces were firstly piloted but later extended to the rest made a total of 27 districts.
- Database for tracking type and numbers of development projects available e.g. BLKX has 105 development projects, of which 70 projects (66%) meet the Environment Compliance Certificate (ECC) but the rest under convincing to conduct new EIA or at least EMP. During the LENS completion workshop at the province on May 2, 2013 it was updated that 107 projects received ECC. Of which, 9 with EIA, 23 with IEE and 75 small project with EMP. For KM has 245 development projects, of 236 projects (95.54 %) meet the ECC (7 with EIA, 46 with IEE and 181 small projects with EMP while 11 have no any environmental management document. Also, for SVK has 91 projects, of over 90% meet the ECC (3 projects with EIA, 14 with IEE and the rest as small projects with EMP.
- Numbers of staff trained on general and specific topic including an evaluation of hydropower and mining projects as ca. 50 staff per province involved. These participants joined at least one while some has more than one training event. At least 5 staff with satisfactory to excellent knowledge and skills both for BLKX and KM but lower in SVK.
- Numbers of officials and communities were disseminated on environment issues and the needs made the people in the target provinces received environment related information for and made them aware on environment issues (see picture below). Other provinces, disseminated environment campaigns on TV and Radio program which has similar outputs.



**Social aspect (also see Box C1)**

- The grievance guideline of BLKX and KM available and adopted by each province for official use. A total 89 books distributed in BLKX and 600 books in KM. This guideline is important tool for addressing conflict resolution on social issues associated with any development projects. The guidelines and database system of grievance available in BLKX and KM which is very important tool for long-term project monitoring.
- Conducted consultation workshops at district and provincial levels for identifying key social issues associated with development projects especially mining, hydropower and large plantation projects. At the same time, some data collected and then improved for project checklist to track for ensuring those development projects meet with ECC.
- The trained district officials and villagers able to implement the grievance work in using data forms, data entry and using the database to monitor which indicates a status of case number are resolved or pending. Data forms available in district and villages so any issues reported to village cluster or district authority. Some data pass on to SMU unit of PONRE. The trained staff at provincial office responsible for data entry has improved the database which this has done well in KM.
- Village and district committee were established, BLKX has 23 villages with 8 members at province, 27 members at district and 135 members at village level. For KM have a total of 59 villages with 17 members at province, 61 members at district and 295 members at village level. These members were trained and at some level of ability to assist and address the grievance issue within their village clusters and district.
- Completed a number of trainings (7 times including invited for participation by other organizations such as National University of Laos and DESIA which at least 2-5 staff participated. The training including on EIA work for PONRE and all District Offices of Natural Resource and Environment. The trained staff are able to do report (quarterly and annual reports) for the project and the provincial authority which show in their capacity to address most complaints in the provinces.

- Completed study tours for provincial and district officials both within and outside the country such as to Vietnam on hydropower project (5 people), to Thailand (5 people), to China (2 provincial authority) on resettlement and to Feuang District on resettlement (13 district and provincial officials. Site visit through grievance system helped some development project and affected people to address their environmental issues as well as social conflicts associated with some development projects.
- Term of Reference for Social Management Unit available and this unit is adhered to PONRE. This unit although is not clear for its niche and this for social it is necessary going along environment impact assessment.

***The immediate outcomes as many cases, through the grievance system made a number of projects have been addressed as below:***

- For BLKX, 238 cases of complaints as 54.4% related to floods while another 46.6% including 70 cases of gold mining projects, 25 cases of Koikolao, 14 cases of land use conflicts in Houya Ngoua PPA, 2 cases of rubber tree plantation. Which 229 case or 96% were solved and 9 cases are ongoing process of solving at district levels.
- For KM, 82 complaints, 80 cases (97%) solved satisfactorily but only two cases are not completely addressed, disseminated on grievance proceeded in 6 districts. One of the two projects having not being well addressed in KM during the assessment such as Kali salt processing factory (see picture below). During the LENS completion workshop at the province on April 29, 2013 it was updated that 283 complaints, of which 277 complaints (93%) have been solved. The complaints on mining have not been well addressed in the province. Finally, as a whole by Mar 4, 2013 the grievance of the province addressed by 98%. While the complaint due to the Kali salt processing factory was better addressed as the effected villagers were given some satisfied compensation.

Remark: this factory is invested by Chinese, the salted water in the storage flows over to paddy fields of local villagers in wet season made rice product lost and also impact on nearby streams that killed fish and aquatic resources made local living difficult.



Kali salt processing factory

Box C1: Summary of activities related to grievance mechanism

Database of the grievance mechanism in Khammouane has been in place and operational. From November 11, 2011 to March 4, 2013 data show a total of 284 complaint issues submitted mainly in Thakhek, Hinboun and Nongbok District. Thakhek District has 8 villages concern and 134 complaint issues, of which Ban Dong Tai (79 issues), Ban Dinchi (22 issues), Ban Napho (17 issues) and Ban Nongpheu (12 issues). Most of the complaints in this district related to mining – Kali salt processing factory were solved at village cluster as some compensation given to the effect people. Hinboun District has 8 villages concern and 89 complaint issues, of which most in Ban Boneng (82 issues) on mining issue. Four complaint issues addressed at district level but the problem was likely completely solved (99%). Nongbok District has 14 villages concern and 61 complaint issues, of which Nalek (19 issues), Ban Nahoun (15 issues), Ban Nachampa (15 issues). Most of the complaints in this district related to mining. But the problems were completely solved at village cluster while 2 issues addressed at district level. As a whole by March 4, 2013 the grievance of the province addressed by 98% as one percent better than the previous assessment.

- In conclusion, there is 5-8 staff with satisfied to excellent skills in handling this work in each province. Although Social Management Unit was not established it is now adhered to and then part of the PONRE practice o ESIA. Anyway, in comparison, the sub-grants under this sub-window on average have gained outputs for 73.25% against the expected outputs summarized as below:

Project Dev't Objective (PDO)	Outcome Indicators (per original by Sep 2010)	Description of the indicators set, refocus and progress made by 2010	Against the expected outputs by 2012
A1. Environment and social monitoring and policy implementation support; PESAPs	PESAPs available and adopted in three provinces and effectively implemented	<ul style="list-style-type: none"> <li>- PESAP published with some trainings done;</li> <li>- A database for monitoring environmental performance</li> <li>- especially the database for tracking type and number of development projects for which ECCs established and tested at national level;</li> </ul>	Improved official capacity, database, monitoring system in place for the 3 provinces. Complaint handling mechanism functioned in BKX and KHM. SMU has been officially established and adhered to PONRE to functions well today.

### **C1.3 Outcomes and Impacts for PICE A1**

#### **Environment**

With the availability of PESAP as important reference material which made the target provinces and districts have direction on environment management and be integrated into socio-economic development plan. Of course, the strategies are the tool for the officials to use and be translated into practice. Therefore, some projects within the PESAP have been already implemented such as 7 projects in KM and some in other two provinces. All new proposed development projects in the provinces submit their environment reports (IEE or EIA) to the Environment Division of PONRE, consulted with this division on any environment issues and always invite to insight on the ground or join a series of meetings. This is really different from the past as often the environment division had barely been invited for consultations.

Since the intervention of EPF that created a number of provincial officials and provided opportunities for them to plan, manage and implement projects today. Forward better environment protection and natural resource management as many environmental issued related have been addressed. Although some issues pending to be completely addressed it is very much better than no any mechanisms to help mitigate adverse impacts. The provincial officials able to advise some investors who have not completely complied with their environmental and social responsibilities to improve their performance better.

The provincial staff has sufficient knowledge and skills that able to prepare project proposals, manage, implement and evaluate their projects. Of which, KM has most strong capacity in environment management according to the PESAP and address environment issues by ensuring the development projects complying with environment standard and social safeguard according to the EIA decree.

Provincial and district staff of these provinces able to prepare and made success in funding mobilization. As part of their assistance made therefore a total of 71 projects funded from EPF and some other from GEF small grants. In this regard, provincial authority considered that the environment division and forest resource management division of the provinces have most strong technical capacity compared to other divisions of the provinces. Through the efforts natural resources of the provinces have better managed. A site to site community-based management is important for scaling up in the future.

#### **Social**

Guidelines for grievance and with sufficient number of trained staff available to handle environment work that made solve a majority of the cases reported to the provinces. The grievance guideline requires the village to make a report to the village cluster and then the district level. Many complaints have been addressed at the village cluster first and then the district which district grievance committee available to make decision. Those trained district staff with some good ability in dealing with grievance work. District official keep collecting data based on the given form and send to the Environment Division of PONRE for data entry. As a whole, the grievance system has been in place for the provinces and well

functioning today in KM and quite well in BLKX. Although some forms are not completely appropriate and some complicate for low education person to fill out it is good initial and quite systematic today.

As a whole the assessment shows that the outcomes or success of this sub-window made for 65.9% which indicates in the performance of staff toward the environment protection, social responsibility. Also, local villagers able to report their cases openly and to claim their rights to ensure health safety. KM PONRE shows most satisfactory performance according to the number of the total complaints made very high. It can be said 100% that the cases were in the process but 97% is the affected people happy. Later, by May 2013 more number of complaints received and that 93% of the cases was solved. Only two cases in KM have not been completely addressed e.g. Kali salt processing factory that impact of salted water spilt into freshwater and some agriculture adjacent to the factor that damaged aquatic resources. Although the company compensated for the effected people the impact on natural resources due to some engineering problem has not been well solved.

The impacts are that decision-makers to take action and response to environment issues by issuing environment statement, action plans, directives, regulations, guidelines and hold some public campaign events. Many official stakeholders raise environmental issues and better take side affected people. While, local villagers reported on their environment issues to district and provincial authorities by their own. Village authorities are certainly able to make grievance matters to district authority. All development projects are now inspected and required to obtain at least EMP. As this, all new development projects are now complete with environment assessment before the project to launch on site. However, this impact is not always because of the EPF project intervention, but also by Strengthening Environment Management (SEM) project.

The difficulty for environment work is that some stakeholders have not considered environmental issues as important; equipment support for monitoring is lack such as equipment for testing water quality and vehicles for fieldwork. Whereas, the difficulty for social work is that some companies have implemented their projects for long time without detailed environmental impact assessment and mitigation measures. Also, some villagers had complaints without sufficient justification and report without detailed information is some issues. Moreover, some villagers do report to the District or Provincial Governor's Office directly which sometime the relevant district and provincial authorities just don't know. This indicates that local villagers have been well aware of their environment issues and that have right to contact and report directly if any delay in a problem solving at locality.

## **C2: PICE A2 (Integrated River Basin Management)**

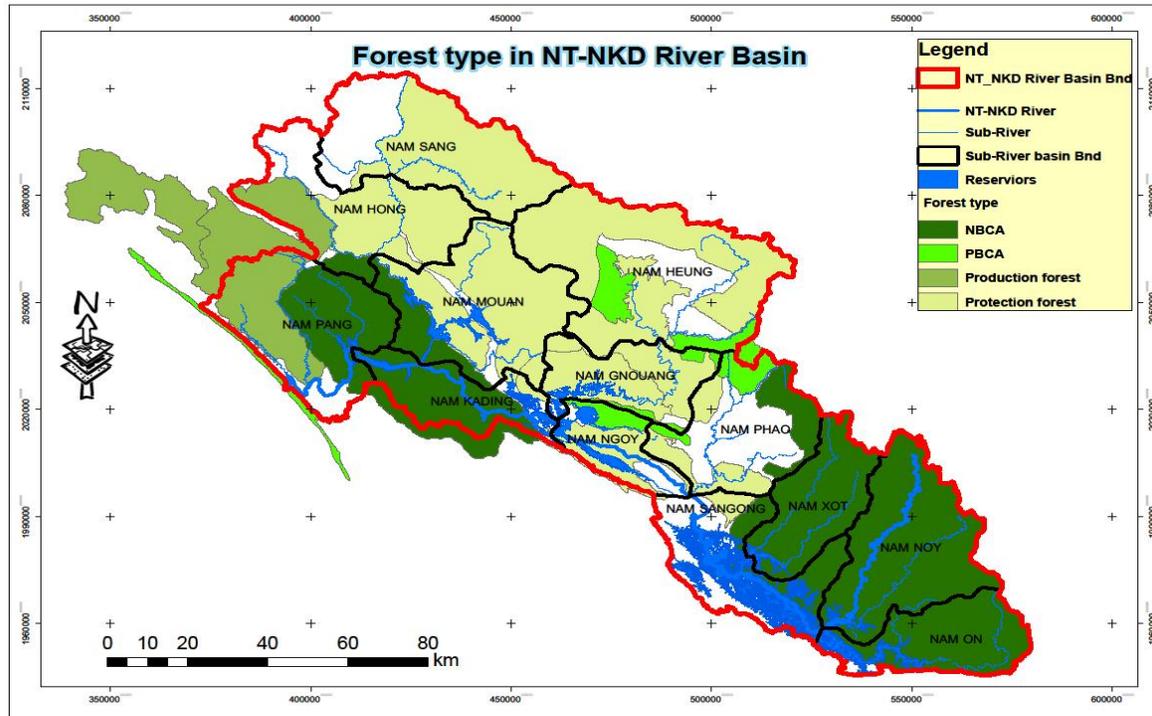
### ***C2.1 Key Activities for PICE A2***

NT-NKD RB has 11 districts of three provinces (BLKX and KM, of which 1 district of Xiengkhouang Province. To ensure the project effectiveness protection in watershed management, to provide riparian communities to be available using water resources and improve their livelihoods. The advantages of this project, government staff has an opportunity to practice how to develop an appropriate model for integrated river basin management which can benefit for Lao PDR. For a readiness of the river basin management, there is a need to form

the river basin committee, the decree to support the implementation, build technical capacity to monitor and minimize cumulative impacts of the development activities; working space for the secretariat and general river basin outreach.

There are a series of 3 sub grants(US\$ 0.74 million)aiming for building a platform on Nam Theun-Nam Kading (NT-NKD) River Basin Management during 2007-2012. These sub grants were reviewed. The basin has been divided into 13 sub basins for management planning (see Figure C1.5).

Figure C1.5. Sub-basins of Nam Theun-Nam Kading River Basin



At the same time, other 6 sub grants implemented in the basin including Community Conservation Network (CCN) which is the key ground project work in the basin on improving local livelihoods and reducing their complete reliance on natural resources. This is believed to gain the co-management of local communities in natural resource management, the watershed, and biodiversity as a whole. Whereas, PESAP sub grants help improved provincial capacity and some legal arrangement to support the work of natural resource management, social safeguard of SMU, protected area management and other small sub grants conducted in the NT-NKD Basin and a special paper on NT-NKD implementation model has been developed (see Annex E).

With the strong support of WREA/MONRE, the NT-NKD River Basin Committee Secretariat (RBCS) has been established in BLKX but most of the staff deployed from the national level and hired expatriate and national Technical Advisors as well as contract staff to help in the start. Some key staff assigned from key provincial divisions and districts to work at the secretariat office, based in Paksan District, Bolikhamxay Province.

Later, the NT-NKD RBC was established as president by the Governor of BLKX and deputies are Vice-Governors of BLKX and KM, with a total 28 members from key relevant provincial departments of BLKX and KM, relevant district governors (7 districts) and some key relevant departments of MONRE.

Capacity building of provincial and district officials conducted along the project period through some classes and on-hand experience as 13 staff was trained for 4 months, of which 7 were officials from two target provinces and districts. Four provincial officials from PONRE of BLKX and KM had worked at the secretariat office for 5 months. Conducted a training on GIS and Remote Sensing tool kit and there were 25 participants joined. As well as, conducted training on integrated river basin management where 10 villages of Pak Kading District and officials made a total of 85 participants. The environment campaign was conducted at provincial level through radio program for one year. The Integrated River Basin Management Plan was developed and presented on stakeholder's workshop, and participants were provide and contributed comments to the plan. In addition, through other sub-grants contributed to the improved provincial and district capacity in this regard.

The Nam Tern Nam Kading Office was organized a study tour for the secretariat and relevant officials to visit Nam Theun2 hydropower project. Through the River Basin Plan developments, a number of consultation workshops with stakeholders conducted. The Decree of Prime Minister no. 004 to support the NT-NKD RBC which was declared 4 January 2011 and its available upon requested. The committee established with TOR available, the first River Basin Management Committee was held on October 29, 2012 after the decree issuance.

The basin profile was developed by the secretariat and assistance from all participating district coordinators, key provincial divisions. At the same time, created basic database with sub-basin map was digitized. Most importantly and direction of the basin is the availability of Nam Theun-Nam Kading River Basin Strategy and Management Plan that conducted through a process of consultation.

In comparison, the sub-grants under this sub-window on average have completed for 58.33% against the proposed activities and expected objectives as some important activities were conducted. The project was delayed due to taking too much time for obtaining an approval on the Prime Minister's Decree and appointment of the RBC members, as well as renovation of the secretariat office. Although the Nam Theun-Nam Kading River Basin Strategy and Management Plan drafted it is subjected to be revised to satisfy the committee.

## **C2.2 Key Outputs for PICE A2**

The project has made some outputs including the availability of the Prime Minister's Decree on River Basin Committee available to support the NT-NKD River Basin management. The success of NT-NKD RBC establishment with the ToR is available. Prior to this, Nam Kading River Basin Secretariat Office established in Paksan District as firstly just in charge office. The secretariat office with project team is in BLKX, and technical staff was trained and ready for fully operation of the basin management. At the same time, a number of provincial and district officials were trained on the job-training at the secretariat office that able to assist the secretariat. Seven officials assigned as focal point of the secretariat

office in the participating province and districts able to continue to function as secretariat coordination while they are based in their districts.

Through a series of workshops, consultations, training and study tour those key stakeholders of the province understood the need of NT-NKD River Basin management. Through the preparing phase, data collection in the basin has been fairly completed and that the basin profile has been developed. Although some more improvement needed it is useful pack of the basin. Data available has been filed and treated as semi-database which the trained staff able to demonstrate some data need quite effectively. Finally, the final draft of the strategy on Integrated River Basin Management (2013-2020) and the Action Plan (2013-2017) with Year one plan are completed.

In comparison, the sub-grants under this sub-window on average have gained outputs for 53.33% against the expected outputs which were summarized as below:

Project Development Objective (PDO)	Outcome Indicators (per original by Sep 2010)	Description of the indicators set, refocus and progress made by 2010	Against the expected outputs by 2012
A2. Integrated river basin management	Framework for addressing cumulative impacts in NT-NKD in place	<ul style="list-style-type: none"> <li>- Progress in a consultation process on understanding of various stakeholders on cumulative impacts;</li> <li>- NT-NKD river profile was completed;</li> <li>- Ongoing for identifying priority issues facing NT-NKD and the need to set up RBC; 50% of grievance has been solved.</li> </ul>	RBO/RBC is in place and started its function but some expected outputs are incomplete. The project delay due to change in the GoL structure as new MONRE established. Meanwhile, some number of grievance addressed through other EPF sub-grants, SMU

### **C2.3 Key Outcome and Impacts for PICE A2**

Nam Theun-Nam Kanding River Basin Committee and the secretariat have been in place with the Prime Minister's Decree to support the establishment, implementation of the river basin management. The availability of this secretariat and the river basin committee made international community including donors are interested to support the basin management. The provincial authority and official considered that the strategy or action of the NT-NKD River Basin is necessary to cover the whole provincial relevant sectors so a success of the basin management is the success of those sectors especially for Bolikhamxay Province because about 90% of the province is located in the basin.

Since Lao PDR has developed a number of hydropower projects so the model of integrated river basin management started in the NT-NKD River Basin. It contributes to the watershed management most importantly to environment therefore the support for the hydropower development project is larger.



### **C3: PICE A5 (Environmental Education and Awareness)**

#### **C3.1 Key Activities for PICE A5**

General environment awareness among Lao people is considered low, not really appreciate their values of natures although they are based upon them for daily consumption and sale. For PICE A5, there are 19 sub grants (\$0.3 million) comprising 17 small subgrants distributed widely at national level and provincial level and two medium sub grants (\$80,000 each) one for NUOL and one for LFNC. Key sub grant activities could be categorized as: (1) incorporating environment into curriculum, (2) outreach through radio program, (3) building capacity on social safeguard, (4) national guidelines on ethnic group consultation and (5) other general public campaign e.g. free chemical vegetable promotion.

Key activities of this sub-window were carried out including public environment campaigns through various Medias such as radio program implemented by national radio program. Some other important public events such as environmental awareness campaigns were conducted by many organizations.

For the radio program was much about Hmong and Khmu radio program that produced 52 episodes and 3 slogans, on-air once a week at noon for 30' covers in 8 provinces so 70% of the Hmong especially in rural area received the information. The radio team visited some rural villages to get the local condition in Mueng Hom before designing the episodes and slogans. This means of communication is quite effective as wider audience received the information.

Particularly project provided trainings and study tour for project team, decision-makers on varying topics on social safeguard. Disseminated Lao environment monitor as well as provide environment information to civil society. Integrated environment into curriculum of four secondary schools and it made availability of textbook and teacher guidebooks.

Developed guideline on social safeguard, social impact assessment with training and conducted a number of workshops made a total of 131 participants. Conducted study tour for 9 times, a number of materials produced including the guidelines for social impact

assessment, then formulated into short-term training program and on plan for incorporating this work into the University curriculum (see also Annex E). Developed the guideline on ethnic group which is being revised during the assessment.

There were developed courses on Non-Timber Forest Products (NTFP) and eco-tourism. TV and Radio program on environment including Hmong and Khmu Radio and newspaper in Savannakhet. As well as, improved the herbarium of Faculty of Science (FoS), NUOL and botanical garden at KM 14 and public can be accessed. This is also some sort of activities related to or support public to gain opportunity to explore nature particularly for students.

Conducted aware campaigns on wildlife trade and hunting issues in local markets such as in Thong Many and Nam Thon where the hot market of wildlife trade in the country. This, specific brochures developed and over 1,000 brochures distributed while on site campaigning. Promoted free chemical vegetable promotion in Ban NoyXiengda, processing and brandy by working and contributing to many organizations, resulted in availability of regularly twice a week market for free chemical vegetables for Vientiane people at That Luang. Groups of farmers were trained on making bio-fertilizer, able to use and transfer knowledge gain to other interested farmers.

In comparison, the sub-grants under this sub-window on average have completed for 75.75% against the proposed activities and expected objectives (see more in output section).

### **C3.2 Key Outputs for PICE A5**

The sub-grants given and made satisfactory outputs by increasing in environmental awareness among Lao people that base on the group interviews they knew the environment issues and importance of the protection. Environment materials published and ready used in the country for some groups of people e.g. guideline on social safeguard and guideline on ethnics being finalized.

To supplement the guidelines for social impact assessment, a number of materials published, formulated into short-term training program and on plan for incorporating this work into the University curriculum. For the social safeguard, a project technical team for developing the guideline Social Impact Assessment (SIA) and Social Safeguard (SS) was formed from mainly lecturers of the Faculty of Social Science, 30 partners (18 in the country and 12 in abroad) are in the network, conducted 6 training events had 131 people), organized study tour (9 times, 95 participants). So far, 385 students were trained as 229 students in social safeguard and social policy related. Of which, 150 students of 4 faculties on social safeguard, 79 students (37 women) on social policy and social safeguard, 87 students on social impact assessment.

Some syllabi, two courses of NTFPs and eco-tourism, insert environment content into textbooks of biology subject available and tested in four secondary school in Vientiane and Vientiane Province e.g. Phone Mee Secondary School and also in Vang Vieng. Brochures designed for reducing wildlife hunting and trade were disseminated in 5 villages of 3 ethnic groups in Thong Namy and Namthon which involved relevant sectors, along the public campaign, the team also worked with elders. Some environmental awareness such as cartoon booklets, brochures, dramas, slogans, posters produced and distributed widely.

Through radio program such as Hmong and Khmu were on-air for one year for Hmong language made 52 episodes and 3 slogans produced and covers 8 provinces where Hmong live as 70% of the Hmong especially in rural area could receive the information. This small-grant is quite effective and disseminated in large area of the country.

Free chemical vegetable has been promoted and market available twice a week at That Luang made interested to the VTE people increase in using the bio product. A group of 15 families were trained how to plant free chemical vegetables using bio-fertilizer has been part of this success. It is now promoted to be three days a week market.

Hin Namno co-management plan was developed through a process of stakeholder consultation as 50 GoL staff at district and some from the province were trained, and some participated in the workshop, joined biodiversity monitoring with local villagers. Designed and agreed on core zone, controlled use zone. This co-management plan is the first has been approved and that the government rated as appropriate for protected area management in Lao PDR.



Other sub-grants within this sub-window are Safeguard for GEF5 was produced for the proposed GEF5 projects in Nam Et-PhouLoey and Nam kading NPA, but now moved from Nam Kading to Nakai-Nam theun and Xebangfai basin. This safeguard document can help ensure the project success.

In comparison, officials gained knowledge and some skills in environment, biodiversity conservation and project management (planning and reporting). It is therefore rated that the sub-grants under this sub-window on average have gained outputs for 69.72% against the expected outputs which were summarized as below:

Project Development Objective (PDO)	Outcome Indicators (per original by Sep 2010)	Description of the indicators set, refocus and progress made by 2010	Against the expected outputs by 2012
A5. Environ. Awareness raising	Environmental Education and Awareness	<ul style="list-style-type: none"> <li>- Involvement of 21 sub-grants to conduct public campaign on environment.</li> <li>- Training on social impact assessment and monitoring.</li> </ul>	<p>19 sub-grants completed</p> <p>Official capacity on EIA and social safeguard improved, environment guidelines, some syllabi for secondary</p>

			school and other strategies and guidelines available
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### **C3.3Key Outcome and Impacts for PICE A5**

There are a number of small and some medium sub-grants made the Lao citizen have been awareness on environment with some environmental materials available to public. The outstanding is that the people aware of consequent impact on health from using chemical fertilizers, while promote on bio-product by using free chemical vegetables. Promoting free chemical vegetables in Ban Noy Xiengda is one of the sub-grants has been some success. With other organizations working toward promoting free chemical vegetation made this work has been progress in Vientiane.

Right now, market fairs on bio-product is organized twice a week. It looks so far so good that urban people interested in the product made more gardeners encourage to plant vegetables to supply the market needs. Firstly, a weekend market was held on Saturday at That Luang, then twice a week and now suggest to have three times a week. This indicates the interest of Vientiane people on promoting environmentally gardening is increased. The gardeners in some provinces including Vang Vieng and Champasack Province have planted free chemical vegetables to supply the Vientiane market. However, this success is because of many organizations working in harmony to promote this work successfully.

The medium sub-grant is that the social safeguard training implemented by National University of Laos which brought a number of officials at different levels including private sectors to involve in a series of training and a process of the guidelines development on social safeguard. This made the participants aware the need of social work associated with development projects. Particular impacts are not obvious today but likely highly potential in the future when social safeguard and ethnic groups are in the consideration and decision process of large development project investment in the country.

At the same time, safeguard for GEF5 has been developed to ensure the project sustainability and the government commitment. In addition, Hin Namno co-management plan was available with an approval by the Department of Forestry and effective in 2010. GIZ, German Government has then funded the plan an amount of US\$ 2.5 million for a three-year project. It is made the forest resource of Hin Namno NPA better protected. For other small sub-grants, through radio program made rural people aware the importance of environment protection and become ownership in their natural resource protection but it is quite hard to measure since no baseline of those sub-grants identified prior to the projects.

Although sub-grant under this sub-window is mostly a small grant project it provides important achievements in building capacity of project implementers, the officials. Environmental awareness rising for community is vitally essential to be invested for long-term goal especially through Radio, TV and incorporate in formal curriculum but this outreach stuff to be carefully designed to target the audiences appropriately. Most successful sub-grant is because the ownership of project manager, support by its project steering committee, clear on the project with key stakeholders. Through a process of consultations, training or study tour is important to build capacity of the project stakeholders.

**ANNEX D**  
**Key Findings from CBI B1 and B2 Subgrants**

## **Annex D Key Findings from CBI B1 and B2 Sub grants**

There are 59 sub grants (\$1.21 million) provided through the CBI B1 for strengthening effectiveness of protected area management of which 17 subgrants from BLKX, KM, and SVK and 2 sub grants from the central agencies were reviewed and assessed. These sub grants aimed for developing protected area management plans, zoning, boundary demarcation as well as updating PA regulations through a process of consultation with key stakeholders. Under CBI B2, 56 sub grants (\$0.96 million) were provided to engage local communities with an aim to promote conservation of biodiversity in which 55 small sub grants were provided directly to local communities and one large sub grant (\$0.52 million) was provided to BLKX for CCN sub grant in NT—NKD under LENs Additional financing. Of the 56 CBI B2 sub grants, 17 sub grants including the CCN for BLKX were reviewed and assessed.

This annex presents the key activities, outputs, and outcome and impacts of the CBI B1 sub grants (Section D1) and CBI B2 sub grants (Section D2) as well as the advantages and disadvantages of different implementation models for community sub grants (Section D3) and some success and failure stories from the CBI B2 sub grants (Section D4).



### **D1: CBI B1**

#### **D1.1 Key Activities for CBI B1**

Key activities included development of protected area management plans, zoning, boundary demarcation as well as updating PA regulations through a process of consultation with key stakeholders and they the activities included:

- Conducted workshops at all levels of 3 target provinces for brainstorming on protected area management and planning and selection of priority PA for development of management plans in line with LENS development indicators. Six main provincial protected areas (PPA) comprising Phou Chomvoy and Houy

Ngoua in BLKX, Khounxe Nongma and Pha Thambing in KM, and Laving-Lavern and Dong Natad in SVK were selected as priority PPAs.

- Completed the preparation of the management plans for the 6 PPAs including the survey and demarcation of boundaries which were considered as priority for the PPA management plan.
- Developed regulations for protected areas management of the 6 PPAs, including completing most of land and forest allocation in the PPAs. In order to support this work, the sub grants helped establishing district and village conservation committees for PPA management. Through the sub grants, many officials, villagers and students were trained and the checkpoints for some NPAs e.g. Houy Ngoua, Dong Natad PPA, Phou Chomvoy were constructed (see picture below).
- Established village foresters, village patrol teams and village networks as the project conducted flora and fauna surveys in all those 6 PPAs, in particular. To support for the management plan development, socio-economic data of those PPAs were carried out. Some protected area has some semi database especially Laving Lavern, Phou Chomvoy, and partly Houy Ngoua PPAs. Supports were also provided to some development activities in PPAs e.g. tourism facilities in Dong Natad and Houy Ngoua PPAs.
- Conducted a series of training for officials and PPA villagers on PA management, of which 18 PA staff were comprehensively trained by the Wildlife Conservation Society on protected area management and planning. About 15-20 PA staff per province was trained through short-training, study tours and on-job-training. Important activities identified in the year one of the management plans of those 6 PPAs have been carried out – ca. 64% as major of them completed before the management plan approved (see detailed in Annex 5 - B1). Provided some basic equipment for protected area management such as motorbikes, GPS, camera, binoculars etc.
- 4 additional PPAs in Bolikhamxay (Phou Ngou, Phou Kadan, and Nateu) and Nam Sanam in Khammouane province have their boundaries identified and signboards installed with general outreach activities. Conservation awareness rising was conducted for officials and villagers in the protected areas.

### **D1.2 Key Outputs for CBI B1**

Most of the sub grants could produce satisfactory outputs and the key ones are highlighted as follows:

- Nine provincial protected areas have clear boundaries with demarcation posts and signboards e.g. 140 signboards for 60 km in Khounxe Nongma PPA. For the six

priority PPAs, the PPA management plans were completed and approved by the provinces. District and village committee for the PPAs have been established. The activities are identified under three categories: Basic requirements Outreach/patrolling, and Biodiversity monitoring (see Table D1 below).

- Village patrol teams, village foresters and village network have been formed as the key player for the protected area management. The local villagers of the 6 PPAs received conservation awareness training including relevant laws on forestry and wildlife. Land use planning was completed in most those six PPAs except Khounxe Nongma and Laving Lavern because they are large. These protected areas have boundaries and zonings done as important initiative. All the PPAs completed socio-economic surveys, flora and fauna survey including Saola survey in Khounxe Nongma PPA (see picture below).
- All relevant district officers of the participating districts including Bolikhan, Bolikhamxay, Boualapha and Vilabouri participated in the planning process of the protected area management. Regulations of these PPAs available with some enforcement and at least 50 officials were trained, of which 18 PA staff received comprehensive training on PA planning organized by the Wildlife Conservation Society (WCS). The trained staff was able to demonstrate their knowledge and some of them can teach other interested staff particularly on outreach activities especially the staff in Bolikhamxay and Khammouane.
- Tourism facilities available in Dong Natad and partly initiative in Houy Ngoua PPA where some basic equipment available for protected area management. Patrolling and some law enforcement are ongoing by local authorities during the assessment period except Dong Natad PPA.
- On average the sub grants under the CBI B1 could produce outputs of about 75% against the expected outputs.

Table D1. Assessment of the implementation of the priority activities identified for the six PPAs		
PPA management	Year One of Five Year Activity	Remarks (as of November 2012)
<b>Average for the six PPAs</b>		64%
<b>(PPA 1) Bolikhamxay: Phou Chomvoy</b>		Average 62%
<b>Basic requirement</b>	<b>Activities identified in Year One</b>	Equal budget is allocated for each year. The first year activity is not well defined. About 90% of the basic requirement activities were completed during the development of the management plans.
- Staff forming and straining	- Form the team and staff training done – <i>done</i>	
- Biodiversity surveys for zoning	- PA Zoning and boundary demarcation – <i>partly done</i>	
- Zoning and boundary demarcation	- PA signs – <i>done</i>	
- Regulations	- Purchased outreach instruments – <i>done</i>	
	- PA regulations – <i>done</i>	
	- Forest, NTFPs survey and demarcation	
	- Design conceptual model – <i>done</i>	
	- Develop work plan, mgt plan; – <i>done</i>	

	<ul style="list-style-type: none"> <li>- Establish road check point (4) – <i>done</i></li> <li>- Establish sub-station (4) – <i>partly done</i></li> </ul>	
<b>Outreach/patrolling</b> <ul style="list-style-type: none"> <li>- Outreach</li> <li>- Patrol</li> <li>- Enforcement</li> <li>- Development</li> <li>- Coordination (visit)</li> </ul>	<ul style="list-style-type: none"> <li>- Awareness materials produced e.g. poster, t-shirt, billboards, signs– <i>partly done</i></li> <li>- Establish green clubs</li> <li>- Outreach program at village and school – <i>partly done</i></li> <li>- Develop Radio spots</li> <li>- Distribute and propagation the wildlife Law – <i>done</i></li> <li>- NTFPS management</li> <li>- Improve technical skills of villagers – <i>partly done</i></li> <li>- Promote weaving groups in potential villages</li> <li>- Improve rice growth and yield</li> <li>- Encourage cash crop plantation</li> <li>- Promote domestic animal raising</li> <li>- Establish fish and frog conservation</li> <li>- Study tour for staff and villagers – <i>partly done</i></li> <li>- Develop tourism facility - feasibility study – <i>partly done</i></li> <li>- Develop view points, trekking</li> <li>- Develop regulations for tourism service</li> </ul>	About 30% of the activities identified under the plan is completed
<b>Biodiversity monitoring</b> <ul style="list-style-type: none"> <li>- Monitoring</li> </ul>	<ul style="list-style-type: none"> <li>- Identify zones for research – <i>done</i></li> <li>- Prioritize research project – <i>done</i></li> <li>- Scholarship</li> </ul>	About 65% of the identified activities were completed.
<b>(PPA2) Bolikhamxay: Houy Ngoua</b>		Average 60%
<b>Basic requirement</b> <ul style="list-style-type: none"> <li>- Staff forming and straining</li> <li>- Biodiversity surveys for zoning</li> <li>- Zoning and boundary demarcation</li> <li>- Regulations</li> </ul>	<b>Activities identified in Year One</b> <ul style="list-style-type: none"> <li>- Zoning and boundary demarcation – <i>done</i></li> <li>- Establish village networks with planning and training – <i>done</i></li> <li>- Establish check point (4) – <i>done (but only 1)</i></li> <li>- Survey on ecological data</li> <li>-</li> </ul>	Many activities identified in the year 1 were completed during the preparation of the management plan; About 70% of the year 1 activities were completed.
<b>Outreach/patrolling</b> <ul style="list-style-type: none"> <li>- Outreach</li> <li>- Patrol</li> <li>- Enforcement</li> <li>- Development</li> <li>- Coordination (visit)</li> </ul>	<ul style="list-style-type: none"> <li>- Staff training – <i>done</i></li> <li>- Enhance law enforcement e.g. team with planning – <i>done</i></li> <li>- Develop tourism facility – <i>partly done</i></li> </ul>	About 50% of the activities identified were completed.
<b>Biodiversity monitoring</b> <ul style="list-style-type: none"> <li>- Monitoring</li> </ul>	-	-
<b>(PPA 3) Khammoun: Khounxe Nongma–(with a clear year one activities)</b>		Average 70%
<b>Basic requirement</b> <ul style="list-style-type: none"> <li>- Staff forming and straining</li> <li>- Biodiversity surveys for zoning</li> </ul>	<b>Activities identified in Year One</b> <ul style="list-style-type: none"> <li>- Staff training on survey skills – <i>done</i></li> <li>- Land use planning in 8 villages – <i>partly done</i></li> <li>- Zoning and boundary demarcation – <i>done</i></li> <li>- Signboards for TPZ and other zones – <i>done</i></li> <li>- Established boundary marking posts – <i>done</i></li> </ul>	Most activities were carried out during the preparation of the management plan. Construction of sub-stations and feasibility

<ul style="list-style-type: none"> <li>- Zoning and boundary demarcation</li> <li>- Regulations</li> </ul>	<ul style="list-style-type: none"> <li>- Survey to identify corridor areas – <i>done</i></li> <li>- Establish info signboards – <i>partly done</i></li> <li>- Develop PA regulations – <i>done</i></li> <li>- Establish village conservation network – <i>done</i></li> <li>- Establish PA committee – <i>partly done</i></li> <li>- Saola survey – <i>done</i></li> <li>- Stakeholder meetings – <i>partly done</i></li> <li>- Construction sub-stations</li> <li>- Feasibility study on livelihood development</li> </ul>	<p>study on livelihood development has not been done. About 80% of the basic requirement was conducted.</p>
<p><b>Outreach/patrolling</b></p> <ul style="list-style-type: none"> <li>- Outreach</li> <li>- Patrol</li> <li>- Enforcement</li> <li>- Development</li> <li>- Coordination (visit)</li> </ul>	<ul style="list-style-type: none"> <li>- Design and produced outreach materials – <i>partly done</i></li> <li>- Conduct outreach activities including training – <i>partly done</i></li> <li>- Establish village patrol units – <i>done</i></li> <li>- Design for patrolling routes – <i>done</i></li> <li>- Conduct training on patrol and law enforcement – <i>partly done</i></li> <li>- Conduct patrolling – <i>partly done</i></li> <li>- Conduct patrolling outside the PA – <i>partly done</i></li> <li>- Villagers positioned in the guardian posts – <i>partly done</i></li> <li>- Study tour and exchange</li> <li>- Stakeholder meetings – <i>partly done</i></li> <li>- Improve working system</li> <li>- Develop sustainable financing mechanism</li> </ul>	<p>These are continuous activities; Patrolling has been carrying out regularly and irregular by villagers without PA staff. In year 1, two regular patrolling by PA staff and local patrol team was conducted. About 60% of the activities were completed.</p>
<p><b>Biodiversity monitoring</b></p> <ul style="list-style-type: none"> <li>- Monitoring</li> <li>- Coordination (visit)</li> </ul>	<p>Not in year 1</p>	
<p><b>(PPA4) Khammouane: Phathambing–(with a clear year one activities)</b></p>		<p>Average 75%</p>
<p><b>Basic requirement</b></p> <ul style="list-style-type: none"> <li>- Staff forming and straining</li> <li>- Biodiversity surveys for zoning</li> <li>- Zoning and boundary demarcation</li> <li>- Regulations</li> </ul>	<p><b>Activities identified in Year One</b></p> <ul style="list-style-type: none"> <li>- Continue the land use planning – <i>done</i></li> <li>- Zoning and boundary demarcation – <i>done</i></li> <li>- Signboards for TPZ and other zones – <i>done</i></li> <li>- Established boundary marking posts – <i>done</i></li> <li>- Continue establishing info signboards– <i>done</i></li> <li>- Develop PA regulations – <i>done</i></li> <li>- Establish village conservation network – <i>done</i></li> <li>- Establish PA committee – <i>done</i></li> <li>- Wildlife survey – elephant migration</li> <li>- Conduct stakeholder meetings – <i>partly done</i></li> <li>- Construction sub-stations</li> </ul>	<p>Only sub-station construction and survey on elephant migration have not been done. Compared with the plan activities, about 90% of the basic requirements were completed.</p>
<p><b>Outreach/patrolling</b></p> <ul style="list-style-type: none"> <li>- Outreach</li> <li>- Patrol</li> <li>- Enforcement</li> <li>- Development</li> <li>- Coordination (visit)</li> </ul>	<ul style="list-style-type: none"> <li>- Staff training – <i>partly done</i></li> <li>- Establish village patrol units – <i>done</i></li> <li>- Design for patrolling routes – <i>done</i></li> <li>- Conduct training on patrol and law enforcement – <i>partly done</i></li> <li>- Conduct patrolling – <i>partly done</i></li> <li>- Conduct patrolling outside the PA – <i>partly done</i></li> <li>- Villagers positioned in the guardian posts – <i>partly done</i></li> <li>- Study tour and exchange</li> <li>- Stakeholder meetings – <i>partly done</i></li> </ul>	<p>Most are partly done and some done since the activities will be conducted every year. For example, staff training is done but refreshment and other training topics are needed. About 60% of the activities identified in year 1 were carried out.</p>

	<ul style="list-style-type: none"> <li>- Promote cash crop plantation</li> <li>- Improve working system</li> <li>- Develop sustainable financing mechanism</li> </ul>	
<b>Biodiversity monitoring</b> Monitoring	-	
<b>(PPA 5) Savannakhet: Laving Lavern</b>		Average 55%
<b>Basic requirement</b> <ul style="list-style-type: none"> <li>- Staff forming and straining</li> <li>- Biodiversity surveys for zoning</li> <li>- Zoning and boundary demarcation</li> <li>- Regulations</li> </ul>	<b>Activities identified in Year One</b> <ul style="list-style-type: none"> <li>- Biodiversity survey for zoning – <i>done</i></li> <li>- Land use planning – <i>partly done</i></li> <li>- Zoning and boundary demarcation – <i>partly done</i></li> <li>- PA regulations – <i>done</i></li> <li>- Establish office and sub-stations– <i>partly done</i></li> <li>- Training need assessment</li> <li>- Establish village conservation team – <i>partly done</i></li> <li>- Set up database – <i>partly done</i></li> </ul>	Most are partly done and some done. About 60% of the work identified in the year 1 completed.
<b>Outreach/patrolling</b> <ul style="list-style-type: none"> <li>- Outreach</li> <li>- Patrol</li> <li>- Enforcement</li> <li>- Development</li> <li>- Coordination (visit)</li> </ul>	<ul style="list-style-type: none"> <li>- Staff training – <i>partly done</i></li> <li>- Awareness materials produced – <i>partly done</i></li> <li>- Distribute and propagation the wildlife Law – <i>done</i></li> <li>- Patrolling – <i>partly done</i></li> <li>- Promote cash crop and other crop plantation – <i>partly done</i></li> <li>- Promote in plant and enrich NTFPS plantation</li> <li>- Promote livestock raising, cattle – <i>partly done</i></li> <li>- Promote handicraft – <i>partly done</i></li> <li>- Conduct dissemination of relevant laws – <i>partly done</i></li> <li>- Village development fund – <i>partly done 1 village</i></li> <li>- Tourism development feasibility study</li> <li>- Marketing analysis</li> </ul>	Most are partly done and some done. About 50% of the work identified in the year 1 done
<b>Biodiversity monitoring</b> Monitoring	-	-
<b>(PPA6) Savannakhet: Dong Natad -- Year 1 activities were not clearly defined</b>		Average 60%
<b>Basic requirement</b> <ul style="list-style-type: none"> <li>- Staff forming and straining</li> <li>- Biodiversity surveys for zoning</li> <li>- Zoning and boundary demarcation</li> <li>- Regulations</li> </ul>	<b>Activities identified in Year One</b> <ul style="list-style-type: none"> <li>- Form the team and staff training done – <i>done</i></li> <li>- PA Zoning and boundary demarcation – <i>partly done</i></li> <li>- PA signs – <i>partly done</i></li> <li>- Draft PA regulations, – <i>done</i></li> </ul>	PA zoning, boundary demarcation and PA sign has not been completed; About 70% of the year 1 activity completed.
<b>Outreach/patrolling</b> <ul style="list-style-type: none"> <li>- Outreach</li> <li>- Patrol</li> <li>- Enforcement</li> </ul>	<ul style="list-style-type: none"> <li>- Awareness materials produced Radio spot – <i>partly done</i></li> <li>- Regular and irregular patrolling – <i>partly done</i></li> <li>- Law enforcement – <i>partly done</i></li> </ul>	Livelihood development activity has not been done, only local patrol. About 50% of the year 1

- Development - Coordination (visit)	- On-the job-training for livelihood development - Monthly and quarterly meetings – <i>partly done</i>	plan was completed
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### D1.3 Outcome and Impacts for CBI B1

*Background:* The main project area that LENS project working is in the whole range of Northern Annamite Mountain Range (Sai Phou Luang) and where the global habitat of critically endangered species such as Saola (see the picture below), and some number of endangered species such as elephant, tigers, gibbons etc.

*Potential impacts:* Demarcation boundaries of PPAs on the ground with management and some basic management are in place remarks some important success. Otherwise, many areas are potential to be converted to other purposes. Also, those 6 PPAs with sufficient fundamental management especially some trained staff available and ready for moving on the protected area management. When protected area boundaries are demarcated especially the development projects are aware and respect the area better. Laving Lavern PPA was promoted to be NPA in 2011 and Houy Ngoua District Protected Area was promoted to be PPA in 2008. Some illegal settlement and new settlers in the designated protected area have been relocated from inside the area. For example, 45 households who reserved the land in Houy Ngoua PPA illegally were removed. Since the success of this new provincial protected area management by Muang Mai Forestry Technical School, the Bolikhan’s District Governor allocated some 960 ha of degraded forest for Muang Mai Forest Technical School to be responsible by rehabilitating it and use it for academic research. Some protected areas have and are likely to have some funding support such as Khounxe Nongma PPA and Laving Lavern NPA from Sepone gold mining company, and Phou Chomvoy from Hinboun hydropower through WCS.

With some awareness raising, ownership built and arrangement of local patrol team, most those 6 provincial protected areas have been managed by local authority which they do regularly patrol in their village areas but this is quite failed in Dong Natad PPA. At least, with clear boundaries, zones and responsibilities of each village made the area have been protected locally.

The important impacts are that the provincial and district authorities consider the importance of forest protection by upgrading some protected area to provincial and also to national level. An increase more number of protection forests and very large areas declared recently in BLKX and KM shows the government willingness toward the forest resource protection. Nam Nhouang (Nam Yon-Nam Mon) Protection forest has as large as 524,409 ha and functions as important watershed of NT-NKD river basin. Also, one more Saola sanctuary, Phou Sithone was declared in the province.

The trained staff has sufficient capacity to plan, manage, implement and evaluate the protected area management projects. Therefore, the protected areas (ca. 9 areas) have been declared, aware by stakeholders as legally conservation forests made those forest areas have been maintained, healthier, some new forest areas generated such as some 300 ha in Houy Ngoua. Also, according to the village interview, more frequent encounters and evidences of

wild animals found. However, it should be noted that this impact is due to LENS as well as other efforts conducted by WCS, WWF, partly WMPA etc.

*Lessons learnt:* There are also success and failure of some sub grants on protected areas and the key ones are highlighted in Boxes D1 and D2 below.

<b>Box D1: Houya Nougat Provincial Protected Area in Bolikhamxay Province</b>
<ul style="list-style-type: none"><li>• Houya Ngoua Provincial Protected Area with an area of 3,960 ha is only the forest area remains closest to the provincial capital – Paksan District. It is actually important for the town people for recreation in the future. It was firstly established as District Protected Area in 2006 but it was finally promoted to Provincial Protected Area in 2008. There are 5 villages which their administrative boundaries coincide the protected area boundaries including Ban Somsavath, Ban Non Somboun, Ban Somseun and Ban Thaheau. Nam Ngiap is one of the Mekong’s tributaries runs through the area and therefore this forest section of dry evergreen forest maintaining some capacity ground water and watershed in the area.</li><li>• Although it is small remnant forest area it provides good ecosystem service and supports some value timbers such as <i>Pterocarpusmacrocarpus</i>, <i>Sindoriasiamensis</i>, <i>Dipterocarpusalatus</i>, <i>hopia spp.</i> etc. Also, some wild animals such as clouded leopard, barking dear, flying squirrel, wild pig, squirrel and a number of other forest birds including green peafowl, pheasants, hill myna, paid hornbill etc. Forest products are resin, rattan, bebeerines, bamboo etc.</li><li>• Due to the area is close to the town, hunting, logging and collecting forest products are an issue as well as reserve the land for tenure. Muang Mai Forestry School with the technical assistance from EPF in 2007 to work with Bolikhan District as well as Provincial Forest Resource Management Division on managing the protected area. Assigned staff responsible for implementing the project, received trainings on various protected area management including planning. The protected area has been planned through a series of consultation, clear boundaries and land use. Some 43 villagers who occupied some land in the protected areas have been withdrawn from the area. Most importantly, the intention of the Muang Mai Forestry School is to take advantage the area as open laboratory for their students that they can explore, learn some ecology and conduct students ‘research work.</li><li>• With the completion of its management plan in 2010 and trained staff, the area has been fully managed in cooperation between the school, the district and local villagers. The local villagers have involved in all patrols and law enforcement. Check points have been established and young lecturers with students are deployed to locate at the checkpoint in rotation basis. They conducted a regular twice a month patrol and also <i>ad hoc</i> response if any case. After funding ends the school has its own budget to implement the area particularly for patrolling and law enforcement. Although it is small budget solicit it works quite effective to maintain the area till today. The effort made at least 300 ha has been regenerated from fallows. According to the village interview they are happy to gain better forest condition of the protected area. It has been much improved and more frequency of wildlife is encountered. At the same time, the district governor and lecturers really recognize the importance of this forest patch to be protected. It is very useful for the students not only from the Muang Mai Forestry School but also secondary and primary students of the province. It is ever more important when Muang Mai Forestry School to provide a Bachelor Degree in the near future. Therefore, they against all ideas to convert the forest for any purpose.</li></ul>

- Based on the village reports there are more and large groups of wild pigs were encountered during patrols including calls of barking deer, forest birds etc. They realize that healthier forest in their area will improve water source since no more forest in the area apart from the protected area because all converted to plant cash crop plantation. Due to the success, the Bolikhan district governor allocated 960 ha of degraded forest for Muang Mai school to be rehabilitated for their academia purpose.
- Finally, it is however, as to better improve the site they suggested to have a sub-station inside the protected area, and enhance the area for tourism site to spot birds where trekking routes to be developed.



#### **Box D2: Dong Natad Provincial Protected area in Savannakhet Province**

- Dong Natad protected area was declared since 1961 but promoted to Provincial Protected Area in 2003. It is located close to the Savannakhet Provincial Capital as just 14 km to the east. The protected area has an area of 8,300 ha, just only one forest patch in the area and use for recreation. The protected area has mixed evergreen, deciduous and dry dipterocarp forest. The value trees are: Dipterocarpusalatus (Mai Nhang), Anisopteracochinchinensis (Mai Bak), and Lagerstroemia indicia (Mai Peuy), Shorea spp. (Mai Chick), Pentacmeasiamensis (Mai Hang) and Dipterocarpustuberculatus (Mai Kung). Wildlife species are mostly birds and glosser whistling duck but barking deer and wild pigs were reported today.
- There are 13 villages, of which 5 key villages are Ban Nong Kom, Ban Xaymoungkhoun, Ban Dongbang, Ban Khok and Ban Na That. The province has gained some income from eco-tourism in the area that target foreigners but very little government's budget allocated for the site management and tourism operation. In reality, apart from the tourism the area is important for educational purpose and recreation of the town people during weekends.
- Therefore, the area is worth protecting and managing systematically. In 2008, the protected area was funded by the World Bank through EPF with the project cost was 200,000 dollars for 2 phases in managing the area started from socio-economic data collection, land and forest allocation, forming patrol team, enforcement, established tourism facilities including viewpoints, treks and other equipment and finally management plan developed. Some environmental campaign but quite great

amount used for patrolling. The project was administrated by the Provincial Cabinet with some cooperation with relevant provincial offices as partners such as Provincial Office of Natural Resources and Environment (PoNRE) and Provincial Agriculture and Forest Office (PAFO).

- For the small area but used quite a lot of money is considered ineffective project. The cost per ha is 25 dollars and that the threats have not been curbed and tourism activities have not been well run. Therefore, this project was evaluated as moderate unsatisfactory as considered failed. The failure is because of the project design and public campaign on the site of importance has been insufficient. Instead, the project used a lot of enforcement which conflicts raised and that hard to build co-management with local communities. In addition, no technical expertise given to the project team in designing and implemented professionally.



*Remark: this is the viewpoint of Dong Natad PPA; tourists can detect some hundreds of wild ducks from this observation area.*





## D2: CBI B2

### D2.1 Key Activities for CBI B2

Many forest and wetland areas lie outside protected area without management in place although they are essential for local livelihood these resources are under threats. In order to gain better and build local ownership in their natural resource management, there are 56 sub-grants (\$0.96 million) under the theme of Community Environmental Development were used widely at all levels especially at district level that implemented by local communities. The project is mainly a small grant but effectively delivered that not only to improve a community-base natural resource management but also provided opportunity for the capacity building.

Key activities were carried out including establishing and declaring forest and water body areas in the participating provinces particularly outside any protected areas, with then completed with boundary demarcation posts. Zoning for protection of forest, water as well as aquatic resources and they are highlighted as follows:

- Conducted numbers of workshops especially at village level. District committee for overseeing the implementation and village committees in almost all the sub-grants of natural resource management were established. Established village conservation group and village conservation networks (12 villages of CCN project and other two more dozens in other locations such as 8 villages of Bolikhan District on fish conservation. In addition, village patrol teams for biodiversity monitoring and enforcement were formed.

- Conducted surveys of wildlife and other forest resources for management planning. Then, village regulations for natural resource management developed and disseminated including the laws on forestry and wildlife to local communities. Many of these sub-grants developed and published various conservation awareness materials e.g. posters & brochures. At the same time, some projects worked on livelihood development as to gain conservation objectives, appreciated the values and aware of health hazard from environment pollution. For example, planting free chemical vegetables in Pak Kading, bananas plantation in Ban Dong of Savannakhet Province.
- Sugarcane plantation in Bolikhan (see picture below), cassava plantation in Ban Palor and other villages of CCN have several activities e.g. plantation, corns, rice etc. Constructed some small scheme irrigations e.g. HouyThoad, dykes, canals etc. Developed and improved some tourism sites with some products for tourists available.

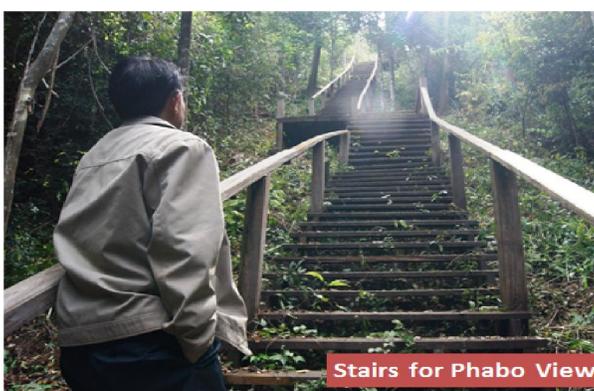


*Remark: some villagers earned good incomes and able to construct a house.*

- Conducted conservation awareness for local communities and officials. Established village development fund in some community such as 5 villages of Bolikhan District in Bolikhamxay Province and several villages in Savannakhet Province. Replant and rehabilitate forest and bamboo forest in the identified project areas. Conducted training for some thousands of villagers in the project areas.
- Some sub-grants working on wetland management, wildlife conservation such as Kha Nyou (Rock rat) is a living fossil as this species has been recorded extinct for 11 million years but rediscovered in Phou Hin Poun NPA in last decade(see some pictures below). Eco-tourism development is another project type funded.



*Remark: BeungVa wetland is one of famous wetland of Savannakhet province, just 15 km from Kaisone Phomvihane District, the capital. After fish conservation zone established in the wetland, local villagers living around the wetland gained more fish in wet season. Also, this site becomes popular tourism site of the province in dry season. Therefore, this wetland provides substantial incomes for the local communities*



*Remark: this stairs were constructed as co-financed by Xaybouathong District (50 million kip) including for road access improvement and toilets.*

- Most importantly, 12 villages of Community Conservation Network (CCN) in Nam Kading River Basin have been established as the specific activities carried out including village conservation committee in all pilot villages, designed and produced outreach materials for use in the village and radio program. Conducted outreach activity in pilot villages and communicated through radio program and other means.
- Conducted trainings for project team in livelihood development, mapping, outreach activities and revolving fund prior to the fieldwork. Training for officials on outreach and PRA especially for district officials was also carried out. Also, the project organized (by EPF) a study tour for officials and villagers to Thailand to see home garden, agriculture income family savings.
- Conducted land use planning, collected socio-economic data for village development and conservation planning. The land use planning activity made various zonings clear to the villagers, also village regulations in the pilot villages. Where potential, forest conservation and reforestation areas identified and demarked and signboards for different types of land use in the villages constructed. One of the important results as fish conservation zones (7 water pools) established in Nam Kading, in particular and some more in Nam Xane, Nam Ngiep etc. Provided villagers with training on livelihood development activities in annual crops – mainly cassava and

some livestock rising such as goats and pigs. Alongside village regulations for natural resources management developed and used effectively concurrently.

- Established village development fund in the pilot villages with each 55 million kip where village committee and agreement available to support for managing the fund was in each village. In order to enhance and improved the project activities it was agreed and that conducted regular village meeting. For CCN sub grant, quarterly meeting at provincial level for 6 times and at district for 9 times were held. In comparison, the sub-grants under this sub-window on average have completed for 92.58% against the proposed activities and expected objectives.

## **D2.2 Key Outputs for CBI B2**

A great number of sub grants produced substantial outputs that particularly community forest, wetland and water body areas are declared and managed through community-based conservation areas with clear boundaries, signboards, village committee and agreed community regulations e.g. Sokbok and Nongchao in Nongbok, Nam Piad watershed, 3 forest zones of Xebangfai, several wetlands and bamboo forest of Songkhone of Savannakhet Province. High number of fish conservation zones declared in Bolikhamxay, at least 8 fish conservation zones (FCZs) in Bolikhan District and 7 FCZs in Pak Kading River.

A number of leaflets, brochures, booklets were published and distributed. Also, officials who involved in the projects and trainings have gained more experiences in project management and implementation. Knowledge and conservation awareness of the communities adjacent to the project areas are increased with better understanding of forestry law and wildlife law. Village fund was available for villagers to access and well able to address their poverty e.g. Bolikhan District. Local livelihoods have been improved at some fair to good in some pilot villages e.g. Ban Dong & Ban Palo of Nong District or 5 villages of Bolikhan as some families earned 20 million kip annually. Some degraded forest areas have been rehabilitated e.g. community bamboo forest. Some small scale basic infrastructure available e.g. Houya Toad irrigation, dykes, canals (some success stories can be found in Section D4).

Most importantly, the Community Conservation Network (CCN) in Nam Kading River Basin so sub-set of this project's outputs provided as below: Village conservation network established in 12 villages, a total of 155 people by each village has its village conservation unit (4, village patrol team, village militia and village chief). A village patrol conducted 2-4 times per month but later monthly when it was curbed. Other outputs included:

- Completed production of outreach materials, printed and used in and for the activity, completed the outreach activity in 12 villages of 2 districts (Pak Kading and Khamkeut), and conducted radio program for 1 year at provincial radio broadcast and Khamkeut District. Of the 2,580 people participated in the village outreach, 1,552 were women.

- Completed training for 14 staff on livelihood development, 16 staff on mapping and 64 staff on outreach activities, complete the establishment of a total 7 fish conservation zones. For livelihood development through establishing a village revolving fund in all 12 pilot villages (55 million kip per village) and that the village fund committee established for managing the fund. The fund has been grown about 10% and that expanded to more villagers (435 villagers received the fund). These, 412 families engaged in annual cash crop plantation for 441.5 ha on cassava, corns, rice. A total of 23 families engaged in livestock raising particularly goats and pigs. Ban Nam Phong for example, has raised their goat to 90 individuals. Established 101 signboards indicate different type of land use in the villages (see photo below).



Nam Lod ecotourism and Nam Piad in Xaybouathong



Sokbor wetland and Nongchao in Nongbok



- Completed the land use planning prior to the village fund established and village regulations available in the pilot villages. Zoning made reforestation and protected area recognized as community land being reserved for 4,421 ha in all pilot villages. Regular patrol (2-4 times per month) but less frequency when threats have been curbed so at least once a month.
- Developed criteria, agreement, and commitment in the village fund regulation for borrower made clear to all villagers particularly for the villagers who borrow the fund

to ensure they are committed to reduce their reliance on forest resources, reduce entering forest, collecting forest products, wildlife hunting so everyone has to be aware of this regulation before taking the fund. Because of their awareness, 64 local guns of the pilot villages handed over to districts (see photo above).

- In addition, the project committee was established and that chaired by the Vice-Provincial Governor and the Cabinet of Provincial Governor’s Office as implementing agency with members from key provincial office such as Provincial Planning and Investment, Provincial Office of Natural Resources and Environment (PoNRE), Provincial Agriculture and Forestry. Most the project technical team from PoNRE and PAFO.



**CCN project activities**

In comparison, the sub-grants under this sub window on average have gained outputs for 88.04% against the expected outputs which were summarized as below:

Project Development Objective (PDO)	Outcome Indicators (per original by Sep 2010)	Description of the indicators set, refocus and progress made by 2010	Against the expected outputs by 2012
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B2. Community Environment development (100 sub-grants)	No. of communities benefitting from sustainable environmental management activities.	<ul style="list-style-type: none"> <li>- Legal agreements mostly made with target communities;</li> <li>- Increased capacity of villagers as at least 43 sub-grants involved training on a range of conservation and livelihood activities;</li> <li>- 17 sub-grants focused on six priority protected areas;</li> <li>- 87 sub-grants supported a wide range of local community forest, aquatic and livelihood activities;</li> <li>- Increased participation in developing and implementing resource use regulations.</li> <li>- Increased awareness on environmental issues;</li> <li>- Involvement in planning, implementation and monitoring of sub-project activities;</li> <li>- Progress in building conservation network in selected communities in Nam-Theun Nam Kading River basin.</li> </ul>	Over 10 conservation communities are established in NT-NKD and function but 12 communities established by CCN sub-grant and some other two folds through small grants where community-based established not only in the NT-NKD River Basin but also other sub-grants in the provinces.
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### D2.3 Outcome and Impacts for CBI B2

The CBI B2 sub grants provided opportunity for officials especially district staff to work with local communities directly. Through some conservation awareness rising made the local communities around the project areas appreciate the importance of natural resources for livelihood support system. Most projects, the arrangement including village patrol teams, village committee and regulations available and make active for their natural resource management. Therefore, many wetlands and forest areas in the 3 provinces have been declared as conservation areas with sustainable uses alongside livelihood development activities through establishment of a village revolving fund.

Descriptions of some sub grants visited were presented in details including the sugarcane plantation in Bolikhan District where 5 villages of (25 families per village) established a village development fund for gardening with an average of 15 families per village and eradicated their poverty as some families gain 20 million kip annually. Some success and failure of Phou Khean-Yothor, also other sub-grants that made success including 3 forest zones of Xebangfai, several wetlands and bamboo forests of Songkhone, two wetlands of Nongbok, Nam Piad watershed of Xaybouathong etc.

The Community Conservation Network (CCN) is one of good examples that obviously show some immediate incomes. It reflects the objectives of the project to help improve local livelihoods while conservation work. Through the project engagement with 12 local

communities that it used the funding assistance in their livelihood development for success of conservation objective. Besides increasing their incomes, their cooperation and responsibilities for conservation are well met. Also the trained villagers or village chief such as Mr. Duangsy of Ban Nahin is able to teach other villagers. This village has a village revolving fund of 55 million kip as the first round was about 50 villagers received the fund. For the second round it has secured 56 million kip that ready to be distributed.

Livelihoods have been improved quite significant according to pre and post assessment of the project shows that 263 households (41.74%) eradicated their poverty in 2012 against the 2009 baseline. The assessment of their poverty based on the national standard regarding their house, rice sufficiency, income etc. This is really encouraging since a short period of the intervention made this much achievable.



Transporting bananas from Ban Dong to Vietnam

Meanwhile, the pilot villagers are well understood the conservation work very well, they keep well perform the conservation practice although after the project. As the village commitment to use the fund by trying to reduce a number of their villagers do hill rice cultivation and hunting. Similarly, 164 households (36.6%) were quit from shifting cultivation and 18 households (13.04%) were quit from hunting. So far, the villagers collected 68 guns, confiscated some fishing gears found in the fish conservation zones including fishing net (4 sets), electro fishing (2), fishing mask (2). In addition, they educated for 5 people who broke the village regulations by shifting cultivation in the forest reserve area.

Some impacts are that community forest areas have been better protected locally. Local authorities including district have ownership in protecting their water and forest resources which benefit their adjacent local communities such as fish conservation zones – more fish available to fish in up & downstream of the designated fish conservation zones. Local villagers gained more incomes from particularly aquatic resource management. Meanwhile, some sub-grants help improve household incomes from livelihood development such as bananas plantation in Ban Dong, cassava plantation in Ban Palor of Nong District in Savannakhet and sugarcane plantation in 5 villages of Bolikhan, Bolikhamxay Province.

Significantly the conservation effort above has an indicator of the conservation success is that some wildlife species were reported their presence close to their farm nearby the NPA

buffer zone e.g. Ban Nahin saw samba tracks this year just in the village production forest since it had never seen for long time ago. Also, the villagers heard gibbon song from the foothill next to the village.

### D3 Community Development Models

**Table D3. Some lessons learned of project delivery by different channels**

<b>Channel</b>	<b>Advantage</b>	<b>Disadvantage</b>
B1, PA as EPF to commune	<ul style="list-style-type: none"> <li>- The officials able to use the fund to implement the project directly</li> <li>- Through the practice they can improve their capacity from planning, budgeting, implementing, financial and technical reporting</li> <li>- It is part of a process, working in team and specific larger conservation size</li> <li>- The fund support the provinces for fulfilling the management needs</li> </ul>	<ul style="list-style-type: none"> <li>- Only particular sector, PA involved in the work at provincial level</li> <li>- Some protected areas, have no relevant external technical assistance to help supervise to ensure the quality of products.</li> </ul>
B2, small grant EPF to commune	<ul style="list-style-type: none"> <li>- Local officials, district staff able to manage and assist communities to implement the project</li> <li>- The communities able to discuss with the officials how to implement the project directly</li> <li>- Local ownership in the project implementation is met with highly potential to success</li> <li>- Decentralization, widely distributed decision and able to manage more forest and aquatic resources</li> <li>- Specific areas, possible to develop a model</li> </ul>	<ul style="list-style-type: none"> <li>- Not many officials at the provincial level know about the project except the implementing office</li> <li>- Not look at a landscape approach or link upstream and downstream</li> <li>- Many conservation areas but in scatter</li> <li>- No connection between different communities except where the project areas identified cover more villages.</li> </ul>
CNN, EPF to BKX to commune	<ul style="list-style-type: none"> <li>- Many people know and understand about the project</li> <li>- Widely public outreach on conservation objectives</li> <li>- Through capacity building and arranging project team from officials to involve in the project from planning to monitoring</li> <li>- Training the team first before delivery the work at the village</li> <li>- Supervise to ensure it is technically delivered</li> <li>- Assigned particular staff or team responsible</li> </ul>	<ul style="list-style-type: none"> <li>- Use a lot of money in short time</li> <li>- Not well consider the sustainable livelihood development</li> </ul>

### Effectiveness

<b>Channel</b>	<b>Advantage</b>	<b>Disadvantage</b>
B1, PA as EPF to commune	Working through the provincial PA system is right approach that the fund used to fulfill the necessary basic protected area management such as boundary, zoning,	- Some trained staff turned over, moved to other divisions or assigned to districts that are not relevant to his previous trained

	billboards, management plan, staff formed and trained, committee, village network and patrol team, outreach etc.	work e.g. pa. - Local participation is not so high in some protected areas made low effective and not sustainable result.
B1, small grant EPF to commune	Working through district authority, relevant sector that the fund used to declare some aquatic and forest resources are protected where some necessary basic management requirements are met. Importantly, the committee established consists from one or several villages' chief and relevant district offices are functioning after the project. Also, regulations are well implemented.	Only the commune, the participating villages involved in the project have better knowledge and practice toward the sustainable use of natural resource management while other non-participating villages do not recognize the management so it is likely to make change the management to lose unless some officials keep monitoring and supporting them.
CNN, EPF to BKX to commune	- Take advantage of study tour, training, use local expertise, in-house capacity - the villagers able to access to fund for their livelihood development alternatives	Without careful planning would make incentive to land and rivers contaminated due to intensive cultivation practice.

### Efficiency

Channel	Advantage	Disadvantage
B1, PA as EPF to commune	- Use local expertise - some Lao experts, in-house capacity used – the trained officials so the cost for technical assistance is considered low. - Local communes contributed in implementing their projects such as patrolling. - Time take is necessary for pa planning and management which some process cannot be done within a few months because a series of conservation is needed.	Insufficient monitoring and training before implementing projects.
B1, small grant EPF to commune	- The project has low input, in-house capacity used – the trained district officials so the cost for technical assistance is considered low. - Local communes contributed a lot of local inputs for their projects. - Almost all the projects completed in time	- Some projects managed by officials made the commune don't understand about the project expenses
CNN, EPF to BKX to commune	Take advantage of study tour, training, use local expertise, in-house capacity building including officials from district and province to be a training facilitator.	- Budgeting and approval have not be well checked - It is expensive compared to project time frame. - Anyway, the project result per the cost used is considered fairly enough.

**Table D5. Village revolving fund (CCN and other through small grant B2)**

	Advantage	Disadvantage
Livelihood aspect	- the villages able to access to funding need for their livelihood development activities which are agreed and inspected by the village	- Poverty reduction in some pilot villages are dramatic, a double reduction, which is still uncertain.

	<p>committee</p> <ul style="list-style-type: none"> <li>- a high number of villagers in the pilot villages eradicated from their poverty as their livelihoods have been improved quite significantly according to pre and post assessment of the project shows that 263 households (41.74%) eradicated their poverty in 2012 against the 2009 baseline.</li> </ul>	<p>Dramatic reduction like this maybe not sustainable.</p> <ul style="list-style-type: none"> <li>- Some other non-CCN villages, some of them have improved their family status due to access to the village development fund.</li> <li>- Anyway, just for certain indicator such as better house, sufficient rice and incomes would not be completed enough unless sustainability of poverty reduction is met.</li> </ul>
For the poor	<ul style="list-style-type: none"> <li>- the village chief identify and consider the poor first but they must be enthusiastic</li> <li>- provide advice and assist by letting them working with a group of better off families</li> <li>- consider if they have problem with crop harvest and that unable to return the fund in time or interest. The village fund committee to investigate and find rational solution.</li> </ul>	<ul style="list-style-type: none"> <li>- Some poor villagers are not enthusiastic to help themselves and that the village authority of some villages has no particular mechanism to help them cordially.</li> </ul>
For environment or biodiversity conservation	<ul style="list-style-type: none"> <li>- the villagers of CCN have good attitude toward particularly the biodiversity conservation or protected area management as they have established village conservation team, village militia to support the patrolling.</li> <li>- agreed on patrolling and joining with NPA staff</li> <li>- they work as volunteer basic in contribution to the NPA work as the villages have some budget to support fuel for them</li> <li>- contract agreement made with the villagers particularly who borrow the fund has to reduce slash and burn activity for rice production and stop hunting</li> <li>- Some indicators of project impact of biodiversity aspect have been found such as wildlife encounters.</li> </ul>	<ul style="list-style-type: none"> <li>- Guidelines to ensure the project selected for funding has not been screened</li> <li>- Safeguard system, risks and mitigation measures are not identified to ensure no long-term adverse impact on ecosystem or environment in general</li> <li>- Specifically, increase in chemical fertilizer use for their crop products, expansion more agricultural products made forest cover fewer or raise some large livestock especially buffalo will compete with wild animal over water resource in dry season.</li> </ul>
For sustainability	<ul style="list-style-type: none"> <li>- the project established village committee to manage and district committee to oversee the fund</li> <li>- the village funding management team including the committee has small secure budget allocated from the interests</li> <li>- guideline on financing management developed for proceeding and reporting the fund</li> <li>- identify candidates for funding and assess their ability to use the fund</li> <li>Per round about 10% growth based on the portion of interested dividends.</li> <li>- assigned official staff responsible for monitoring the fund quarterly using the district budget</li> <li>- assist the borrowers, the poor to use the fund effectively and ensure the fund is returned</li> </ul>	<ul style="list-style-type: none"> <li>- staff turnover, the trained and active district staff have no longer would make loose of the village fund performance</li> <li>- changed new village chief but not well transferring the work</li> <li>- unclear expenses or no regular update and reporting for their villages</li> <li>- identify persons for fund is not always based on the principle in some village, perhaps their relatives have more chance</li> <li>- Delay in paying back due to crop loss by any reasons e.g. flooding, illness etc.</li> <li>- No regular monitoring and support the borrowers</li> </ul>

#### D4 Success and Failure Stories of Some CBI B2 Sub grants

##### (Case 1) Fish conservation zone of Ban Songkhone, Bolikhan District

- In 2007, Bolikhan Agriculture and Forestry District, with funding support from EPF, had established the FCZs in 8 villages along the Nam Xan River where appropriate. Prior to this effort fish in the river was scarce, which sometime it was unable to harvest to enough for one meal. As to oversee the practice a village committee was set up in each village alongside FCZ regulation was developed. Village militia allocated for monitoring the FCZ especially during dry season.
- Effectiveness of the management and implementing the regulation, the fish conservation zone has been successful since more fish available to harvest in upstream and downstream of the fish protected zone. Together with other neighboring villages the effort brings more fish in the rivers.
- Ban Songkhone is one of 8 villages share the river and fisheries in the area was visited. The village agreed to harvest fishes twice a year (March and May) which certain date fixed for. Prior to the date the neighboring villages including Paksan and Bolikhan are informed. Therefore, each year a lot of people come and do entertainment in the village. They do usually harvest up to 500-700 kg per year-time and from selling the fish the village earn about 7-10 million kip. Apart from this income the village and many people earn substantial income from selling food and breweries. *Fish harvest day of Ban Songkhone become a traditional practice till today.*
- The income from fish conservation zone made the village able to increase the village revolving fund capital, constructed the temple's fence, a village meeting place and also contributes to village road improvement after damaging by flood in 2011. The benefit gained from this conservation work made the villagers realized that conservation is important and everyone goes for now. *It is part of raising awareness to public on the need of conservation work for sustainable livelihoods.*

##### (Case 2) Sugarcane plantation in Bolikhan District of Bolikhamxay Province

- Five villages of Bolikhan District selected for sugarcane plantation by providing financial support through a village revolving fund. The fund of 50 million kip was established in each village and to oversee the fund its village revolving fund committee was established. Objective of the fund establishment is to reduce the villagers' complete reliance on natural resources by providing some alternative incomes. The village meeting was held for identifying the first priority families that agreed by the village and their interest activity for their incomes improvement. According to the project plan that a quota of 25 households per year to be selected based on the criteria given as to ensure the fund is sustainable. The criteria for granting the fund had to be a poor family, enthusiastic, potential ability to return the fund. Special consideration and priority is given to the poor and disadvantage villagers.
- Each family is allowed to borrow the village fund for one year period but extension is possible dependent on situation. Special consideration for the poor, widow and disadvantage group. An interest of 6% per year which the borrower to pay at the year round or at time of returning the loan for the person uses the fund for only one year. The interest is divided into several proportions as 50% for the village fund, 30% for the government staff to monitor the fund and the rest for village committee to oversee the fund and support the borrowers to use the fund effectively.
- Four years now, and four rounds but some families continue using the fund while interest is paid annually. On average, 5-10 new families added. Some families do locally sugarcane processing "sugarcane cake". *The impact of the fund made a number of families better-off as about 15 families per village eradicated their poverty.* Some families earned about 20 million kip per year and that able to

construct a house and buy a new engine boat such Mr.Xiengkham, Phoyen and Mr. Phone in Ban Phiangdee. At the same time, some 500 ha of forest regenerated after many families quit from slash and burn to do intensive gardening. *Fish conservation zones in Nam Xane have been established and well implemented.*

- However, they realize that the soil quality in sugarcane plantation area is poorer after several years so they need to put some chemical inputs in following years as to maintain the productivity. Also, the local processing demands more firewood's for local sugarcane cake processing so more production of this will impact on forest in the area. Similarly, some soil quality is also problem with cassava plantation. Therefore, planning for soil quality management by rotating various crops is necessary including legume cash crop to be used.

### **(Case 3) PhouKhaen-Nyothor, Viengthong District of Bolikhamxay Province**

- PhouKhaen-Nyothor is just very close to Viengthong town. The forest landscape of the town on east and west of the district. This forest area functions as important watershed on maintaining water source in the area. The project area covers some 3,000 ha, 5 villages located around the area including Ban Phou Dou, PhaPhae, PhouKhaen, HinNgon and Nadee. The project design was to reduce forest cover loss in the watershed area by demarcating the boundaries with signboards and assisting the villagers in some livelihood development activities by improving irrigation of Ban Phou Dou and through a village revolving fund (100 million kip) established that the local villagers can access to for rice plantation in dry crop season.
- The dry crop season has been implemented in Ban Phou Dou after the irrigation available to supply some 20 ha. The villagers of Ban Phou Dou have actually success in dry crop production that they have surplus rice and they have not cultivated in hill rice anymore. The villagers produced a lot of rice but the district is not allowed them to sell because the Provincial Policy states a district has to have sufficiency in its own rice production so selling rice out of the district is prohibited. This made some families discourage producing more rice in following years.
- At the same time, some Hmong villagers immigrated from Thailand who have no experience in lowland crop plantation started cultivation in the upper mountain area of PhouKhaen. A majority of the forest area of this watershed has been slashed and burned. The district authority has difficult position to retain the forest cover loss in the project area. Therefore, *this project is considered failed although some villagers have sufficient rice as threats by other people cannot be curbed.*

### **(Case 4) PhaPhae Water supply, Viengthong District of Bolikhamxay Province**

- Ban PhaPhae is located about 5 km before the Viengthong town has 96 families and 550 people. Local villagers recognize the need for watershed protection since their water source for drinking and use from forest area next to the village. Before, this village fetched water from the small stream but they were concern of poor water quality and work load for women. It is believed that some chemical use for agriculture in the area would drain into the river and that might impact on their health. Carrying water for household use consumed a lot of time and work load for women. Therefore, the village priority selected was clean water supply development for the village and to conserve the watershed.
- The project constructed water pipes, head check dam, village water tank and water taps. This facility made especially the women's work load released very much and that the villagers get safe drinking water. Through the project attribute the community aware of the importance on forest protection. Therefore, they urge for forest protection in the village. The village fund for the clean water supply

maintenance has been set up and that a water fee of 1,000 kip per family-month is collected. *This is another way of environmental campaign of the project that helps a community to conserve forests as well as biodiversity.*

#### **(Case 5) Sokbok and Nongchao, Nongbok of Khammouane Province**

- Sokbok (30 ha) and Nongchao (40 ha) are only two important wetlands in Nongbok District that provide benefits for 10 villages living around the wetlands for fishing, water use for agriculture and gardening. The Sokbok wetland is just close to the town but the Nongchao wetland is quite far from the town.
- Nevertheless, forests around the wetlands were degraded since no any regulations and management in place. There were illegal logging and wildlife hunting including illegal fishing. Therefore, Sokbok and Nongchao wetland management identified. With the project assistance, totally protected and managed zones for wetlands and forests around the wetlands identified along wetland management committees. Wetland management committee established for each wetland. There are the members from all village representatives (32 members) and relevant government offices (7 members). Regulation for wetland management has been developed and distributed widely in the district.
- Through environmental awareness rising, the villagers realized water source in the wetlands become most important especially dry crop season. They considered the wetlands are important as fish conservation zone - the fish sanctuaries. Therefore, *the committees established have been functioning as well as the regulations.* They hold a regular meeting of the committee and assign team responsible for protecting the totally fish conservation zone in the wetland especially in dry season.

#### **(Case 6) Phalabo eco-tourism in Xaybouathong of Khammouane Province**

- Phalabo eco-tourism site is about 10 km away from Xaybouathong District as only one area closes to the town, on the way before the town. This site where the town people can see large trees. It is about 30 ha including the limestone forest area connecting to the site. Before, this area is quite difficult to access, unable to access by car. The district selected this project as to raise the district people to be aware of conservation and that value they gained from the conservation through tourism business as well as recreation value since no more forest is found nearby.
- With the project assistance, the road access and viewpoint constructed but the district co-financed for about 50 million kip to construct the stairs of the viewpoint, toilets, road access improvement and the exhibition centre is being constructed during the evaluation. The site was open in April 2010 had over 1,000 people not only from the district but also the province generated income for the district 47 million kip from selling place concession and parking permit. This made the district encourage protecting the value of this tourism site, the cave and forest surrounding. Apart from the event, people from the town have advantage to use the area for recreation. Therefore, eco-tourism is another way of environmental awareness rising for next generation. Since this business provides benefits for the district and local communities so *the project investment for this sub-grant is sustainable.*

#### **(Case 7) KhaNyou Conservation in Khammouane Province**

- KhaNyou is a living fossil, newly rediscovery species since this species has been recorded extinct for some 11 million years ago. Although the species is endemic and only found in Khammouane Limestone region the species is not considered as special for local villagers regarding its living fossil. This species is quite common to the Gnommalath district because the animal had been harvested

almost every day by local hunters for consumption and also sale.

- With the project assistance, provincial and district officials has propagated the importance and uniqueness of this species to local community through various media such as poster, signboard and other campaign. The regulation for KhaNyou conservation has been adopted by the province and used widely in particularly the districts where KhaNyou recorded. Harvesting the species for trade is illegal, only for consumption is allowed.
- The regulation has been quite effective in beginning but looser after the project end. Due to no regular patrol conducted selling KhaNyou in some market were seen and people started interesting to consume KhaNyou when they know that the species is the animal of million years. Purchasing the animal was also reported. Therefore, this project *has not been well successful and sustainable*.

#### **(Case 8) Three forest zones of Xebangfai, Khammouane Province**

- Xebangfai pine forest is located in lowland area as only 250 m above sea level which is abnormal to science because its usual distribution is over 800 m asl. This forest area is located just 10 km before Xebangfai town. It has 64 ha of pine forest and 12 ha of dipterocarp and belongs to Ban Phon Bok and Na Soy of Xebangfai District.
- The project helped demark its boundary with signs established around the forest zone. In the past, this forest was used for firewood collection and collecting some other forest products including mushroom and hunting some small mammals such as squirrel, rats and forest birds. The forest has been well protected through community regulation assisted by district officials but it seems *it is not been well ownership and recognized its value by the local communities since not much benefit they gain from the forest area*. However, this forest zone is potential for eco-tourism purpose which can bring more income for local communities.

#### **(Case 9) Bamboo community, Songkhone District of Savannakhet Province**

- Four villages of Songkhone District living around the large bamboo forest area and that distributed around wetland. These villages called bamboo community as the name of this sub-grant. The project area is 4 ha, covers wetland and bamboo forest. Since natural resource become scarce, fish and even bamboo trees become fewer due to over harvest without management. There has no zoning and regulation for the bamboo forest and wetland management.
- The project helped zoning and developed community regulations for both wetland conservation and bamboo forest protection. The regulations have been well implemented by the villagers made the project successful when more fish available and bigger fish size today. Some fish such as has as big as 5 kg.
- This is just only a few years of the project implementation but *the project success is obvious*. From this benefit made them encourage protecting the wetland from further encroachment. The bamboo forest in the protection zone has not been used so far but it needs to be used as long as having properly harvest technique. The fish harvest is conducted every year in dry season.

#### **(Case 10) Ban Dong banana plantation in Nong District of Savannakhet Province**

- Ban Dong has 90 families and 540 people, located close to Road No. 9 and just 19 km before the Lao-Vietnam Laobao checkpoint. The villagers are basically poor; rely on agriculture – lowland, hill rice cultivation and some gardening. With technical assistance by Poverty Reduction Fund and funding

support by EPF established banana plantation group in 2007.

- The group had only 15 families, working in one large collective banana plantation ( 8 ha) but due to disputing on labor use against earn, misunderstanding among the members in terms of incomes and expenses made some members left the group and developed banana plantation themselves. Finally, the collective bananas plantation was abandoned; all new shootings of banana trees were divided to all remaining members to plant their own plantations. By this, a number of families expanded their own plantation and other villages scaled up the bananas plantation.
- Therefore, right now some families earned quite a lot of incomes – at least 200,000 kip per month. They can sell bananas every day over the year as Vietnamese traders just purchased the product at the village. Majority of the villagers earned about 5 million per year from selling bananas but a lot for some familalities. For example, Mr. Ma has 2 ha of bananas garden, he sold a harvest concession of his garden to Vietnamese trader for 50 million kip for a period of 3 years. This means that the Vietnamese trader keep harvesting the bananas over the concession period. In this regard, because of good market access the banana plantation business is boom and become good business in the area, the whole Nong District especially the village along the Road No. 9. This made substantial incomes for local villagers of about 9 villages in the area which partly impact of the project on site having obviously seen. Also, it was reported the banana plantation is boom in Dansavanh. At the same time Ban Nong Dong has established fish conservation zone and conserve some forests.
- In conclusion, this project although it was failed from the collective garden it is very successful from individual garden because of their ownership, the more they do the more they earn. However, the contract of some villagers with some traders is not binding enough made some gaps for the traders to take advantage of the villagers so some conflicts were happened. Further assistance from the government is needed as to ensure they are fair trading and the local commitment for conservation. Also, the district authority suggested that there would have a factory for bananas processing in the area.

ANNEX E  
SPECIAL PAPERS

## **Annex E. Special Papers**

This annex presents 3 special papers providing additional information regarding the achievement and potential impacts of the key sub grants with respect to capacity building on social safeguard, NT-NKD implementation model, and implementation of the national policy on environment and social sustainable development for hydropower sector in Lao PDR while Annex F present a special paper on the environmental compliance certificate in Lao PDR. Presentation in this annex is as follows:

- E1: Improving capacity of agencies on social safeguard comprising: Introduction (Section E1.1), SIMU activities and organization (Section E1.2), Training on social safeguards under the NUOL Sub grant (Section E1.3), and Other Capacity Building Activities Related to Social Safeguards (Section E1.4);
- E2: NT-NKD Integrated River Basin Management Implementation Model comprising: (Section E2.2) Introduction, (Section E2.2) Background on NT-NKD River Basin and LENS Support, (Section E2.3) Institutional Arrangement and key Challenges, and (Section E2.4) Community Conservation Network (CCN) model; and
- E3: NPSH story line (briefly summarize PICE A3 activities and outputs).

### **E1: Improving Capacity of Agencies on Social Safeguard**

#### **E1.1 Introduction**

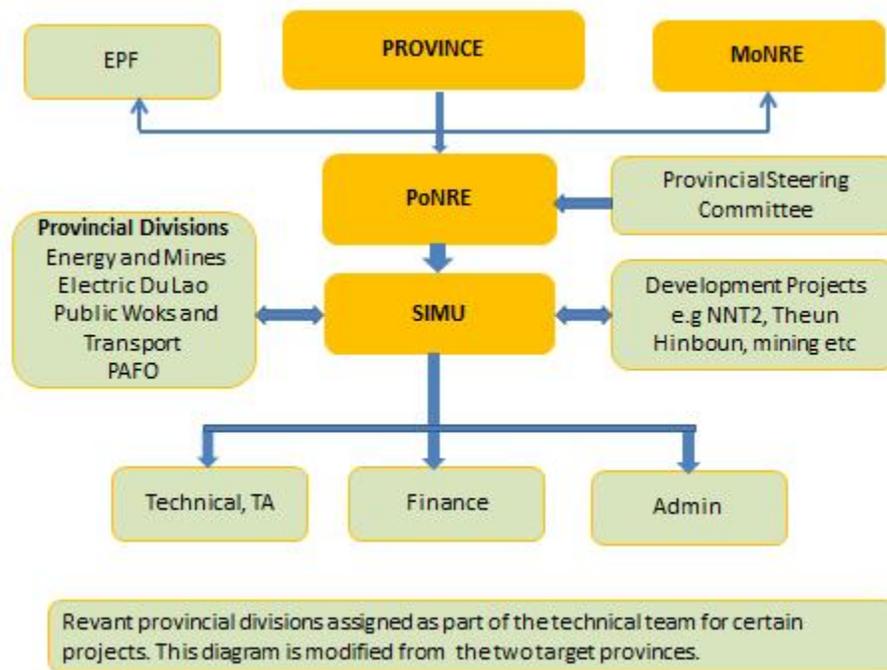
As mentioned in the project appraisal and project paper for LENS and its additional financing, building GOL capacity to address social impacts of development projects are considered priority, especially those issues associated with inappropriate development projects and concession areas that create negative impacts on local livelihoods and increase potential conflicts over land use and access to natural resources. In 2007-2008, LENS provided a sub grant to the central agency (i.e. DOE of STEA) to establish a social management unit responsible for review and assessment of social assessment impact and identify priority needs for capacity building and review of the technical guidelines for implementation of the compensation and resettlement decree (Decree 192) which was promulgated in late 2005. During 2009-2013, additional 2 sub grants were provided to support the operation of the newly create agency i.e. the Department of Environment and Social Impact Assessment (DESIA) established to be responsible for forging effective implementation of the Environmental Impacts Assessment (EIA) process including the social impact assessment (SIA) and capacity building through training and dissemination workshops and study visits.

During 2011-2013, two sub grants were provided to Bolikhamxay (BLKX) and Khammouane (KM) (\$0.24M) to demonstrate ways to establish grievance mechanisms and to establish a social impact management unit at provincial level. Through PICE A5 sub window, one sub grant was provided to the National University of Lao (NUOL) for establishing the social impact assessment and capacity building while one sub grant was provided to the Lao Front for

National Construction (LFNC) to establish a national guideline for consultation with ethnic group. Efforts have also been made to forge coordination and cooperation among various sub grants related to social impacts assessment (DESIA sub grants, SIMU BLKX, SIMU KM, NUOL, and LFNC). At the end of LENS project, BLKX and KM have confirmed that an environmental and social unit established in the provinces (as part of MONRE operation) will be responsible for implementation of the grievance mechanism developed under LENS project.

Diagram below presents basic structure (and coordination line) of the SIMU in BLKX and KM. This section summarizes the activities of the SIMU sub grant and the SIMU organization that has been established for BLKX and KM provinces.

### Coordination line and structure of SIMU

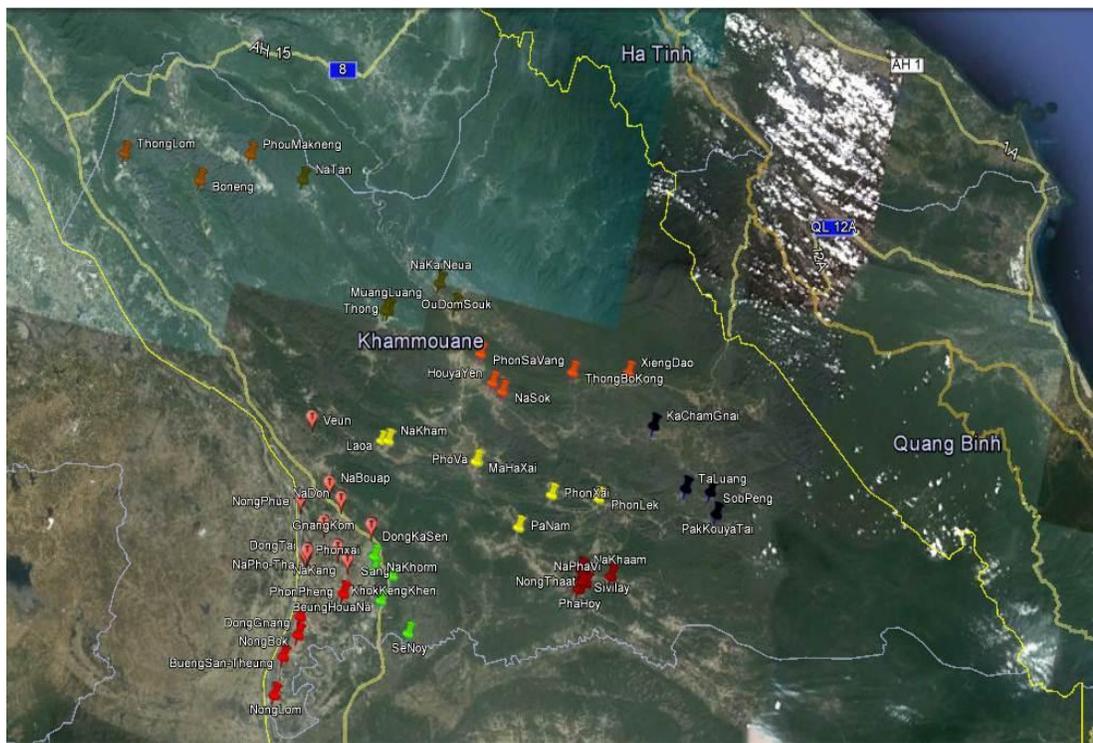


### E1.2 SIMU Activities and Organization

*Background:* The pilot villages of SIMU sub grant for BLKX has 23 villages of 4 Districts including *Pak Kading District*: Ban Houy Hai, Phonsi, Ban Sot, Hat Saikham, Phonsay and Pak soummuang and *Bolikhan District*: Non Somboun, Hat O, Na O, Pha Muang, Ban Dong and Phonthong. The pilot villages of the SIMU sub grants for KM has 59 villages of 9 Districts (see the map below) comprising Thakhek District (12 villages), Hinboun District (4 villages), Mahaxay District (7 villages), Nongbok District (5 villages), Xebangfai District (6 villages), Boualapha District (4 villages), Nakai District (8 villages), Gnommalath District (7 villages) and Xaybouathong (5 villages).



Source: Phonthipaza, P. 2013.



*The sub grant activities:* The sub grant activity firstly started in November 2011 by hiring a national consultant to assist identifying social impact issues in Bolikhamxay and Khammouane provinces and prepared an issue paper and detailed plan for the sub grant activities in December 2011. The sub grant team conducted consultation and shortlist the issues with relevant local officials and villagers before preparing guidelines on grievance procedures. The procedures have been officially adopted by the provinces and training was provided to the villagers. The second consultant was mobilized in early 2012 to assist in the preparation of a computerized database necessary for tracking the implementation of the grievance process and additional consultation with the provinces was carried out in May 2012. After completion of the database setting up additional training on the grievance guidelines and the application of the database was provided to 21 staff from the two provinces so that they could provide training to staff at the districts and village levels. A 5 year plan for the SIMU activities has been also developed with the provinces. The SIMU team also participated in various trainings and study visits which were organized by the WB, the NUOL, or DESIA sub grants.

*Grievance mechanisms:* Grievance committee established at village/village cluster, district and provincial level. Sooner the grievance committee members at all levels with well trained in place, data forms of complaints have been available at pilot villages. The villagers then filled in the forms on their complaints and sent to the SIMU for data recording particularly the issues that have not been solved at village cluster level. The grievance guidelines suggested for solving the issues at village cluster first. If the issues could not be solved at the village level then they will be submitted to the district and if they could not be solved the district committee will submit the case to Kumban court (village cluster). Majority of the issues has been so far addressed at Kumban. Otherwise, be submitted to be solved at district and provincial court.

At each level, when the issue has not been addressed some more information will be collected with results of the grievance committee meeting at that level for further solution. Decisions made by any committee level if the issue to be further investigation or completed were recorded accordingly. At the province level, the grievance committee consists of 8 members in Bolikhamxay but 17 members in Khammouane. They are representatives from all provincial divisions. So far, the established grievance committee is not been required to solve any problem due to those have been solved at Kumban and district level.

*Comments:* Through the practice, the forms and guidelines to follow is quite difficult for some officials and certainly for villagers who have some limited knowledge and skills. Therefore, revising the guidelines and forms to be friendly used is necessary. The grievance committee members at village or Kumban should include teachers and elders who are respected by local villagers.

Key activities and outputs of the SIMU sub grants:

<b>No</b>	<b>Key products</b>	<b>Bolikhamxay</b>	<b>Khammouane</b>	<b>Remarks</b>
1	Grievance guideline has been developed and adopted	89 books in 4 districts (23 villages)	600 books in 9 districts (59 villages)	
2	Grievance Committee	135 members	317 members	

	(village and district)	8 members at province 27 members at district 123 members at village	17 members at province 61 members at district 295 members at village	
3	Training on grievance and relevant decrees/regulations	27 staff, At villages 135 participants of 23 villages	At village 275 participants 15 training events with 295 participants	
4	Capacity building			
	- Project proposal writing and planning	8 staff from DoNRE		
	- Grievance guideline training	28 committees 123 villagers	15 provincial and district	
	- Grievance learning workshop on Social Impact Assessment in Thalat (13-18/10/2010, organized by NUoL	22 participants, of which 6 from BKX PONRE, 7 staff from SMU/PONRE	4 staff	
	- Project monitoring and resettlement	8 staff	4 participants from KHM PONRE	
5	Study Visits			
	Study visit in Hatinh, Vietnam on hydropower project (Nov, 2010)	5 staff from PONRE	4 participants from PONRE	
	Study tour in China on resettlement from hydropower project (5-11 April, 2012)	2 (Vice Provincial Governor and PONRE Director	4 staff of PONRE	This is a high level study visit organized by EPF and led by the Chair of Economic, Planning and Budget Committee of the Lao National Assembly
	Study in Laos, Feuang District, on resettlement (2-6/6/2012)	13 staff		
6	Workshops/meeting, Law and regulations dissemination at villages			
	At province level, 2 times	All relevant sectors and private companies	All relevant sectors and private companies	
	At villages level for 23 villages	Many villagers joined	Many villagers joined	
7	Project development monitoring every quarter and bi-annual	NNT2, TheunHinboun), mining (Nakadok), industrial tree plantation (Thai Hao) etc	NNT2, TheunHinboun, mining Kali salt factory, Koiko, mining, industrial tree plantation (Thai Hoa), etc	The issues associated with these projects have been basically solved

				but some people who need some compensation have not been well completed due to insufficient compensation.
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### E1.3 Training on social safeguards under the NUOL Sub grant

In Lao PDR, social safeguard has not been fully taken into account by developers in the past and there are some pending issues related to affected people associated with development projects that need to be addressed satisfactorily. It is not only hydropower project but also mining and large scale concession projects on industrial crops. Given limited capacity on social impact assessment and effective grievance mechanism in the country, the issues and trends are increasing and in some cases the affected people received high pressure and unfairness. In this connection, priority for LENS support has been given to build capacity of key agencies and the province to address social impacts due to development projects. Under LENS additional financing, a grant fund was provided to NUOL for developing training materials on social issues and the process involved many stakeholders, especially government officials, participating in the design of the training program. There are a number of materials and training events undertaken through the NUOL sub grant is highlighted below:

- *Syllabus:* The project completed social safeguard syllabus that accepted by the University to be used for bachelor and master program. A total of 316 students from 4 faculties – both B.Sc and M.Sc- have been taught on social safeguards (150 students), social policy and social safeguard (79 students of which 37 were women), and social impact assessment (87 students).
- *Activities and outputs:* A technical advisor (from Mahidol University in Thailand) was hired for the sub grant under a part-time contract to assist the sub grant implementation committee established a detailed plan and technical supervision of the sub grant activities. A total of 1,350 books on various subjects used for 15 subjects and 600 leaflets published and distributed widely. Key products of the NUOL sub grant are: (1) Manual on Social Impact Assessment and Social Safeguard; (2) Social problem analysis (book); (3) Social policy and safeguard; (4) Social impact assessment; (5) Geology; (6) Museum Management; (7) Genders on development; (8) Community-social economic; (9) Planning on tourism development; (10) Social philosophy; (11) Natural Resource Conservation; (12) Basic human ecology; (13) Essays on Social Impact Assessment and Social Safeguard; (14) Summary: Syllabi of M.Sc and B.Sc; (15) Summary: Abstracts of M.Sc and B.Sc; (16) Leaflet of social science faculty – Lao and English version.
- *Training:* A series of 6 trainings was conducted for 131 participants. Firstly, a 10 day-training (Train-the-Trainer) on social impact and social safeguard conducted in December 19-29, 2010 at Lak Sao which 22 participants from the lecturers and the

sub grant team members. The training course # I was conducted for 25 participants from the University, MONRE, PONRE of Bolikhamxay and Khammouane on the SIA and social safeguard (October 26-28, 2010). Training course # II on SIA and social safeguard was conducted for 22 trainees from various organizations include private companies. Training course # III on SIA and social safeguard was conducted for 22 participants including developers, lectures, technical and private companies (June 20-24, 2011). Training course # IV was conducted for 27 participants from all faculties of National University of Laos (September 24-28, 2011). The training course # V for 35 participants from 11 districts of Khammoune and Bolikhamxay conducted in KeoOudom District (March 11-18, 2012). The trainers who were trained on the first training course (Train-the-Trainer) were able to deliver lessons to other people especially the participants from the Faculty of Social Science of the National University of Laos. Also, some other participants of government organizations including provincial participants and students gained some knowledge which possibly communicating on social safeguard issues.

#### **E1.4 Other Capacity Building Activities Related to Social Safeguards**

*Study visits:* Under LENS additional financing, a number of study visits in country and abroad were organized by the sub grants in close coordination with WB and involving 95 participants. The first study visit was conducted for 4 people to Vietnam (October 1-7, 2010) in Quanchi on Ore mining and Hatinh to study the resettlement and social issues related to hydropower project. The second visit was conducted for 11 social science lecturer to visit Theun Hinboun and Nakadok Gold Mine (26-27 December 2010) while the third visit was made for 22 trainees to visit Ban Vangheua and Nakhom of Nam Ngum 1 on resettlement (June 23, 2011) and the forth visit was made for 27 trainees to visit Ban Phousavard of Nam Theun 2 (September 9, 2011). The fifth visit was organized for a team of high decision makers to China on resettlement (April 5-11,2012) while the sixth study visits were organized for 4 team leaders and trainers to Mae Moh coal mine in Thailand. Another study visit was made for 26 people to Hongsa Lignite on social safeguard and SIA. It is noted that these study visits have increase awareness and knowledge on social impact issues and most of the participants (technical and decision makers) have realized the nature of and ways to address the social impacts issues which are different from social development issues in general. It was the first time of many people who appreciate benefit from the study tour. Particular, the decision-makers to China gained better understanding and interested in social issue, resettlement made therefore further cooperation with Chinese Institute identified afterward.

*Building network:* Through the implementation of LENS additional financing sub grants, about 18 partners in the country and 11 partners abroad are being developed. The partners in Lao PDR including all relevant ministries and institutions such as Ministry of Energy and Mines, Ministry of Agriculture and Forestry, PONREs of participating provinces. The partners abroad are mainly academia and institute such as Resettlement Centre of Hohai University in China, KhonKaen, Thammasart, Mahidol University in Thailand, and San Diego State University, USA. At least for now, the institution in China, Hohai University has expressed a strong interest to establish a long term partnership with the NUOL on capacity building and sharing of best

resettlement practice appropriate to Lao PDR and a memorandum of understanding (MOU) has signed.

## **E2: NT-NKD Integrated River Basin Management Implementation Model**

### **E2.1 Introduction**

In light of the Government's policy to be the ASEAN's battery and a number of hydropower projects are being developed in the country, sustainable river basin management has become a key development challenge in Lao PDR.

For a long life span of most hydropower projects will very much be dependent upon water supply, the backbone of it is the watershed capacity in the upstream and water quantity and quality in the basin. Ensure the sufficient water resource according to the demand of sector concerned by having the plan and organizing systematically; reduce the impact caused from the water disaster on socio-economic and environment; water quality management; to improve the people living condition; contribute in nation development.

*NT-NKD RBM implementation model:* Nam Theun-Nam Kading River Basin Management is integrated approach which the concept may be some differences from Nam Ngum River Basin and also the Nam Theun 2 River Basin management approach. The Nam Ngum basin is the first initiative in the country that the central government tries to find ways how to get better river basin management. Whereas, the Nam Theun 2 Basin management has its Watershed Management and Protection Authority in place but the planning and managing is quite autonomous. Although Nam Ngum and Nam Theun 2 approach include district sectors for ground work implementation local ownership is not high.

Therefore, the model of Nam Theun-Nam Kading River Basin Management is another piloting approach on integrated river basin management where the planning for the basin management come from provincial and district sectors with its secretariat body to facilitate and the river basin committee (RBC) available to support for the secretariat office to work with stakeholders to make decisions.

The NT-NKD RBC is one of the first two RBCs which have been officially established to demonstrate how to best engage cooperation among line agencies especially the provincial sectors and key stakeholders at local level. The RBC is the sectoral representatives that they do periodically share on concerns of the basin as to facilitate achievement of sustainable development as well as addressing potential cumulative impacts and benefit sharing of development activities in the river basins in Lao PDR.

During the past two years in the basin and with technical assistance and financial supports from the WB through the EPF mechanism, there are a number of capacity building activities related protected area management, establishment of conservation community networks (CCN), establishment of provincial grievance mechanism, development of an environmental database, and water resources management in a sub-basin and these activities have increased knowledge and experience of our staff to address water and other resources management issues.

## **E2.2 Background on NT-NKD River Basin and LENS Support**

*The Nam Kading River and the NT-NKD river basin (Figure E1):* Nam Kading River is one of a long river (353 km) in Lao PDR and the only river flowing from the south to the north. The river comprises two parts: the upstream part known as Nam Theun and the downstream part known as Nam Kading. The Nam Theun-Nam Kading (NT-NKD) River Basin is a large river basin in Lao PDR (the fifth largest basin of the Mekong's tributary basins), with a total area of 14,831 km<sup>2</sup> and consists of 13 sub-basins (see Fig. 1). The basin has forest cover of about 57.48% in 2002 with some more potential forest areas. The basin provides flows to the Mekong for 17,219 million m<sup>3</sup> annually but only 7,641 million m<sup>3</sup> is used in the basin per year. With an elevation ranges from 2,288 m above mean sea level (msl) at the upstream to 145 m msl in downstream area the average discharge capacity at Pak Kading River is high as 546 m<sup>3</sup>/second.

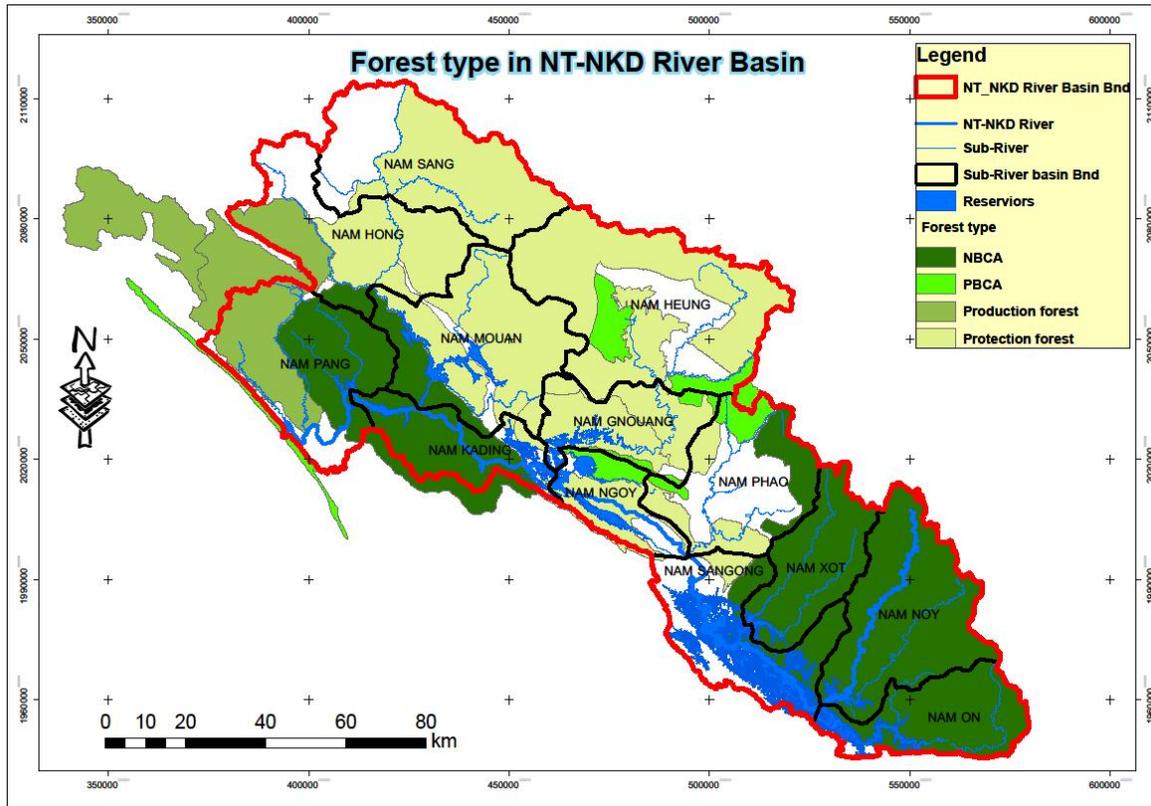
*Population:* Nam Kading River Basin has 11 districts of three provinces – Bolikhamxay, Khammouane, and Xiengkhouang, with a total population of 429,000 people but only 142,466 people of 162 villages (2007) located in the basin. Of these districts, 67 poor villages are mainly resided in the sub basins in the upstream areas namely Nam Heung and Nam Mouan.

*Development activities and key issues:* Due to many development projects being implemented and under construction in the basin particularly hydropower and mining projects generate some cumulative impacts (see locations in Figure E2). Construction of the Nakai dam for the Nam Theun 2 (NT2) project diverts large amounts of water from the NT-NKD river basin starting 2010. Downstream of the Nakai dam, there is one existing hydropower project in operation (TheunHinBoun, THB), one project is under construction (THB extension), and one project (Nam Theun 1) is under Concessional Agreement (CA) negotiation. Although EIA studies were carried out for these projects there are now concerns on the cumulative impacts on the livelihood development and conservation objective, inadequate water flows and/or flooding, river bank erosion, water quality, and safety, especially in downstream area where large dam operations are located. By 2013, at least three large hydropower projects will be in operation and may create significant cumulative impacts on the local environment and people. Flood and drought is so serious in recent years especially the downstream communities - seven villages of Pak Kading District. At the same time, the upstream residents – some are new settlers relocated from the reservoir dams- have some land shortage and inappropriate land for cultivation have made it difficult for the people to adapt to the new settlement. Rice and cash crop products are considered low product due to the lack of new variety and with insufficient agricultural extension service. Therefore, more encroachment on forest land for cultivation is unavoidable since effective land use planning and livelihood alternative have not been well in place. The most pressure is the poor especially the women group has suffered most since they have disadvantage and lack of livelihood alternatives.

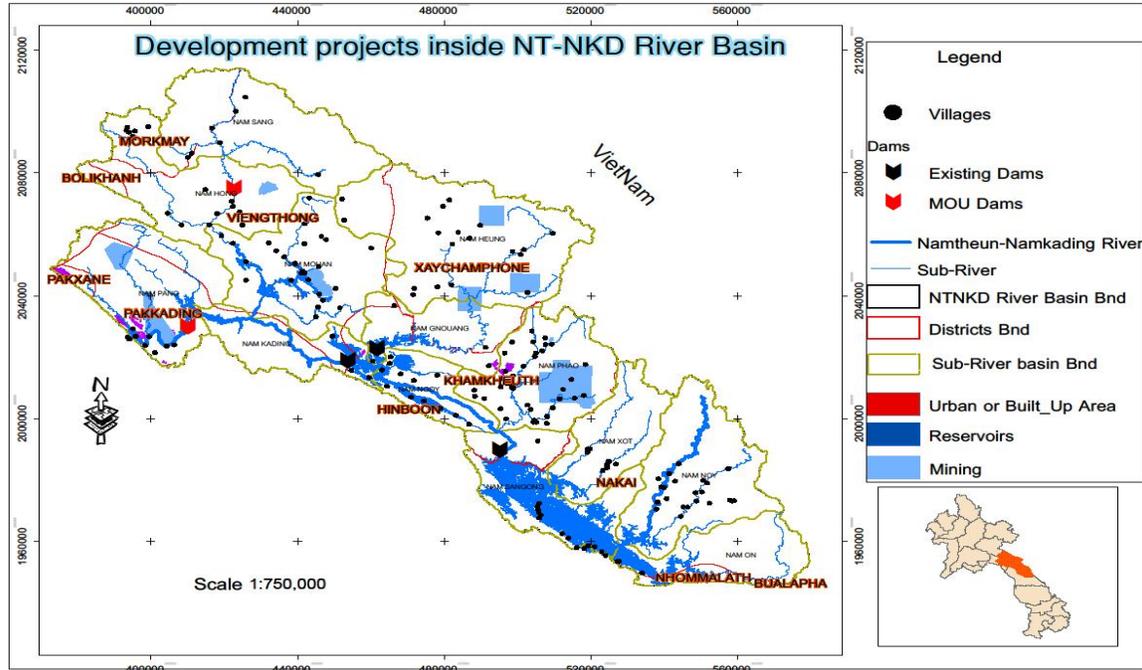
Studies during the preparation of NT2 project suggested that adequate institutional capacity of agencies in the NT-NKD river basin will be necessary for addressing such cumulative impacts. It is, therefore, urgent to strengthen institutional capacity and decision making and engaging local communities in the NT-NKD river basin. Strengthening capacity of Bolikhamxay

and Khammouane provinces on safeguard monitoring is also priority and all these will be included under the additional financing.

**Figure E1. Sub-basin of Nam Theun Nam Kading River Basin**



**Figure E2. Development projects in Nam Theun-Nam Kading River Basin**



### E2.3 Institutional Arrangement and Challenges

**The NT-NKD RBC:** Following the Government of Lao PDR declared the decree no. 293 dated June 15, 2010 on “Creation and Operation of River Basin Committees in Lao PDR” and in order to operate the Nam Theun-Nam Kading river basin management needs to have a river basin committee and secretariat body of RBC established legally to support and facilitate a dialogue of river basin planning and management. The principle is (i) to manage the water resource under the discussion and participation between all concerned stakeholders; and (ii) to ensure the justice in the society and sustainability of the ecology in the river basin and using the mechanism: polluter pay for treatment and elimination of pollution including activities related to enhancement and conservation of environmental quality.

The Nam Theun – Nam Kading River Basin Committee (NT-NKD RBC) has been established by the Prime Minister’s Decree No. 132 dated Oct 17, 2012, consists of 28 members as below:

- |  |           |
|--|-----------|
| 1. Governor of Bolikhamxay province                  | President |
| 2. Vice Governor of Bolikhamxay province             | Deputy    |
| 3. Vice Governor of Khammouan province               | Deputy    |
| 4. Vice Minister of Natural Resource and Environment | Deputy    |
| 5. Head of Administration office of Bolikhamxay      | Committee |
| 6. Head of Administration office of Khammoaun        | Committee |
| 7. Head of Water Resource Department, MRE            | Committee |
| 8. Head of Metrology and Hydrology Dept., MRE        | Committee |

9. Representative of Ministry of Agriculture and Forest	Committee
10. Head of Electricity Dept., Ministry of Energy and Mines	Committee
11. Head of Land Management Dept.	Committee
12. Head of Agriculture and Forest Division, Bolikhamxay	Committee
13. Head of Agriculture and Forest Division, Khammoaun	Committee
14. Head of Natural Resource and Environment Division, Bolikhamxay	Committee
15. Head of Natural Resource and Environment Division, Khammoaun	
16. Head of Energy and Mines Division, Bolikhamxay	
17. Head of Energy and Mines Division, Khammoaun	
18. Head of Public Work and Transport Division, Bolikhamxay	
19. Head of Public Work and Transport Division, Khammoaun	
20. Head of Industry and Commerce Division, Bolikhamxay	
21. Head of Industry and Commerce Division, Khammoaun	
22. Head of Public Health Division, Bolikhamxay	
23. Head of Public Health Division, Khammoaun	
24. Vice Governor of Khamkeud district, Bolikhamxay	
25. Vice Governor of Pak Kading district, Bolikhamxay	
26. Vice Governor of Viengthong district, Bolikhamxay	
27. Vice Governor of Xaychamphone district, Bolikhamxay	
28. Vice Governor of Nakai district, Khammoaun	

The committee is the group who has the same vision as the key duties of the RBC are to stipulate the strategy, action plan and regulations regarding the water resource management within the basin; to listen to opinion from stakeholders and local communities, to consider and resolve some dispute on water related of the basin, to prove the plan, projects, budget plans that prepared by the secretariat office. Most importantly, the committee to attend in negotiation meetings and signing convention as well as memorandum of the basin, to counsel and recommend to the higher level regarding major impacts on the basin.

**The NT-NKD RBC Secretariat:** To facilitate the establishment and implementation of the NT-NKD RBC, the NT-NKD RBC secretariat office (NT-NKD RBCS) was temporary established in Bolikhamxay in October 2011 with the responsibility to facilitate, arrange and prepare for the basin management including make the committee functioning. Later, the Minister of MONRE officially established the secretariat office on May 28, 2012. There are three divisions: Administration-Planning Division; Technician Division; and Information Division

The main duties of the secretariat are to stipulate the strategy and draft action plan; prepare and inform the president of the committee on ordinary and extra-ordinary meetings for revision and adoption; organize ordinary and extra-ordinary meetings; coordinate all concerned sectors and projects in planning and implementing the river basin plan; promote consensus on the basin management; and collect data, analyze, report and disseminate. In addition, the secretariat's responsibility is to identify basin issues with relevant provincial sectors and prioritize for the committee to consider and make decision how to address the issues and plan for long-term river basin management.

The secretariat office is the government organization located in Bolikhamxay province. The office has quite small staff (14 staff) as majority of them is government staff and some government contract staff deployed by the central government, with some provincial staff assigned to work with the secretariat during the funding project period. At the beginning, almost of the staff from central but to transfer the tasks to the provinces as long as the provincial capacity proved.

The secretariat structured has been formulated and recruited posts including director, deputy director and assistant to assist the director of the RBC secretariat in technical and administration matters, also liaise with sectors and stakeholders. The concept of all relevant sectors at provincial level is represented in the committee to address key issues on water resources. Apart from institutional arrangement the secretariat identified district technical coordinators to be working with the secretariat office as part of government capacity building through on-hand experience and assisting in collecting some data need, liaise with his or her district authorities where needed. Alongside the secretariat's technical team has collected data for development of a basin profile. Also, the district contributed in developing the basin strategy, management plan and action plan of the Nam Theun-Nam Kading River Basin. According to the profile the basin has been divided into sub-basins as to ease for planning and management.

Provincial sector is a key player for the NT-NKD River Basin Management but current perception and capacities are not ready to fulfill the roles. All the relevant divisions of the provinces are the committee members and for the participating districts is the Vice Government as member. Therefore, each member can comment, verify and approve the activities involved in their divisions.

**Preparing phase:** The design for the basin management is considering a basin-wide approach with integrated sectoral planning. Two years of designing and preparation time lost for coordination and arrangement work for the government to issued the decree for the secretariat structure and operation.

**Implementation:** The NT-NKD RB Committee has an agenda to meet at least three times a year as called an ordinary meeting but *ad hoc* (extra-ordinary) meeting can be held where necessary. With the support from its committee the secretariat office has its organization structure, planning process through platform, implementation and reporting. Objectives of the meetings are to discuss and approve the important issues submitted by secretariat and make consensus. From the beginning, the committee meeting is to consult on Nam Theun-Nam Kading River Basin Strategy, Management Plan and various technical issues these includes water resources and quality, fisheries, mining, land use as well as dams/irrigation relevant to floods, drought, poverty and biodiversity offset.

Therefore, key activities of the basin management in long-term identified in its management plan such as monitoring of water use and water quality (especially near water protection areas and pollution sources); identifying priority issues of social, economic, and environmental concern; coordinating development activities and/or mitigation measures; and/or carrying out priority investments and issuing licenses. These activities encompass many sectors and involve various stakeholders; therefore close collaboration among different

stakeholders (communities, private sector, and central and local governments) and different sectors are needed.

**Financing:** The government has allocated some budget to support the secretariat and some for committee forum. But, as long as the secretariat office strong some aid fund and biodiversity offset payment may be through some appropriate financing channel to the secretariat then to provincial divisions for some ground activity works.

In conclusion, NT-NKD River Basin is a basin-wide approach with integrated sectoral planning. Learning by doing is therefore the principle for adaptive river basin management. Since the work of NT-NKD RBC is only at preparing phase which is difficult to describe the concrete direction of the basin management.

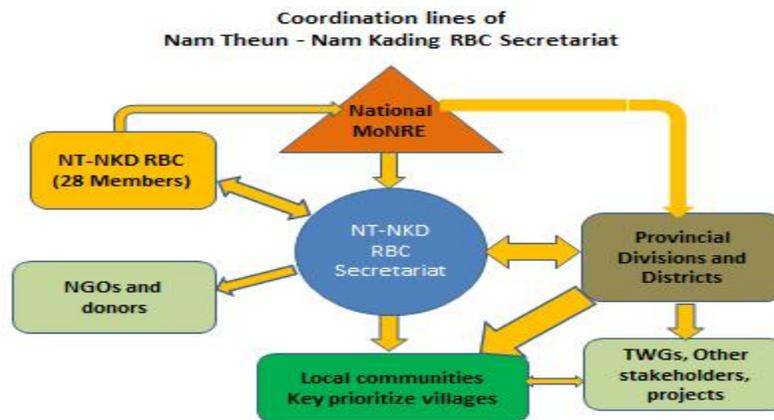
**Reporting:** Quarter and annual reports or activity completion reports of the Nam Theun-Nam Kading River Basin work have been updated and reported to the NT-NKD RB committee – the president, line agency of the secretariat – the MONRE. In technical aspect, with provincial divisions will be enhanced and be updated each other on planning and implementing progress.

#### **E2.4NT-NKD Implementation Model**

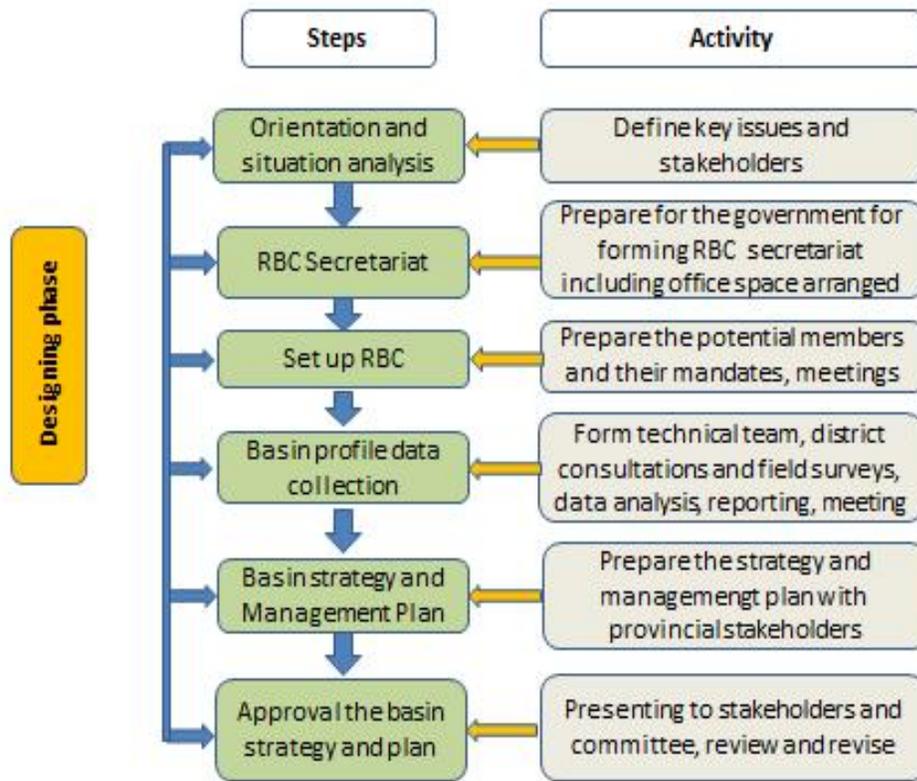
- Nam Theun Nam Kading River Basin Model is the integrated river basin management which sectoral provincial planning and implementing with facilitating by the basin secretariat that located on site. With support from its river basin committee representing all relevant provincial divisions, participating districts and key departments at national level to platform for planning toward a sustainable river basin management using the adopted principle as (i) to manage the water resource under the discussion and participation between all concerned stakeholders; and (ii) to ensure the justice in the society and sustainability of the ecology in the river basin and using the mechanism: in principle polluter pay for pollution.
- An early stage of designing and preparing for Nam Theun-Nam Kading River Basin management it was realized to build capacity of participating provinces and local ownership in their natural resources management while ensuring that legal framework and support the river basin to be in place. Therefore, prior to the establishment of the NT-NKD RBC and the secretariat, EPF invested a number of various sub-grants in Bolikhamxay and Khammouane mainly Provincial Environment Strategy and Action Plan (PESAP), Social Management Unit (SMU) and Community Conservation Network (CCN) on the ground. These sub grants made the province able in developing protected area management plan, boundaries and zones identified, social issues related to impacts of development projects are brought and mainly solved and that the provincial and district staff as well as local villagers aware and have satisfied capacity in grievance system. Database of all development projects with environmental impact document status and also SMU is useful for the

river basin management. In addition, CCN project designed for strengthening local communities in natural resource management alongside livelihood development.

- During the preparation phase of Nam Theun-Nam Kading secretariat has a number of activities conducted and steps are given below. The secretariat is a centre to facilitate, liaise, planning, implementing, monitoring and reporting starting from studying and identifying key issues of the basin with the provincial divisions and stakeholders build a common understanding of an interest in the basin development. The key products that the secretariat has developed with the stakeholder were the basin profile, preliminary database, strategy and management of the basin, some outreach and capacity building. Due to a large basin, 13 sub-basins defined as to easy for planning, management and clear boundaries of those basins belong to particular districts.
- Update progress on the river basin management for the committee through ordinary and extra-ordinary meetings. The committee consists of 28 members including the chair and this is quite large number due to two participating provinces.

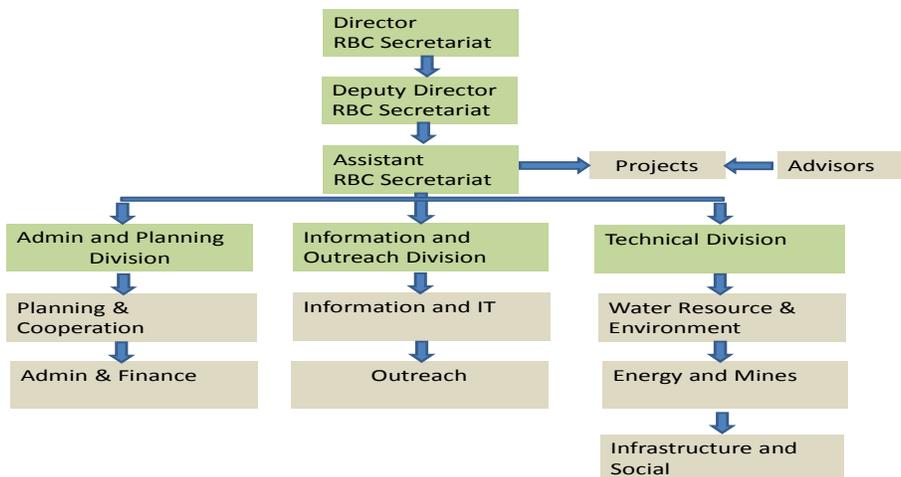


There are a number of steps for establishing the NT-NKD RBC as below



The secretariat office is located on site, working closely with the provincial divisions. Only a small number of staffs are working in three divisions of the secretariat office where its director leads. From the beginning the national team taking led the process of designing, preparing and planning but some authority and tasks will be decentralized to the province when they have sufficient capacity. The most important capacities of the secretariat apart from specific technical skills are facilitation, liaison, planning and reporting, with also English ability.

### Organization Structure of Nam Theun-Nam Kading RBC Secretariat



Although some capacity building and preparing quite ahead to the availability of NT-NKD RBC it is still concern of effectiveness of the river basin management and development which local authorities to lead and consider basin-wide planning or integrated sectoral planning. It is absolutely need time and resource to continue forward the sustainable development of Nam Theun-Nam Kading River Basin Management as model for other.

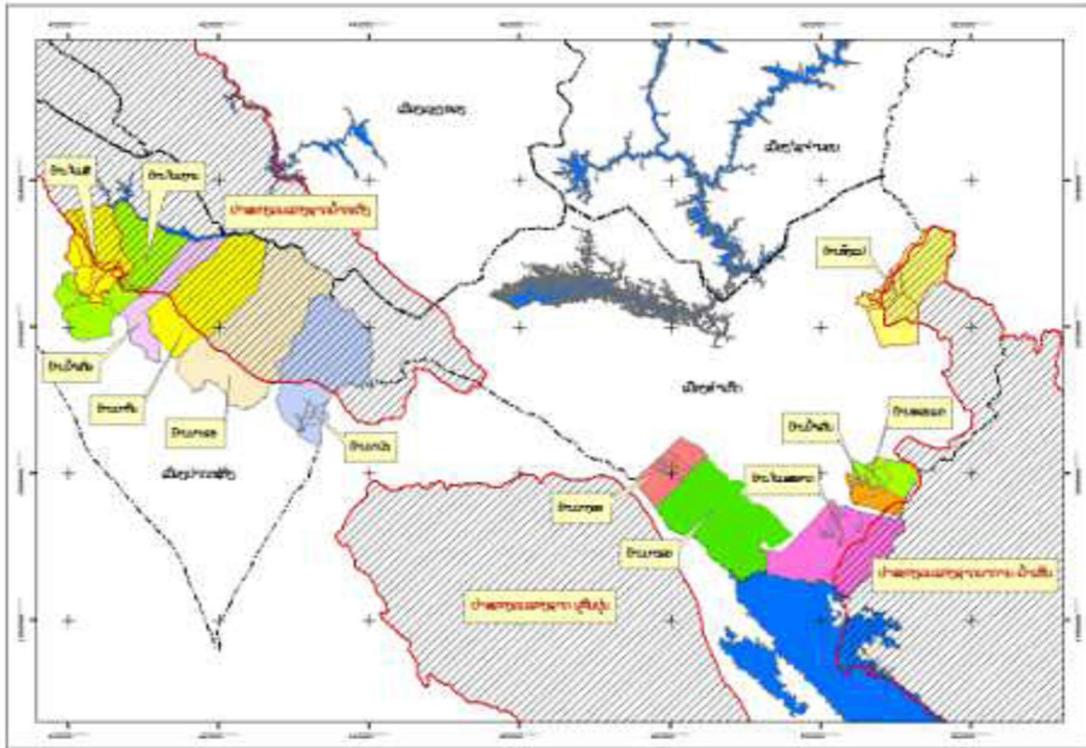
In conclusion, the NT-NKD model is a holistic approach planning from bottom up and top down. It is sectorial planning for management of the basin as ground work has been prepared - the local villagers have been built on their capacity and ownership as well as provincial and district officials. The Community Conservation Network (CCN) is one of key ground project conducted by other sub grant. With some strategies, guidelines and other tools available to support the implementation such as PESAP, SMU. While its river basin committee and secretariat was set up as the committee to overseeing and supporting the secretariat to plan and implement, and holding a negotiation with other. The secretariat plays as a facilitator to liaise and support other stakeholders working in the basin. Anyway, this approach is another alternative should be further supported and better developed which would be a good example and sustainability when capacity and ownership of province, district and villagers in natural resources management are built.

### **E2.5 Community Conservation Network (CCN) model**

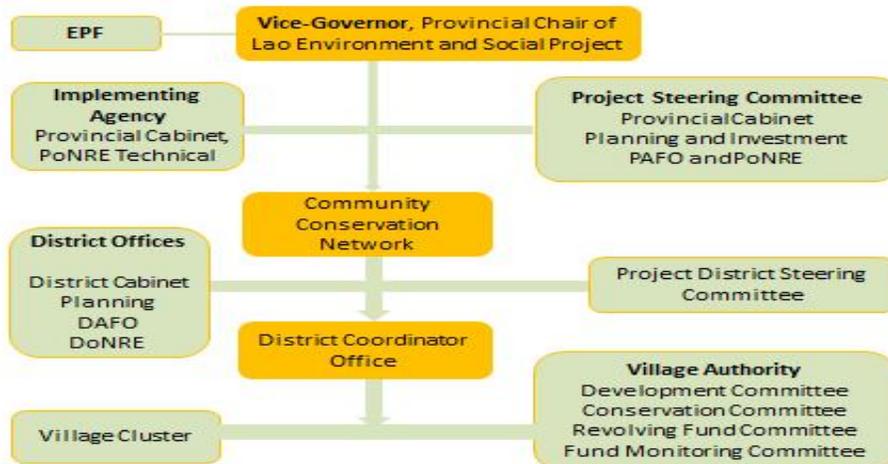
Since most rural villagers in Lao PDR live in and rely on natural resources for survival and income generation. The local people and natural resources cannot be separated so their good survival will be only ensuring their natural resources are managed. The design of protected area management in the country is therefore different from other which the inhabitants are not relocated from the declared protected area. It is realized that local people will be eyes and ears in case of the government's limitation on human resources and finance. However, when there has no practice of sustainable use of their existing forest resources in place, either lack or ineffective land use planning is associated with over harvest of forest resources, made some consequent impact on their livelihoods.

Therefore, the community conservation network was designed to enhance knowledge and understanding of local communities on the need to protect the watershed, to conserve natural resources and biodiversity, and to provide knowledge and opportunities on various livelihood development options. There are 12 villages in 2 districts located surrounding the NNT and NKD NPAs.

The intention is to build a base network and improving livelihoods to change behaviors from over-exploiting natural resources to actively participating in the protection of NPAs. The key project objectives were to increase awareness of communities surrounding NNT and NKD-NPAs of the global biodiversity significance, enhance the biodiversity conservation network at community level, and maximize community participation in conservation activities, improve community livelihoods through increased crop and livestock production and sustainable management and use of Non Timber Forest Products (NTFPs). There by increasing household incomes, with direct links to reduce dependence on forest resources.



### CCN Project structure



CCN sub grant is considered a large project with US\$525,100 for 2.5 year (June 2010-December 2012). The project pilot villages of Pak Kading District as Ban Phonsy, Phonkho, Nam Duan, Nahin, Nabouy and Naphong, and the villages of Khamkeuth District as Ban Na Ngoy, PhonNgam, Thongpae, Nam Deun, Nongmek and PhonSa-at.

This project was involved by many provincial divisions and district offices from project activity planning to implement. The Project committee established sooner the project started,

the committee was chaired by Vice Provincial Governor and with the members consists of relevant provincial divisions and district office helped the project to plan and implement the project activities successfully.

The relevant provincial divisions assigned most work for district offices to work closely with the project team to deliver the project activities as planned. The key activities conducted as following:

#### **Outreach activity**

- The project firstly started with full outreach activity for official and district teams as a team of 8 staff with well trained and 64 villagers involved in 12 villages for facilitating this work. There were various topics but for the staff to firstly understand the ultimate goal of the project toward watershed protection, then for other are more about conservation concept, biodiversity, forest and ecosystem. Also, the values of these forest resources, what the need for sustainable forest and wildlife management, what impacts are found and on their livelihoods, biodiversity losses because of over harvesting. Alongside, some communications on building local ownership, change behaviors from over harvest practice to wise use.
- Using the advantage of outreach materials developed for Nam Kading NPA including posters (2,000 on good forest good life, 2,500 on Saola, 2,500 on great hornbill), comic book (5,500), and a number of leaflet, puppets and signboards produced. Designed and produced outreach materials, printed and used for the outreach activity in 12 villages of 2 districts (Pak Kading and Kham keut) had 2,580 people participated, of which 1,552 is women. At provincial level, the outreach through a radio program for 1 year at provincial radio broadcast and Khamkeut District radio program.
- This activity has been well achieved by certifying that the villagers of these pilot villages able to explain about the CCN project, the linkages of conservation and development and their responsibilities, commitment toward the forest and wildlife conservation. The success of this because the province has good outreach team built partly by the Wildlife Conservation Society working in Nam Kading NPA since early 2005.

#### **Building capacity**

- Officials and villagers in any work being delivered in the villagers such as outreach, data collection, land use planning, livelihood development through training, study tour and on-hand experience (see specific items below). The mechanism that the project had done by identifying right persons particularly who are interested to learn, select relevant training topics and study tour sites with immediate assessment after the events to ensure all the participants gained the same understanding.

- The trainings carried out: 14 staff on livelihood development, of which 7 district staff. A total of 12 villagers were trained on crop plantation (Dec, 2011), on agricultural extension, specific crop such as short rice variety plantation, cassava, livestock raising (goat, pig). For 60 villagers on solid management and bio-fertilizer making (Jan 2012), 16 staff on mapping and a number of workshops/meeting conducted for the project team. Apart from the class trainings, three study tours conducted as visiting the Sepon gold mine (61 participants ) on village fund, land use, seedling, agricultural technique extension, bio-fertilizer, information; to Phou Mat Protected Area in Vietnam (31 participants) on pilot families on forest management, agricultural extension, outreach etc, to Sakon Nakhon in Thailand (19 participants) on water use management, land use for agriculture, pilot families on agriculture development, community participation and family incomes savings. In addition, as part of capacity building on outreaches that the project support including 8 staff and 64 villagers who were involved in village outreach activity.

### **Land use planning**

- Due to time limitation, the project trained provincial and district teams to conduct the land use planning in the pilot villages as 7 days per villages. The team has been well trained and ensure all understand and able to use all data forms correctly. The content of the training including: participatory rural appraisal, village mapping and land use survey technique. Results of the village land were therefore classified into several types of the land use as protected areas/watershed, protection forests, rehabilitation forest, fish conservation zones, agriculture land, paddy land, village resettlement. The key village data for livelihood development planning conducted are village profile, village calendar, family status ranking, family incomes and expenses, biodiversity data, ranking of most important forest products for incomes, ranking for most important natural resources for conservation, status of forest resources (decline), land use mapping, problem analysis, potential for livelihood development, priority activities and shortlist for funding and make a schedule for the village activities.

### **Livelihood development**

- Further from the village development priorities and potentials identified, numbers of poor families and based on their interest were assisted with funding. Through the process of screening made those pilot families identified in each of the 12 pilot villages. The trainings were given for the interested and selected families agreed by villages. The village development committee and authority to help and support those pilot families step by step from preparing land, plant or raise (livestock) to weeding and selling products. Total of 412 families engaged in annual cash crop plantation for 441.5 ha on cassava, corns, rice. A total of 23 families engaged in livestock raising particularly goats and pigs. Ban Nam Phong for example, has raised their goat to 60 individuals.

- Most villagers have a success in livelihood development activities particularly the family's selected cassava plantation so per family incomes is about 15-20 million kip but their investment cost for seeding, ploughing and other necessary cost is on average just about 2 million kip. Therefore, a majority of the pilot villages able to pay back the borrow amount, with have sufficient budget for covering their family expenses and prepare for next turn. Therefore, if the incomes base for their poverty assessment the district realizes that through this funding mechanism helped villagers eradicated from poverty faster.

No	Village	Poor HH 2009	Activity	Pilot HH	Area (ha)	Poor HH 2012	% Better off HH afterward
<b>Khamkeuth District</b>							
1	Na Ngoy	35	Cassava	19	21	24	68.57
2	PhonNgam	30	Cassava, corns, g-nut,	20	20	15	50.00
3	Nam Deun	64	Cassava, corns, g-nut, (pig and cattle)	13	11.4	46	71.87
4	NongMek	30	Cassava,	52	58	10	33.33
5	Phon Sa-at	30	Cassava, corns, g-nut,	20	32.1	20	66.66
6	Thong Pae	180	Cassava,	50	50	80	44.44
<b>Pak Kading District</b>							
7	Phousy	108	Cassava	25	13	24	22.22
8	PhonNgam	10	Cassava	27	52	6	66.00
9	Nam Deua	218	Cassava	55	55	107	49.08
10	Nam Hin	28	Cassava	55	55	6	21.42
11	Nam Bouy	18	Cassava	56	76	5	27.77
12	Nam Phong	59	Goat (60 individuals)	6			

- Livelihoods have been therefore improved quite significant in the CCN pilot villages according to pre and post assessment of the project shows that 263 households (41.74%) eradicated their poverty in 2012 against the 2009 baseline (see the table above). The assessment of their poverty based on the national standard regarding their house, rice sufficiency, income etc. This is really encouraging since a short period of the intervention made this much achievable.
- Ban Thongpae and Nam Deua have most significant change in poverty reduction, quit from shifting cultivation as over double, also much reduction in hunting in these two villages as well as Ban Nahin when this is a requirement in the contract agreement before the village fund is allowed. These make positive and contribute to the conservation objectives.

**Village development fund:**

- A total of 435 villagers received the fund, the village fund which has the village and district committee established for managing the fund. The fund has been grown about 10% and that expanded to more interested villagers to use their village fund. Each family is allowed to borrow the village fund for one year period but extension is possible dependent on case by case. Special consideration for the poor, widow and disadvantage group.
- An interest of 6% per year which the borrower to pay annually or at time of returning the loan if that villager borrows just one year only. The interest is divided into several proportions as 50% for the village fund, 30% for the government staff to monitor the fund and the rest for village committee to oversee the fund and support the borrowers to use the fund effectively. Even though, it has no dividends from this income goes to support for the conservation the village organize themselves to get some collective fund to support patrol team. From the experience, the village authority i.e. Ban Nahin said that it needs to set aside portion for conservation work from the village development fund's interest.

**Contract agreement for conservation:**

- Establishing village committee of all pilot villages as conservation network by the district governor with clear on mandates, responsibility and patrolling schedule to ensure that they understand, agree and follow the commitment by reducing wildlife hunting and illegal logging, preventing other people encroachment into their village areas coinciding the protected areas. Village conservation network established in 12 villages, a total of 155 people by each village have its village conservation unit (village patrol team, village militia and village chief). Each village organized a patrol for 2-4 times per month but later monthly when threats were better curbed. Threats are not necessary by the village itself but also other villages that are quite hard to manage. Some tactics developed by conducting a patrol without noticing anyone prior to the trip except the village conservation network including the neighboring villages. This tactics looks successful and able to detect illegal poachers.
- Physically, 7 fish conservation zones established, 101 signboards indicate different type of land use in the villages. Village regulations for conservation, land use and consisting with the village revolving fund developed in each village as reference for enforcement.
- All the pilot villagers are well understood the conservation work very well, they keep well perform the conservation practice although after the project. As the village commitment to use the fund by trying to reduce a number of their villagers do hill rice cultivation and hunting. Similarly, 164 households (36.6%) quited from shifting cultivation and 18 households (13.04%) quited from hunting. So far, the villagers collected 64 guns, confiscated some fishing gears found in the fish conservation zones including fishing net (4 sets), electro fishing (2), fishing mask (2). In addition, they educated for 5 people who disobey the village regulations by slashing forest for cultivation in the forest reserve area.

### E3: NPSH Story Line

Main objective of NPSH is to express GOL's policy intention to move toward sustainable development by giving high priority to the following aspects: (1) minimizing the potential negative impacts on local environment, affected population, and watershed; (2) ensuring that opinion of affected people especially ethnic group are heard during the decision making process and transparent through adequate consultation with local people and providing information to the public; (3) ensuring compliance with GOL regulations; (4) encouraging the GOL and developers to share revenue and/or benefits from the project to build capacity of agencies and/or contribution to conservation of natural resources in the country through special fund; (5) describing ways to bring existing projects into compliance with the policy; and (6) institutionalizing regulations and/or institutional arrangement that could facilitate effective implementation of the policy. The implementation progress and lessons learnt should be reported to high level committee on an annual basis.

It should be noted that the NPSH was issued on 07 June 2005 as part of the Government Letter of Implementation Policy (GLIP) of the Nam Theun 2 Hydroelectric Project and Nam Theun 2 Social and Environment Project by the Deputy Prime Minister who was the chairman of the Committee on Planning and Investment and Chairman of Lao National Committee for Energy. As part of the same package it was also agreed that LENS<sup>19</sup> will provide technical assistance and financial support (about \$0.38M) to initiate the implementation of the NPSH. However, the activities were delayed during 2006-07 due to the needs to assign the agency responsible for the implementation of the NPSH and for the agency to develop a proposal as required for the sub grant mechanism under EPF operation. In 2006, the Government created the Ministry of Energy and Mines (MEM) comprising two departments responsible for energy sector i.e. the Department of Electricity (DOE) and the Department of Energy Promotion and Development (DEPD).

In early 2007, DOE through the social and environmental unit (SEU) was assigned to be responsible for the implementation of the NPSH. With technical assistance of the LENS's Chief Technical Advisor, the first phase proposal was developed in early 2007 and approved in mid 2007. The proposal aimed to conduct a rapid assessment of the sector, develop a strategy for implementation of the NPSH, and prepare the second phase proposal for EPF consideration. The draft strategy and proposal were discussed with the World Bank (WB) technical team and the NPSH implementation strategy was established and implemented during 2008-2010. Recognizing the urgency for building technical and management capacity of key agencies in addressing the environmental and social safeguard issues related to hydropower projects that are being developed, constructed, and/or operated by the private investors, priority for technical assistance and financial support on the implementation of NPSH has been incorporated into the design of the HMTA (Technical Assistance for Capacity Building in the Hydropower and Mining Sectors Project) project planned to be implemented during 2010-2014. Below summarizes key activities, outputs/outcome, and lessons learnt from the implementation

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<sup>19</sup> Lao Environment and Social Project aims to strengthen capacity of the country to mainstream environment and social safeguards in infrastructure development, strengthen biodiversity conservation in Central Lao and increase public 's knowledge of and support for environmental management. The project was implemented through the Environmental Fund using the sub grant mechanism with a grant of about \$4 million during 2006-2010 and \$3 million during its additional financing (2011-2013).

of the NPSH through LENS support during 2006-2010 as well as the activities being carried out under the HMTA project aiming at forging effective implementation of the NPSH.

*(a) LENS's activities, outputs/outcomes, and lessons learnt*

Recognizing the institutional and financial constraints of all agencies at national and local levels, LENS provided technical support to DOE during 2007-2011 and key activities included (a) mobilization of consultants, (b) procurement of vehicle and equipment (1 car and 1 computer), and operating cost for on-the-job training through project-by-project monitoring, training workshops, and study visit as needed. During the first phase (1 year) two full time senior national consultants and one regional consultant were mobilized to carry out a rapid assessment on capacity of MEM agencies at national (DOE, DEPD) and provincial level (PDEMs) and on the extent of NPSH compliance of the on-going projects and to prepare a draft implementation strategy and a proposal for the second phase. The draft strategy was extensively discussed between DOE and the WB technical team in light of the lack of clear regulations to forge effective implementation of the NPSH, the lack of public awareness on the NPSH, and limited knowledge, capacity, and financial resources of the agencies. The NPSH implementation strategy was later finalized and endorsed by DOE and the WB technical team and the second phase proposal was submitted to EPF for approval, and the activities were carried out during 2009-2011.

The NPSH implementation strategy adopted the three parallel approaches: (a) establishing a coordination mechanism, (b) undertaking a project-by-project monitoring (PBPM) program, and (c) establishing sustainable financial mechanism. To move forward (a) and (b) during the second phase, a full time national consultant, a full time administrative assistant, and a part time regional consultant were mobilized and a draft sector action plan was developed. DOE conducted a number of meetings by inviting key agencies (DEDP, DESIA, MAF, MOF, and WB) to participate in the discussion. Recognizing that the Department of Environment and Social Impact Assessment (DESIA) has been established under the Water Resources and Environment Administration (WREA)<sup>20</sup> and that DESIA/WREA was revising the EIA regulation, technical guidelines and various documents aiming to strengthening effective implementation of the EIA/SIA process and with assistance from Sweden (SEM II) and the WB through a different sub grants (A3), DOE proposed (and WB technical team agreed) to put more efforts on the implementation of the PBPM program, facilitation of stakeholder discussion at local level, preparation of Status Reports, and undertaking the national workshops.

Review of the development status of hydropower projects, it was determined that priority for the PBPM actions should be given to the south (Sekong/Champasak/Attapeu) where there are issues related to hydropower development and there was no technical assistance and/or financial supports (there were supports from ADB for Nam Ngum and from WB for Nam Kading at that time). DOE staff made a number of field visits to the south and the activities and lessons learnt are discussed in following section (see below). DOE prepared the first and second status reports based on desk review of the hydropower project registered with DEDP, the NPSH implementation strategy, and results from the PBPM program, and the reports were made available in the DOE website. DOE in close cooperation with DESIA also conducted two high-

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<sup>20</sup> WREA was established in 2008 and is now merged with other agencies under the new Ministry of Natural Resources and Environment (MONRE) which has been established in mid 2011.

level national workshops (one in 2009 and one in 2011) to disseminate information of the NPSH, the EIA decrees, and other government regulations regarding safeguards requirements related to hydropower projects. Key government agencies, project developers, and international donors were invited to attend the first national workshop when the key project developers (such as NT2, THB) were invited to make presentation on their safeguard practices. In the second workshop (chaired by the deputy prime minister responsible for environment) all Governors were attended. Although these workshops raised awareness of the developer, the general public, and the provinces on the NPSH and regulations related to safeguards, it is necessary that providing technical assistance and financial support to the agencies at national and local level will be necessary to move forward achieving sustainable development of hydropower sector.

**Coordination among agencies:** Experience and lessons learnt during the implementation of NPSH under LENS regarding the coordination of agencies are that (a) forging effective coordination and cooperation among key agencies requires clear policy direction from a high level interagency committee so that the activities can be continued despite the change in organization and personnel; (b) development and application of an action plan to implement the NPSH can be an effective means for updating information undertaking by key agencies as well as facilitating close coordination among them, however having a strong secretariat will be necessary for facilitating the decision making process and for forging timely implementation of the activities; and (c) preparation of the status report and undertaking national workshop although useful for updating information but it is necessary to actively engage the project owners, local agencies, local authorities, local people, and other key stakeholders and take actions on the ground. Effective coordination between key agencies and the provinces during the planning stage, especially during the feasibility study and the EIA/SIA study, will be critical for ensuring that adequate mitigation measures will be implemented and clear agreements should be reached before the signing of the environment compliance certificate (ECC) and the concession agreement (CA). Involvement of the National Assembly and public consultation during the final stage of the CA approval process could reduce potential negative impacts of the project and the potential long-term risk to poor population, especially the ethnic groups.

**Project-by-Project Monitoring (PBPM):** With technical assistance from the Technical Advisor and the WB technical team, a number of field visits to the project areas in the south (Xeset 1/Xeset 2, Houya Ho, Xekaman 1), the central (Nam Leuk, THB), and the north (Nam Leuk, Nam Lik 1-2, Nam Ngum etc.) were carrying out and priority safeguard issues and actions to mitigate them were identified and recorded in the report. Given the lack of clear regulation and institution framework necessary for addressing the safeguard issues that are complex and cut across the responsibility of sector and/or administrative boundary, DOE took the lead in demonstrating ways to do it by separating issues that could be solved by the sector agencies using existing regulations from an issues that require discussion, agreement and cooperation among agencies, project owners, and local communities at local level. Field visit and discussion with Houya Ho project<sup>21</sup> located in the south covering Champasak and Attapue provinces suggested that there was an issue related to resettlement of affected people which was carried out by local authority when the resettled people from Houya Ho and Xenamnoi projects were moved at the same time and they are having difficulty in restoring their livelihoods. A rapid

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<sup>21</sup>Houya Ho is the first Independent Power Producer (IPP) project in Lao PDR designed for energy export to Thailand and the concession agreement (CA) signed in 1997

study was conducted by a regional social consultant and a plan to address the issue was proposed to DOE for consideration. Given that development of Xenamnoi project was on-going, the proposed mitigation plan was considered during the discussion between DOE and the Xenamnoi developer and the plan to restore the livelihood of the affected people have been included as part of the mitigation measures for the Xenamnoi project. Discussion with Houya Ho project and field visit suggested that there are also issues related to watershed protection mainly due to encroachment of local people and that the company has also made contribution to the local government for improving the well being of local population (schools, water supply, etc). Addressing the watershed management issues is critical for ensuring adequate storage capacity in the reservoir but it beyond the responsibility of the project owner and requires coordinated actions between local agencies (MAF), local authorities, and other stakeholders (farmers, households, etc.) in the area. Field visits to Xeset 1 and Xeset2, which are located in nearby area, also suggested that watershed protection and management is very critical for maintaining water storage capacity since the watershed is small and there are too many land clearance for coffee plantation. DOE provided some fund for the MEM provincial office (PDEMs) and MAF to work together with the project owner (EDL) for Xeset 1 and Xeset 2 and an action plan to control land use and implement measures to prevent soil erosion for Xeset was prepared. The plan was completed and being implemented with financial support from the project owner (Xeset).

These two experiences suggested that there are ways to address difficult safeguard issues at local level if there are strong policy direction from the national agencies regarding the priority of the issues and timely financial support to facilitate constructive discussion on options and implementation arrangement despite the lack of specific regulations and institution. However, this will require strong leadership and commitment of the sector agency which may be difficult to find a solution especially when the issues are related to the private owners that are operated based on the existing agreements described in the CA which was approved by the National Assembly and thus can sometime overrule many of the existing laws and regulations. In this context it is necessary for the agencies and provinces to ensure that all new hydropower project has gone through appropriate appraisal process by the agencies during the planning stage (FS, EIA/SIA, ECC/CA signing) and the proposed mitigation measures and post evaluation and/or monitoring activities are clearly defined including funding arrangement and responsible agencies. For the existing projects, an assessment should be carried out by DEPP/MEM staff through desk study and the PBPM program to assess the extent of the NPSH compliance and identify priority actions to address the issues in consultation with the local agencies, local authorities, local communities, and project owners as appropriate. The action plan for implementation of the NPSH should then be updated and with a strong secretariat, the activities should be moved forward.

Another key lesson learnt from the PBPM program is that this approach could be used as an effective mean to facilitate the “learning-by-doing” of staff both at national and local level as well as to initiate partnership and cooperation among them. It is also effective to bringing local agencies, key agencies, and the project owners to discuss the issues openly and agree on actions that are practical and doable on the ground. The most important issues are clear policy and technical guidance of central agencies, budget to support operation and opportunities to discuss among key stakeholders. A study visit of DOE staff and representatives from PDEMs to Thailand (EGAT ++) was also conducted to widen the knowledge and vision on energy development policy, operation, and good practices of the project owners.

Application of PBPM approach will be carried out by DEPP/MEM during 2013-2014 as part of the implementation of HMTA, including follow-up the implementation experience and outcomes of the Houya Ho resettlement actions and the Xeset watershed management. Results will be incorporated into the third status report expected in mid 2014.

Implementation of the third strategy (ensuring sustainable financing) is much more complex given the complexity of the issues, limited GOL budget, and the lack of clear regulations on how to share revenue from hydropower projects as described in the NPSH. Discussion with Houya Ho during the field visit and a WB study<sup>22</sup> on hydropower development suggested that there are ample opportunities for the project developers to make contribution to mitigate potential cumulative impacts due to development activities as well as to improve well being of local population through various forms of benefit sharing schemes that have occurred in the country. Implementation experience from LENS however suggested that efforts will be necessary to first build partnership and common understanding among local agencies, local authorities, local communities, and the project owners and initiatives from DEPP/DESIA (similar to DOE/DESIA in the past) could bring them together and discuss ways to move forward the activities that are acceptable to key stakeholders. It should also be noted that the revised Electricity Law (approved on 16 January 2012) has included clear provision (article 41 Part III) for the developer to make contribution to the EPF for protection of environment in the project area, downstream area, watershed area, and for development of basic infrastructure and socioeconomic activities in local area where the project is located. There are also a clear provision (Article 31 Part III) that the developer will have to carry out environmental impact assessment, assess impacts on resettlement of affected population, identify mitigation measure to reduce impacts on water quantity including cumulative impacts downstream of the project, and responsible for all these associated costs as part of the project cost and the environment tax as required by law. Under the HMTA project a study is being carried out by MOF to investigate various options to address hydropower fiscal policy issues and the results are expected in late 2013.

*(b) Activities to be carried out under HMTA*

In line with the new organization structure and mandate, DEPP is responsible for forging effective implementation of NPSH under the subcomponent 2c, including updating the NPSH in line with the current organization and priority. A budget for the component was revised during the midterm review in January 2013. DEPP will be responsible for forging effective implementation of the 2c as well as the overall C2 activities to ensure achievement of the expected outcomes and outcome monitoring indicators. Key activities for 2c will include (a) updating NPSH including consultation with key agencies and with a target of producing the final draft by the end of 2013, (b) undertaking the PBPM program to priority projects in the north, the central, and the south and prepare the third status report by mid 2014, (c) convening a national workshop on NPSH in mid 2014, and (d) mainstreaming internal regulations and/or procedures to incorporate safeguard requirements. DEPP will also taking the lead in the

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<sup>22</sup> Lao PDR Development Report 2010 --Natural Resources Management for Sustainable Development: Hydropower and Mining.

preparation of a training program for PDEMs and other MEM agencies to be implemented by the Department of Personnel under subcomponent 1a. Recognizing the lessons learnt mention above, the following activities will be carried out:

- Complete the updated NPSH and submit to GOL for approval including a recommendation to establish a high level committee to supervise the implementation of the NPSH. The updated NPSH will provide clarity regarding the compliance and monitoring process, the policy on revenue and benefit sharing, and connection with the safeguard measures in the project planning cycle.
- Clarify roles and responsibility of key agencies in the IPP process, including preparation of standard documents necessary for forging compliance with the CA and NPSH;
- Conduct the PBPM program for priority projects in priority basins which will be selected in consultation with other agencies, including setting up criteria for determining compliance with CA and NPSH; The results will be used to prepare the third status report;
- Conduct a national workshop on NPSH in late 2014.

## ANNEX F

### Environmental Compliance Certificate System in Lao PDR

## **Annex F. Environmental Compliance Certificate System in Lao PDR**

This annex presents the executive summary and key finding on the quality of the Environmental Compliance Certificate (ECC) as assessed by the regional consultant to verify achievement of the PDO performance target as well as provide an independent opinion on the quality of the ECC system. The presentation is as follows: (F0) Executive Summary; (F1) Introduction; (F2) The ECC System in Lao PDR; (F3) Verification of DESIA Achievement for LENS Project; (F4) Improving Effectiveness of the ECC; (F5) Measuring Quality of the ECC; and (F6) Conclusion and Recommendations. There are also 4 appendixes presenting (1) An Independent Opinion on SESO; (2) ECC-SESO Data at DESIA; (3) IPP Process and EIA Process; and (4) Draft Division of Labor for the IEE/EIA Process which is being revised.

### **F0. Executive Summary**

The Environmental Compliance Certificate (ECC) system in Lao PDR was reviewed and its quality was assessed to certify achievement of the agreed performance target for the Lao Environment and Social (LENS) project. The reviews were carried out through document reviews and meetings with key officials from the Department of Environmental and Social Impact Assessment (DESIA) of the Ministry of Natural Resources and Environment (MONRE) and other key agencies while the quality assessment was made based on the professional experience and judgement.

Key findings and recommendations are as follows:

- According to DESIA database, achievement of the agreed performance target of more than 60% inclusion of the Standard Environment and Social Obligations (SESO) was achieved at the end of the LENS project (June 30, 2013).
- Although quality of the ECC system has been significantly improved starting 2009, more improvement will be necessary to ensure effective application of the ECC system in Lao PDR.
- It is concluded that the current quality of the ECC system is rated “Moderately Unsatisfactory” given weaknesses in the implementation and monitoring/inspection of the EIA/SIA process and limited human and financial resources including coordination/cooperation among key agencies, and capacity of the provinces and local authorities.
- Additional efforts, technical assistance, and financial supports from international agencies will be necessary to improve effectiveness of the ECC system in Lao PDR. Given that LENS2 is being proposed by WB and the activities

will be implemented during 2015-2020, DESIA should work closely with EPF, WB, and other interested parties to secure additional technical assistance and funding support for the implementation of the action plan identified in Section F4.2.

## F1. Introduction

Rapid development in Lao PDR especially during the past 5 years has raised public concerns on the effectiveness of the government regulations regarding the environmental impacts assessment (EIA) process and capacity of agencies to implement them. Review of various reports<sup>23</sup> suggested that key sector issues related to natural resources and environmental management (NREM) in Lao PDR include: (a) depletion of natural resources, especially forest and biodiversity; (b) hydropower development and social challenges, especially those related to relocation of ethnic groups; (c) national policy on economic growth and poverty reduction, especially through hydropower and mining development; and (d) weak legal and institutional framework for natural resources and environment. With technical assistance and financial supports from donors and international agencies including the World Bank (WB), Asian Development Bank (ADB), Sweden (SIDA), Finland, UNDP, and Germany, the Government of Lao PDR (GOL) has been taken actions on institutional and legal reforms as well as on capacity building of key agencies.

During 2006-2013, the World Bank (WB) provided technical assistance to the Government of Lao PDR (GOL) through the Lao Environment and Social (LENS) project using EPF sub grant mechanism. LENS project aims to assist GOL in strengthening the management of environmental and social issues associated with the sustainable use of natural resources in Lao PDR and a number of sub grants were provided to build capacity of national agencies and the 3 project provinces (Bolikhamxay, Khammouane, and Savannakhet) as well as to enhance knowledge and capacity of local communities and general public giving high priority to address environment and social safeguards due to hydropower development. Key national agencies received the supports included the Department of Environment and Social Impact Assessment (DESIA), the Department of Electricity (DOE) of the Ministry of Energy and Mines (MEM), the Nam Theun-Nam Kading (NT-NKD) River Basin Committee Secretariat (RBCS), the National University of Lao (NUOL), and the Lao Front for National Construction (LFNC). Under LENS additional financing, there are two monitoring indicators for DESIA sub grant as follows:

*(1) "By December 31, 2010, WREA has prepared guidelines for incorporating ECC measures in Concession Agreement for hydropower projects signed by the Recipient after the enactment of the Environment and Social Impact Assessment Decree"; and*

*(2) "Increase in the % of environment compliance certificates (ECCs) issued by WREA that are of adequate quality as judged by a third party annually starting June 2010 as a baseline and agree on the % increase by September 30, 2010. The target is by the end of the Project to increase the issuance of said the ECCs by WREA by a percentage to be agreed between the Recipient and Association based on the baseline data".*

Review of LENS and discussion with DESIA suggested that during the review and approval of DESIA sub grant there was extensive discussion on way to measures the term "adequate quality of the ECC as judged by a third party annually" in light of limited capacity of DESIA and rapid development of hydropower in the country. Given that WREA had adopted a

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<sup>23</sup>One of them is the project completion report (draft May 2013) of the Lao Environment and Social (LENS) project

policy to apply the Standard Environment and Social Obligations (SESO)<sup>24</sup> into the Concession Agreement (CA) and development of a draft SESO for large hydropower and mining project was nearly completed it was agreed that SESO will be considered as the guideline for incorporating ECC measures in CA for large hydropower projects and that DESIA capacity to negotiate with the project developer to include the SESO as an annex to the CA will be considered as “adequate quality of the ECC as judged by a third party annually” for LENS project. In September 2010, it was further agreed that at the end of LENS additional financing at least 60% of the new hydropower projects receiving the ECC issued by WREA will incorporate SESO as an annex to the CA and the June 2010 baseline is equal to zero. However, during the preparation of the Project Completion Report (PCR) for LENS, it was agreed that EPF in coordination with DESIA will mobilize an independent consultant to (a) verify DESIA’s database and justify achievement of the agreed target (60% SESO incorporated as an annex), (b) assess the quality of the ECC system in connection with the agreement to include SESO in the CA of hydropower project starting June 2010, and (c) prepare a paper on the ECC system in Lao PDR including highlighting DESIA strategy to strengthen effectiveness of the ECC. The ECC is governed mainly by the Environmental Impact Assessment decree (Decree 112) promulgated in 2010 and the Compensation and Resettlement (CAR) decree (Decree 192) promulgated in 2005. The decree on River Basin Committee (RBC) promulgated in 2010 (Decree 293/PM) provides a legal basis for the agencies and key stakeholders to facilitate effective implementation of water and other related resources in the context of an integrated river basin management.

This paper is prepared by the regional consultant. The paper (a) describes background on the ECC and the EIA process in Lao PDR and its connection with SESO (Section 2); (b) verifies achievement of the performance indicators for LENS project (Section 3); (c) highlights DESIA strategy and action plan to improve effectiveness of the ECC process (Section 4); (d) provides an opinion on the quality of the ECC system (Section 5); and (e) provides conclusion and recommendations on way forward (Section 6). Appendixes provide more details on related information including opinion of an international expert who has been extensively work in the environmental management sector in Lao PDR, a summary on SESO development, and ECC-SESO database obtained from DESIA. It is anticipated that the paper would also provide some background on priority areas for additional technical assistance and financial supports. It should be noted that in light of the Ministry of Natural Resources and Environment (MONRE) policy and implementation experience of the EIA/CAR decrees the strategy and action plan would be modified by DESIA from time to time.

## **F2. The ECC System in Lao PDR**

### **F2.1 What is the ECC and why is it important?**

According to the EIA decree (Decree 112) the ECC is a legal document which approves a report on an initial environmental examination (IEE) or a report on environmental impact assessment (EIA), an environmental management and monitoring plan (EMMP), and a social management and monitoring plan (SMMP) as provided in Article

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<sup>24</sup> The draft SESO was developed by DESIA with technical assistance from an international lawyer through the Strengthening Environmental Management project phase II (SEMII) during 2006-2010. This technical assistance has been continued through the Environmental Management Support Project (EMSP) being implemented under the financial support from Finland during 2011-2014.

10 and Article 15 of the EIA Decree<sup>25</sup>. Article 17 of the EIA decree stipulates that the Water Resources and Environment Administration (WREA now MONRE) is responsible for issuing the ECC for all the projects subject to the EIA decree however with agreement from WREA and the sector agencies responsible for the project, the provinces may issue the ECC for the IEE projects (Category 1 project). The ECC may contain conditions which the project developer is obliged to perform and it is valid throughout the concession period of the investment project. Below highlights key conditions on ECC validity while specific procedures for the projects under operation without the ECC is specified in Box 2.1:

- If the investment project does not start to operate within 2 years, from the date it obtained the ECC, the certificate will be automatically expired and cannot be used. Three months prior to the expiry date, if the project developer wishes to continue its investment project, it can request the WREA to re-consider.
- After the investment project gets the ECC, 6 months prior to the completion of the construction phase, the project developer must review and evaluate the implementation of the measures to minimize the impacts on environment and society or the EMMP and the SMMP during the construction period as well as to improve the measures to minimize the impacts or the EMMP and SMMP during operation stage and submit the revised EMMP and SMMP to WREA for approval.
- During the operation of the project, the project developer must review and improve the mitigation measures to minimize the impact on environmental and society or the EMMP and SMMP every 2 - 5 years period depending on the complexity of the project and agreement with WREA. The revised plan will be submitted to the WREA for consideration and approval.
- The ECC is required before issuing any business license, endorsing any contract for mining and extracting of mineral substance, clearing of project site, construction, or implementation of the project.

<p>Box F2.1 Required actions regarding the investment project which is under operation without an environmental compliance certificate prior to the effective date of this Decree</p>
<ul style="list-style-type: none"> <li>– The local administrations to make a list of the businesses which are located within their administration areas, under their respective categories and sizes of the investment project, in either category 1 or category 2, and then send the list to the Water Resources and Environment Administration within 90 working days, after this Decree becomes into effect;</li> <li>– The WREA considers it with reference to the degree of impacts on the environment and society of the investment project. For the project which has no impact on the environment and society, the WREA will notify the project developer to continue its operation. For the project which has impacts on the environment and society, under the class and size of the investment project, either Category 1 or Category 2, the WREA will notify the project developer in writing to demand the project developer to prepare and finalize the EMMP and the SMMP within 90 working days, for the investment project which falls under category 1, and 120 working days for the investment project which falls under Category 2, from the date of notification. If the plans cannot be finalized within that specified period, the measures provided in Article 37, 38, 39, and 40 of this Decree will be respectively imposed on the investment project, depending on</li> </ul>

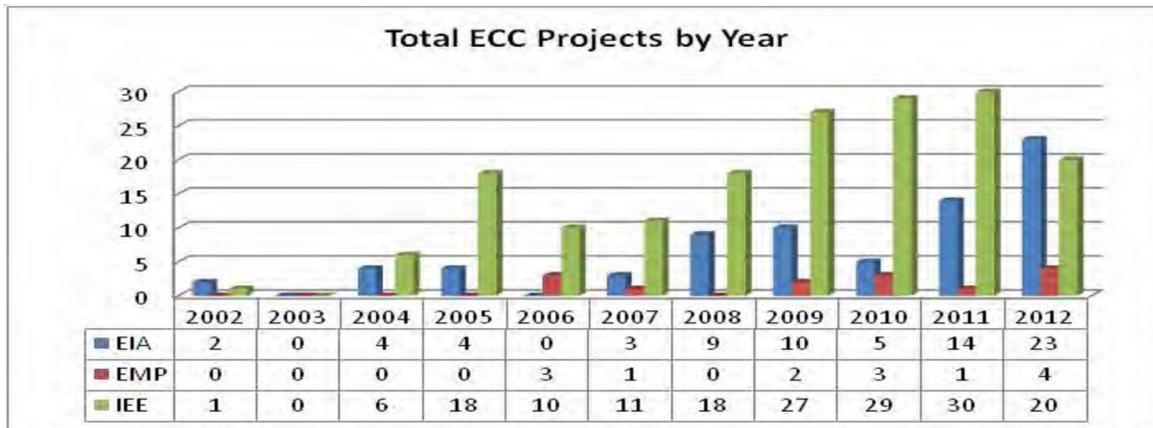
<sup>25</sup> The EIA Decree is available through the internet.

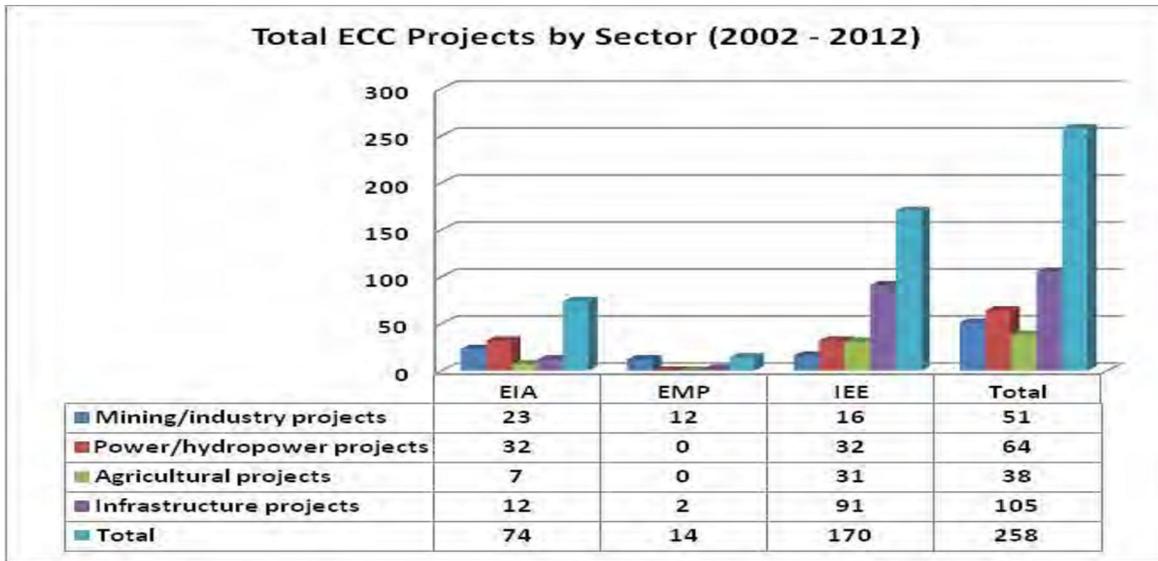
their circumstances.

- For the investment project which the WREA has already approved the scope of study and ToR for the EIA, and the investment project of which its report on IEE or report on the EIA has already been submitted, but have not yet received ECC, before the date this Decree becomes effective, that project developer can follow the Regulatory Provisions on Environmental impact assessment in Lao PDR No.1770/STEA.PMO, dated October 3, 2000 or this Decree.

Figures F2.1 and F2.2 show the total number of ECCs approved by WREA/MONRE during 2002-2012 for EIA, IEE and EMP projects for the four sectors: mining/industry, power/hydropower, agriculture, and infrastructure. Before the effectiveness of the EIA decree in 2010, the projects could be prepared as an IEE, EIA, or EMP depending on agreement between the project development and the agencies in line with the EIA regulation (2003). Under the EIA decree specific types and sizes of the projects requiring IEE or EIA is clearly defined and efforts are being made to facilitate effective implementation of the decree. The total number of ECCs for EIA projects for all sectors increased considerably from 14 projects in 2011 to 23 projects in 2012 while majority came from power/hydropower sector. The number of ECC for mining/industry shows a decreasing trend in 2012 which could reflect the GOL policy to slow down the development of mining projects. Most infrastructure and agriculture projects are of IEE type however in 2012, six ECCs were issued for EIA infrastructure projects.

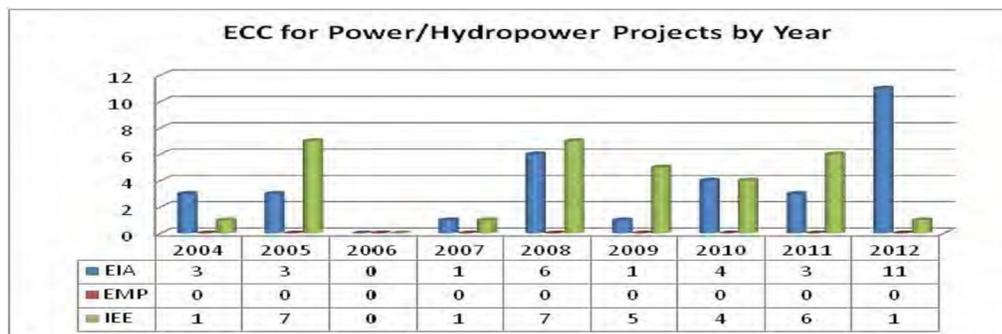
Figure F2.1 Total number of ECC approved by WREA/MONRE during 2002-2012 (Reference EMSP progress report)

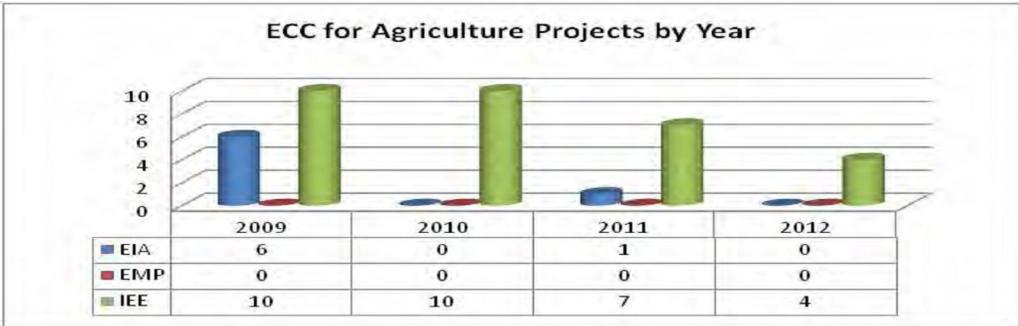




Review of DESIA database however suggested for the need to improve clarity and effectiveness of the data management system as well as information disclosure performance of DESIA and efforts are being initiated under the Environmental Management Support Project (EMSP). More discussion on this aspect is provided in Section F3 below.

Figure F2.2 Number of ECC approved by WREA/MONRE during 2002-2012 by sectors (Reference EMSP progress report)





## F2.2 The EIA Process and Key Challenges

### F2.2.1 Legal and institutional frameworks

*Background:* To promote protection of environmental quality and mitigate the potential negative impacts of development activities, the first Environmental Protection Law (EPL) was promulgated in 1999 and followed by the EPL implementation decree in 2000 and the EIA regulation in 2003. The EPL implementation decree and the EIA regulation assigned the responsibility for the IEE and EIA review to the line agencies responsible for the development project while the Department of Environment of the Science, Technology, and Environmental Agency (DOE/STEA) was responsible for issuance of an ECC with recommendations from the line agencies. During that period a number of technical guidelines related to the preparation of the EIA, IEE, and/or social impacts assessment were prepared by the line agencies in the energy and transport sectors with technical assistance from various donors such as JICA, ADB, and SIDA/WB. In 2008-2009, the EIA division of DOE/STEA was upgraded to a division (equivalent to a department) i.e. DESIA under the WREA and it is now under MONRE in 2011-2012. During 2009-2012, with technical assistance and financial supports from international agencies (SIDA, WB, ADB, UNDP, Australia, Finland, and Germany), DESIA capacity and EIA system has been significantly improved (see Section F5). Table F2.1 summarizes key legal and institutional frameworks affecting effectiveness of the ECC system in Lao PDR. Key aspects of the EIA and CAR decrees and the EIA process are briefly provided in this section.

Table F2.1 Key legal and institutional frameworks related to ECC system in Lao PDR

Laws/regulations	Implementing agencies	Remarks
EIA decree (2010)	DESIA of MONRE	Being reviewed, the revised EPL has been approved in December 2012
CAR decree (2005)	DESIA and provinces	Being reviewed and updated
RBC decree (2010)	DWR, Nam Ngum RBC (NG-RBC) and its secretariat in Vientiane, and Nam Theun-Nam Kading (NT-NKD) RBC and its secretariat in Bolikhamxay; all under MONRE	The NT-NKD RBC and the NG-RBC have been officially established through the prime minister decision while DWR is taking the lead in drafting technical guidelines and facilitating the IWRM process in other river basin.
Protection forest decree (2010)	Department of Forest Resources Management (DFRM); under MONRE	This agency is established in 2012 by upgrading the division of forest resources management of Ministry of Agriculture (MAF) to a department under MONRE
Protection area decree (draft)	DFRM	The process has reached the final stage for approval
Water resources law (1996)	DWR, RBCs	Being revised; Expected to be submitted to the national assembly in late 2013
Environmental Protection law (EPF, 2013)	MONRE, provinces	The revised EPL was approved by the National Assembly in December 2012
Forestry law	MAF	Being reviewed
Aquatic and wildlife law	MAF	Being reviewed
Investment law	MPI	-
Mineral law (2011)	MEM	Being reviewed
Electricity law	MEM	-

(2012)		
Other related laws and regulations	Other agencies	Including emission and standards, pollution control, infrastructure, etc.

*The EIA decree (Decree 112/PM):* The decree was promulgated on 16 February 2010 and has been effective 30 days after that. The decree stipulates a clear requirements and processes for the preparation and approval of the IEE and EIA projects including social impact aspects, requirements on consultation and information disclosure, and responsibility of the agencies and the project developers. Part I of the EIA decree describes the general provisions outlining the key objectives, definitions, and general principles for assessing the environmental impacts including the needs for assessing cumulative impact assessment and/or a trans-boundary impact. Part II describes the EIA process comprising the project screening, the participation process for affected people and public, the IEE process, EIA process, the ECC issuance, and cost obligations of the project developers. This section describes roles and responsibility of agencies (WREA, local administration, and sector agencies responsible for the projects) and the project developer as well as the review process and the services standard (50 working days for IEE and 15-120 working days for EIA depending on complexity of the project), including scope of the EMMP and SMMP to be developed and specific conditions to be followed during implementation of the EMMP and SMMP. The project developer is responsible for all expenses incurred during the preparation and review of the IEE/EIA report, the EMMP, and the SMMP as well as during implementation and monitoring of the prevention and mitigation measures to reduce the environment and social impacts or the EMMP and SMMP including (a) field survey; (b) consultation/information dissemination on the IEE/EIA/EMMP/SMMP reports at all levels (village, district, province/prefecture, and national); (c) fees and services charges; (d) implementation of the EMMP/SMMP and monitoring; (e) hiring of national and/or international consultant experts to review the EIA/EMMP/SMMP; (f) strengthening capacity of local and national agencies and necessary equipments/tools/vehicles for monitoring; and (g) carrying out routine monitoring and inspection visits and emergency cases. Part III prescribes management and monitoring arrangement to be conducted by the project developer, government agencies, and external monitoring by the National Assembly, state audit agency, state examination administration, and expert committee (when necessary) while Part IV prescribes the establishment of project steering committee on the implementation of the EMMP and SMMP (National Steering Committee, Resettlement and Livelihood Restoration Committee). Parts V to IX describe procedures related to change of project owner, information disclosure, dispute settlement related to environment and social impacts, policy for merit and measure for offenders, and final provisions.

*CAR decree (Decree 192/PM):* The decree was promulgated on 7 July 2005 and has been effective on the date of signing. The Science, Technology, and Environment Agency are assigned to provide guidance and coordinate with concerned sectors and local authority in the implementation of this decree and this responsibility rest with DESIA under MONRE. The decree applies to all development projects including government and domestic or foreign private development projects that require acquisition of land or land use rights or rights to possess fixed or immovable assets, change in land use or restriction of the use of resources that affect the

livelihood or income of the people. The project developers have responsibility to work with concerned agencies and local authorities to carry out surveys and field investigations, identify affected communities, prepare inventory of impacts by types and degree, determine entitlement to mitigation measures including compensation for affected assets and provide appropriate funding to assist, support, relocate affected population and to implement income rehabilitation measures and the plan will have to be approved by the concerned agencies. Special attention will be given to the poor and disadvantage groups and the resettlement process is carried out through a meaningful involvement of project-affected communities. Details on the cut-off date, compensation principles and procedures, and reporting requirements are described in the decree.

*The EIA/SIA process:* Figures F2.3 and F2.4 present the EIA process<sup>26</sup> while Box F2.2 presents the resettlement process. To implement each step of the project cycle and resettlement process, the project owner will have to comply with the provisions provided in the EIA decree and/or technical guidelines.

Figure F2.3 the EIA process in Lao PDR based on the EIA guideline (2012) (ESMMP covers the EMMP and/or SMMP)

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<sup>26</sup>EIA Guidelines (draft November 2011), prepared by DESIA with UNDP support

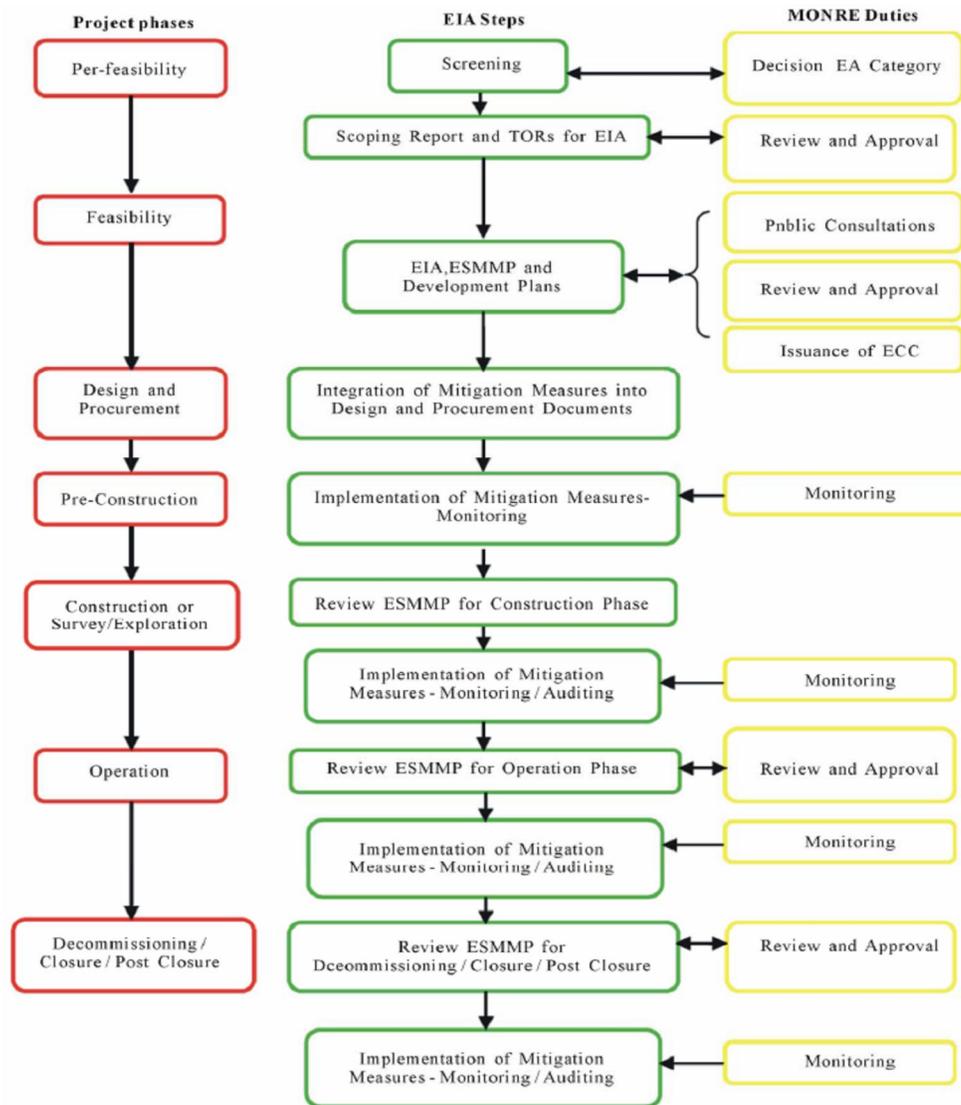
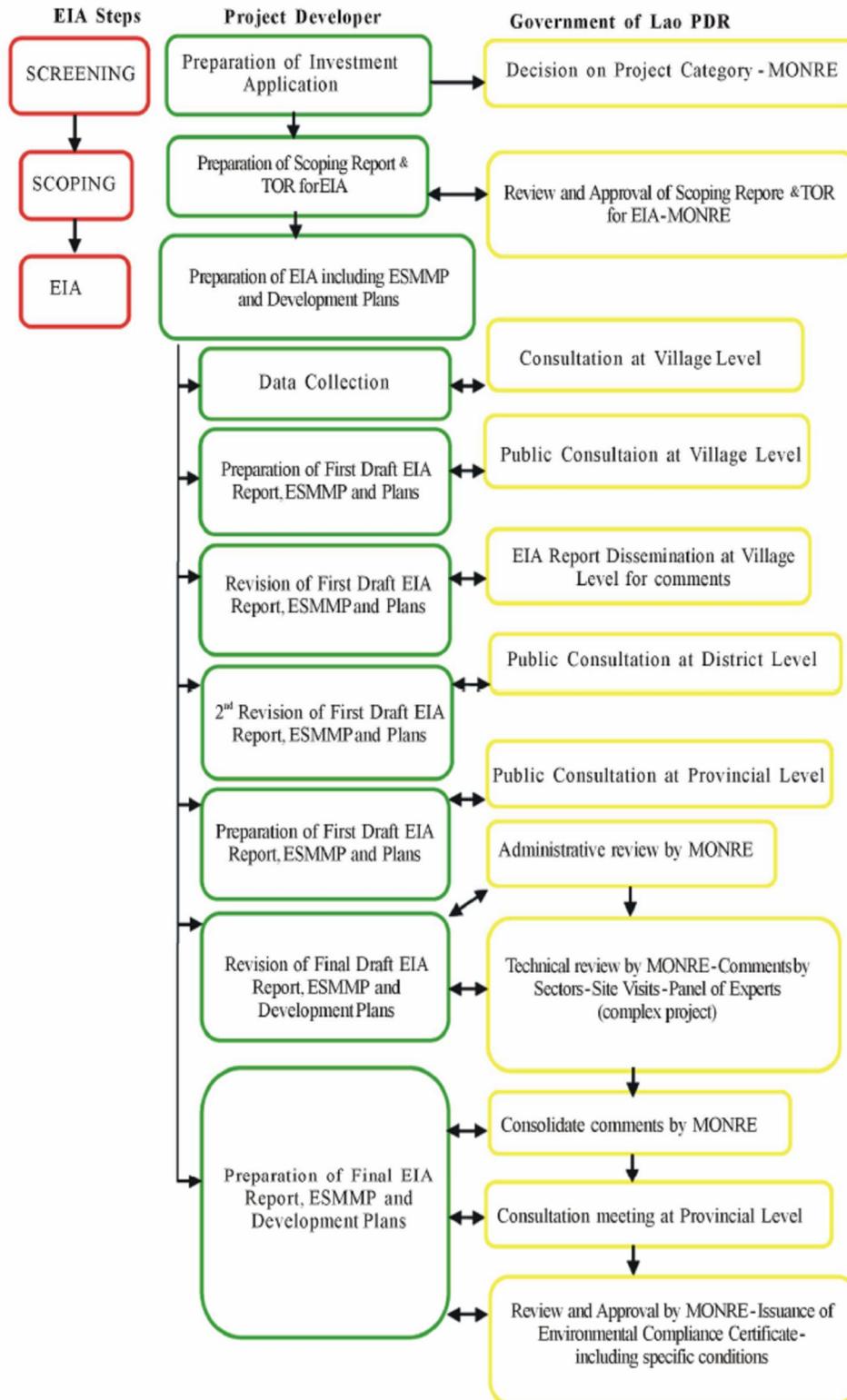
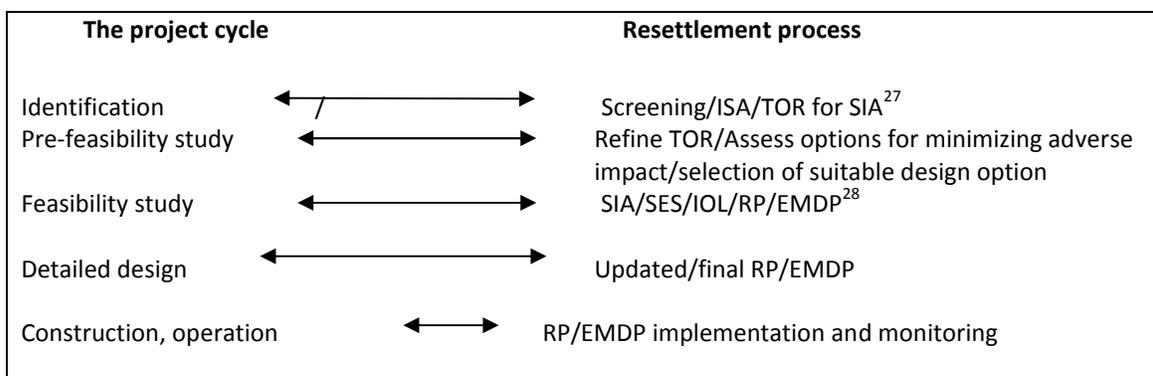


Figure F2.4 Responsibilities of the agencies and project developer in the EIA process in Lao PDR based on the EIA guideline (2012) (ESMMP covers the EMMP and/or SMMP)



Box F2.2 Resettlement process



### F2.2.2 Key challenges

Key challenges affecting effectiveness of the ECC system in Lao PDR include rapid hydropower development, limited institutional capacity, clarity of the EIA/IEE process, and quality of the IEE/EIA/EMMP/SMMP and they are discussed in this section.

*Rapid development of hydropower projects:* Lao PDR is a small country with limited human and financial resources but rich in hydropower development potential (about 26500 MW) and private sector development in the country has been rapid. Before year 2005 there were 9 hydropower projects (1-210 MW) under operation of which two projects were invested by the Independent Power Producer (IPP). At present there are 17 hydropower projects under operation of which 10 projects are larger than 50 MW of which 7 projects are IPP type while there are 18 projects under construction of which 11 are larger than 50 MW and most of them are IPP type (see [Appendix F2](#)). There are about 30-40 projects are under preparation at an advance stage (PDA/CA stage<sup>29</sup>) while about 108 hydropower projects are listed in the database of the Department of Energy Policy and Planning (DEPP) of the Ministry of Energy and Mines (MEM). [Table F2.2](#) presents the current and expected status of hydropower projects in Lao PDR and [Figure F2.5](#) presents the development trend during 2002-2020. It is anticipated that about 50 hydropower projects (about 17,000 MW) would be in operation by year 2020.

Table F2.2 Summary of expected hydropower projects in Lao PDR by year 2015<sup>30</sup>

Stages	# of projects	Installed capacity (MW)	Remarks
Operation by 2015	22	3,205	See project status in Appendix 2.
Construction by 2015	28	4,973	
Starting construction before 2015	12	1,799	
Preparation (FS, DD, etc. expected to start construction after 2020)	74	11,929	
<b>Total</b>	<b>136</b>	<b>21,906</b>	

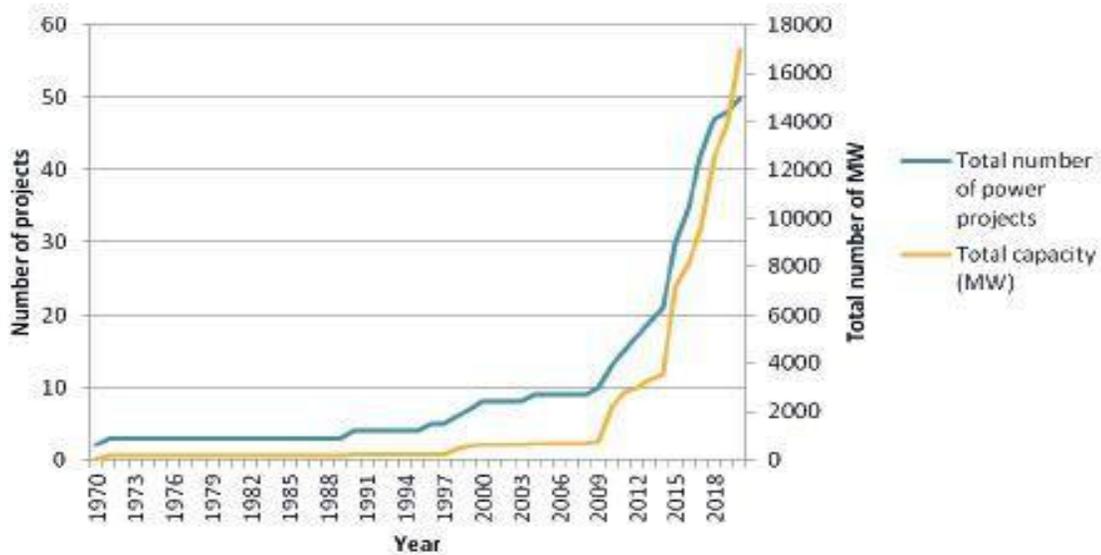
<sup>27</sup> ISA = Initial Social Assessment; TOR = Terms of Reference; SIA = Social Impact Assessment

<sup>28</sup> SES = Socio-Economic Survey; IOL = Inventory of Losses; EMDP = Ethnic Minority Development Plan

<sup>29</sup> PDA/CA = Project Development Agreement and Concession Agreement

<sup>30</sup> Presentation on Resettlement Policies And Practices in Lao PDR – its Learning Experience in the Past Decade by Mr. Daovong Phonekeo, Director General of the Department of Energy Policy and Planning, Ministry of Energy and Mines, and Mrs. Bouakeo Phounsavath, Director of Legislative Division, Department of Environmental and Social Impact Assessment (DESIA), Ministry of Natural Resources and Environment (MoNRE) in the international conference on management of resettlement, rehabilitation, and benefit sharing in infrastructure development May 20-23, 2013, conducted in India; <http://www.asci.org.in/asciwb/index.html>.

Figure F2.5 Development trend for hydropower development in Lao PDR (same reference as Table F2.2)



During the past 10 years, many international agencies and NGOs have raised concerns on limited capacity of key agencies to minimize the potential negative impacts (direct and indirect) of large hydropower projects on natural environment and local people especially the ethnic groups<sup>31</sup>. To address these concerns during 2009-2012 GOL carried out a series of legal and institutional reforms related to NREM and energy and mining sectors including the EIA/ECC process and building technical and management capacity of key agencies. DESIA has been assigned as the agency responsible for forging effective implementation of the EIA decree and CAR decree in close cooperation with sector agencies and provinces.

*Clarity on the operation process and quality of EIA/SIA/EMMP/SMMP:* Given that most of the large hydropower projects will be implemented through the independent power producer (IPP) process and about 50 projects are expected to be in operation by year 2020, the challenges on how to ensure that DESIA, MEM, provinces, and other key agencies will have adequate technical and management capacity (including human and financial resources) to forge effective implementation, monitoring, and enforcement of Government regulations so that the potential negative impacts on local communities and environment could be minimized. There are also concerns among agencies and staff regarding roles and responsibilities of key agencies in the IPP process, including clarity/quality of the CA, consistency between SESO and the EMMP/SMMP, the GOL-Developer-Contractor relationships, lack of auditing arrangement, and difficulty in understanding these legal documents due to limited knowledge and experience on the legal terms and English language. Understanding and commitment of the project developer; quality of the EIA, EMMP, and SMMP; and tendency to underestimate the environment and social obligations by the senior managers are another key concerns. Efforts are being made by DESIA and MEM agencies (through HMTA project) to discuss and clarify the IPP and EIA process in

<sup>31</sup> Of the total population of 6 million many of them are ethnic groups who are still living in remote areas with limited access to infrastructure and other services and rely heavily on subsistence agriculture, hunting, and very poor.

consultation with other key agencies. [Appendix F3](#) presents the IPP process and EIA process and an effort is being made by MEM and MONRE to enhance effective implementation and coordination of the two processes. DESIA is also making an effort to clearly define role and responsibility of the agencies, provinces, and local authority during review and monitoring of the EIA/SIA process and they are expected to be finalized by the end of 2013 (see [Appendix F4](#) for a draft).

*Institutional capacity to implement the CAR and EIA decrees:* Although the CAR decree is effective in late 2005 while the EIA decree is effective in early 2010, however capacity of key agencies, provinces, and local authorities to effectively implement them remain limited due to inadequate knowledge, experience, human, and financial resources. During 2010-2012, with assistance from various international agencies (WB, ADB, UNDP, SIDA, and Finland), a number of training and workshops were conducted to enhance knowledge and experience as well as to disseminate information regarding the decrees and the technical and management capacity has been gradually increased. A number of technical guidelines (TG) and/or standard documents/forms have also been developed to facilitate effective implementation of the EIA/SIA process. At present, preparation of the following technical guidelines (TG) has been completed, approved, and effective: TG on the implementation of the CAR decree; TG on public involvement; and TG on the preparation of an EIA report. To keep up with rapid development of large hydropower projects DESIA developed and applied SESO during the negotiation with the hydropower project developers during the past three years and is making an effort to formalize this requirement. With technical assistance from Finland (EMSP project) efforts are being made to assist DESIA in developing a standard ECC document and monitoring form, including training to DESIA staff, and this is expected to be completed in 2014. DESIA (with technical assistance from IFC) will also develop a simplified SESO and TG on cumulative impact assessment and they are expected to be completed by the end of 2014. However given rapid development, the nature and scale of negative impacts, limited human and financial resources, and ineffective coordination and cooperation among agencies, this issue remains critical for ensuring effective application of the ECC system.

*Quality of the EIA, EMMP, and SMMP:* Quality of the reports and adequacy of the prevention and/or mitigation measures including clarity on the legal obligations and commitment of the project developer have been considered as one of the key challenge for ensuring effective implementation of the ECC system in Lao PDR. Although the EIA decree requires that the IEE or EIA to be conducted only by the qualified consulting firm or consultants who registered with WREA/MONRE to ensure accountability of the reports and the proposed mitigation measures, limited qualified national consultants make it difficult to ensure quality of the EIA/SIA study that are practical and effective in the Lao context. For large and complex project hiring an international consulting firm appears to be the only choice and this will require strong commitment of senior management of the project developer. Clarity on the implementation of the EMMP/SMMP, relationship between agencies and project owners, and funding obligations and arrangements for implementation and monitoring are considered critical for ensuring effective implementation of the ECC system.

### **F3. Verification of DESIA Achievement for LENS Project**

[Table F3.1](#) provides a summary of achievement of the DESIA sub grant as indicated in the draft PCR report. Assessment of the ECC quality ([Section F5](#)) suggested that given current

weaknesses of the ECC system and rapid development of hydropower projects in the country measuring the quality of the ECC based on inclusion of SESO into the CA appears to be the most effective way to forge effective implementation of the ECC system.

Table F3.2 presents a list of projects that have incorporated SESO as an annex to the CA based on the ECC-SESO data available at DESIA while more details on the data are provided in Appendix F2. Review of data at DESIA and MEM agencies suggested that the process on IPP process and EIA process are conducted separately.

Table F3.1 Summary of achievement of DESIA sub grant

Indicators	Status	Remarks
<i>(1) By December 31, 2010, WREA has prepared guidelines for incorporating ECC measures in Concession Agreement for hydropower projects signed by the Recipient after the enactment of the Environment and Social Impact Assessment Decree</i>	Met	Development of SESO was completed by the end of 2010.
<i>(2) "increase in the % of environment compliance certificates (ECCs) issued by WREA that are of adequate quality as judged by a third party annually starting June 2010 as a baseline and agree on the % increase by September 30, 2010. The target is by the end of the Project to increase the issuance of said the ECCs by WREA by a percentage to be agreed between the Recipient and Association based on the baseline data"</i>	Met	This indicator is measured from the % of SESO incorporation into the CA and the target is not less than 60% starting June 2012 (see PCR for LENS project).

Table F3.2 List of projects incorporated SESO as an annex into the CA (larger than 15 MW only)

No	Name of project (provinces)	MW	COD	CA*	ECC signed	Annex to CA Signed	Remarks	#
<b>I. Under Operation</b>								
1	Nam Ngum 5 (Loung Phra Bang/ Xiengkeoung)	120	2012	10/04/2007	23/6/2008	20/7/2009	SESO in CA	#1
2	Tuen Hinboun Extension (Bolikhamsay)	220+60	2012	27/08/2008	31/07/2008	2008	SESO in CA	#2
<b>II. Under Construction</b>								
1	Xekaman 1 (Attapeu)	322	2013	10/02/2011	14/01/2008	19/04/2011	SESO in CA	#3
2	Xenamnoi 1 (Champasak)	148	2013	19/10/2012	21/07/2010	27/03/2012	SESO in CA	#4
3	Nam Ngiep 2 (Xiengkhuang)	180	2015	18/8/2011	12/09/2010	29/12/2011	SESO in CA	#5
4	Xayabuly (Xayabuly-Mekong)	1,285	2019	29/10/2010	13/09/2010	13/01/2012	SESO in CA	#6
5	Hongsa lignite (Xayabuly)	1,878	2015	30/11/2009	08/10/2010	30/11/2009	SESO in CA	#7

6	Xepian-Xenamnoi – (Champasak/Attapeu)	390	2016	19/10/2012	18/03/2011	29/4/2013	SESO in CA	#8
7	Nam OU 2 (Louangphrabang)	90	2013	10/06/2012	20/04/2012	05/04/2013	SESO in CA	#9
8	Nam OU 5 (Phongsaly)	99	2013	10/06/2012	20/04/2012	05/04/2013	SESO in CA	#10
9	Nam OU 6 (Phongsaly)	180	2013	10/06/2012	20/04/2012	05/04/2013	SESO in CA	#11
10	Nam Beng (Oudomxay)	34	2015	07/01/2013 (PDA2)	04/05/2012	3/1/2013	SESO in CA	#12
<b>III</b>	<b>Under Planning</b>							
1	Sekong 4 (Sekong)	300	2017	PDA22 (CA/PPA)	21/04/2010	NYS	SESO negotiation	
2	Sekong 5 (Sekong)	330	2016	PDA23 (CA/PPA)	21/04/2010	NYS	SESO negotiation	
3	Nam Ngiep Mouang Mai (Bolikhamsay)	38		MOU15	08/12/2010	NYS	SESO negotiation	
4	Xenamnoi 2 (Champasak)	242	2014	PDA	18/03/2011	NYS	SESO negotiation	
5	Nam Ngum 3 (Vientiane/ Xiengkhuang)	460	2017	PDA7 (CA/PPA)	08/06/2011	NYS	SESO negotiation	
6	Xenamnoi 5 (Champasak)		2014	PDA	19/12/2011	NYS	SESO negotiation	
7	Xenamnoi 6 (Champasak)		2014	PDA	26/12/2011	NYS	SESO negotiation	
8	Nam Lik 1 (Vientiane)	60	2014	PDA3 (CA)	25/03/2011	01/10/2012	SESO in CA	#13
9	Nam Kong 1 (Attapeu)	150	2017	PDA2 (CA/PPA)	21/04/2011	NYS	SESO negotiation	
10	Nam Mo (Xiengkhuang)	120	2015	PDA5 (CA/PPA)	28/11/2011	NYS	SESO negotiation	
11	Xe Katam (Champasak)	61	2017	CA/PPA	18/03/2011	NYS	SESO negotiation	
12	Nam Mang 1 (Bolikhamsay)	57	2015	CA/PPA	01/02/2012	27/4/2012	SESO in CA	#14
13	Nam Ngiep 1 (Bolikhamsay)	269+20	2018	PDA6 (CA/PPA)	16/06/2012	25/4/2013	SESO in CA	#15
14	Donsahong (Champasak- Mekong)	240	2017	PDA1 Completed	13/07/2012	NYS	SESO negotiation	
15	Nam Pha (Loung Nam Tha/Bokeo)	130	2016	PDA11	27/08/2012	NYS	SESO negotiation	
16	Nam Sane 3A-3B (Xiengkhuang)	65	2016	PDA Completed	05/09/2012	NYS	SESO negotiation	

	<p>Note: NYS=Not yet signed; *=Ministry of Energy and Mines (MEM) database; IPP= Independent Power Producer; MOU=Memorandum of Understanding (early stage of IPP); PDA =Project Development Agreement (and feasibility study/EIA stage of IPP); PPA =Power Purchase Agreement; CA =Concession Agreement stage (beginning of project construction, operation, and handover); IEE Initial Environmental Evaluation; SESO=Standard Environment and Social Obligation; MW=megawatts; COD=Commercial operation date.</p>	
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## **F4. Improving Effectiveness of the ECC**

### **F4.1 Strategic Approach**

Reviews of DESIA activities and other related documents and meetings with DESIA staff and key staff of the on-going technical assistance project (EMSP) suggested that DESIA is well aware of existing weaknesses of the ECC system and has been taken actions to mitigate it focusing first on large hydropower development projects. DESIA’s strategy to improve effectiveness of the ECC system include: (1) improving effectiveness of policy, legal, and institutional frameworks, including those necessary for addressing cumulative/transboundary impacts and clarity on roles and responsibility of key agencies; (2) strengthening capacity of key agencies and stakeholders to forge effective implementation of the EIA/SIA decrees through development of TG and/or standards, training, and information dissemination; (3) strengthening technical and management capacity of DESIA and effective coordination with sector agencies and provinces; and (4) building capacity of the provinces and local authorities to implement the EIA/CAR decrees. Below highlight key activities and implementation progress on the strategy.

#### ***F4.1.1 Improving effectiveness of policy, legal, and institutional frameworks***

To forge effective implementation of the EIA/SIA decrees, this strategy aims to improve effectiveness and accountability of agencies through development, revision of key policy, laws, regulations, and/or institutional structure both at national and sector levels including policy support/commitment especially for those related to inclusion of SESO into the CA of large hydropower projects. [Table F4.1](#) summarizes the institutional conditions related to EIA/SIA system in Lao PDR while key pending activity is highlighted below.

*Promulgation of the EIA decree and clarity on division of labor:* As mentioned in Section F2, recognizing the weakness of the 2003 EIA regulation in light of rapid development in the country, GOL took actions to promulgate the EIA decree, assign clear agency to be responsible for forging effective implementation of the EIA process to DESIA, disseminate information to line agencies and provinces, and provide technical training during the past 3 years. However, given the different arrangement between the 2003 EIA regulation and the 2010 EIA decree and the current legal and institutional structure it is necessary to provide clarity on roles and responsibility of key agencies and DESIA is making an effort on this aspects in consultation with key agencies. Below highlights key roles and responsibilities on the implementation of the EIA/CAR decree based on the EIA decree (2010):

- DESIA/WREA is responsible for (1) issuing the national policy, laws/regulations (decrees), and guidelines (technical, policy, management); (2) reviewing of the EIA/SIA report; (3) issuing an ECC for IEE/ISE and EIA/SIA project; (4) forging effective consultation and public disclosure; (5) monitoring the ECC compliance in close cooperation with the sector agencies; (6) facilitating consultation and public disclosure; (7) registering the qualified consultants; and (8) providing clarification, training, support to other agencies regarding the implementation of the EIA/CAR decrees.
- Sector agencies (MEM, MAF, MOC, MPWT, MOPH, etc.) is responsible for (1) reviewing of an IEE/ISE for private investment and recommend to DESIA/WREA for ECC issuance, (2) forging effective consultation and information disclosure during the IEE/ISE process; (3) participating and provide timely inputs in the EIA/SIA process for the projects; (4) incorporating the ECC approval conditions both for IEE/ISE and EIA/SIA into the sector administrative/legal documents i.e. the CA for private sector projects and administrative order/approval of project for GOL projects; (5) forging effective implementation of the ECC conditions for the sector projects; and (6) in cooperation with DESIA monitoring compliance of the CA and sector regulations related to EIA/SIA.
- MPI in close coordination with DESIA and sector agencies is responsible for (1) assessing the scope of EIA/SIA requirements for private sector projects during the MOU signing and CA signing stages and (2) participating in the IEE/ISE and EIA/SIA review and monitoring process as appropriate.
- Other national agencies are responsible for (1) participating in the IEE/ISE and EIA/SIA review and monitoring process as appropriate and (2) developing of specific guidelines as required to ensure effective implementation of the IEE/ISE and EIA/SIA process such as standards (effluent/emission, ambient) and guidelines related to air/water quality, solid/toxic wastes/substance, water resources/watershed management, biodiversity, cultural heritage, consultation with ethnic groups, enhancing gender in the EIA process, etc.
- Provinces is responsible for (1) forging the project owners to conduct adequate consultation with affected population; (2) participating in the IEE/ISE review process and provide approval of the social mitigation measures; (3) participating in the EIA/SIA review process and provide approval of the SIA and SMMP; (3) monitoring and taking actions to forge effective implementation of SMMP.
- In 2011, DESIA prepared roles and responsibility of key agencies during the IEE/EIA review process and monitoring to be discussed with key agencies (see [Appendix 4](#)) however the process is being reviewed in light of the updated EIA and CAR decrees.

Table F4.1 Institutional conditions related to EIA/SIA <sup>32</sup>		
Baseline (2005-06)	2010-2012	2013-2015
<b>Policy, regulation, and organization</b>		
Weak policy support on the EIA/SIA process. The Department of Environment (DOE) was part of Science, Technology, and Environmental Agency (STEA).	Strong policy support to improve effectiveness of the EIA/SIA process, especially after the study visit to China of the high-level policy makers in early 2012.	Strong policy support to improve effectiveness of the EIA/SIA process at national and provincial levels.
The EIA/SIA process was governed by the EIA regulation (2003) which allocates the responsibility for EIA review to line agencies. However, DOE/STEA was responsible for issuing an Environmental Compliance Certificate (ECC).	Promulgated the new EIA decree in February 2010 (effective in March 2010); the decree divides the IEE and EIA process and responsible agencies; the sector agency is responsible for review of an IEE while DESIA/WREA is responsible for review of the EIA and issuance of the ECC. The decree also calls for public consultation and information disclosure during the EIA/SIA process.	Given the operation of MONRE during 2011-2012, the decree is being revised to clarify responsibility of key agencies and provinces and to increase effectiveness of the implementation and in line with GOL decentralization policy (Sam Sang).
CAR decree was promulgated in 2005. However most policy makers, line agencies, and provinces did not have capacity to implement them. No staff/unit responsible for social safeguard.	A social unit was established within DOE/STEA and a need assessment for capacity building was conducted. However the unit was dissolved when DESIA was established in 2009 comprising 2 divisions (Planning and finance, Legal and information dissemination) and 4 centers responsible for review of the EIA/SIA report for power and hydropower; mining and industries; infrastructure; and agriculture.	Under MONRE, DESIA has 2 divisions and 5 centers and the additional one will be responsible for monitoring of EIA/CAR compliance. Capacity of these divisions and centers will have to be strengthened. There are now 73 staff of which 53 staff are junior but received appropriate training. DESIA will continue to be the key agency responsible for forging effective implementation of the EIA/SIA process including monitoring of the compliance and the need for capacity building remain high priority.
<b>Staff awareness, attitude, and technical/management capacity</b>		
There was about 10 staff in the EIA division of DOE/STEA with limited experiences on EIA review and ways to address social safeguard issues.	--DESIA had more than 70 staff including 53 junior staff hired under LENS supports. --Capacity building of DESIA and the target provinces on social impact aspects provided through LENS during 2007-2012 have enhanced technical and management capacity of DESIA, BLKX and KM, NUOL, LFNC, and other provinces/agencies on social impacts assessment.	Many junior staff has been recruited as GOL staff; DESIA has 75 staff including 22 junior staff; With extensive training through LENS/WB, SEM II (SIDA) and EMSP (Finland) ADB, and UNDP, DESIA staff provides training to provincial staff and line agencies on the implementation of the EIA decree and CAR decree and their guidelines.  However, given that DESIA will be the key agency responsible for forging

<sup>32</sup>As indicated in the PCR report for LENS (Draft May 31, 2013).

	--With the first study visit to China in 2008, DESIA had a clear idea on what should be done and the knowledge was applied during the drafting of new EIA decree. The second study visit to China by the high policy makers has increased awareness and actions to address social impacts. The grievance mechanism and social impacts management units have been established in BLKX and KM.	effective implementation of the EIA/SIA process and ECC compliance monitoring, additional technical assistance and training of DESIA staff, line agencies, and provinces on environment and social safeguard remain necessary.
<b>Availability of offices, equipment, vehicles, operation budget</b>		
A small space and limited facility for the EIA division.	Limited space for more than 70 staff; no computers and functioning database; no information dissemination center.	Adequate office for 75 staff; adequate computers and availability of an ECC database and an information dissemination center, however, the quality and reliability of the database have to be strengthened.
Lack of budget for implementation and monitoring	LENS/LAF sub grants provided some operation budget	Need additional funding supports
<b>Availability of technical guidelines and key documents</b>		
A draft technical guideline (TG) on implementation of CAR decree and a draft TG on public involvement (PI) was prepared with technical assistance from ADB.	With LENS supports, the draft TG on CAR implementation and PI were modified to be practical and acceptable to policy makers including translation and consultation. The TG on CAR implementation was approved in 2011 while the TG on public involvement (PI) was approved in late 2012. Training and dissemination of these TGs were also carried out with line agencies and provinces.	Training and monitoring of the TGs will continue to be provided by DESIA.
No TGs related to the EIA was developed. The ECC is a one page license with no clear condition on obligation of the project owner.	With assistance from UNDP, a technical guideline (TG) for EIA preparation has been completed and approved.	Training and monitoring of the TG will continue to be provided by DESIA.
	With assistance from SIDA (SEM II) a standard environmental and social obligation (SESO) for large hydropower project has been developed and being applied to all large hydropower projects.	With support from EMSP and LENS consultation on the SESO is being carried out. It is anticipated that the SESO will be approved by MONRE in 2013.
	With assistance from Finland (EMSP), effort is being made to develop a standard ECC especially for industrial projects. This is expected to be completed by 2014.	With assistance from IFC, a simplified SESO for hydropower project, a TG on cumulative impacts assessment (CIA), and an operational policy on information disclosure will be developed during 2013-2014.

#### ***F4.1.2 Strengthening implementation capacity for the EIA/CAR decrees***

This strategy aims to improve quality of the EIA/SIA review, monitoring, and inspection process through the development of technical guidelines, standard documents, and/or operation procedures necessary for ensuring quality of the EIA/SIA report, clarity on the mitigation measures implementation, and financial aspects. As mentioned in Section F2, a number of TG and/or standards documents related to environmental and social obligations (SESO) are considered priority for DESIA and technical assistance from international agencies (SIDA/Finland, IFC, WB, ADB, UNDP) have been provided and the key ones are summarized in [Table F4.2](#). Under the EMSP ([Box F4.1](#)) a standard ECC model is being developed and training will be provided in 2014. Draft TGs on self-monitoring, inspection, and mine closure handbook are also being prepared and consultation is on-going. DESIA will also make an effort to improve its performance regarding information disclosure in line with the EIA decree requirement ([Box F4.2](#)). Recognizing weakness in database management, effort is also being made in this area but available resource remains limited. It is anticipated that these efforts would enhance quality of the IEE/EIA/SIA study and report preparation as well as capacity of the agencies in review of the study/reports and monitoring effectiveness of the implementation of the EIA/CAR decrees. However, capacity of agencies to implement and monitor the implementation of the decrees remains inadequate due to limited human and financial resources. Additional technical assistance and financial supports will be necessary in this area.

Table F4.2 Key technical guidelines and standard documents related to ECC

Guidelines	Status	Remarks
(1) TG for CAR decree	With support from WB/LENS, the TG was revised during 2009-2010 and approved in late 2011. In 2011, ADB <sup>33</sup> organized the training on the EIA review for the staff of DESIA and line ministries	Being applied; The ADB training also provided on the Initial Environmental Examination (IEE) and application of the safeguard for about 150 officers.
(2) TG for EIA preparation	With support from UNDP <sup>34</sup> , the TG was completed and approved in late 2012.	Being applied; Training provided for 17 provinces including utilization of the draft Public Involvement Guideline (EMSP/LENS).
(3) SESO for large scale hydropower and mining	With support from SIDA (SEMII), completed in December 2010 and being consulted with key agencies (with support from WB/LENS). It is anticipated this requirement will be formalized by the end of 2013.	See <a href="#">Table F3.1</a> for projects that have incorporated SESO as an annex of the CA.
(4) TG on Public Involvement	The draft was initiated in 2005 with assistance from ADB, revised during 2010-2012 with support from WB/LENS, and approved in December 2012.	Being applied; Training provided for 17 provinces (EMSP/LENS).
(5) Development of a	On-going with supports of	To be completed in 2014 and

<sup>33</sup>Asian Development Bank the project Strengthening the application of the safeguard in Lao PDR (TA 7566-REG)

<sup>34</sup> UNDP Poverty and Environment initiatives (PEI-UNDP)

model ECC to be used as a good practices in preparing an ECC by MONRE	international Law Expert and Licensing Expert; The latest draft was used as the basis for drafting the ECC for water discharge from Tailings Storage Facility (TSF) of Phu Bia Mining Ltd. Phu Kham Copper Operations.	training will be provided. See <u>Box F4.1</u> on brief summary of EMSP activities.
(6) Public disclosure policy and procedures	Not yet start; The activities will be carried out under DESIA-IFC program.	To be completed in 2014
(7) Improving effectiveness of ECC database	On-going (EMSP); Need more supports.	Being considered under DESIA-IFC program
(8) Environmental Flow Requirements (EFRs) <sup>35</sup>	On-going effort is being made under EMSP to develop the EFR to be included in SESO; Training on water quality modeling was conducted by the Ecological Modeling Expert and the SWAT Modeling (Soil and Water Assessment Tool) Expert	A set of requirements has been incorporated as part of SESO.
(9) TG on Strategic EA (SEA)	On-going (EMSP)	
(10) TG on Self-Monitoring; TG on Inspection Guidelines; and TG on Mine Closure Handbook	Under EMSP, drafts have been prepared, translated into Lao, and consultation is on-going	
(11) TG on financial mechanism for monitoring and inspection	Under EMSP and with support from an international expert.	On-going
(12) Development of simplified SESO (SSESO) to be applied to smaller and/or less complex projects	Not yet start; The activities will be carried out under DESIA-IFC program.	To be completed in 2014
(13) Development of TG on CIA	Not yet start; (IFC support)	To be completed in 2014

**Box F4.1: Brief summary of the EMSP<sup>36</sup>**

The EMSP is a four year (2011-2014) comprehensive capacity building program for WREA (now MONRE) funded by the Government of Finland through a 9.5 million Euros grant<sup>37</sup> aiming to strengthen MONRE and provincial environmental authorities to become sustainable and effective in using updated tools and methods in ensuring: a) Environmental aspects are merged into national strategic plans and MONRE's role in this is recognized by the line ministries and MPI; b) The social and environmental impacts of major mining, hydropower, industrial and infrastructure projects are properly regulated and monitored by MONRE and DONREs; c) Delivery of relevant environmental messages and information

<sup>35</sup> The EFRs are a set of flows determined in terms of: – Flow magnitude (the amount of water moving past a point per unit time); – Event frequency (how often a particular magnitude recurs over a specific time period); – Event duration (the length of time a specific flow event lasts); – Timing or predictability (the regularity of a specific flow event); – Rates of change (how quickly the magnitude of an event alters); and Water quality.

<sup>36</sup> Based on the Annual Progress Report for the Environmental Management Support Programme (EMSP) it covers the twelve months from the 1st of October 2011 to the 30th of September 2012.

<sup>37</sup> GOL contribution is about 460,000 Euros.

services to MONRE partners and stakeholders; and d) Provision of environmental laboratory services; and e) Financial sustainability. The activities are implemented through 6 components: (1) DEQP: Building capacity for SEA and NEAP (264,200); (2) DESIA: Building capacity in licensing and inspection (490,880); (3) PONRE: Strengthening environmental management at the provincial level (1,522,150); (4) Natural Resources and Environment Data Information Center: Capacity building for high quality information services (358,144); (5) The Natural Resources and Environment Institute: Environmental laboratory services (1,962,020); and Program Management (776,260). Although some delay occurred during the reorganization of WREA/MONRE in 2011-2012, implementation is being picking up.

Current status of the project activities related to ECC process (C2) can be summarized as follows (a) Development of a model ECC -Second draft of a model ECC was developed and translated into Lao. However, after internal consultations and workshops the draft model will have to be reviewed and modified; (b) Juridical training for licensing officers --Training on the EIA Guidelines for 17 provinces was organized while training on ECC model will be conducted after the model ECC is completed; (c) On-the-Job training on licensing and support on reviewing of the EIA reports and negotiations with developers concerning environmental and social obligations in the CAs are on-going based on request and needs while build capacity of DESIA in applying river basin modeling through training was completed; and (e) Facilitating public participation in ESIA (70%) Draft Public Involvement Guideline (PIG) was utilized in the training on EIA Guideline. DESIA actively (e.g. through discussions with the developers) ensures that public participation is implemented in the EIA processes.

**Box F4.2 Information disclosure requirements (EIA decree, 2010)**

Article 31: information disclosure will be made according to the following procedures

- (1) WREA has a duty to manage information on ES aspect of project in coordination with the concerned agencies and project developer (PD) as well as facilitate the stakeholders and PAPs in accessing such information;
- (2) PD has a duty to manage information on results of the implementation of EMMP/SMMP and facilitate PAPs and other stakeholders in accessing the information. For EIA project, the PD will have an information center within the project area and related districts.
- (3) The information to be disseminated (both in Lao and English) include: (a) IEE, EIA, EMMP, SMMP, except confidential information provided in Art 32 of this decree; (b) monitoring report on implementation of EMMP, SMMP; (c) WREA report or LA report which issues ECC on monitoring of the implementation of EMMP and SMMP; (d) detailed information on fining or other disciplinary measures which WREA and the line agencies has imposed on the PD; and (e) project expenditures on ES activities.

Article 32: Confidential information

- 1) WREA reserves the right to disclose any information related to the national stability in any report on IEE, EIA, EMMP, SMMP;
- 2) Based on a writing request of PD, WREA may consider to keep some information confidential and can refuse to put such information in any report (IEE, EIA, EMMP, SMMP); this include (a) information on privacy of individual, (b) information on property; (c) information on commercial license;
- 3) If PD does not wish to disclose any of the information stated in art 32 (2), the PD may submit a request with such information and send it to WREA which will response within 25 working days;
- 4) If the information is considered confidential, it will be kept confidential for 4 years and

without additional request for the PD (which can be done within 60 days before the expiration date), the information will not be considered as confidential.

#### ***F4.1.3 Strengthening capacity of DESIA and enhancing cooperation with other agencies and provinces***

DESIA is responsible for forging effective implementation of the EIA/SIA decree in close coordination with line agencies, provinces, and local authorities and key responsibility include reviewing the EIA/SIA/EMMP/SMMP reports, including ensuring effective consultation and information disclosure and monitoring the implementation of the EMMP/SMMP and inspection for GOL compliance. DESIA performs the review function through the operation of 4 centers responsible for energy and hydropower, mining and industry, infrastructure, and agriculture since 2009 while the monitoring and inspection will be performed through the newly established center on monitoring and inspection. The legal and information section is responsible for legal aspect, database management and information disclosure while the planning and management section is responsible for overall planning of DESIA activities. At present, the legal and information section is responsible for ensuring effective coordination with MEM agencies regarding HMTA projects while the planning section is the focal point for LENS, EMSP, and UNDP activities.

Under EMSP, efforts are being made to put in place and facilitate sustainable inspection and compliance enforcement system for environmental conditions and standards in MONRE. Key activities included review on the legislation overlapping with MONRE mandates regarding inspections and monitoring and an agreement on the duties and mandates of concerned departments of MONRE was approved in May 2012 and consultation with line agencies is ongoing. A number of training to inspectors and licensing officers will be carried out in 2013-14 including intensive environment technical training and training of trainers for inspectors and licensing officers. Further development of standard operation and management procedures is also ongoing and draft guidelines concerning monitoring and inspections as well as minimum requirements are being prepared. On the job support to inspections and monitoring is being provided on needs and requests and the database system for inspection follow-up and emission inventory and a plan for monitoring will also be developed. The project also provides equipment and training to the 17 provinces including the environment monitoring unit (EMU). Other on-the-job training included training on inspections of rubber tree plantations (in Bolikhamxay and Savannakhet) will also be conducted under the EMSP.

Under UNDP program, technical assistance has been provided for development of guidelines for general EIA writing; general IEE writing; EIA/IEE writing note for agriculture and forestry; EIA review for general and agriculture and forestry; IEE review for general and agriculture and forestry; and EIA/IEE monitoring for general, provinces, and agriculture/forestry. There were also a number of training and capacity building for DESIA and line agencies both at central and provincial levels and an effort is being made to establish an effective financial mechanism for monitoring and inspection.

Under HMTA project under the implementation of the national policy on environment and social sustainability of hydropower sector, DESIA is working closely with MEM agencies to ensure effective implementation of the policy and enhance effectiveness of coordination

between the IPP process and EIA process while an effort is also being made to enhance close cooperation between MONRE and MEM on mining aspect. Under road sector project DESIA is also working closely with the Ministry of Public Works and Transport (MPWT) on the updating of the environment and social operation manual. These initiations are considered critical for ensuring effective coordination among DESIA/ agencies activities will be continued to initiated

**F4.1.4 Building capacity of the provinces and local authorities on monitoring, evaluation, and inspection**

According to the EIA/CAR decree the province is responsible for the review and/or issuance of the ECC if assigned by WREA as well as for facilitating and overseeing the implementation of compensation and resettlement of development projects in line with CAR decree and capacity building activities related to the environmental management, including the EIA/SIA process, has been initiated during the past 5 years with technical assistance from various projects (SEMII, EMSP, LENS, HMTA, etc.) which were managed through the central agencies. However, under implementation of recent GOL policy on “Sam Sang”<sup>38</sup> the provinces, districts, and villages will play more active roles in forging effective implementation of the EIA/SIA process. Although DESIA conducted a number of information dissemination and/or training workshops during the past 3 years, much more effort will be necessary to facilitate effective implementation of the decree at provincial and local level. Discussion with concerned officials at DESIA suggested that the revised EIA will assign clear responsibility for the review, issuance of ECC, and monitoring of the EIA process and social impact aspects to the province and local authorities and the consultation process is on-going. In light of rapid development and limited human and financial resources in the country, capacity building of the provinces and local authorities would likely to be carried out according to priority needs i.e. focus on locations where development activities and serious negative impacts are concerns. DESIA will develop a strategy to build technical and management capacity of priority provinces, districts, and villages in close consultation with key agencies and potential donors.

**F4.2 Action Plan for 2013-2020**

To provide clarity to key agencies, development partners, and general public on DESIA strategy to move forward improving effectiveness of the ECC system in Lao PDR, an action plan identifying priority activities to be carried out by DESIA toward improving effectiveness of the EIA/SIA process (ECC system) is provided in Table F4.3. These activities will be updated from time to time depending on the implementation progress and/or agreement with the agencies, provinces, and/or the development partners.

Table F4.3 Priority activities to be carried out by DESIA (Draft)

Objectives	Key activities	Remarks
<b>(1) Improve effectiveness of policy, legal, and institutional frameworks</b>		
(1.1) Complete the update of the EIA and CAR decrees	Consultation is on-going; The updated decrees are expected to be completed by the	

<sup>38</sup> Sam Sang is the party policy issued in 2012 with an aim to achieve the country objectives in poverty reduction (less than 10% and UN MDG by 2015) and development status (come out from the UN list of least developed country by 2020) by building village as the development unit, district as the integration unit, and the province as the strategic unit. Implementation of the policy has begun in late 2012 and discussion on ways/plan to implement the policy is ongoing.

	end of 2013	
(1.2.) Secure agreement on the division of labor during review and approval of the EIA/SIA process and monitoring of the EMMP and SMMP	DESIA prepared a draft division of labor during IEE/EIA review and monitoring, but need to be updated in line with the revised EIA/CAR decrees including translation and consultation with key agencies, provinces, and key stakeholders; Consultation will be carried out to facilitate agreement among agencies and provinces	See the draft division of labor in <a href="#">Appendix 4</a> ; The activities are being supported by EMSP, but more TA and funding support will be necessary.  To be proposed for LENS2 support.
(1.3) MONRE approval to apply current SESO in the CA for all large hydropower	The draft SESO has gone through a number of consultation during 2012-2013 and the final draft will be submit to MONRE for approval by end of 2013	Need support for translation and information dissemination after approval by MONRE
(1.4) Development of simplify SESO (SSESO) for hydropower projects	The activities will be carried out in 2013-2014 with IFC technical assistance.	
(1.5) DESIA need to prepare similar SESO and/or SSESO for other type of projects (mining, plantation, etc.) that requires EIA and IEE	Under HMTA, an effort is being made to hire a consulting firm for drafting regulations and undertaking inspection including development of guidelines on environmental protection and social compliance for mining projects, regulations on mine closure and rehabilitation, and regulation on health and safety for mining projects.	Some TA is provided to DESIA by UNDP but considered inadequate; GIZ also provided a TA and capacity building focusing on building capacity of provincial and local agencies (PDEM). To be proposed for LENS2 support.
(1.6) Complete development of an ECC module and apply it in all projects	EMSP is working on this. However available resources is limited	Need to ensure consistency between the environmental and social obligations incorporated in the CA with the ECC standard condition.  To be proposed for LENS2 support.
(1.7) Establish a decree on operation permits to ensure that adequate measures are carried out during operation phase.	– With assistance from EMSP, DESIA has developed a draft, but need to be translated into Lao and consulted with line agencies before presenting it to the Ministry of Justice and secure GOL approval.	Need TA and funding support For consultation and finalization, dissemination, etc.  To be proposed for LENS2 support.
<b>(2) Facilitate effective implementation of the EIA and CAR decrees</b>		
(2.1) Monitor the effectiveness of the ECC conditions for all hydropower projects including the application of SESO in the CA	– DESIA will develop a TOR for a consulting service (firm or individual). Budget allocation for on-the-job training, field/study visits, incremental cost, and other training of DESIA staff will also be necessary.	Need a TA;  To be proposed for LENS2 support
(2.2) Monitor the implementation of the ECC system for other projects (mining, infrastructure, and agriculture) and assess its	– DESIA will develop a TOR for a consulting service (firm or individual). Budget allocation for on-the-job training, field/study visits, incremental	Need a TA;  To be proposed for LENS2 support.

effectiveness	cost, and other training of DESIA staff will also be necessary.	
(2.3) improve effectiveness and reliability of the development projects, EIA/IEE, and ECC database to facilitate effective management and monitoring of ECC compliance	<ul style="list-style-type: none"> <li>– DESIA will develop a TOR for consulting service (firm or individual) to ensure effective and reliable ECC database both at DESIA and provinces that could be used by DESIA manager and provincial managers and also publicly accessible. Budget allocation for on-the-job training, field/study visits, incremental cost, and other training of DESIA staff will also be necessary.</li> </ul>	<p>IFC support could help in developing the plan during 2013-2014 while the implementation especially at the provincial level could be made under LENS2.</p> <p>To be proposed for LENS2 support.</p>
(2.4) Establish operation policy and procedures on information disclosure as required by the EIA decree	<ul style="list-style-type: none"> <li>– This will be included in the TOR for the development of database in (2.3).</li> </ul>	IFC support could help initiating the process during 2013-2014
(2.5) Ensure that all the EIA and SIA reports for hydropower projects has adequate details on the implementation arrangement and fund flows of the EMMP and SMMP so that the ECC will be issued with a clear conditions and/or action plan for the implementation of the EMMP and SMMP, including fund flow and M&E mechanism	<ul style="list-style-type: none"> <li>– DESIA will review the current EMMP/SMMP and its implementation experience with MEM and other agencies and provinces to ensure adequate coordination and consultation during implementation of the EMMP/SMMP. Experience could be used to improve the approach and ways to enhance effectiveness of the EIA/SIA review.</li> <li>– A TOR will be developed for a consulting service (firm and individual) for the review of all projects.</li> </ul>	<p>Need a TA;</p> <p>To be proposed for LENS2 support.</p> <p>The review for hydropower projects should be carried out as soon as possible.</p>
(2.6) Ensure that all the EIA and SIA reports for other type of development projects (mining, infrastructure, agriculture, industry) has adequate details on the implementation arrangement and fund flows of the EMMP and SMMP so that the ECC will be issued with a clear conditions and/or action plan for the implementation of the EMMP and SMMP, including fund flow and M&E mechanism	<ul style="list-style-type: none"> <li>– DESIA will review the current EMMP/SMMP and its implementation experience with MEM and other agencies and provinces to ensure adequate coordination and consultation during implementation of the EMMP/SMMP. Experience could be used to improve the approach and ways to enhance effectiveness of the EIA/SIA review.</li> <li>– A TOR will be developed for a consulting service (firm and individual) for the review of all projects.</li> </ul>	<p>Need a TA;</p> <p>To be proposed for LENS2 support.</p> <p>The review for mining projects should be carried out as soon as possible.</p>
<b>(3) Strengthening DESIA capacity and cooperation with line agencies</b>		
(3.1) Given a large number of development projects	<ul style="list-style-type: none"> <li>– DESIA will prepare a TOR for consulting service to assist in the</li> </ul>	This will be done in consultation with NUOL.

and GOL policy to recruit new officials, it is necessary to identify human resource development and funding support for DESIA for the next 5-10 years to ensure that adequate technical and management capacity will be available for forging effective implementation and monitoring of the EIA, CAR decrees.	<p>review and preparation of human resources development plan for DESIA staff.</p> <ul style="list-style-type: none"> <li>– DESIA will conduct training workshops, field/study visits, and/or other on-the-job training for DESIA staff and other agencies/provinces to strengthen effective cooperation. This will require budget for the activities.</li> </ul>	To be proposed for LENS2 support.
(3.2) Coordinate with MEM on the updated NPSH and the committee to oversee effective implementation of sustainable development of hydropower policy including ways to address cumulative impacts	<ul style="list-style-type: none"> <li>– The NPSH is being updated by MEM (DEPP is the focal point) with HMTA and IFC supports. The updated NPSH is expected to be approved by MEM by the end of 2013.</li> <li>– DESIA will conduct training workshops, field/study visits, and/or other on-the-job training for DESIA staff and other agencies/provinces to strengthen effective cooperation. This will require budget for the activities.</li> </ul>	To be proposed for LENS2 support.
(3.3) Coordinate with MEM and other agencies on the EIA/SIA related to mining, infrastructure, agriculture, and industry.	<ul style="list-style-type: none"> <li>– DESIA will conduct training workshops, field/study visits, and/or other on-the-job training for DESIA staff and other agencies/provinces to strengthen effective cooperation. This will require budget for the activities.</li> </ul>	To be proposed for LENS2 support.
<b>(4) Building capacity of the provinces to implement the IEE/EIA/SIA process</b>		
(4.1) Develop a capacity building plan on implementation of the EIA/SIA for the provinces	In consultation with key agencies and provinces, DESIA to establish a clear policy/plan for capacity building on the EIA/SIA process focusing priority on taking actions on the ground (monitoring, inspection, reporting), securing operational budget from various sources, improving database management capacity (ECC and development project) and information disclosure, grievance mechanism, and consultation with local community. A TOR for consulting service for the planning and implementation will be prepared.	<p>A TA will be needed.</p> <p>To be proposed for LENS2</p>
(4.2) Implement the plan as agreed with the agencies and/or potential donors	The consulting service for (4.1) will also include scope for facilitating implementation of the plan.	To be proposed for LEN2.

## F5. Measuring Quality of the ECC

### F5.1 Methodology

In line with the ECC objective, measuring quality of the ECC should focus on effectiveness in reducing and/or mitigating the potential negative impacts of development projects on natural environment and local people, especially ethnic group and disadvantages people. Quality of the ECC is therefore assessed based on the quality of the EIA/SIA process including quality of the EIA/SIA study and report, adequacy of the EMMP and SSMP, effective implementation of the EMMP and SSMP by the project developer, and effective monitoring by the agencies. Sections below highlight methodology for data collection and criteria for rating quality of the ECC.

- Data collection was carried out during May-June 2013 through document reviews, meetings with key DESIA officials and national and international specialists who have been working in the EIA/SIA related aspects. Key document reviewed include EIA regulations (2003), EIA decree (2010), CAR decree 2005, technical guidelines, standard documents, etc. Verification of achievement regarding SESO inclusion in the CA of hydropower projects is conducted by reviewing the existing DESIA database on the ECC and other report available, including MEM database on hydropower projects.
- *Assessment criteria:* Performance rating for ECC quality is based on professional judgment and experience of the regional consultant in Thailand and Lao PDR and the applicable knowledge on international practices. [Section F5.2](#) presents the quality of the ECC based on 20 key parameters considered critical for forging effective implementation of the EIA/SIA process in Lao PDR while [Section F5.3](#) presents an assessment on quality of the EIA process in Lao PDR conducted by a group of researchers of the National University of Laos. Criteria for the assessment rating are identified in [Table F5.1](#) below.

No	Quality rating	Score	Range (%)	Meaning
1	Highly Satisfactory (HS)	5	90-100	There were no shortcomings in the operation's achievement of its objectives, in its efficiency, or in its relevance.
2	Satisfactory (S)	4-4.9	80-89	There were <i>minor</i> shortcomings in the operation's achievement of its objectives, in its efficiency, or in its relevance.
3	Moderately Satisfactory (MS)	3-3.9	60-79	There were <i>moderate</i> shortcomings in the operation's achievement of its objectives, in its efficiency, or in its relevance.
4	Moderately Unsatisfactory (MU)	2-2.9	40-59	There were <i>significant</i> shortcomings in the operation's achievement of its objectives, in its efficiency, or in its relevance.
5	Unsatisfactory (U)	1-1.9	20-39	There were <i>major</i> shortcomings in the operation's achievement of its objectives, in its efficiency, or in its relevance.
6	Highly Unsatisfactory (HU)	0	0-19	There were <i>severe</i> shortcomings in the operation's achievement of its objectives, in its efficiency, or in its relevance.

## F5.2 Quality Assessment of the ECC

The overall rating on ECC quality is considered “Moderately Unsatisfactory (MU)” given the availability of critical decrees, regulations, and technical guidelines and DESIA capacity to incorporate SESO into the CA of large hydropower projects. Table F5.2 presents results of the assessment using the criteria identified in Table F5.1 taken into consideration the institutional conditions during 2006 and 2013 (see Table F4.1 above) including suggestion on actions to improve the rating.

Table F5.2: Assessing quality of the ECC

Parameters	Status	Rating		Remarks
Total rating		53/ 100	MU	53%
<b>(1) Improving effectiveness of policy, legal, and institutional frameworks</b>		<b>15/20</b>	<b>MS</b>	<b>75%</b>
1.1 Existence of GOL policy, strategy, and/or actions toward sustainable development and/or effective management of natural resources and environmental (NREM) including adoption of good international practices related to information disclosure and public access to information.	<ul style="list-style-type: none"> <li>– The national policy on environment and social sustainability in hydropower sector (NPSH) has been adopted since 2005 and capacity of MEM agency begins in 2007. The NPSH is being updated in line with the current organization and MEM policy. MONRE is updating policy/strategy on water, land, and other resources and they are expected to be approved by end of 2013.</li> <li>– MONRE and MAF have established a number of policies/strategies to guide the development/implementation of plans and/or activities related to environment and natural resources such as water, forests, land, climate changes, etc.</li> </ul>	4	S	Rating could be raised when the key policy/ strategies related to hydropower development and natural resources management has been approved.
1.2 Existence of laws and regulations that could facilitate effective implementation of the EIA/CAR decrees and/or NREM in line with international practices (governance, accountability, cumulative impacts, trans-boundary impacts etc.), including dissemination and training	<ul style="list-style-type: none"> <li>– EIA decree (2010), CAR decree (2005), protection forest decree (2010), revised environmental protection law (2013) are in place. Efforts are being made to revise the water law, land law, forestry law, protected area decree, etc. and many will be submitted to the national assemble by the end of 2013. The EIA decree also requires cumulative and transboundary assessment, public involvement and information disclosure.</li> <li>– The revised mineral law (2011) and the revised electricity law (2012) have explicitly require effectiveness and sustainability of mining and hydropower development projects including requiring project developers to share the</li> </ul>	4	S	Rating could be raised when the revision of the key laws, decrees, and regulations are in place including training and agreement of key agencies on division of labors.

	project benefits in local area and make financial contribution to EPF.			
1.3 Existence of clear agency responsible for forging effective implementation and monitoring of the EIA/SIA process including agreement on role and responsibility of key agencies.	<ul style="list-style-type: none"> <li>DESIA is responsible for ensuring effective implementation of the EIA/SIA process. DESIA prepared a draft division of labor however the EIA/CAR decrees are being revised in line with the new organization structure and the province is likely to be responsible for the IEE. There are need to ensure common understanding among DESIA, line agencies, and the provinces regarding the EIA/SIA review, monitoring, and information disclosure.</li> </ul>	4	S	Rating should be raised to 5 if there are common understanding and/or agreement on the implementation processes.
1.4 Existence of mechanism to forge effective implementation of the environment and social obligations (EMMP/SMMP and other obligations) by the project developer	<ul style="list-style-type: none"> <li>A standard document on environment and social obligations (SESO) for large hydropower project was developed and being applied by DESIA through negotiation during the CA signing process. DESIA is making an effort in consultation with key agencies to formally require SESO negotiation for all projects and the document is being finalized with technical assistance from EMSP/Finland.</li> <li>Efforts may be needed to enhance effectiveness of the IPP/EIA process including simplify SESO and/or specific document of other development projects (mining, infrastructure, agriculture, etc.)</li> </ul>	3	MS	Rating could be raised when there are clarity and/or agreements among agencies on the documents available for key development activities.
<b>(2) Implementation performance</b>		<b>9/20</b>	<b>MU</b>	<b>45%</b>
2.1 Quality of the EIA, SIA, EMMP, SMMP, including consultation and information disclosure and commitment and capacity of project developer to implement the EMMP/SMMP, including monitoring and reporting.	<ul style="list-style-type: none"> <li>Most large developers hire international and/or regional consultants to conduct the EIA/SIA study and also implement the EMMP/SMMP including submission of progress reports to responsible line agencies. However limited capacity of human resources in the country this is not shared with the provinces, other agencies, and/or the public.</li> <li>Monitoring Fair due to limited qualified human resources in the country and inadequate attention of the project developer.</li> </ul>	3	MS	Rating could be made when there are clarity and agreements among key agencies on the IPP and EIA processes and on the quality and adequacy of the EMMP and SMMP that could facilitate effective implementation of the mitigation measures and commitment of project developers.
2.2 Quality of M&E and reporting capacity	<ul style="list-style-type: none"> <li>Limited due to limited qualified human resources responsible for undertaking</li> </ul>	2	MU	Rating should be raised to 3-4

by agencies, provinces, and/or international agencies	M&E as well as limited budget for undertaking the activities. There is internal reporting process within the agency in general however third party involvement for M&E and/or information disclosure (which could help enhancing quality and credibility of the M&E process) is not a normal practice. Effective application and effective coordination and cooperation between DESIA, sector agencies, provinces, and academic institutes could enhance the quality over time.			depending on the extent of M&E activities carried out by the agencies and/or province and disclose the key findings to the public.
2.3 Existence Availability and application of TG, STDs, and grievance mechanism	– With periodic input from regional and international consultants, and number of TGs have been completed in 2012 and additional development of TGs will be continued. However, information disclosure and grievance mechanism need improvement; Of 17 provinces, only two has established and applied this mechanism on a pilot basis	3	MS	Rating could be raised depending on the extent of which the TG, standards, and grievance mechanism are developed and applied.
2.4 Available budget for M&E	– No GOL allocation budget to the agencies or the province for M&E. However, the EIA decree requires the project developer to provide to the agencies for monitoring and this is considered as the project cost. Although the EIA decree and the revised Electricity Law clearly stipulate the obligation to include the EIA/SIA activities and monitoring as part of the project cost, details on appropriate funding mechanism has not been established.	2	MU	Rating could be raised when the funding mechanism is clearly developed and applied by key agencies.
<b>(3) Capacity of and coordination among key agencies and general public on the EIA/SIA process and mitigation</b>		<b>12/20</b>	<b>MS</b>	<b>60%</b>
3.1 DESIA capacity (#of qualified staff and budget) to review and monitor performance of EIA/SIA implementation and information disclosure	– Inadequate qualified staff; DESIA has staff of about 70 of which many are junior and require training and implementation experience. Monitoring of EMMP/SMMP would also require some equipment and training as well as adequate vehicles and transports. Current database management and information disclosure if not operational effectively.	3	MS	Rating could be raised when the number of qualified staff and other DESIA performance (review, monitor, TGs, database, etc.) are improved.
3.2 DESIA capacity to cooperate/engage sector agencies to actively participate in the EIA/SIA process (review, monitoring, etc.)	– Limited due to limited human and financial resources and need clarity on the division of labor and increase knowledge and understanding on the process and TG/STDs, etc. However, since 2010 DESIA has actively work with MEM agencies to address safeguard issues related to hydropower and mining	2	MU	Rating could be raised to 3-5 depending on the increased number of qualified staff in line agencies and active participation in the EIA/SIA process (at

	<p>projects through the implementation of HMTA project and this effort should be strengthened. Coordination and cooperation between DESIA and line agencies in other sectors has also been carried out when needed and/or resources are available. Active cooperation with other line agencies such as DWR, DMH, DFRM, MAF, MOH, etc. will be necessary to ensure effective planning and implementation of the EMMP and SMMP.</p>			<p>least for 4 main sectors)</p>
<p>3.3 Capacity to address broader issues such as cumulative impacts and/or trans-boundary impacts</p>	<p>– GOL promulgated the RBC decree in June 2010 and established NT-NKD RBC and Nam Ngum RBC to pilot for RBC implementation mechanism. LENS sub grant provided TA to promote NT-NKD RBC activities as well as to engage the provinces and local communities. Lack of budget and limited undertaking on the concept of RBC, transboundary issues and cumulative impacts make it difficult for the RBC and provincial units to cooperate effectively. More effort on this will be necessary.</p>	3	MS	<p>Rating could be raised when it is demonstrated that the RBC mechanism could facilitate effective coordination and cooperation among agencies and local community on the ground and the potential conflicts could be prevented and/or resolved.</p>
<p>3.4 Involvement and/or accessibility to international expertise's and/or good practices and</p>	<p>– To ensure quality, best practices. SIDA/Finland, WB, ADB, UNDP, etc. have been active and this should be continued; Training is being provided through EMSP and TG on CIA will be developed with IFC assistance.</p>	4	S	<p>Rating could be raised if more TA becomes available for DESIA and other line agencies and provinces, including capacity building for RBCs.</p>
<p><b>(4) Capacity of the provinces and local authorities and engagement with affected people and other key stakeholders</b></p>		<b>8/20</b>	<b>MU</b>	<b>40%</b>
<p>4.1 Provinces (5) in the north (Sayabuly, Bokeo, Loungnamtha, Oudomsai, Phongsaly)</p>	<p>– In 2006-2010 SIDA provided TA to 9 provinces and expand to cover 17 provinces in 2010-2014 under EMSP while DESIA, MEM, DWR/RBCs also provided some training on environment and social safeguard, IWRM, and various aspects. Lack of operation budget and limited technical knowledge and experience appear to be the most critical environmental and social safeguard issues. Most provinces have expressed their willingness and urgent needs for capacity building, especially where development activities have been rapid (such as Vientiane, BLKX, KM, Sekong,</p>	2	MU	<p>Rating could be raised when DESIA in consultation with key agencies and the provinces has established a clear policy/plan for capacity building on the EIA/SIA process focusing priority on taking actions on the ground (monitoring, inspection, reporting), securing operational budget</p>
<p>4.2 Vientiane capital and provinces (4) in the northeast (Vientiane, Loungphabang, Xiengkhang, Houphan)</p>		2	MU	
<p>4.3 Provinces (3) in the central</p>		2	MU	

(Bolikhamxay (BLKX), Khammouane (KM), Savannkhet)	and Champasak). Many provinces have increased their knowledge on trans-boundary/cross sectoral issues and cumulative impacts and begin to work together in the context of integrated river basin however more efforts and resources will be necessary to facilitate the process and actions on the ground.			from various sources, improving database management capacity (ECC and development project) and information disclosure, grievance mechanism, and consultation with local community.
4.4 Provinces (4) in the south (Salavan, Champasak, Sekong, and Attapeu)	<ul style="list-style-type: none"> <li>– LENS sub grants initiated capacity building in BLKX, KM, and SVK including building environmental management planning capacity (PESAP), developing a database for development projects, operation of grievance mechanism, management of protected areas, and setting up conservation community network, management of protected area, and training aspect on social impact assessment and implementation experience. However, there are 17 provinces that need capacity building.</li> </ul>	2	MU	
<b>(5) Others</b>		<b>9/20</b>	<b>MU</b>	<b>45%</b>
5.1 Contribution of project developers to EPF and/or local development as a good practices	Beginning, but need more efforts from key agencies and EPF to secure additional contribution from hydropower projects for sustainable development in the project and nearby areas as well as for EPF.	2	MU	Rating could be raised when more contribution has been made available to EPF.
5.2 EPF capacity to be an effective financial mechanism for tapping additional resources as well as for effective allocation and management of sub grant mechanism.	EPF is operational and gaining experience, however, it is necessary to improve financial sustainable and technical capacity	3	MS	Rating could be raised when EPF could collect the budget and effectively allocate them to support the NREM activities.
5.3 GOL policy and commitment to invest in environmental conservation	GOL budget allocation to EPF will demonstrate ownership and commitment	2	MU	Rating could be raised when GOL budget is made available to EPF
5.4 Engagement with national assemble, mass organizations, universities/ research institutes, and international agencies	This will improve credibility and effectiveness of the EIA/SIA process	2	MU	Rating could be raised when these constituencies could play an active role in the EIA/SIA process.

### F5.3 Stakeholder Opinions

Table F5.3 presents results of a recent assessment on performance of the EIA process in Lao PDR conducted by a researcher from the National University of Laos<sup>39</sup>. The study reviewed the current EIA process and practices and concluded that there are major gaps between the EIA requirements stipulated in policy and/or regulations and current EIA/ECC practices, especially on monitoring and evaluation. Coordination and cooperation among agencies (decision makers and planners), provinces, project developers, and consultants are generally weak causing poor quality of the measures, delay in approval, and ineffective implementation and monitoring of compliance. Lack of clear mechanism and procedures for monitoring and reporting including information disclosure and ineffective management of database have further weakening the system.

The study provided recommendations for improving effectiveness of the EIA process and the key ones include: strengthening integration and cooperation between MONRE and sector agencies; ensuring public participation in the EIA process during scoping and study; mandatory requiring for information disclosure (IEE/EIA/EMMP/SMMP and monitoring reports); improving quality of the review process by introducing review criteria; undertaking (by MONRE) site inspection and follow-up activities and reporting the results to the public; incorporating the EIA report into the licensing/permitting system; forging (by international agencies) effective implementation of the EIA process; implementing systematically for consultant accreditation; introducing penalty for non-compliance; increasing public awareness; capacity building and in-house training; etc.

Table F5.3 Independent assessment by a researcher (see reference #22)	Remarks																
<p style="text-align: center;"><b>Table 2. Summary of EIA systems performance.</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Criteria</th> <th style="text-align: left;">Lao PDR</th> </tr> </thead> <tbody> <tr> <td>1. Environmental policies, regulations, and guidelines</td> <td>Fair</td> </tr> <tr> <td>2. Institutional/administrative framework</td> <td>Medium</td> </tr> <tr> <td>3. EIA procedure</td> <td>Fair</td> </tr> <tr> <td>4. Roles of key actors</td> <td>Fair</td> </tr> <tr> <td>5. Compliance of monitoring and enforcement</td> <td>Deficient</td> </tr> <tr> <td>6. EIA implementation and effectiveness in practice</td> <td>Medium</td> </tr> <tr> <td>7. Availability of resources</td> <td>Deficient</td> </tr> </tbody> </table> <p>Five-point scale from good to very deficient (good, fair, medium, deficient, and very deficient).</p>	Criteria	Lao PDR	1. Environmental policies, regulations, and guidelines	Fair	2. Institutional/administrative framework	Medium	3. EIA procedure	Fair	4. Roles of key actors	Fair	5. Compliance of monitoring and enforcement	Deficient	6. EIA implementation and effectiveness in practice	Medium	7. Availability of resources	Deficient	<p>The assessment is qualitative and based on a large number of criteria (more than 100 items) including (1) environmental policies, regulations, and guidance (legal basis for EIA, clarity and adequacy on scope of EIA, availability of TGs and/or procedures); (2) institutional/ administrative framework (existence of key agency, capacity of agencies, staff attitude/capacity, integration and coordination mechanism for EIA, independency of agencies and project</p>
Criteria	Lao PDR																
1. Environmental policies, regulations, and guidelines	Fair																
2. Institutional/administrative framework	Medium																
3. EIA procedure	Fair																
4. Roles of key actors	Fair																
5. Compliance of monitoring and enforcement	Deficient																
6. EIA implementation and effectiveness in practice	Medium																
7. Availability of resources	Deficient																

<sup>39</sup>Evaluation of the Environmental Impacts Assessment (EIA) System in Lao PDR, Sengdeuane Wayakone, Inoue Makoto, National University of Laos, Office of International Relations, Vientiane, Laos; Email: \*s\_wayakone@yahoo.com *Journal of Environmental Protection*, 2012, 3, 1655-1670 doi:10.4236/jep.2012.312182 Published Online December 2012 (<http://www.SciRP.org/journal/jep>).

Table 3. Performance of Lao PDR's systems using the evaluation criteria proposed by Wood (1995).		
Criteria	Lao PDR	Observations
1) Legal basis	*	
2) Coverage	*	
3) Alternatives in design	-	Very limited in Lao PDR
4) Screening	*	
5) Scoping	*	
6) Content of EIA	*	
7) Review of EIA	*	
8) Decision-making	*	
9) Impact monitoring	*	
10) Mitigation	*	
11) Consultation and participation	*	
12) System monitoring	*	Limited in Lao PDR
13) Costs and benefits	-	Very limited in Lao PDR
14) Strategic Environmental Assessment (SEA)	-	Just started in Lao PDR

Source: Adapted from Wood (1995). Legend for level of adoption/implementation of EIA practice: + fully/always; \* partially/sometimes; - not/non-existent; na, not applicable.

developers, international assistance); (3) EIA procedures (clear procedures for screening, public participation, disclosure, international requirements, etc.); (4) cooperation with sector agencies and provinces (clear roles and responsibility, involvement of higher authority, etc.); (5) EIA compliance monitoring and enforcement (mechanism in place, linking with permit/licensing system, formal involvement of enforcement entity, involvement of international financing, etc.); (6) EIA implementation and effectiveness in practice (EIA influence in the project cycle, influence of political-social-economic factors, use of best practices, opportunity for learning by doing practices, regular auditing/assessment, application of SEA, etc.); and (7) availability of resources (commitment of staff, human resources capacity, adequate management tools, availability of international technical and financial supports, etc.).

There are also opinions related to the ECC system expressed during the meetings with other key agencies and some national consulting firms in Lao PDR and the key ones are highlighted below:

- Applica

tion of SESO to compliment the ECC system could help ensuring that developer will implement the mitigation measures better and the revised version of SESO appears practical (when compared to the original version). However, given that SESO has been developed as a standalone document comprising legal and technical obligations therefore it may duplicate and/or conflict with the legal obligations described in the CA.
- At

present DESIA is developing a standard ECC document however it is not clear how this will be done to replace SESO and/or reflect connection with EMMP and SMMP. The standard ECC document should be effective and practical documents that could be applied in CA project and non CA projects and could facilitate effective monitoring.
- A

national consultant firm expressed an opinion that DESIA should promote activities that could improve quality of the EMMP and SMMP rather than hiring consultant to prepare report according to SESO to be included as an Annex to the CA.

- DESIA should strengthen its cooperation with line agencies, provinces, local authorities, universities and academics, and general public including provision of adequate training and/or information to them.
- Negotiation for ECC, SESO and other legal documents should be conducted under the leadership of the law and information division with technical input from the EIA review center and the monitoring center. This is to ensure consistency and clear understanding on the agreements and obligations.
- Need to strengthen monitoring and reporting on the compliance with ECC, SESO, and/or other related law/regulations.

## **F6. Conclusion and Recommendations**

It is concluded that the current quality of the ECC system is rated “Moderately Unsatisfactory” given weaknesses in the implementation and monitoring/inspection of the EIA/SIA process and limited human and financial resources including coordination/cooperation among key agencies, and capacity of the provinces and local authorities. Additional efforts, technical assistance, and financial supports from international agencies will be necessary to improve effectiveness of the ECC system in Lao PDR. Given that LENS2 is being proposed by WB and the activities will be implemented during 2015-2020, DESIA should work closely with EPF, WB, and other interested parties to secure additional technical assistance and funding support for the implementation of the action plan identified in Section F4.2.

## List of References

#	Names
1	Decree on Environmental Impacts Assessment, Prime Minister's Office No 112/PM, dated 16 February 2010 (English version).
2	EIA Guidelines, November 2011
3	List of project subject to EIA: Agreement on List of Investment Projects subject to IEE and EIA; No. 697 /PMO –MONRE; Dated 12 March 2010
4	Decree on the Compensation and Resettlement of the Development Project, No. 192/PM, dated 7 July 2005
5	Technical guideline for implementation of the compensation and resettlement decree, November 2011
6	Guideline on public involvement in the EIA process of development project, 2013. Guideline,
7	Guideline on consultation with ethnic group, 2013
8	Decree on Establishment and Activities of River Basin Committee (No. 293/PM/WREA, Dated 15 June 2010
9	Decision on Organization and Operation of Nam Theun-Nam Kading River Basin Committee (No: 132/PM), dated 17 October 2012
10	NT-NKD RBCS: Decision on Organization and Operation of Nam Theun-Nam Kading River Basin Committee Secretariat; No 3302/MONRE; Dated 24 May 2012
11	Law on Minerals (revised version); NA No. 04/NA, dated 20 December 2011
12	Law on Electricity (Amended 2012), printed by the Department of Energy Management, Ministry of Energy and Mines in Cooperation with Law Dissemination Department, Ministry of Justice, 2013.
13	The Environmental Law, No. 09/PO, 26 April 1999 and the draft revised law in 2012 (in Lao)
14	Law on Minerals (revised version), National Assembly No. 04/NA, dated 20 December 2011 (English version)
15	Law on Electricity (amended 2012), RathaDumrat of the President No 056/PM, dated 16/01/2012 (English version)
16	Protection forest decree 2010
17	Protection forest fund
18	EPF Decree 2005, Prime Minister Office and EPF Charter
19	LENS Project Completion Report (PCR), final draft, dated 31 May 2013
20	Lao PDR Development Report 2010: Natural Resource Management for Sustainable Development: Hydropower and Mining, including a number of technical notes and papers (reference 1 in Section VII)
21	EMSP 2012 annual report.
22	Evaluation of the Environmental Impacts Assessment (EIA) System in Lao PDR, Sengdeuane Wayakone, Inoue Makoto, National University of Laos, Office of International Relations, Vientiane, Laos; Email: *s_wayakone@yahoo.com <i>Journal of Environmental Protection</i> , 2012, 3, 1655-1670 doi:10.4236/jep.2012.312182 Published Online December 2012 ( <a href="http://www.SciRP.org/journal/jep">http://www.SciRP.org/journal/jep</a> ).

## **Appendix F1: An Independent Opinion on SESO**

## To Whom It May Concern

20 May2013

**Subject:** Environmental and Social Obligations in Concession Agreements, Lao PDR

In my capacity as Chief technical Adviser of the of the international consulting company Grontmij and Team Leader of the Environmental Management Support Programme (EMSP) at the Ministry of Natural Resources and Environment (MONRE), Lao PDR, I have for more than five years worked closely together with the Department and Environmental and Social Impact Assessment and its legal counsel to ensure that energy concession agreements include a high standard of clear and enforceable environmental and social obligations. This has gradually led to the development of a Standard Environmental and Social Obligations or SESO, which since 2009 has been applied in all new large energy concession agreements.

The current version 22 of the SESO is a comprehensive and integrated set of obligations, which provide a high level of protection of the environment, affected people and public interests. The development and incorporation of the SESO into concession agreements has a number of advantages.

First of all the SESO contains a uniform set of obligations, which are all in line with the social and environmental safeguard policies and standards of leading international organizations and lenders. Secondly, the obligations are the same for all concessionaires in the sector, which ensures a fair and consistent treatment across the sector, and it provides for a more effective and efficient administration and enforcement saving time and resources of the environmental authorities. Thirdly, the SESO fills the current gaps and shortcomings in the statutory legal framework and in particular, the SESO clearly determines that the project developer is responsible for all project related environmental and social impacts. This key responsibility is a very important point of reference in the SESO, and it forms the basis for obligations on how this responsibility must be implemented in terms of impact prevention, mitigation and where this is not practicable through compensation. Part of this also includes requirements on compliance with national and international environmental and social standards and the project developer shall prepare management and monitoring plans describing in detail the measures that will be implemented to ensure full compliance with obligations. Such plans are then subject to review and approval by MONRE.

In terms of enforcement, the SESO is also an important step forward as it contains a penalty regime ascribing levels of fines to different kinds of non-compliances.

The SESO is an important and necessary instrument to ensure that large development projects are implemented without causing unacceptable impacts on the environment and people. The SESO still needs to be further developed, the language can be tightened and shortened, but the SESO is also designed so that it can easily be expanded to cover other sectors such as mining, industry and agriculture. Finally, many obligations in the SESO can be transferred into new or revised legislation.

It is highly recommended that the work on the SESO continues and that it is expanded to cover other sectors with large concessions.



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## Executive Summary of the Standard Environmental and Social Obligations<sup>40</sup>

### 1. Development History

This Note describes the background, content and application of the (draft) Standard Environmental and Social Obligations or SESO which the Ministry of Natural Resources and Environment, Lao PDR has developed over the past 5-6 years in order to fill in the gaps in the current statutory legal framework and to maximize compliance with internationally recognized environmental and social safeguards.

The legal framework on environmental and social requirements is still under development with many related pieces of legislation under revision. In particular, environmental permitting or licensing mechanisms are still underdeveloped, which means that projects are often approved without clearly defined and enforceable environmental and social obligations. This not only means that it is unclear for the developer what exactly must be complied with, but it also makes it difficult for MONRE to enforce compliance. However, the concession agreement system provides an opportunity for MONRE to remedy these shortcomings by adding contractually binding environmental and social obligations into concession agreements. A concession agreement is a contract between a project developer and the government approved by the highest legislative powers of the country i.e. the National Assembly and a concession agreement often contains exemptions from laws and regulations. MONRE recognizes that it has a not only an opportunity but also a duty to ensure that environmental and social safeguards form part of the contractual obligations in concession agreements in order to ensure that such matters are properly managed, monitored and funded by the projects. MONRE has pursued this through the gradual development of the SESO.

The SESO is a comprehensive and integrated set of contractual environmental and social obligations incorporated into concession agreements - so far mainly energy project concessions.

The development of the SESO took the very first steps in 2007 as a result of the Ministry of Natural Resources and Environment (MONRE) being requested to take charge of negotiating the contractual Integrated Environmental and Social obligations in energy projects.

Since then, MONRE has led numerous negotiations with many different projects, and in order to ensure the uniformity among all the contractual environmental and social obligations, MONRE gradually developed the draft SESO with the intention to create a uniform and coherent binding set of integrated environmental and social obligations. Increased uniformity will lead to a greater understanding all of the contents of the SESO by GOL officials responsible for administration of the documents and finally will lead to more effective enforcement of the SESO obligations of the project developer by MONRE.

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<sup>40</sup> Sources: DESIA, 2013

Throughout the years up until 2013, MONRE has conducted a series of workshops and consultations on the SESO among officers from MONRE, the concerned government organizations and the project developers with the dual objective of getting feedback to the SESO and building capacity and mutual understanding on legal matters related to Integrated Environmental and Social Obligations under the concession agreements.

Parallel with all these workshops and consultations as well as the conclusion and lessons learned from various project developments, MONRE has continued to update the SESO and MONRE have applied the SESO on more than 20 energy projects.

## **2. Expandability of the SESO**

The current SESO has been drafted to encompass the Integrated Environmental and Social Obligations chiefly in the energy sector with potential application to the mining sector. However, the SESO can be further expanded to address other types of industries or activities where Integrated Environmental and Social Obligations need to be set clearly and monitored, such as for industrial, agricultural, tourism, and other types of activities.

## **3. Outline of the Standard Environmental and Social Obligations**

The current draft SESO (version 22) is divided into 3 parts and 9 appendices. The first part of the SESO includes the general terms and conditions that the project developers shall comply with. These terms and conditions apply to all types of projects and they are not linked to any particular social or environmental issue.

The second part of the SESO focuses on the obligations of the project developer to manage, prevent and mitigate and monitor the environmental and social adverse impacts caused by the project. This part covers all the required technical procedures and minimum requirements for all the environmental and social management and monitoring plans that shall be prepared and implemented by the project developers.

The third part of the SESO focuses on compensation and resettlement obligations. This part of the SESO includes obligations to alleviate poverty for all Project Affected Persons, ensure that no one is worse off than before the project and also to increase the net-income of the PAPs over a ten year period in the sustainable way.

The last part of the SESO is a series of appendixes that covers project specific obligations and arrangements.

## **4. Advantages of the Standard Environmental and Social Obligations**

### **Providing the Comprehensive Integrated Environmental and Social Obligations**

- To a large extent, the SESO fills the gaps in the existing statutory legal framework and has become a strong tool and legal instrument for the Government and in

particular for MONRE to ensure that large development projects comply with a high standard of environmental and social safeguards.

- In addition, the environmental and social obligations in the SESO are designed to ensure that the projects comply not only with all the applicable national environmental and social standards and requirements but also with environmental and social safeguards and performance standards required by international finance institutions such as World Bank, International Finance Corporation, and Asian Development Bank. And it is always the more stringent requirement that applies.

#### **Uniformity**

- The SESO is designed to ensure consistent, fair and equal treatment of all concessions. All project developers will have to comply with the same set of obligations, which will also make it easier and more efficient for MONRE to inspect and enforce compliance with obligations.
- Furthermore, by having a uniform set of obligations, the responsible MONRE officers will gradually become acutely familiar with the obligations, their meaning and application. This improved understanding will lead to better and more effective enforcement of the obligations.

#### **Custom-made Set of Integrated Environmental and Social Obligations**

- The SESO is a standard and it contains standard terms and conditions, but the SESO also identifies the areas or issues where the environmental and social obligations have to be custom made to fit the project specific design, installations, layout, location, and surrounding social and environmental situation.
- Although such project specific obligations are negotiated on a project by project basis, they are still based on scientific methods and general principles and overtime through practice in the field and negotiations MONRE is gaining the necessary experience on how they should be specified and formulated.

#### **Avoiding numerous contradictory documents among other Project at any given time**

- Using the SESO will establish a standard from which MONRE will be reluctant to deviate. The fewer deviations there are from the standard, the less the risk will be that MONRE will have a number of different, and possibly contradictory, positions outstanding with various projects at any given time. This can help to avoid disputes and the costs and uncertainty associated therewith.

#### **Time saving from Limiting negotiation**

- The position of MONRE officials in discussions with project developers should be that the SESO document has already established the correct allocation of risks and obligations between the parties. Moreover, by virtue of having utilized the SESO in regard to other projects, the position of the MONRE with respect to any new project developer will be much enhanced. Because it will not be necessary to negotiate chapter by chapter, page by page, and sentence by sentence, MONRE officials should find a great savings in time as well as a much improved final result by not needing to

negotiate the document so heavily, and by being able to focus attention almost exclusively on unique project aspects.

### **Maintaining strong MONRE positions**

- The less negotiation days of the SESO, the more likely it is that the final document will maintain such strong MONRE positions.

### **Bright line positions**

- The SESO has attempted to state the obligations of the developer as clearly and unambiguously as possible, to try to minimize disputes and maximize compliance by the developer with clearly stated obligations. A second benefit of setting bright line positions is that it makes it much easier for MONRE officials to understand what exactly is expected and what to monitor.

### **Minimize risk shifting to GOL**

- In a typical negotiation of the concession agreement, the project developer may wish to incorporate a certain amount of ambiguity or uncertainty, which can be exploited at a later date as a means of pressuring the GOL to agree with opposition advanced by the project developer. This can cause a shift in risk from the developer to the GOL in a manner, which the GOL did not previously anticipate. The use of the SESO will help to minimize such risks shifting. Minimization occurs in part because there will be a reduced amount of negotiation, and a limited amount of change to the SESO. Another basis for minimizing such risks shifting is that the language itself tends to be much clearer and the imposition of an obligation on either party is much less ambiguous than in other concession agreements employed in the past.

### **Clear basis for training**

- Having an SESO will allow MONRE to carry out a variety of training exercises for MONRE officials charged with enforcing the SESO, but also other officials who wish to understand what Integrated Environmental and Social Obligations the project developer has.

## **5. Key Obligations in the SESO**

Some of the most important clauses in the SESO are summarized below:

### **Responsibility for environmental and social impacts**

- The developer shall be responsible for, and shall fully and effectively implement, all requirements set forth in the Concession Agreement's Annex on Environmental and Social Obligations, Environmental Compliance Certificate, Applicable Laws, and Standards.
- The responsibility of the developer includes, among other things, the obligation of the Developer to meet all Standards, in order that all adverse impacts are:
  - prevented or avoided, whenever and wherever, and to the extent possible;

- reduced, whenever and wherever, and to the extent possible, when prevention or avoidance cannot be achieved;
  - remedied and rectified, whenever and wherever, and to the extent possible, when prevention or avoidance or reduction cannot be achieved; and
  - Compensated through payment to be made to GOL and/or to Project Affected Persons, as the case may be, whenever and wherever such adverse impacts have not been wholly prevented or avoided, reduced or remedied by the Developer.
- The Developer shall bear full legal and financial responsibility for all actions and omissions of its contractors, subcontractors acting for or on behalf of the Developer, in carrying out their work on the Project.
  - The Developer is solely responsible for accurately defining the required scale and scope of the Project, carrying out thorough investigations of all Site conditions, selecting technologies, vendors and contractors, the construction, operation, maintenance, and any clean-up or rehabilitation of the Project, and achieving the Standards.
  - The Developer shall ensure that the Environmental and Social Measures are fully and appropriately reflected in the Environmental and Social Management and Monitoring Plans.
  - The Developer shall be responsible properly and fully to carry out all Environmental and Social Measures.

#### **Permits**

- The Developer shall obtain permits (environment and social) from MONRE for the Construction Phase and for the Operational Phase.
- The Construction Phase Permit Application form the developer shall include updated detailed Construction Phase Environmental and Social Management and Monitoring Plans in accordance with a prescribed format and in compliance with detailed requirements;
- No construction works are allowed until the construction phase permit has been issued by WREA;
- The Operational Phase Permit Application from the developer shall include updated detailed Operational Phase Environmental and Social Management and Monitoring Plans in accordance with a prescribed format and in compliance with detailed requirements;
- The Operational Phase shall not be commenced until the operational phase permit has been issued by MONRE;
- The permits may contain conditions and can be revoked or suspended in case of non-compliances;

#### **Revisions to the Environmental and Social Management and Monitoring Plans**

- The Construction Phase and Operational Phase Environmental and Social Management and Monitoring Plans shall be reviewed and revised every 2-5 years and shall within specified timeframes be submitted to MONRE for review and approval Obligation to comply with all applicable laws of Lao PDR;
- The Developer shall include all relevant environmental and social Standards together with any other Environmental and Social Measures and requirements specified in the

Environmental and Social Management and Monitoring Plans into its contract specifications, and shall ensure that such Standards, measures and requirements are fully and properly implemented by all Contractors and Subcontractors.

**Penalty regime**

- Penalty regime with clearly stated ranges of monetary penalties or other sanctions for different kinds of non-compliances and aggravating factors such as history of non-compliance, deliberate action, attempt to conceal, imminent threat to humans or the environment;

**Environmental Management System**

- Obligation to develop and implement an Environmental Management System in accordance with ISO 14001;

**Environmental and Social Management Office**

- The Developer shall set-up an environmental and social management office and carries out comprehensive self-monitoring and monthly reporting to MONRE;

**Funding of Environmental and Social Measures and for WREA monitoring and capacity building**

- The Developer shall provide sufficient and adequate budget for implementation of its obligations including avoidance, reduction and remediation of environmental and social impacts caused by the Project;
- Developer is solely responsible for the accuracy and completeness of all estimates as to anticipate impacts, costs and budgets;
- The developer shall provide sufficient and adequate budget for environmental and social monitoring by MONRE and other government organizations;
- The developer shall to provide financial support to MONRE capacity building;

**Disclosure of information**

- The Government reserves the right at its sole discretion to make public or to share with any third party environmental or social data, measurements and information received from the developer;

**Monitoring and Inspection by MONRE**

- The Government reserves the right to monitor and make inspections at any time and from time to time in regard to developer's performance of its obligations;

**Compensation and Resettlement**

- Detailed obligations on resettlement;
- Detailed compensation entitlement matrix for people affected by the project;
- Detailed obligations in regard to income restoration (all PAPs shall be above poverty line 2 years after start of project, all PAPs shall reach same net-income level as before the project, average net-income target is 200% of baseline average net-income) – this is in addition to compensation entitlements;
- Grievance redress procedures;
- Organizational structures and procedures for dealing with compensation and resettlement;

**Standards and Guidelines**

- Detailed list of performance standards, guidelines and effluent/emission limit values, and ambient environmental quality standards;

- Reference to internationally recognized standards and guidelines such as from: IFC, ADB, WHO, ISO, IEC, Equator Principles, International Council for Mining and Minerals, International Cyanide Management Institute, USEPA, EU Commission, OECD.

**Appendix F2. ECC-SESO Data at DESIA (June 30, 2013)**

No	Name of project (provinces)	Capacity (MW)	COD	CA*	ECC signed	Annex to CA Signed	Remarks	#
<b>I.</b>	<b>Under Operation</b>							
1	Nam Dong (Loungphrabang)	1	1970	EDL1	No data	-	No CA need	
2	Nam Ngai (Pongsaly)	1.2	-	EDL2	No data	-	No CA need	
3	Selabam (Champasak)	5	1970	EDL3	No data	-	No CA need	
4	Se Xet 1 (Saravan)	45	1990	EDL4	No data	-	No CA need	
5	Houya Ho (Champasak/ Attapeu)	152	1999	CA	No data	-	Before SESO	#1
6	Nam Ko (Oudomxay)	1.5	1996	EDL5	No data	-	No CA need	
7	Theun Hinboun (Bolikhamsay)	220	1998	CA	25/4/1994	-	Before SESO	#2
8	Nam Leuk (Vientiane)	60	2000	EDL6	1/10/1995	-	No CA need	
9	Nam Mang 3 (Vientiane)	40	2004	EDL7	22/12/2001	-	No CA need	
10	Nam Ngum 2 (Vientiane)	615	2011	14/03/2006	29/10/2004	-	Before SESO	#3
11	Se Xet 2 (Saravan)	76	2009	EDL8	15/11/2004	-	No CA need	
12	Nam Theun 2 (Bolikhamsay/ Khammouane)	1,075	2010	3/10/2002	28/1/2005	-	Before SESO	#4
13	Nam Nhone (Bokeo/Loung Nam Tha)	2.4	2011	3/3/2006	11/1/2005		Before SESO	#5
14	Nam Lik 1-2 (Vientiane)	100	2010	31/11/2007	18/2/2008		Before SESO	#6
15	Nam Ngum 5 (Loung Phra Bang/ Xiengkeoung)	120	2012	10/04/2007	23/6/2008	20/7/2009	SESO in CA	#7
16	Tuen Hinboun Extension (Bolikhamsay)	220+60	2012	27/08/2008	31/07/2008	2008	SESO in CA	#8
17	Nam Ngum 1 (Vientiane)	155	1971	EDL9	25/5/2010	-	No CA need	-
<b>II.</b>	<b>Under Construction</b>							
1	Xekaman 3 (Sekong)	250	2010	04/01/2006	23/11/2006	-	Before SESO	#1
2	Nam Ham (Xayabuly)	3.5		(MOU8) CA completed	09/07/2007	2008	SESO in CA	#2
3	Tad Salen (Savannakhet)	3.2	TBD	03/02/2009	02/01/2008	2008	SESO in CA	#3
4	Nam Sim (Houphan)	8	2015	13/06/2011	30/01/2009	6/11/2009	SESO in CA	#4
5	Nam Long (Luang Nam Tha)	5	2013	21/03/2011	2009	19/01/2010	SESO in CA	#5
6	Xekaman 1 (Attapeu)	322	2013	10/02/2011	14/01/2008	19/04/2011	SESO in CA	#6
7	Xenamnoi 1 (Champasak)	148	2013	19/10/2012	21/07/2010	27/03/2012	SESO in CA	#1
8	Nam Ngiep 2 (Xiengkhuang)	180	2015	18/8/2011	12/09/2010	29/12/2011	SESO in CA	#2
9	Xayabuly (Xayabuly-Mekong)	1,285	2019	29/10/2010	13/09/2010	13/01/2012	SESO in CA	#3

10	Hongsalignite (Xayabuly)	1,878	2015	30/11/2009	08/10/2010	30/11/2009	SESO in CA	#4
11	Nam Khan 2 (Loung Phra Bang)	126.2		EDL10	28/01/2011	-	No CA need	-
12	Xepian-Xenamnoi – (Champasak/Attapeu)	390	2016	19/10/2012	18/03/2011	29/4/2013	SESO in CA	#5
13	Nam Khan 3 (Loungphrabang)	47		EDL11	30/10/2012	-	No CA need	-
14	Na Ngiep 3A (Xiengkhuang)	44	-	CA	20/04/2012	22/03/2013	SESO in CA	#6
15	Nam OU 2 (Louangphrabang)	90	2013	10/06/2012	20/04/2012	05/04/2013	SESO in CA	#7
16	Nam OU 5 (Phongsaly)	99	2013	10/06/2012	20/04/2012	05/04/2013	SESO in CA	#8
17	Nam OU 6 (Phongsaly)	180	2013	10/06/2012	20/04/2012	05/04/2013	SESO in CA	#9
18	Nam Beng (Oudomxay)	34	2015	07/01/2013 (PDA2)	04/05/2012	3/1/2013	SESO in CA	#10
<b>III.</b>	<b>Under Planning</b>							
1	Nam Kong 2	66	2015	31/01/2013	NYS	NYS		
2	Nam Mang 1 (BLKX)	57	2016	Ca signed	NYS	NYS		
3	Nam Ngiep 2	180	2015	18/08/2011	NYS	NYS		
4	Nam Tha 1 (Bokeo/ Loung Nam Tha)	168	2015	PDA17 (CA/PPA)	09/10/2008	-	Before SESO	
5	Nam Ngum Downstream (Vientiane Capital)	110		EDL12	13/04/2010		IEE, no CA need	
6	Nam Gan (Vientiane)			?	13/04/2010			
7	Sekong 4 (Sekong)	300	2017	PDA22 (CA/PPA)	21/04/2010	NYS	SESO negotiation	
8	Sekong 5 (Sekong)	330	2016	PDA23 (CA/PPA)	21/04/2010	NYS	SESO negotiation	
9	Nam Ngiep Mouang Mai (Bolikhamsay)	38		MOU15	08/12/2010	NYS	SESO negotiation	#1
10	Xenamnoi 2 (Champasak)	242	2014	PDA	18/03/2011	NYS	SESO negotiation	#2 (L1)
11	Nam Ngum 3 (Vientiane/ Xiengkhuang)	460	2017	PDA7 (CA/PPA)	08/06/2011	NYS	SESO negotiation	#3 (L2)
12	Xenamnoi 5 (Champasak)		2014	PDA	19/12/2011	NYS	SESO negotiation	#4 (L3)
13	Xenamnoi 6 (Champasak)		2014	PDA	26/12/2011	NYS	SESO negotiation	#5 (L4)
14	Nam Lik 1 (Vientiane)	60	2014	PDA3 (CA)	25/03/2011	01/10/2012	SESO in CA	#6 (L4)
15	Nam Kong 1 (Attapeu)	150	2017	PDA2 (CA/PPA)	21/04/2011	NYS	SESO negotiation	#7 (L5)
16	Nam Pod (Houphan)	15	-	PDA12	10/08/2011	-	IEE	#8
17	Houya Champi (Champasak)	5	-	MOU3	12/09/2011			#9
18	Nam Mo (Xiengkhuang)	120	2015	PDA5 (CA/PPA)	28/11/2011	NYS	SESO negotiation	#10 (L6)
19	Xe Katam (Champasak)	61	2017	CA/PPA	18/03/2011	NYS	SESO negotiation	#11 (L7)

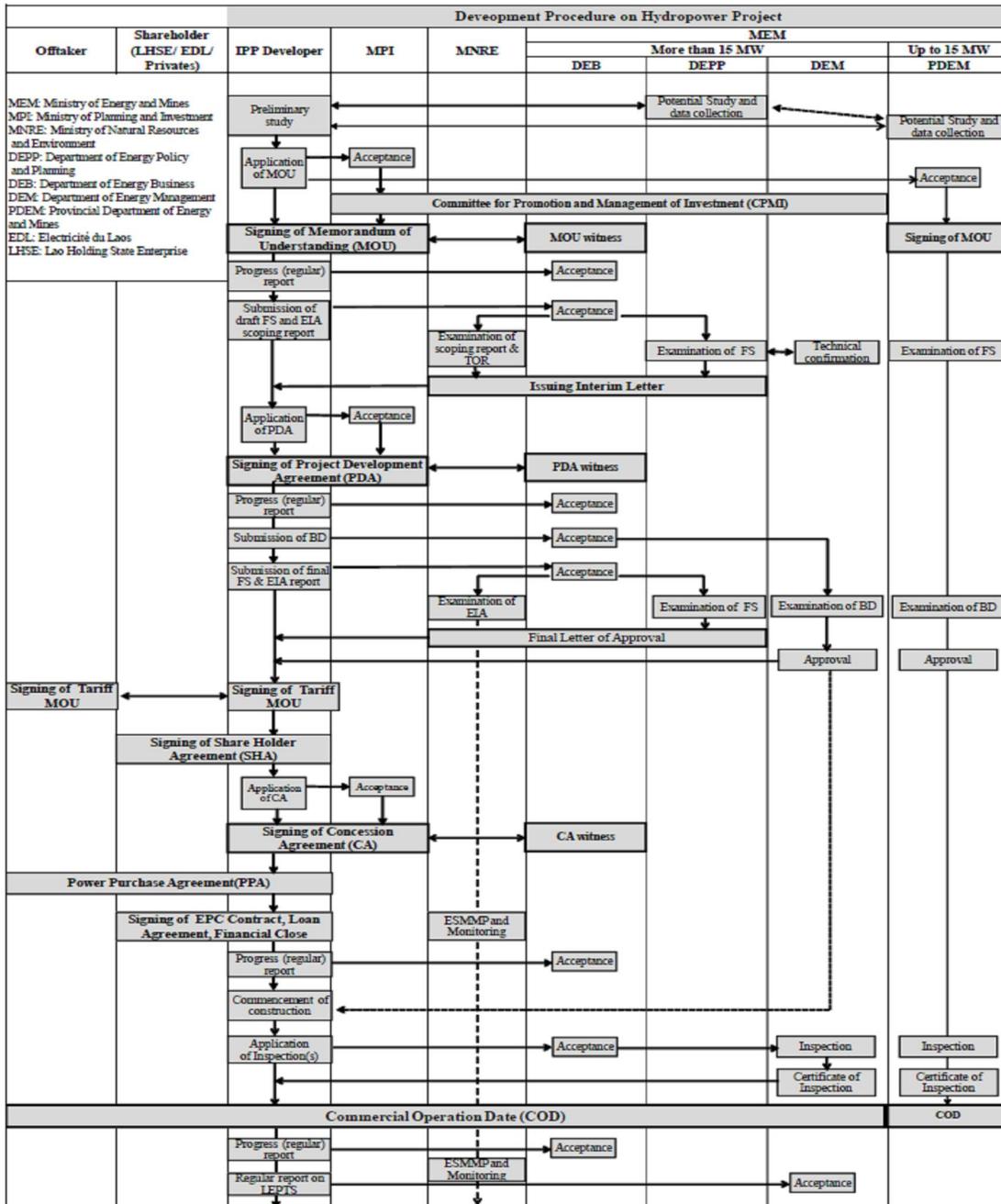
20	Tad ixom (Champasak)			?	19/01/2012			#12
21	Mekong Tad somphamit (Champasak)	20-30		?	19/01/2012			#13
22	Nam Mang 1 (Bolikhamsay)	57	2015	CA/PPA	01/02/2012	27/4/2012	SESO in CA	#14 (L8)
23	Nam Sana (Vientiane)	14		EDL13	21/05/2012	-	No CA need	-
24	Nam Ngiep 1 (Bolikhamsay)	269+20	2018	PDA6 (CA/PPA)	16/06/2012	25/4/2013	SESO in CA	#15 (L9)
25	Xe set 3 (Saravan)			EDL14	29/06/2012	-	No CA need	
26	Donsahong (Champasak-Mekong)	240	2017	PDA1 Completed	13/07/2012	NYS	SESO negotiation	#16 (L10)
27	Nam Pha (Loung Nam Tha/Bokeo)	130	2016	PDA11	27/08/2012	NYS	SESO negotiation	#17 (L11)
28	Nam Jien (Vientiane)			?	28/08/2012			#18
29	Nam Sane 3A-3B (Xiengkhuang)	65	2016	PDA Completed	05/09/2012	NYS	SESO negotiation	#19 (L12)
30	Houay Lamphanyai (Sekong)	70	-	EDL15	06/09/2012		No CA need	-
31	Nam Kong 3 (Attapeu)	45		PDA4	29/10/2012	NYS	SESO negotiation	#20
32	Nam Houng (Xayabuly)			?	31/01/2013		SESO negotiation	#21
33	Nam Phay (Vientiane)	86		PDA8				
34	Nam Phouan (Xayabuly)	80		PDA9	TOR			
35	Nam Phak (Champasak)	45		PDA10				
36	Nam Seuang 1 (Loungphrabang)	94	2017	PDA13				
37	Nam Seuang 2 (Loungphrabang)	96	2017	PDA14				
38	Nam Sum 1 (Houphan-Loungphrabang)	96		PDA15				
39	Nam Sum 3 (Houphan/Loungphrabang)	186		PDA16				
40	Mekong Pakbeng (Oudomxay/Xayabuly)	855	2018	PDA18				
41	Nam Ngoy (Champasak-Mekong)	651	2018	PDA19				
42	Mekong Sanakham (Xayabuly/ Vientiane)	660	2018	PDA20				
43	Sekong 3A (Sekong)	105		PDA21	EIA			
44	Sekong 3B (Sekong)	100		PDA21				
45	Xekanman 4 (Sekong)	80		PDA24	EIA			
46	Nam OU 1	180	2016	PDA			DEPP database	
47	Nam OU 3	240	2016	PDA				
48	Nam OU 4	60	2016	PDA				
49	Nam OU 7	180	2016	PDA				
50	Nam Xam 1	47		PDA				
51	Nam Sum 1 (Houphan/Loungphrabang)	102		PDA				

52	Nam Mang (Vientiane)			PDA				
53	Dak e meule (Sekong)	130		MOU2				
54	Luangprabang (Mekong)	1,410		MOU4				
55	Nam Bak 1 (Vientiane)	160		MOU5				
56	Nam Bak 2 (Vientiane)	40		MOU6				
57	Nam Feuang (Vientiane)	28		MOU7	TOR			
58	Nam Ham (Xayabuly)	5		MOU8				
59	Nam Leng (Pongsaly)			MOU9				
60	Nam Ma 1, 2, 3 (Houphan)	175		MOU10				
61	Nam Mo 1 (Xiengkhuang)	60-80		MOU11				
62	Nam Mouan (Bolikhamsay)	124		MOU12				
63	Nam Nga (Lounaphrabang)	110	-	MOU13				
64	Nam Neun (Houphan)	65		MOU14				
65	Nam Ngum 4 (Xiengkhuang)	220		MOU16	EIA			
66	Nam Et 1, 2, 3 (Houphan)	420		MOU17				
67	Nam Phouan (Vientiane)	60		MOU18	TOR			
68	Nam Poui (Xayabuly)	60		MOU19				
69	Nam Theun 1 (Bolikhamsay)	523	2018	MOU20				
70	Pak Lay (Xayabuly-Mekong)	1320		MOU21	TOR			
71	Sekong Downstream (Attapeu)	80		MOU22				
72	Thakho (Champasak)	172		MOU23	EIA			
73	Xebanghieng 1 (Savanakhet)	50		MOU24				
74	Xebanghieng 2 (Savanakhet)	52		MOU25				
75	Nam Neua (Khammouane)	53		MOU26				
76	Nam Ang Tha beng (Attapeu)	30		MOU27				
77	Xepian-Houaysoy (Attapeu)	100		MOU28	TOR			
78	Xelanong 1 (Savanakhet)	80		MOU29				
79	Xelanong2 (Savannakhet)	50		MOU30				
80	Xetanuan (Savannakhet)	30	-	MOU31				
81	Xeso (Attapeu)	40-60	-	MOU32				
82	Sebangnouan (Saravan)	80		MOU			DEPP database	
83	Ban Koum (Champasak-Mekong)	1872	2020	MOU				
84	Nam Phai (Vientiane)	60		MOU				
85	Nam Hinboun (Khammouane)	40		EDL16				
86	Nam Phak (Oudomxay)	21		EDL17				
87	Nam Song Ext (Vientiane)	6		MOU/EDL18				
88	Nam Kham 3	47		MOU/EDL19				

(Loungphrabang/XiengNgeun)									
<p>Note: NYS=Not yet signed; *=Ministry of Energy and Mines (MEM) database; ?=MEM database; TOR = Terms of Reference; EIA Environmental Impacts Assessment; EDL= Electricity De Lao; IPP= Independent Power Producer; MOU=Memorandum of Understanding (early stage of IPP); PDA =Project Development Agreement (and feasibility study/EIA stage of IPP); PPA =Power Purchase Agreement; CA =Concession Agreement stage (beginning of project construction, operation, and handover); IEE Initial Environmental Evaluation; SESO=Standard Environment and Social Obligation; MW=megawatts.</p>									

# Appendix F3 IPP Process and EIA Process

## IPP Process in Lao PDR



(Source) Study Team based on MEM information

Figure 2-12: Comprehensive flow of IPP development

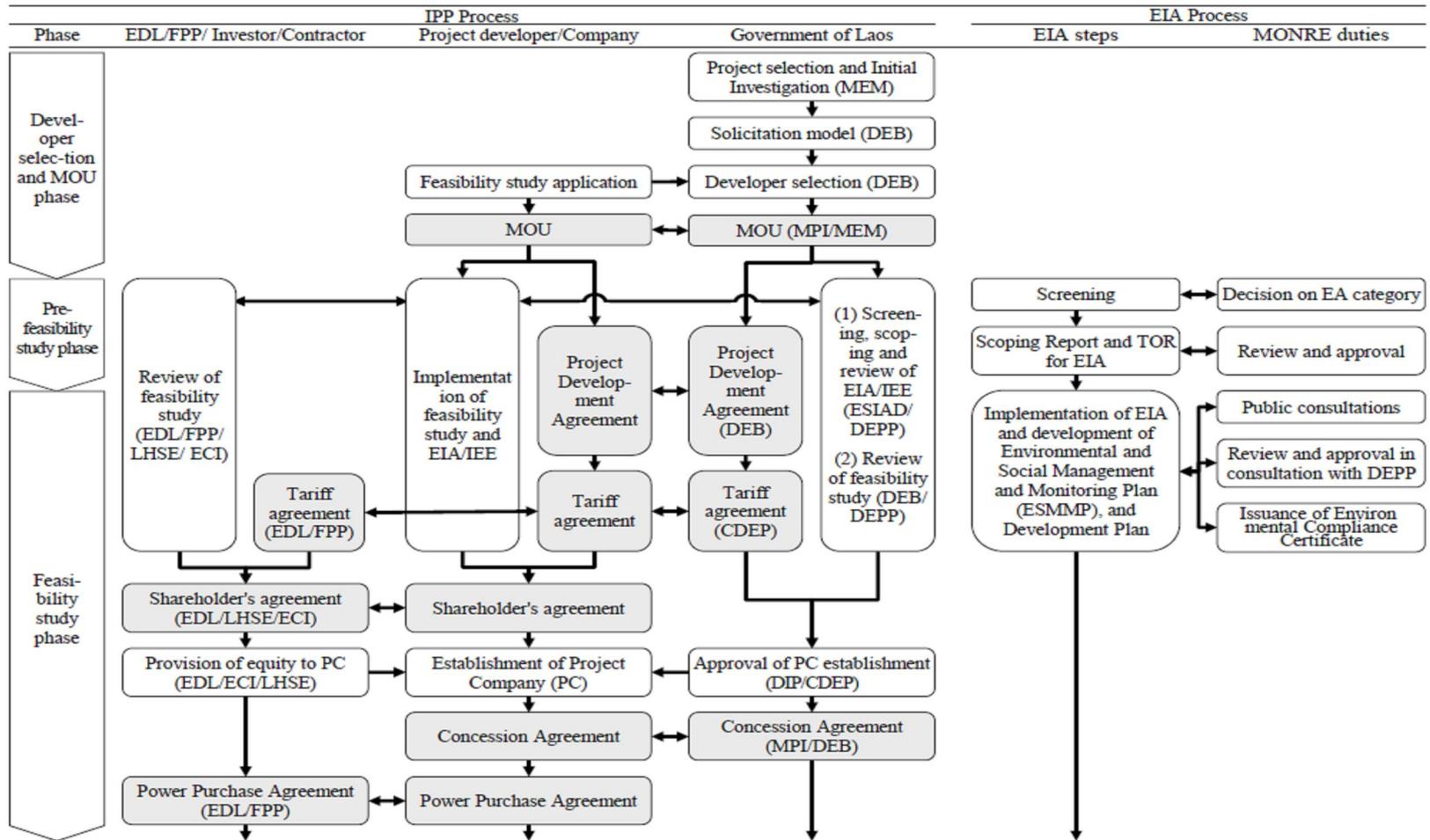
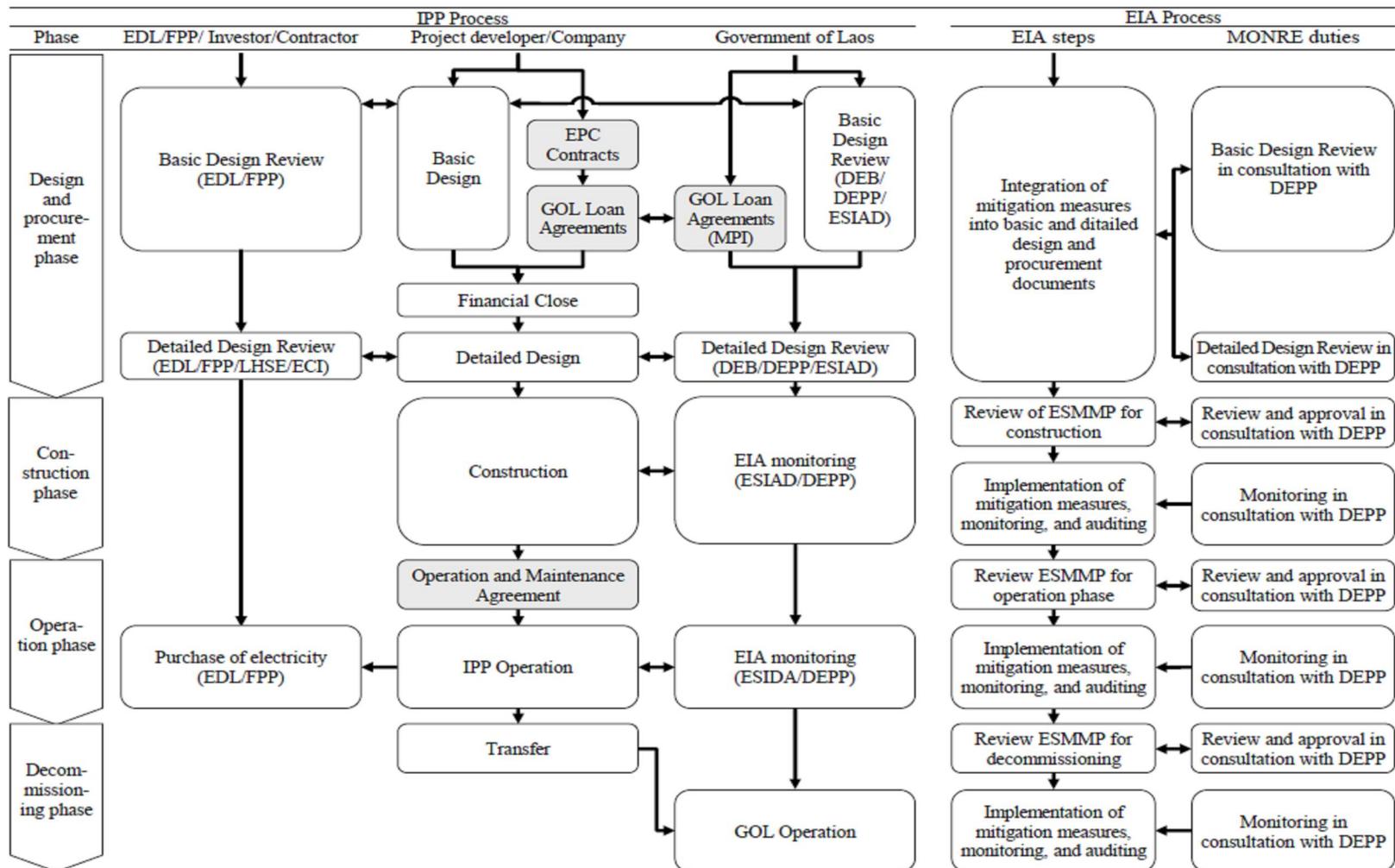


Figure 2-46: IPP project implementation process (to be continued to next page)



(Source) Ministry of Natural Resources and Environment. 2012. Environmental Impact Assessment Guidelines (draft).

Figure 2-47: IPP project implementation process (cont.)

Note 1: 1) CDEP: Coordinating Committee for Development of Electric Power; 2) DEB: Department of Energy Business (former Department of Energy Promotion and Development, Ministry of Energy and Mines); 3) DEPP: Department of Energy Policy and Planning; 4) DIP: Department of Investment Promotion, Ministry of Planning and Investment (to be confirmed); 5) ECC: Environmental Compliance Certificate; 6) ECI: Electricity Construction and Installation Enterprise; 7) EDL: Electricite du Laos; 8) EIA: Environmental Impact Assessment; 9) EPC Contracts: Engineering, procurement, and construction contracts; 10) EPD: Department of Energy Promotion and Development (changed to Department of Energy Promotion and Development (DEB) in December 2011); 11) ESIAD: Environmental and Social Impact Assessment Department; 12) IEE: Initial Environmental Examination; 13) LHSE: Lao Holding State-Owned Enterprise; 14) MEM: Ministry of Energy and Mines; 15) MONRE: Ministry of Natural Resources and Environment; 16) MOU: Memorandum of Understanding; 17) MPI: Ministry of Planning and Investment; 18) PC: Project Company; and 19) PDA: Project Development Agreement.

Note 2: The agreements shown in shaded boxes are preceded by negotiations among concerned parties.

#### Appendix F4: Draft division of labor for the IEE and EIA projects

This appendix presented the draft roles and responsibilities of the project owners and government agencies during (a) the review of the EIA project (Table AF4.1) and IEE project (Table AF4.2) and (b) the monitoring of the EIA project (Table AF4.3) and the IEE project (Table AF4.4). These roles and responsibilities are being reviewed in light of the updated EIA decree (2010) and CAR decree (2005) to ensure effective implementation of the decrees.

Definitions: IEE, EIA, ECC

- Compliance is the behavior response to regulatory requirements that ensures the protection of human health and the environment. For the regulations are being in compliance means obeying environmental requirements established by law.
- Compliance monitoring is the collection and analysis of information on compliance status (through pre-inspection and inspection reviews, ambient and emission monitoring, when needed, and other kinds of data gathering).
- Compliance promotion is any activity that facilitates or encourages voluntary compliance with environmental requirements. This approach contributes to the enhancement of environmental performance of industrial establishments through guiding them in utilizing the technical and financial support mechanisms, which address waste management and treatment, applying self-monitoring systems and at source pollution control programs. All aiming at only one goal, namely compliance to the set conditions of the law/permit.
- Emission (Effluent) Limit Value (ELV) is a figure specifying the concentration or load of a pollutant allowed to be emitted or discharged to the environment from a specific installation in a given period of time or per unit of production.
- Enforcement, in the broad sense of this notion, is the application of all available tools to achieve compliance, including compliance promotion, compliance monitoring and non-compliance response. In a narrow sense, enforcement can be defined as the set of actions that governments or others take to correct or halt behavior that fails to comply with environmental requirements.
- Environmental Quality Standard (EQS) is a measure of the state of a specific environmental medium, in regard to a specific pollutant, representing an upper limit of acceptability designed to protect human health or the ecosystem. WQS are Water Quality Standards (ambient).

Table AF4.1. Roles and Responsibilities of WREA, PWREOs and Line Ministries on the EIA/SIA review process and ECC issuance

Agency/Party	Key Actions on the Process and Procedures	The EIA/SIA Study	Public Involvement (PI)	Public Information Disclosure (PID)	ECC Obligations	Implementation
(1) Project owners (Private and Public)	<ul style="list-style-type: none"> <li>Express their interest in developing projects including submission of the project concept, scope, locations, key activities, and potential impacts and mitigation measures</li> </ul>	<ul style="list-style-type: none"> <li>-Discuss scope of the TOR with concerned agencies</li> <li>-Secure approval of the TOR by the responsible agencies</li> <li>-Conduct the EIA/SIA study per the agreed TOR;</li> <li>-Submit the EIA/SIA report to the responsible agencies</li> </ul>	<ul style="list-style-type: none"> <li>Conduct public involvement per the PI guidelines and include the results in the EIA/SIA report</li> </ul>	<ul style="list-style-type: none"> <li>Provide PID as required in the decree and guideline</li> </ul>	<ul style="list-style-type: none"> <li>-Observe and commit to the require obligations as described in the EIA decree and CAR decree;</li> <li>-Secure ECC approval before starting the construction activities</li> <li>-Prepare detailed action plan and fund flow</li> </ul>	<ul style="list-style-type: none"> <li>Set up an EMU and SMU and various committees for the project including grievance committees;</li> <li>Effectively implement the approved EMMP and SMMP.</li> <li>Ensure full compliance with the ECC approval and provide full cooperation with agencies during monitoring of compliance</li> </ul>
(2) MPI	<ul style="list-style-type: none"> <li>Review the request made by the private sector in close cooperation with WREA and line agencies;</li> <li>If acceptable, inform the private sector and sign an MOU for investment</li> </ul>	<ul style="list-style-type: none"> <li>- Participate in the discussion and acknowledge the agreement</li> </ul>	<ul style="list-style-type: none"> <li>Participate in the process as much as possible</li> </ul>	<ul style="list-style-type: none"> <li>Participate in the process as much as possible</li> </ul>	<ul style="list-style-type: none"> <li>-Be informed before signing an approval for the project</li> </ul>	<ul style="list-style-type: none"> <li>Participate in the process as much as possible</li> </ul>
(3) WREA (central and/or provincial)	<ul style="list-style-type: none"> <li>During the conceptual stage of the project, provide opinion regarding environment and social impacts and</li> </ul>	<ul style="list-style-type: none"> <li>-In coordination with line agencies review and approve the TOR, including conduct field visit to the proposed location as needed.</li> </ul>	<ul style="list-style-type: none"> <li>- Provide guidelines on PI and participate in the process as much as possible</li> </ul>	<ul style="list-style-type: none"> <li>Provide guidelines on PID and participate in the process as much as possible</li> </ul>	<ul style="list-style-type: none"> <li>- Inform key agencies (MPI, line agencies, provinces, etc.) on status of ECC issuance and its conditions</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>

Agency/Party	Key Actions on the Process and Procedures	The EIA/SIA Study	Public Involvement (PI)	Public Information Disclosure (PID)	ECC Obligations	Implementation
	provide clarification of the EIA/SIA process and procedures including technical guidelines as appropriate	- In case of emergency	- Not apply	- Not apply	- Issue ECC with conditions for post review and mitigation if the activities are not properly made	- Field visit as needed
	During review of the EIA/SIA report, ensure/forgo close coordination with line agencies, local authorities, and other key stakeholders in the EIA/SIA review process	- In coordination with line agencies, local authorities, and key stakeholders, review the EIA/SIA report and provide timely response to the project owner	-Participate in the IP process as much as possible	- Disclose the information in line with the EIA and CAR decrees and technical guidelines	- Issue ECC with a clear condition and/or plan to ensure effective implementation of the approved EMMP and/or SMMP, including identification of responsible agencies, funding sources, and fund flow arrangement. - Carry out the performance review and confirmation of the EMMP and SMMP during implementation which will be conducted six months before completion of construction.	-

Agency/Party	Key Actions on the Process and Procedures	The EIA/SIA Study	Public Involvement (PI)	Public Information Disclosure (PID)	ECC Obligations	Implementation
Line Ministries/ (DPRA)  - A nd/or their Provincia l Divisions	- Provide inputs on technical as well as provides opinions on safeguard and clarify sector regulations and procedures.	- Participate in the discussion and/or field visit as needed and provide inputs and/or comments on the TOR, and acknowledge the agreement	- Participate in the discussion as much as possible	- Create a website and provide information to the public and/or facilitate information access as much as possible	- Include ECC conditions in the CA as agreed with WREA;	- Supervise and monitor the compliance with the GOL regulations and the CA, including participate in the performance review to be conducted by WREA;  Ensure that issuance of the Operating Permit is in line with the GOL regulations and the Operating Permit decree to be established.

Table AF4.2: Roles and Responsibilities of WREA, PWREOs and Line Ministries on the IEE review process and ECC issuance

Agency/Party	Key Actions on the Process and Procedures	The EIA/SIA Study	Public Involvement (PI)	Public Information Disclosure (PID)	ECC Obligations	Implementation
(1) Project owners (Private and Public)	- Express their interest in developing projects including submission of the project concept, scope, locations, key activities, and potential impacts and mitigation measures	-Discuss scope of the TOR with concerned agencies  -Secure approval of the TOR by the responsible agencies  -Conduct the IEE/ISE study per the agreed TOR;  -Submit the IEE/ISE report to the responsible agencies	- Conduct public involvement per the PI guidelines and include the results in the IEE/ISE report	- Provide PID as required in the decree and guideline	-Observe and commit to the require obligations as described in the EIA decree and CAR decree;  -Secure ECC approval before starting the construction activities  -Prepare detailed action plan and fund flow	- Set up an EMU and SMU and various committees for the project including grievance committees;  - Effectively implement the approved EMMP and SMMP.  - Ensure full compliance with the ECC approval and provide full cooperation with agencies during monitoring of compliance
	- Review the request	- Participate in the discussion	- Participate in the	- Participate in the	-Be informed before signing an	- Participate in the process as much as

Agency/Party	Key Actions on the Process and Procedures	The EIA/SIA Study	Public Involvement (PI)	Public Information Disclosure (PID)	ECC Obligations	Implementation
(2) MPI	made by the private sector in close cooperation with WREA and line agencies; - If acceptable, inform the private sector and sign an MOU for investment	and acknowledge the agreement	process as much as possible	process as much as possible	approval for the project	possible
(3) Line Ministries/ DPRA  And/or their Provincial Divisions	- During the conceptual stage of the project, provide opinion regarding environment and social impacts and provide clarification of the IEE/ISE process and procedures including technical guidelines as appropriate - During review of the EIA/SIA report, ensure/forgo close coordination with line agencies, local authorities, and other key stakeholders in the IEE/ISE review process	- In coordination with WREA and local authorities review and approve the TOR, including conduct field visit to the proposed location as needed.	- Ensure that the project owner carry out PI as required and participate in the process as much as possible	- Ensure that the project owner are compliance with the PID and participate in the process as much as possible	- If the IEE is acceptable, request WREA (central and/or provincial level) to issue an ECC; - For private sector project, include the ECC condition in the CA;	- Supervise and monitor the compliance of the CA.  Ensure that issuance of the Operating Permit is in line with the GOL regulations and the Operating Permit decree to be established.
		- In case of emergency	- Not apply	- Not apply	- Advise on mitigation measures and conduct post review and mitigation measures if the activities are not properly made, consultation with WREA is encouraged.	- Field visit as needed
- WREA (central and/or provincial)	- Provide inputs on technical as well as provides opinions on	- Participate in the discussion and/or field visit as	- Participate in the discussion as much as possible	- Create a website and provide information	- Issue ECC with clear conditions and/or plan to ensure	- Supervise and monitor the compliance with the GOL regulations and the CA, including

Agency/Party	Key Actions on the Process and Procedures	The EIA/SIA Study	Public Involvement (PI)	Public Information Disclosure (PID)	ECC Obligations	Implementation
l)	safeguard and clarify sector regulations and procedures.	needed and provide inputs and/or comments on the TOR, and acknowledge the agreement	possible	on to the public and/or facilitate information access as much as possible	<p>effective implementation of the approved EMMP and/or SMMP, including identification of responsible agencies, funding sources, and fund flow arrangement.</p> <p>– Include ECC conditions in the CA as agreed with WREA;</p>	participate in the performance review to be conducted by WREA;

Table AF4.3 Roles and Responsibilities of WREA, PWREOs and Line Ministries on Enforcement of Environmental Requirements of EIA Type Projects

	Coordination and Procedures	Monitoring Aspects	Monitoring Frequency	Monitoring Methodology	Non-Compliance Responses	Reporting
National Environment Committee	-	- In case of environmental disaster or very significant environmental problem/non-compliance; - Monitoring of complicated projects to follow-up on implementation of GOL policies	- Immediately in case of emergency/disaster/significant problem or non-compliance - At key milestones during project implementation. Normally once during construction and right after start of operations	- Call for meetings and request reports from concerned parties - Field visit - Check of Project Progress Reports/Completion Report from the DOE/WREA - Field visits	- Give notice to inform GOL to suspend/terminate project - Instruct concerned ministry to take action for disaster management	- Report to PM on a case by case basis
National Steering Committee	- Semi-annual coordination meetings - Appoint Team of Experts to carry out monitoring - Appoint a secretariat	- Complicated projects - Progress of implementation of the project (environmental and social issues) and identify critical issues	- Annual field inspections - In case of significant environmental or social problems	- Reviewing reports compiled by the Secretariat based on reports from ESIA Dept/WREA, RMU, DPRA and developer - Field inspection assisted by Team of Experts	- Give notice to developer to mitigate environmental/social problems - Warn and sanction non-compliances	- Report to GOL annually or more often on a case by case basis
WREA	- Develop policies and strategies for enforcement - Develop National Compliance Assurance Master Plan - Coordination meetings - Develop standard tools and procedures - Conduct	- Implementation of EMMP - Compliance with environmental standards - Compliance with environmental obligations in Concession Agreements - Compliance with ECC conditions - Unfore	- Semi-annually	- Review self-monitoring reports from developer - Review monthly reports from EMU - Meeting with developer - Field inspections	- Determine non-compliance and notify the developer on violations and what measures developer need to take in order to bring the project back into compliance - Follow up non-	- Prepare quarterly and annual summary reports to GOL and WREA Leadership and cc to concerned Line Ministries; - Immediately report any observed non-

	Coordination and Procedures	Monitoring Aspects	Monitoring Frequency	Monitoring Methodology	Non-Compliance Responses	Reporting
	<ul style="list-style-type: none"> <li>– Increase capacity building to EMU, Line Ministries, PWREOs</li> </ul>	<ul style="list-style-type: none"> <li>– Monitor seen impacts upon Act upon comments from other ministries (DPRA),</li> <li>– In case of emergency</li> <li>– Spot check the functioning of the monitoring system and performance of EMU</li> </ul>	<ul style="list-style-type: none"> <li>– Case by case</li> </ul>	<ul style="list-style-type: none"> <li>– Request certified sampling or field measurements</li> <li>– Request certified laboratory analyses;</li> <li>– Field inspection</li> <li>– Review emergency reports for developer, EMU and others</li> <li>– Review and audit documents, management procedures, performance indicators</li> <li>– Review meetings with EMU and PWREO</li> </ul>	<ul style="list-style-type: none"> <li>– Provide compliance notifications and determine further sanction in accordance with article 39 and 40 of the EIA Decree</li> <li>– Provide public access to monitoring and inspection reports of ESIA Dept, Line Ministries and PWREOs;</li> <li>– Provide public access to decisions made by WREA/ESIA Dept in relation to monitoring and inspection;</li> <li>– Manage consolidated database of compliance monitoring;</li> </ul>	<ul style="list-style-type: none"> <li>– Provide compliance or emergency situation to WREA and Provincial Governor;</li> <li>– Provide public access to monitoring and inspection reports of ESIA Dept, Line Ministries and PWREOs;</li> <li>– Provide public access to decisions made by WREA/ESIA Dept in relation to monitoring and inspection;</li> <li>– Manage consolidated database of compliance monitoring;</li> </ul>
<b>PWREO Complicated Projects</b>	<ul style="list-style-type: none"> <li>– Develop Provincial Compliance Assurance Plan in accordance with the National Compliance Assurance Plan</li> </ul>	<ul style="list-style-type: none"> <li>– Same aspects as under EMU:</li> <li>– Join the EMU's monitoring by seconding PWREO staff to the EMU;</li> </ul>	<ul style="list-style-type: none"> <li>– Together with EMU</li> </ul>	<ul style="list-style-type: none"> <li>– Familiarize with relevant EMMPs and ESO in CAs</li> </ul>	<ul style="list-style-type: none"> <li>– Report to the Provincial Governor and WREA in case of possible non-compliance as notified by EMU or found by PWREO</li> </ul>	<ul style="list-style-type: none"> <li>– Report findings to Provincial Governor and WREA</li> </ul>

	<b>Coordination and Procedures</b>	<b>Monitoring Aspects</b>	<b>Monitoring Frequency</b>	<b>Monitoring Methodology</b>	<b>Non-Compliance Responses</b>	<b>Reporting</b>
	<ul style="list-style-type: none"> <li>- Coordinating with other provincial level GOL organizations</li> <li>- Coordinating through WREA with national level GOL organizations</li> </ul>	<ul style="list-style-type: none"> <li>- Environmental incident/complaints</li> </ul>	<ul style="list-style-type: none"> <li>- In case of environmental incident, conduct inspection in consultation with WREA;</li> <li>- Upon request from WREA</li> <li>- Quarterly monitoring if found necessary</li> </ul>	<ul style="list-style-type: none"> <li>- Field inspections;</li> <li>- Review EMU Monitoring Reports;</li> </ul>	<ul style="list-style-type: none"> <li>- Report to the Provincial Governor and WREA in case of possible non-compliance</li> </ul>	
<b>PWREO non complicated EIA type projects</b>	<ul style="list-style-type: none"> <li>- Same as above for complicated projects</li> <li>- Build capacity in DWREUs</li> </ul>	<ul style="list-style-type: none"> <li>- In case of environmental incident conduct inspection in consultation with WREA</li> <li>- Spot check compliance with EMMP/unforeseen impacts</li> </ul>	<ul style="list-style-type: none"> <li>- Immediately in case of environmental incident;</li> <li>- Regular inspections as specified in Provincial Compliance Assurance Plan</li> </ul>	<ul style="list-style-type: none"> <li>- Familiarize with relevant EMMPs and ESO in CAs</li> <li>- Review self-monitoring reports from developer</li> <li>- Review EMU monitoring reports;</li> <li>- Field inspection</li> <li>- Request certified sampling or field measurements</li> <li>- Request certified laboratory to carry out or laboratory analysis;</li> </ul>	<ul style="list-style-type: none"> <li>- Report to the Provincial Governor and WREA in case of possible non-compliance</li> </ul>	<ul style="list-style-type: none"> <li>- Report findings to Provincial Governor and WREA</li> </ul>

	Coordination and Procedures	Monitoring Aspects	Monitoring Frequency	Monitoring Methodology	Non-Compliance Responses	Reporting
<b>EMU</b>	<ul style="list-style-type: none"> <li>- Participate in coordination meetings</li> <li>- Input to development of tools and procedures</li> <li>- Develop EMU annual monitoring plan</li> </ul>	<ul style="list-style-type: none"> <li>- Check that environmental control works have been established</li> <li>- Spot check emissions and discharges to verify that the project is within standards;</li> <li>- Check self-monitoring reports from developer</li> <li>- Check that previous non-compliance have been cured and on time;</li> <li>- Spot check for unexpected environmental impacts;</li> <li>- Emergency</li> <li>- Inspection of cause of problem and response by developer;</li> </ul>	<ul style="list-style-type: none"> <li>- Day-to-day in accordance with the EMU monitoring plan</li> </ul>	<ul style="list-style-type: none"> <li>- Review self-monitoring reports from developer</li> <li>- Regular meeting with EMO of the developer</li> <li>- Independent field inspections</li> <li>- Joint monitoring with EMO</li> <li>- Request certified sampling or field measurements</li> <li>- Request certified laboratory analysis;</li> </ul>	<ul style="list-style-type: none"> <li>- Notify WREA/ESIA Dept and PWREO in case of possible non-compliance;</li> <li>- Upon request from WREA/ESIA, assist ESIA Dept with assessment of possible non-compliances with environmental requirements</li> </ul>	<ul style="list-style-type: none"> <li>- Prepare monthly, quarterly and annual summary reports to WREA/ESIA Dept and PWREO;</li> <li>- Immediately report any observed non-compliance or emergency situation to WREA and PWREO;</li> <li>- Manage database of compliance monitoring;</li> </ul>
<b>Line Ministries/ DPRA And/or their Provincial Divisions</b>	<ul style="list-style-type: none"> <li>- Cooperate with WREA on development and revision of overall policies and strategies</li> <li>- Develop Compliance Promotion strategy and plan for their own sector</li> </ul>	<ul style="list-style-type: none"> <li>- Give comments through WREA to self-monitoring reports submitted by project developers;</li> <li>- Join compliance monitoring led by WREA/ESIA Dept;</li> <li>- Implement compliance promotion activities</li> </ul>	<ul style="list-style-type: none"> <li>- Commenting case by case when DPRA finds it necessary</li> <li>- Joint inspection upon request to/from WREA/ESIA Dept</li> <li>- Compliance promotion in accordance with DPRA's own plan</li> </ul>	<ul style="list-style-type: none"> <li>- Comments to Reports: desk study</li> <li>- Inspections: In field</li> </ul>	<ul style="list-style-type: none"> <li>- Provide cooperation to WREA in case WREA is contemplating temporary or permanent suspension of a project partially or wholly due to non-compliance with environmental requirements;</li> <li>- Upon request from WREA/ESIA Dept, assist ESIA Dept with</li> </ul>	<ul style="list-style-type: none"> <li>- Prepare summary report to the National Steering Committee</li> <li>- Inform WREA about results of review of self-monitoring reports from project developers and respond to summary reports prepared by WREA;</li> </ul>

	Coordination and Procedures	Monitoring Aspects	Monitoring Frequency	Monitoring Methodology	Non-Compliance Responses	Reporting
					assessment of possible non-compliances with environmental requirements;	
<b>Project Owners Private and Public</b>	<ul style="list-style-type: none"> <li>- Set-up and implement EMS</li> <li>- Participate in coordination meetings with WREA/DPRA/PWREO/EMU</li> <li>- Set-up Environmental Management Office</li> <li>- Developing and implementing the Monitoring Program;</li> <li>- Preparing work and cost schedules for the Monitoring Program;</li> </ul>	<p>Self-monitoring of:</p> <ul style="list-style-type: none"> <li>- Implementation of EMMP</li> <li>- Compliance with environmental standards</li> <li>- Compliance with environmental obligations in Concession Agreements</li> <li>- Compliance with ECC conditions</li> <li>- Unforeseen impacts</li> </ul>	- Day-to-day	<ul style="list-style-type: none"> <li>- Regularly collect samples and submit to certified laboratory for testing;</li> <li>- Carry out regular field measurements in accordance with Standards</li> <li>- Carrying out any appropriate testing to ensure that the Environmental Obligations are being and have been effectively addressed</li> <li>- Undertake internal and external audits as necessary to comply with the Concession Agreement, and the procedures of Company</li> </ul>	<ul style="list-style-type: none"> <li>- Immediately stop non-compliances;</li> <li>- Immediately report to WREA/EMU/PWREO in case of non-compliance</li> <li>- Immediately commence clean-up of any pollution;</li> <li>- Compensate for damages;</li> <li>- Respond to non-compliance observation reports from WREA</li> </ul>	<ul style="list-style-type: none"> <li>- Provide WREA with information and data</li> <li>- Arranging for adequate reporting to WREA on a regular basis of the results of the Monitoring Program</li> </ul>

Table AF4.4 Roles and Responsibilities of WREA, PWREOs and Line Ministries on Enforcement of Environmental Requirements of IEE Type Projects

	Coordination and Procedures	Monitoring Aspects	Monitoring Frequency	Monitoring Methodology	Non-Compliance Responses	Reporting
<b>National Environment Committee</b>	- Regular meeting semi-annually	- In case of environmental disaster	- Case by case	- Call for meetings and request reports from concerned parties - Field visit	- Give notice to inform GOL to suspend/terminate project - Instruct concerned ministry to take action for disaster management	- Report to PM on case by case
		- In case of very significant environmental problem/non-compliance	- Case by case	- Call for meetings and request reports from concerned parties - Field visit		
<b>WREA</b>	- Develop policies and strategies for enforcement - Coordinate meetings with Line Ministries and other stakeholders - Develop standard tools and procedures - Conduct capacity building to Line Ministries and PWREOs	- Implementation of the measures on prevention and mitigation of the impacts on environment - Compliance with environmental standards - Compliance with environmental obligations in Concession Agreements - Compliance with ECC conditions - Unforeseen impacts - Act upon comments from other ministries (DPRA)	- in cases where there are indications that a project is violating or is likely to violate ECC conditions or other environmental requirements;	- Review self-monitoring reports from developers - Review monthly reports from PWREOs - Meeting with developers - Field inspections - Request certified sampling or conduct field measurements - Request certified laboratory analysis	- Based on compliance monitoring and inspection carried out by Line Ministries, PWREOs or WREA itself, determine non-compliance and notify the developer on violations and what measures developer need to take in order to bring the project back into compliance - Follow up non-compliance notifications and determine further sanction in accordance	- Semi and annual reports to GOL and WREA Leadership and cc to concerned Line Ministries; - Immediately inform any non-compliance or emergency situation to Provincial Governor and concerned Line Ministry - Provide public access to monitoring and inspection reports of WREA, Line Ministries and PWREOs; - Provide public
		- In case of emergency	- Case by case	- Field inspection - Review		

	Coordination and Procedures	Monitoring Aspects	Monitoring Frequency	Monitoring Methodology	Non-Compliance Responses	Reporting
				emergency reports from developers, Line Ministries, PWREOs	with article 39 and 40 of the EIA Decree	access to decisions made by WREA in relation to inspections;
		- Spot check the functioning of the monitoring system and performance of PWREOs	- Random or based on priority criteria	- Review and audit documents, management procedures, performance indicators - Review meetings with PWREOs		- Manage database of compliance monitoring;

	Coordination and Procedures	Monitoring Aspects	Monitoring Frequency	Monitoring Methodology	Non-Compliance Responses	Reporting
<b>PWREO</b>	<ul style="list-style-type: none"> <li>- Draft Provincial Compliance Assurance Master Plan for approval by the Provincial Governor</li> <li>- Organize joint meetings among local GOL organizations involved in inspection and enforcement to evaluate progress of compliance assurance;</li> <li>- Build capacity in DWREUs</li> </ul>	<ul style="list-style-type: none"> <li>- Carry out spot check of self-monitoring reports submitted by project developers</li> <li>- Upon delegation of authority from GOL or as requested by WREA conduct compliance monitoring implementation of the measures on prevention and mitigation of the impacts on environment</li> <li>- In case of environmental incident conduct inspection in consultation with WREA</li> </ul>	<ul style="list-style-type: none"> <li>- Case by case where there are indications that a project is violating or is likely to violate ECC conditions or other environmental requirements</li> </ul>	<ul style="list-style-type: none"> <li>- Review self-monitoring reports from developer</li> <li>- Field inspection</li> <li>- Request certified sampling or field measurements</li> <li>- Request certified laboratory analysis</li> </ul>	<ul style="list-style-type: none"> <li>- Upon request from WREA, assist with assessment of possible non-compliances with environmental requirements;</li> <li>- Report to the Provincial Governor and WREA in case of possible non-compliance</li> </ul>	<ul style="list-style-type: none"> <li>- Write up consolidated monthly reports on compliance monitoring carried out by local GOL organizations, Submit to WREA through Provincial Governor;</li> <li>- Immediately report any non-compliance or emergency situation to WREA, Provincial Governor and other concerned GOL organization;</li> <li>- Manage compliance monitoring database of compliance inspection and monitoring compliance monitoring carried out by local GOL organizations;</li> </ul>
<b>Line Ministries/ DPRA And/or their Provincial Divisions</b>	<ul style="list-style-type: none"> <li>- Cooperate with WREA on development and revision of overall policies and strategies</li> <li>- Prepare national and provincial</li> </ul>	<ul style="list-style-type: none"> <li>- Review self-monitoring reports submitted by project developers;</li> <li>- Regular compliance monitoring/inspection of implementation of the measures on prevention and mitigation</li> </ul>	<ul style="list-style-type: none"> <li>- Regular inspections in accordance with Compliance Assurance Plan</li> <li>- Joint inspection upon request to/from WREA</li> <li>- Comp</li> </ul>	<ul style="list-style-type: none"> <li>- Comments to Reports: desk study</li> <li>- Inspections: In field</li> <li>- Request certified sampling or field measurements</li> <li>- Request</li> </ul>	<ul style="list-style-type: none"> <li>- Provide cooperation to WREA in case WREA is contemplating temporary or permanent suspension of a project partially or wholly due to non-compliance with environmental</li> </ul>	<ul style="list-style-type: none"> <li>- Prepare monthly reports with overview of compliance monitoring and promotion activities and self-monitoring reported by project developers. Submit to WREA and</li> </ul>

	<b>Coordination and Procedures</b>	<b>Monitoring Aspects</b>	<b>Monitoring Frequency</b>	<b>Monitoring Methodology</b>	<b>Non-Compliance Responses</b>	<b>Reporting</b>
	<p>Compliance Assurance Plan for its sector</p> <ul style="list-style-type: none"> <li>- Cooperate with PWREOs on drafting Provincial Compliance Assurance Master Plan for approval by the Provincial Governor</li> </ul>	<p>of the impacts on environment</p> <ul style="list-style-type: none"> <li>- Join compliance monitoring led by WREA;</li> <li>- Implement compliance promotion activities</li> </ul>	<p>compliance promotion in accordance with DPRA's own plan</p>	<p>certified laboratory analysis</p>	<p>requirements;</p> <ul style="list-style-type: none"> <li>- Upon request from WREA/ESIA Dept, assist ESIA Dept with assessment of possible non-compliances with environmental requirements;</li> </ul>	<p>concerned Provincial Administrations;</p>
<b>Project Owners Private and Public</b>	<ul style="list-style-type: none"> <li>- Participate in coordination meetings with WREA/DPRA/PWREO</li> <li>- Set up Environmental Management Office and Social Management unit (SMO)</li> <li>- Developing and implementing the Monitoring Program;</li> <li>- Preparing work and cost schedules for the Monitoring Program;</li> </ul>	<p>Self-monitoring of:</p> <ul style="list-style-type: none"> <li>- Implementation of the measures on prevention and mitigation of the impacts on environment</li> <li>- Compliance with environmental standards</li> <li>- Compliance with environmental obligations in Concession Agreements</li> <li>- Compliance with ECC conditions</li> <li>- Unforeseen impacts</li> </ul>	<p>Day-to-day</p>	<ul style="list-style-type: none"> <li>- Regularly collect samples and submit to certified laboratory for testing;</li> <li>- Carry out regular field measurements in accordance with Standards</li> <li>- Carry out testing to ensure that the Environmental Obligations are effectively addressed</li> <li>- Undertake internal and external audits as necessary to comply with the Concession Agreement, and the procedure</li> </ul>	<ul style="list-style-type: none"> <li>- Immediately stop non-compliances;</li> <li>- Immediately report to Line Ministry/WREA/PWREO in case of non-compliance</li> <li>- Immediately commence clean-up of any pollution;</li> <li>- Compensate for damages;</li> <li>- Respond to non-compliance observation reports from WREA</li> </ul>	<ul style="list-style-type: none"> <li>- Provide Line Ministry with information and data</li> <li>- Arranging for adequate reporting to WREA on a regular basis of the results of the Monitoring Program</li> </ul>

	Coordination and Procedures	Monitoring Aspects	Monitoring Frequency	Monitoring Methodology	Non-Compliance Responses	Reporting
				s of Company		

# ANNEX G

## List of Key Persons Met

## Annex G. List of Key Persons Met

This annex present a list of person met during the assessment of PICE A1, A2, and A5 and CBI B1, and B2 including an interview form used for institution and capacity assessment (Section G1) and those met for PICE A3 and A4 (Section G2).

### G1: List of Persons met for PICE A1, A2, and A5 and CBI B1 and B2

#### *(a) Persons interviewed*

No	Name	Position	Organization
1	Saychai Syladeth	Deputy Head of Post Graduate	National University of Laos
2	Bounmak Inthaphone	Dean, Academic Affairs	National University of Laos
3	Koualor Sotouky	Radio DJ, Manager	National Radio
4	Chymai Yangchuethao	Radio producer, Assistant	National Radio
5	Yiakurya Nochochongtoua	DG, Department of Control	Lao Front for National Construction
6	Bounphone Phouththa-amat	Head, NPA Division	DFRM, MoNRE
7	Boun Nhong Sisouvanakhone	Vice Prov. Governor	Provincial Governor's office, BKX
8	Leuanvilay Chanthalaphonh	Director	PoNRE, Bolikhamxay
9	Soukan Phiangsanan	Vice District Governor	Pak Kading, Bolikhamxay
10	Khamdy	Vice District Governor	Viengthong, Bolikhamxay
11	Thongma Souknavong	Director, Secretariat	NT-NKD BC, Secretariat Office
12	Saylee Xayasane	Contract staff	NT-NKD BC, Secretariat Office
13	Pounyasane	Government staff	NT-NKD BC, Secretariat Office
14	Souksamone	Contract staff	NT-NKD BC, Secretariat Office
15	Keovongdeuane Phanthanousy	Head, Forest Res Mgt Division	PoNRE, Bolikhamxay
16	Manysengphet Phakhounthong	CCN, Deputy, Forest Res Mgt	PoNRE, Bolikhamxay
17	Souksanong Latsachanh	Staff	PoNRE, Bolikhamxay
18	Intha Sisoudtho	Staff	PoNRE, Bolikhamxay
19	Somsay Chaleunsakdy	Staff	PoNRE, Bolikhamxay
20	Bengpheng Mahavong	SMU, Head, Environment	PoNRE, Bolikhamxay
21	Phaivanh Sayphoumy	SMU, Environment Division	PoNRE, Bolikhamxay
22	Chanhom Xayasane	Lecturer, Houya Nguoa	Meungmai Forestry School
23	Sonexay Bangphachanh	Lecturer, Houya Nguoa	Meungmai Forestry School
24	Somsavath	Head,	Meungmai Forestry School
25	Phouvong Phongmalayseng	Head,	DAFO Bolikhan
26	Kaenchanh Keovanxay	Staff	Tourism, Bolikhan
27	Siphone Xayavong	District Cabinet	Pak Kading, Bolikhamxay
28	Bounkham Phommachanh	DoNRE	Pak Kading, Bolikhamxay
29	Keo Sasengvong	DAFO	Pak Kading
30	Khoupchai		
31	Maita	Village chief	Na LuangPhomhom Tourism
32	Bouavone	Villager	Na Luang for Phomhom Tourism
33	Xiengkham	Village chief	Non Somboun for Houya Nougat
34	Phoyen	Village militia	Non Somboun for Houya Nguoa

35	Sisouphan	Villager	Phiangdee, Bolikhan
36	VathLuang Souvannavong	Villager	Phiangdee, Bolikhan
37	Khamfong	Villager	Phiangdee, Bolikhan
38	Somsanouk Duangphan	Villager	Phiangdee, Bolikhan
39	Somphone	Medical Doctor	District Health, Viengthong
40	Singkham	Villager	Ban Phaphae, Viengthong
41	Khamphay Phengphaengmuang	Director,	PoNRE, Khammouane
42	Sinnasone Sengchanthavong	Deputy Head	PoNRE, Khammouane
43	Sisomphone Soudthichak	Head, Forest Resource	PoNRE, Khammouane
44	Phetsamone Oudone	Khounxe Nongma	PoNRE, Khammouane
45	Homkham Saykosiphinit	Staff	PoNRE, Khammouane
46	Saleumsak Keochanthala	District Governor	Nongbok, Khammouane
47	Khamphet Homsombath	Staff	DoNRE, Nongbok, Khammouane
48	Souphaphone	Staff	DAFO, Nongbok, Khammouane
49	Souvannou Vilayvanh	Staff	Forestry, DAFO, Nongbok, KHM
50	Chandeng Phetmany	Staff	Tourism, Nongbok, Khammouane
51	Khamseng Vilaysak	Staff	Nongbok, Khammouane
52	Nuanta Keomavong	Vice-District Governor	Xaybouathong, Khammouane
53	Vongsa Phommavong	Staff, DAFO	Xaybouathong, Khammouane
54	Khamkeo Yommainthy	Staff, DoNRE	Xaybouathong, Khammouane
55	Phonsavath Vongvichit	Staff	Xebangfai DAFO
56	Kaysone Bounlathsouvanavong	Vice-Provincial Governor	Savannakhet
57	NoukhanInthapanya	Deputy Director	PoNRE, Savannakhet
58	Vayavet Vixaysomboun	PESAP, Environment	PoNRE, Savannakhet
59	Bounyot Namsena	Head, Forest Resource	PoNRE, Savannakhet
60	Somkhoun Chanthakhen	Staff	PoNRE, Savannakhet
61	Phoulatsamy	Staff	PoNRE, Savannakhet
62	Kham-arn	Staff	PoNRE, Savannakhet
63	Chimmy Alomdy	Staff	PoNRE, Savannakhet
64	That Sihavong	Staff, Dong Natad	Tourism, Savannakhet
65	Thanongsine	Retired staff	Provincial Cabenit
66	Chantha	Villager	Ban Dong
67	Khouanta	villager	Ban Dong
68	Phetsamone	Staff	Songkhone DAFO
69	Khik Kham Saenphimasak	Staff	Songkhone DAFO
70	Phonethip Xoumphonphakdy	Staff	Songkhone DAFO
71	Vixay Lengsoumixay	Staff	Songkhone DAFO
72	Daoviphone Sanavouth	Staff	Songkhone DAFO
73	Detsackda Xomphosy	Head, Environment Division	PoNRE, Khammouane

**(b) Interview form for institution and capacity**

Informant.....

Province..... Division.....

Staffing	Ranking	1	2	3	4	5	Description
	General Knowledge						
Specific knowledge							
Management							
Willingness							
Attitude							
Commitment							
Institution	Structure						
	Mandate						
	Cooperation						
	Guideline						
	Database						
	Legal support						
	Finance						
	Aid fund						
Technical Advice							
Remarks: 5 = Excellent/sufficient, 4 = Good, 3 = Fair, 2 = Poor, 1 = very poor. Most of correspondents (15 per province) are for quantitative data but as many as possible for qualitative data.							

**G2 List of Persons Met for PICE A3 and A4**

Names	Agencies	Tel, emails
Department of Energy Policy and Planning (DEPP) of Ministry of Energy and Mines		
Dr. Phouanphanh Souvannabouth,	Technical advisor for 2a and 2c HMTA project; DEPP/MEM	
Department of Environmental and Social Impacts Assessment (DESIA)		
Ms. Phakkavanh Phissamay	Head, Management and Planning Division	020-02228763
Mr. Lamphoukeo Kettavong	Deputy Head, Management and Planning Division	
Mr. Sommanus	Management and Planning Division	020-59595918
Ms. Bouakeo	Deputy Head, Legal and Information Division	<a href="mailto:bouakeop@hotmail.com">bouakeop@hotmail.com</a>
Mr. Thongsamlith	Officer, Legal and information division	020-7772-0611; Thongsamlith_one@yahoo.co.tr
Mr. Peter G. Jensen	Team Leader, Environmental Management Support Project (EMSP) supported by Finland	<a href="mailto:pgjcbi@gmail.com">pgjcbi@gmail.com</a>

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