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ນະໂຍບາຍການພັດທະນາໄຟຟ້ານ້ຳຕົກແບບຍືນຍົງຂອງ ສປປ ລາວ

**Policy Guidelines  
for the Implementation of Policy on  
Sustainable Hydropower Development in Lao PDR**



2015

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## Abbreviation

BOO	Build-Own-Operate
BOT	Build-Operate-Transfer
BT	Build and Transfer
CA	Concession Agreement
COD	Commercial Operation Date
DEB	Department of Energy Business
DEM	Department of Energy Management
DEPP	Department of Energy Policy and Planning
DESIA	Department of Environment and Social Impacts Assessment
DFRM	Department of Forest Resources Management
DMH	Department of Meteorology and Hydrology
DOL	Department of Land
DONA	Department of National Assets
DOT	Department of Taxes
DWR	Department of Water Resources
ECI	Electricity Construction and Installation Company
EdL	Electricite du Laos
EdL-Gen	EdL – Generation
EPC	Engineering, Procurement and Construction
EPF	Environment Protection Fund
EIA	Environmental Impacts Assessment
FS	Feasibility Study
GOL	Government of Lao PDR
IEE	Initial Environmental Examination
IPP	Independent Power Producer
IREP	Institute of Renewable Energy Promotion
LEPTS	Lao Electrical Power Technical Standards
MAF	Ministry of Agriculture and Forestry
MEM	Ministry of Energy and Mines
MOF	Ministry of Finance
MPWT	Ministry of Public Works and Transport
MONRE	Ministry of Natural Resources and Environment
MOU	Memorandum of Understanding
MPI	Ministry of Planning and Investment
PDA	Project Development Agreement
PDEM	Provincial Department of Energy and Mines
PONRE	Provincial Department of Natural Resources and Environment
PSHD	Policy on Sustainable Hydropower Development
SESO	Standard Environmental and Social Obligations
TOR	Terms of Reference
WREA	Water Resource and Environment Administration

## 1. Purpose and Application

This document is the Policy Guideline on the Implementation of the Government Decree on Policy on Sustainable Hydropower Development (PSHD) in Lao PDR which was approved by the Prime Minister on 12 January 2015 (*Decree N<sup>o</sup> 02/GOL dated 12/1/2015*). The Guideline aims to provide policy guidance to the agencies responsible for overseeing the implementation of investment projects in the hydropower sector as well as to inform and encourage project developers/investors to be aware of the Government policy toward achieving sustainable development in Lao PDR.

This Guideline applies to all hydropower projects having installation capacity higher than 15 Megawatts including construction and operation of its transmission lines. Implementation of this Guideline is considered an integral part of the hydropower project development process covering planning, construction, operation, and transfer/closure stages.

## 2. Background

Lao PDR is a mountainous country and is abundant in water resources, forest, and biodiversity and has high potential for development of various scales of hydropower projects. Increasing demands of electricity for socioeconomic development in neighboring countries as well as within the country has increased opportunities for hydropower development in Lao PDR.

In 2005, a National Policy on Environment and Social Sustainability of Hydropower Sector in Lao PDR (NPSH) was adopted and applied. During 2006-2014, a number of laws, regulations, and institutional frameworks related to the implementation of the NPSH and the utilization of natural resources in Lao PDR have been changed, the key ones include:

- *Laws and regulations:* The revised Electricity Law (2012); the EIA Decree in 2010 and the Ministerial EIA Instruction issued in December 2013; the Compensation and Resettlement Decree in 2005 which is being revised; the Protection Forest Decree (2010); the Forestry and Forest Resource Development Fund (2006); and the 2012 Revised Environmental Protection Law. The Water Law (1996) is also currently being revised along with the Forestry Law and Land Law.
- *Institutions:* The establishment of the Ministry of Energy and Mines (MEM) in 2006 and its restructuring in 2011-2012; the establishment of the Water Resources and Environment Agency (WREA) in 2007 and its upgrading to the Ministry of Natural Resources and Environment

(MONRE) in 2011-2012; and the re-organization of the Ministry of Agriculture and Forestry (MAF) in 2011-2012.

In this context, the NPSH was updated with active involvement of the responsible agencies through a series of meetings including consultation workshops with other key agencies and stakeholders during 2013-2014. Given that scope of the policy has been expanded to cover the technical and engineering aspects as well as the environment and social impacts, the name of the policy has been changed to the Policy on Sustainable Hydropower Development (PSHD).

### **3. Principle of PSHD**

Sustainable hydropower development is a vision that the Government of Lao PDR (GOL) overall, and the Ministry of Energy and Mines (MEM) in particular, has been trying to achieve.

Four elements of hydropower sustainability consist of “3-E and 1-S”:

- **Engineering** – guarantee safety, ensure the use of modern technology and equipment and prevent or mitigate damage to natural resources and third parties during the survey, design, construction and operation stages;
- **Economic** – reliance upon the maintenance of the renewable resource base, and the use of non-renewable resource rents support the development of other factors of production;
- **Environment** – relies upon the avoidance of irreversible environmental impacts such as the loss of biodiversity, accumulation of persistent pollutants, or disruption of ecological cycles;
- **Social** – based upon the better-off of project affected people from the projects development through the process of public participation.



**Figure 1: Concept of Sustainable Hydropower in Lao PDR**

#### **4. Responsible Agencies**

Key agencies responsible for implementation of the PSHD include MPI, MOF, MEM (DEM, DEPP, DEB), MONRE (DESIA, DFRM, DWR, DMH), and provinces. Other concerned agencies such as EPF, MPWT, MAF (fisheries, irrigation, forest, etc.) and they will be invited to participate in technical discussions.

The organization and management structure for the implementation of PSHD is provided in *Annex 1*.

#### **5. PSHD Policy Guidelines**

##### **5.1 Overall Policy Objective - Sustainability**

*“Overall objectives of the Policy on Sustainable Hydropower Development Hydropower Development shall be implemented based on the principles of economic, social and environmental sustainability”*

### ***a) Rationale/explanation***

Hydropower sector plays an important role to achieve the objectives of the National Strategy on Poverty Eradication and Economic Development and for supporting regional energy demands. To achieve socio-economic sustainability, the GOL will develop hydropower as an export commodity as well as to meet electricity needs for the national socio-economic development and contributing to the national security and improving living conditions of the people. The GOL will promote all individuals, legal entities, and organizations, both domestic and foreign entities, to invest in hydropower development in conjunction with watershed protection and in ensuring that hydropower operation is consistent with the national socioeconomic development plan, safe, effective, economic, and sustainable, and that the potential adverse impacts on affected people, natural resources, and environment are effectively mitigated

The GOL acknowledges the right to use water resources for all major purposes including human consumption, hydropower, irrigation, industry, navigation, flood control, fisheries and wildlife, and ecological maintenance and will encourage active engagement of responsible agencies in all levels and other key entities to discuss, cooperate, and reach agreements on water allocation, water users, and/or trade-offs - related issues in the context of integrated river basin management and in accordance with the GOL policies, laws, and regulations. The integrated river basin management approach will be applied for multiple hydropower projects planned to dam a single river and this approach will also include addressing cumulative impacts, how to assess and management then along with mitigation plans and be supported by an appropriate institutional and financing mechanism.

To achieve environmental and social sustainability, the Government will ensure that negative environmental and social impacts associated with hydropower projects are managed; that avoidance, minimization, mitigation, compensation and/or offset enhancement measures are implemented; and that environmental and social commitments are fulfilled. The GOL will require the project developers to assess the potential environment and social impacts, including cumulative impacts, at an early stage of project preparation and to effectively mitigate and/or restore any adverse impacts on the affected population, land and water resources, ecology, biodiversity, and natural habitats for aquatic and wildlife including undertaking adequate consultation and information disclosure. To maintain sustainability of water resources, integrity of water storage, and safety of downstream communities protection, conservation, and/or restoration of upstream watershed and capacity on emergency preparedness of communities located in the downstream area will be priority for the sector and actions from project developers will be required. All



these costs including the payment for all damages, relocation, and/or compensations to the affected population will be part of the project cost.

The GOL will ensure integrity, accountability, and transparency of hydropower project through compliance monitoring, reporting, and information disclosure. GOL capacity to conduct compliance monitoring will be strengthened during the next five years while appropriate criteria for determining compliance levels will be established by responsible agencies. Existing hydropower projects will also be reviewed to ensure that any unsustainable aspects could be adequately addressed. As a member of international community, the GOL will promote transparency and good governance in decision making process related to hydropower development in Lao PDR. The integrated water resources management (IWRM) principle will be applied.

To ensure socio-economic achievement of hydropower development as well as facilitate effective implementation of the policy, the GOL will develop and implement effective and transparent financial mechanisms for: (i) the revenue sharing among agencies and/or provinces to carry out the review and monitoring processes necessary for forging effective implementation of the policy; and (ii) the benefit sharing where project developers could make contribution to local development and environmental conservation as well as development of human resources for hydropower sector.

#### ***b) Role and responsibility***

The responsible agencies of the MEM will work closely with other agencies, organizations, provinces, and local authorities to ensure that water resources are used for hydropower development in an economic, effective, and sustainable manner and that modern technology in the electricity business will be applied and adequate mitigation measures for social and environmental impacts will be carried out.

## **5.2 Planning and Coordination**

*“In order to achieve economic, social and environmental sustainability in hydropower development, detailed data collection, planning and implementation is required. Hydropower Development Plans shall be undertaken in collaboration with relevant stakeholders in the management, utilization of water and water resources for the optimal benefits”*

#### ***a) Rationale/explanation***

Development of hydropower projects will involve the utilization of water, land, and forest that may create both positive and negative impacts on local peoples and local environment therefore effective coordination among key agencies during planning, implementation, and monitoring, and evaluation stages

will be necessary to ensure that the development activities are effective and timely and the GOL policy and regulations are complied with.

**b) Roles and responsibilities**

The Department of Energy Policy and Planning (DEPP) of the MEM will be responsible for forging effective implementation of this policy in close consultation with concerned agencies and provinces, including facilitating dialogue and/or discussion on hydropower sector issues and facilitate agreements. The responsible agencies will develop detailed procedures, technical guidelines, supporting decrees/regulations, and/or institutional capacity building to ensure effective implementation of the updated policy especially on monitoring, reporting, financing, and other oversight functions.

During planning, the project developers will study all the GOL regulations and requirements related to hydropower development in Lao PDR and prepare a plan for data collection, feasibility study, environmental impacts assessment (EIA), basic design, detailed design, construction, and operation of the project. Initial data collection will include those related to socioeconomic, environment, geology, hydrology, and potential impacts and the information will be used as the basis for discussion with the concerned agencies and local authorities as well as for technical assessment, design, construction, installation, and operation of the project which has to be prepared in accordance with the specific technical guidelines and/or standards established by the agencies of the MEM according to the Electricity Law (2012).

The project developers will also be responsible for ensuring full compliance with GOL laws and regulations and payments for royalty, duty and tax, and other obligations in accordance with the laws and regulations and the concession agreement including paying for compensation for land, crops, resettlement, and livelihood restoration of affected people and for implementation of mitigation measures for the potential negative impacts on environment and society including cost for monitoring by agencies and provinces.

**5.3 Modalities for Hydropower Project Implementation**

*“Any hydropower development of private or public sector shall be implemented on the basis of either build-operate-transfer (BOT), build and transfer (BT), build-own-operate (BOO) and those that are developed by stated-owned enterprises”*

**a) Rationale/explanation**

Planning for the project developers for BOT, BT, and BOO will follow the following key steps: signing of a Memorandum of Understanding (MOU), signing of a Project Development Agreement (PDA), and signing of a Concession Agreement (CA), except BT basis. Details on the process will follow regulations

and/or technical guidelines to be established by the Ministry of Energy and Mines according to the Electricity Law and other agencies responsible for enforcing the implementation of other laws and regulations.

**b) Roles and responsibilities**

The Department of Energy Business (DEB) of the MEM will be the focal agency responsible for managing the independent power producer (IPP) process in close consultation with other concerned agencies and provinces.

Responsibility of the project developers of BOT, BT, and BOO related to this policy are as follows: (i) strictly comply with laws and regulations related to labor as well as other laws and regulations of Lao PDR; (ii) execute the business correctly according to the CA and approval of socioeconomic, technical, finance and measures to mitigate impacts on environment, social, and natural resources; (iii) completely and timely pay royalty, duty and tax obligations and other obligations in accordance with the laws and regulations; (iv) pay compensation for damages to life, health, property of people, and environment, and for relocation of peoples; (v) record and timely report results of CA compliance including project expenses; (vi) timely maintain and repair machines and all equipment to be in good conditions according to technical principles; (vii) coordinate, cooperate, and make contribution to the socioeconomic development of local area where the project is located; and (viii) perform other obligations as provided by the laws and regulations. The main activities such as dam construction, power plant or water diverse tunnels, including reservoir clearance (tree logging) can be carried out only when the CA is effective.

#### 5.4 Feasibility Study

*“All hydropower development shall conduct a comprehensive feasibility study before the project can be approved to ensure it is economically, technically and financially feasible and that potential negative impacts on the environment and social can be prevented and or mitigated”*

**a) Rationale/explanation**

Feasibility study aims to determine if the project is technically, economically, and financially feasible after mitigating potential negative impacts. The Electricity Law requires that technical, socioeconomic, and financial feasibility study will include feasibility from socioeconomic, technical and financial aspects; maximum electricity production; estimated project value; estimated life and duration of the dam and other facilities; estimated electricity prices and markets; and plans and steps for implementation including construction, installation, and commercial operation date (COD). During planning for the design, construction, installation, and operation of the projects

including transmission lines and other associated facilities, the project developer will (i) guarantee high quality and efficiency of energy production by applying the modern equipment with quality meeting international standards; (ii) guarantee safety; (iii) limit and reduce damage on the natural resources and property of people; and (iv) compensate for all the damages to life, health, and property of the people, natural resources, and environment.

Safeguard analysis will cover at a minimum the following basic requirements: (i) assessment of damages on environment including proposed methodology, mitigation measures to reduce negative impacts on environment, water resources, soil, land use, ecological biodiversity, and natural habitats for aquatic and wildlife; (ii) assessment of damage and resettlement of people that are affected by the project; (iii) measures to mitigate the impacts on water quantity including cumulative impacts on downstream of the dams; and (iv) cost for items (i), (ii), and (iii) will be part of the project cost. In addition, the investor will have to pay for environmental tax as require by law and/or regulations.

#### ***b) Roles and responsibilities***

DEPP will be responsible for the approval of the feasibility study in close consultation and coordination with concerned agencies and provinces including facilitating effective integration of environmental and social impacts assessment process and ensuring that appropriate economic and financial factors are considered during the feasibility study.

The DEPP will also investigate opportunity for maximizing the benefit of water resource utilization and reservoir management (including domestic consumption, flood control, irrigation, fisheries, industry, and other major water users) as well as for sharing benefits of the project with the local communities and provinces that bear social and environmental costs. Efforts will be made to develop and apply appropriate management tools, criteria/regulations, and/or technical guidelines (such as mathematical models, EIA guidelines, etc.) to facilitate constructive discussion and decision making process.

### **5.5 Economic Considerations**

*“Special attention shall be paid to the economic aspect of each project to ensure it is efficient, effective and sustainable. The economic-technical feasibility studies shall be undertaken in parallel with environmental and social impact assessments including identification of appropriate measures to mitigate any negative impacts. It shall be implemented in accordance with the National Socio-Economic Development Plan and National Electricity Development Plan”*

### **a) Rationale/explanation**

In 2012 the hydropower sector has covered 7% of gross domestic products and its export has covered 15% of gross national export while existing hydropower development projects cover about 29.0% of all major development projects. The current energy/power development plan will be updated to determine the targets, directions, mechanisms, and methods in developing the electricity project in line with the current legal and organization arrangement, the regional and domestic electricity demands, the availability of electricity technology and/or practices.

Transmission of electricity to and from Lao PDR will require Government approval. Electricity transit will be transmitted through the National Electricity Transmission Grid (NETG) and pay for the service charge. If the NETG is not available, a transmission line system could be established in accordance with the Lao Electric Power Technical Standard (LEPTS) and other laws and regulations.

The electricity export will ensure sufficiency for domestic use, including industrial expansion and national socio-economic development. Import of electricity can be made only when it is necessary for the country's socioeconomic development and is approved by the GOL. The electricity prices will be stable and suitable for economic conditions of the country and for the target and type of electricity users. The Government will determine the electricity prices for import purchase and export sale as well as for domestic purchase and sale.

### **b) Roles and responsibilities**

DEPP will be responsible for ensuring that appropriate economic factors are considered during the planning and implementation of hydropower project and that the proposed project are effective, efficient, and sustainable and the operation is in line with the national socio-economic policy and the electricity/power development plan.

## **5.6 Technical and Engineering Considerations**

*“Project developers shall use the most advanced equipment that ensures the safety of people’s life and their properties prevents and mitigates any potential risks to the natural resources and the environment in the design, construction and operation stages”*

### **a) Rationale/explanation**

During design, construction, and operation stages of the electricity generation and/or transmission systems including installation, expansion, repair, and maintenance, the project developer must guarantee safety, ensure the use of modern equipment, mitigate all damages to natural resources and properties of the affected people, and follow strictly the LEPTS and its guidelines. For a large

dam higher than 15 meters, special attention will be given to address dam safety aspects during design, construction, and operation stages.

The developer will establish the safety rules for Operation and Maintenance in accordance with LEPTS and submit it to the MEM for consideration.

During data collection, the project developer should consider availability and reliability of hydrological resource, seismic stability, other natural hazards, geotechnical stability, access to the construction materiel, asset safety, etc.

During construction of transmission line, the project developer must guarantee full compliance with LEPTS, pay for all taxes and fees, reduce damage to the environment and people and compensate for all the damages, and allow the GOL to utilize the transmission line as needed.

During construction of main activities such as construction of dams, power plant, or water tunnel including cutting of tree/log from reservoir can be made only when CA is signed and effective.

During operation, the project developer must guarantee safety during operation and maintenance of project areas and facilities such as dam, reservoirs, spillways, power plants, power stations, transmission line, equipment and facilities including electricity users. The project developer will also assist GOL in the development and implementation of the flood management plan for the downstream area.

#### ***b) Roles and responsibilities***

The Department of Energy Management (DEM) of the MEM is responsible for ensuring that hydropower projects are in accordance with the LEPTS during construction and operation stage. DEM will develop and/or update the required regulations, criteria, and/or technical guidelines necessary for ensuring adequate safety of hydropower facilities and operations, including development of dam safety policy for large and medium size dams. DEM, DEPP, and other related agencies of other ministries (MONRE, MPI) and provinces will develop and implement flood management plan for downstream area of all hydropower projects.

The project developers will be responsible for the tasks specified in the previous section during all stages of project preparation and implementation.

### **5.7 Environmental and Social Impact Assessment**

*“All hydropower projects shall undertake a comprehensive Environmental and Social Impact Assessment. Any project with large impacts and which is trans-boundary, a cumulative impact assessment and also a trans-boundary impact assessment shall be undertaken. Environmental and Social Impact Management*

*and Monitoring Plans shall also be developed before the construction and implementation of a project”*

**a) Rationale/explanation**

The Environmental Protection Law (2012) requires preparation and approval of an Initial Environmental Examination (IEE) or an Environment and Social Impact Assessment (ESIA) for an investment project including development of an Environment and Social Management and Monitoring Plan (ESMMP) identifying appropriate methods and measures to prevent, avoid or mitigate the potential negative impacts of project activities. The Ministry of Natural Resource and Environment (MONRE) will issue an Environmental Compliance Certificate (ECC) after approval of the ESIA/IEE report and the proposed ESMMP. Specific regulations on the ESIA/IEE processes have been issued by MONRE and obtaining an ECC is necessary before undertaking construction of project activities. The ESIA and IEE regulations require public participation during the preparation of the ESIA/IEE reports as well as public information disclosure and more details are provided in the policy guideline on public consultation and information disclosure.

For hydropower development project, the ESIA will be prepared as required by the ESIA or IEE regulations. Preparation of additional cumulative impact assessment will be conducted if the project is expected to generate cumulative environmental and social impacts to other investment project located in nearby area. Preparation of additional transboundary impact assessment will also be prepared if the project is expected to cause transboundary impacts to a neighboring country. For the project that involve land acquisition according to the Compensation and Resettlement Decree, the ESIA report may be submitted into an EIA report and a Social Impact Assessment (SIA) report.

The ESIA will also include a risk analysis over the entire life-span of project, an analysis of alternatives for project structure and locations, including the no-project alternative, lessons learnt from previous projects, and cumulative impacts analysis at basin and/or sub-basin levels. If impact on physical cultural resources is significant, the EIA will also include provisions for field based surveys of archaeological, historical and/or sacred sites and include provisions for “chance find” procedures to address measures to be undertaken when unknown cultural materials are encountered during the course of project implementation of operation.

Implementation of the approved plans for mitigation and monitoring of the potential environment and social impacts will need to fully comply with the conditions specified in the Environmental Compliance Certificate (ECC) and the Standard Environmental and Social Obligations (SESO) of the Concession Agreement (CA).

## **b) Roles and responsibilities**

The Department of Environmental and Social Impact Assessment (DESIA) of the Ministry of Natural Resources and Environment (MONRE) is responsible for ensuring that hydropower projects are fully in compliance with the Environmental Protection Law and the ESIA and IEE regulations. The Provincial Department of Natural Resources and Environment (PONREs) and the Vientiane Capital City are responsible for review and approval of the IEE report including an issuance of an ECC.

The planning and implementation of ESIA activities related to cultural heritage are coordinated with the Ministry of Culture and Information.

The project developers will be responsible for all the costs related to the preparation of the reports and the implementation of the approved management and monitoring plans to mitigate the potential negative environmental and social impacts as well as for the review and monitoring by the responsible agencies and any damages due to accidents and/or wrong doing that may occur during construction and operation. The environmental and social management and monitoring plans and/or the SESO of the CA will clearly define the implementation budget for management and conservation of watershed and/or downstream areas as needed including how the fund will flow from the project to the agencies either directly to the agencies or through the Environmental Protection Fund (EPF).

## **5.8 Project- affected People/Social Impacts**

*“In order to safeguard the statutory interests of the project affected people due to resettlement and compensation cases, the hydropower project developer shall provide a progress report on the social impact assessment, develop a resettlement and livelihoods’ improvement plan, an ethnicity development plan, a gender development plan and so forth before the construction and implementation of the project to ensure that any potential negatives impacts to the people and other social related impacts are mitigated”*

### **a) Rationale/explanation**

The Compensation and Resettlement Decree (2005) provides definitions, objective, and principles to be applied when land acquisition and/or resettlement of population is required for implementation of an investment project and the process is described as part of the ESIA and IEE regulations. The revised Decree is expected to be approved by the Prime Minister. For hydropower project, the below principles will be applied.

Project-affected people will be recognized as those whose assets, resource use and livelihoods, and/or social or cultural structures are involuntarily altered



by the project, and will be identified on the basis of social, economic, health and cultural studies and impact assessments. Assets and resource use will be recognized on the basis of legally established and/or customary use rights. The right of all project-affected people to sustainable livelihood options and services at least at the level previously enjoyed will be recognized, and achieved through the implementation of the social management and monitoring plan. The plan will consider distributional effects of development activities and the participation of vulnerable groups, including women and ethnic minorities, and will commit to targets for replacement or compensation for loss of assets, livelihoods restoration, and services and community development over the entire life-span of the project, with provision for monitoring and evaluation, participatory planning and adaptive management. In cases where ethnic groups are in the project area a specific plan to meet their aspirations would be prepared in consultation with these communities in line with the ethnic group consultation guideline established by the Lao Front for National Construction (LFNC) in 2013.

At a minimum consultation with the affected population and the public will be in line with the technical guideline on public involvement issued by the DESIA. Implementation of the approved environmental and social management and monitoring plan and full compliance with the conditions specified in the Environmental Compliance Certificate (ECC) will be necessary.

#### ***b) Roles and responsibilities***

The DESIA of the MONRE and the provinces will be responsible for ensuring that hydropower projects comply with the Compensation and Resettlement Decree.

The project developer will be responsible for all the costs related to the preparation of the reports and the implementation of the approved social management and monitoring plan as well as for the review and monitoring by the responsible agencies as stipulated in the ESIA and IEE regulations.

### **5.9 Consultation**

*“Reasonable, honest, accurate and transparent consultations will be implemented based on the provision of adequate data and information provided, as this would help to effectively listen or hear the public voices before making a decision to approve a hydropower project”*

#### ***a) Rationale/explanation***

The ESIA and IEE regulations require public involvement of the project-affected persons (PAPs) and other stakeholders. The consultation is part of the ESIA/IEE preparation and approval process as well as the ESMMP

implementation and monitoring during construction, operation and closure stages. Consultation during the preparation of the ESIA/IEE report the project owner will ensure that PAPs: (a) have received information on the development plan and activities of the project, the benefit to be received, and the social and environmental impacts that may arise from the project; (b) cooperate and provide information on local conditions in the project and nearby area to be considered during the preparation of the ESIA report; and (c) participate in field inspection and the consultation meetings at all levels. During implementation, PAPs will (a) receive information on the ESIA report and the implementation progress; (b) participate in monitoring activities; and (c) officially inform local authority to resolve the environmental and social impacts caused by the project.

#### ***b) Roles and responsibilities***

All hydropower projects larger than 15 MW will comply with, at a minimum, consultation with the affected population and the public in line with the technical guideline on public involvement issued by the DESIA.

The DESIA of the MONRE and the provinces are responsible for ensuring that appropriate consultation is carried out according to the GOL guidelines.

### **5.10 Information Disclosure**

*“All hydropower development projects shall be undertaken on the basis of transparency and openness. In addition, in the process of information disclosure, ethnic minority’s language needs to be taken into consideration”*

#### ***a) Rationale/explanation***

The ESIA and IEE regulations require public disclosure of information related to the project developers, the social and environmental impacts; the obligations to mitigate the environmental and social impact; the ESIA report including other reports that have been submitted to the agencies; the monitoring result of the mitigation measures; ESMMP budget; and other related information requested to be disclosed by the agencies.

All hydropower projects larger than 15 MW will comply with the information disclosure as required by the ESIA/IEE regulations and other government guidelines related to information disclosure. All projects documents such as: EIA, SIA, the environmental management and monitoring plans, the social management and monitoring plan and the approved ECC, will be publicly disclosed. Project developers will be required to establish information centers in the project area and in Vientiane. Information might be disclosed both in Lao and English, as the case might be, and appropriate methods will be used to communicate with ethnic groups. During implementation of the project, the

project developers will be required to make public progress reports on the project. Third-party review is encouraged. Gross project revenues and spending on environmental and social safeguards should be disclosed.

**b) Roles and responsibilities**

The DESIA of the MONRE and the provinces are responsible for ensuring compliance with the ESIA and IEE regulations and other guidelines related to information disclosure.

**5.11 Water Resource and Watershed Management and Conservation**

*“Natural conserved habitat area losses due to hydropower development projects shall be avoided and mitigated as much as possible. Where avoidance is not possible, it must be compensated and restored by the project developers as well as provide funding to help manage and effectively conserve the watershed area as well as nearby watersheds and other important conservation areas. Must also develop a sustainable biodiversity management plan, consider compensation or help mitigate the impact on the local natural resources base”*

**a) Rationale/explanation**

All hydropower projects larger than 15 MW will comply with the Protection Forest Decree (2010), the water law or its revision, the National Protected Area Decree (draft), and other concerned regulations. Law and regulations regarding water and watershed protection and management including water use and water pollution control will be applied. Analysis on the potential project impacts on water resources and watershed will be made according to basin and/or sub-basin approach including potential impacts and risks on the upstream watershed and downstream area and communities. For the project located in the basin or sub-basin that accommodates more than 1 hydropower plant, the analysis will include cumulative and/or transboundary impacts as required by the ESIA and IEE regulations. Collection of primary data on major land uses, water uses, water quality, and potential water pollution sources (including sediment) upstream and downstream of the project area as well as the consultation with key stakeholders are considered necessary during the preparation of an ESIA report. Application of hydrological model will be used for assessing the potential impacts on the water users, water pollution, and risks due to flood, drought, and disaster in downstream area including the preparation of an emergency preparedness plan.

Any loss of natural terrestrial habitat will be offset, where possible, by funding and implementing effective conservation management in nearby protected and/or critical watershed areas. A watershed adaptive management and participatory planning strategy will be developed to stabilize land use, maintain vegetation cover and manage National and Provincial Protected Areas

within the catchment area, and to enhance the productivity and sustainability of aquatic resources within the reservoir and its tributaries. Sustainable biodiversity management plans will be conducted taken into account the need to compensate populations residing within protected areas for eventual restriction to the resource base on which they depend and to develop alternative means of livelihoods.

The proposed compensation and mitigation measures will be considered part of the environmental and social management and monitoring plans and/or ESO. Implementation of the approved environmental and social management and monitoring plans and full comply with the conditions specified in the ECC and/or the environment and social obligation (ESO) to be included in the concession agreement will be necessary.

***b) Roles and responsibilities***

The Department of Forest Resources Management (DFRM) of the MONRE is responsible for facilitating the planning and implementation of watershed protection upstream of the project and ensuring compliance with the related policy, decrees, and regulations. The project developer will be responsible for all the costs related to the preparation of the reports as well as for the review and monitoring by the responsible agencies as stipulated in the EIA decree.

**5.12 Compliance Monitoring**

*“Regular monitoring, inspection and reporting will be undertaken by relevant government line agencies, which includes appropriate third party monitoring and inspection to ensure that all large hydropower projects are implemented in accordance with all relevant obligations set-out under the law of Lao PDR, policies, strategies, contracts and other implementation plans”*

***a) Rationale/explanation***

All hydropower projects larger than 15 MW will comply with all relevant obligations under Lao national law, policies, ministerial instructions, strategies and action plans, and international conventions, and this will be ensured through regular inspection, monitoring, and reporting by the responsible agencies, with oversight from a third party agencies as stipulated in the Electricity Law (2012), the ESIA and IEE regulations, and/or other regulations. A grievance/dispute mechanism accessible to project-affected people will also be established.

Special attention will be given to ensure compliance with the Electricity Law (2012), the ESIA and IEE regulations, the Compensation and Resettlement Decree, and the technical guidelines prepared by the responsible agencies. This includes specific engineering and technical obligations to be required and

monitored by the Ministry of Energy and Mines and the Standard Environmental and Social Obligations (SESO) to be required and monitored by MONRE according to the Environmental Protection Law and its regulations and/or guidelines.

Compliance monitoring and/or inspection may include the following aspects: procedures and time schedule for electricity business operation; economic, technical, and financial feasibility study; design, construction, installation, and management of electrical facilities, including technical safety standards and/or standards for electrical equipment; law and regulations and/or agreements on electricity business including actions plans (if any); implementation of measures to mitigate negative environment and social impacts; compensation for damage to life, health, property of the people and environment; financial, policy, and social welfare systems; and registration and records of the electricity consumptions figure. All expenses for undertaking technical inspection and audit relating to electricity business will be calculated and included in the project costs.

**a) Roles and responsibilities**

The responsible agencies of the MEM and the MONRE will be responsible for compliance monitoring with an aim to ensure that the electricity business is operated in accordance with the laws, regulations, and technical requirements as well as are effective, safe, and do not create adverse impacts on natural environment and local people.

The project developers will report to agencies and local authorities regularly regarding the design, construction, operation, and safety related to electricity as required by regulations.

**5.13 Revenues and Benefit Sharing**

*“Project developer shall pay taxes, royalties and fees that is set-out in the regulations, laws and project specific agreements/contracts, as well as paying in cash or share benefits with the local communities through Community Funds for environmental protection and other Funds for watershed protection and development of basic socio-economic infrastructure within the project areas”*

**a) Rationale/explanation**

The project developers will be responsible for paying royalty, taxes, and fees as required by the Electricity Law and/or other laws, decrees, and regulations. Details will be established by the responsible agencies. A certain portion of the revenues from each project will be allocated to general funds or special financing windows within the Environment Protection Fund (EPF). These

funds will be used to support nation-wide environmental protection and conservation efforts in the country.

In addition to the payment of royalty, duty, and tax, the project developer has to also pay its contribution for the Fund for environmental protection within the concession areas and surrounding areas, for watershed protection and downstream of project areas and for socio-economic infrastructure development of the locality where the project is located as stipulated in the Electricity Law (2012). These actions will be considered as the “benefit sharing” with local communities and environment and the “company social and environmental responsibility” (CSER) which is a good practice for normal business development at international level. The developers are encouraged to apply green and clean technology approach during the planning, design, construction, and operation of the facilities; adopting the “Equator Principles”; and/or applying good practices and/or standard procedures established by the International Hydropower Association.

#### ***b) Roles and responsibilities***

The project developer will be responsible for paying royalty, taxes, and fees as required by the Electricity Law and/or other laws, decrees, and regulations. Details will be established by the responsible agencies.

### **5.14 Existing Projects**

*“Existing projects will be reviewed and assessed by responsible agencies based on the current legislation and institutional framework. Implementation plan shall be prepared for consultation with the project developer on a case-by-case basis”*

#### ***a) Rationale/explanation***

The compliance status of the projects constructed and/or operated before the effective date of this policy will be reviewed and assessed by the responsible agencies in the context of the current legal and institutional frameworks and an action plan will be prepared for discussion with the project developers on a case by case basis.

Application of each specific law will be in accordance with the effective date described by the laws and/or decree as summarized below:

- The revised Electricity Law 2012 (No. 03/NA): Effective 60 days after the signing date (20 December 2011)
- The Environmental Protection Law (EPL 2012): effective 90 days after the signing date which is 18 December 2012;
- MONRE Ministerial Instruction on ESIA and IEE regulations (dated 17 December 2013);

- The decree on protection forest (Decree 333/PM): Effective on the signing date which is 19 January 2010.
- The decree on compensation and resettlement (Decree 192): Effective on the signing date which is 7 July 2005 or its revision.
- The River Basin Committee (RBC) decree (Decree 293): Effective on the signing date which is 15 June 2010.

***b) Roles and responsibilities***

The DEPP will be responsible for the review and assessment of the compliance status of existing projects in close cooperation with DEB, DEM, DESIA, and DFRM.

**5.15 Institutionalization**

*“The implementation of this policy will be effective for the legislations and institutions that have been updated by the government in the past five years only”*

***a) Rationale/explanation***

The legal and institutional reforms undertaken by the government during the past five years will be applied during the implementation of the Policy.

Internal procedures and regulations during the planning, construction, and operation stages of large hydropower projects including clarity on the independent power production (IPP) process will be established by the agencies of the Ministry of Energy and Mines in line with the legal provision of the Electricity law (2012). Promulgation of the decree on the River Basin Committee in 2010 provides a mechanism for promotion of sustainable development in the context of a river basin management. Implementation of the ESIA process including consultation and information disclosure, the compensation to project affected population, and the watershed conservation will be governed respectively by the ESIA and IEE regulations, the compensation and resettlement decree , and the forest reserve decree (draft) and their technical guidelines established by the Ministry of Natural Resources and Environment.

Compliance monitoring of the specific laws and regulations will be carried out by the responsible agencies while compliance monitoring of the policy will be carried out by the Department of Energy Policy and Plan in close coordination with concerned agencies as appropriate. These arrangements will be periodically reviewed thereafter on the basis of lessons learned from implementing this policy

### ***b) Roles and responsibilities***

The Department of Energy Policy and Planning will be responsible for ensuring effective coordination and cooperation among key agencies and forge effective implementation of the policy.

## **5.16 Reporting**

*“The implementation this policy shall be reported to the inter-ministerial committee established by Ministry of Energy and Mines. Close advice on the implementation will be undertaken on a periodic basis”*

### ***a) Rationale/explanation***

The MEM has established an inter-ministerial committee to oversee the implementation of this Policy and the DEPP serves as the secretariat. The DEPP will prepare and disclose an annual or biannual Status Report on the implementation progress of this policy to the public. The report will be submitted to the national committee before disclosure.

### ***b) Roles and responsibilities***

The DEPP will prepare and disclose an annual or biannual Status Report on the implementation progress of this policy to the public.

## **6. Performance Evaluation**

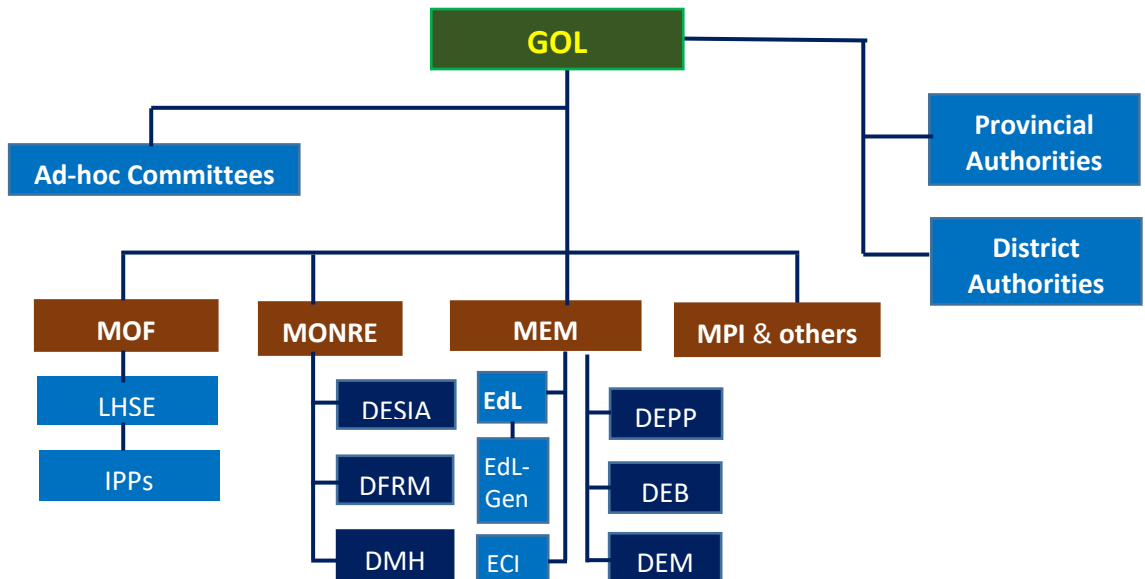
Since the PSHD requires actions both from GOL agencies (central and provinces) and the project developers therefore measuring PSHD implementation performance to these agencies will be periodically monitored and evaluated by the DEPP. According to the CA, the budget for performance evaluation for individual project will be supported by individual project developers.



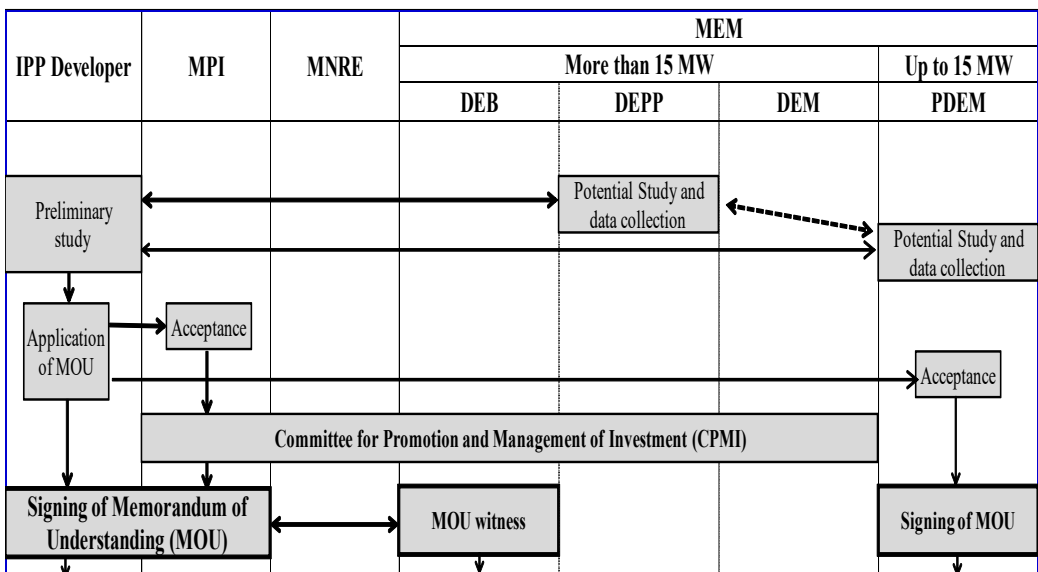
# Annexes

## Annex 1: Organization and Management Structure for PSHD Implementation

### 1.1 Overall Organization Structure



### 1.2 Management Process - before MOU.





### 1.5 Management Process - CA Operation Stage

