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(Section 12)

IMPLEMENTATION PLAN

for the

SUSTAINABLE HYDROPOWER MASTER PLAN FOR THE XE KONG BASIN IN LAO PDR

Submitted to
Government of Lao PDR

Submitted by
Natural Heritage Institute, San Francisco, California
In Association with the National University of Lao

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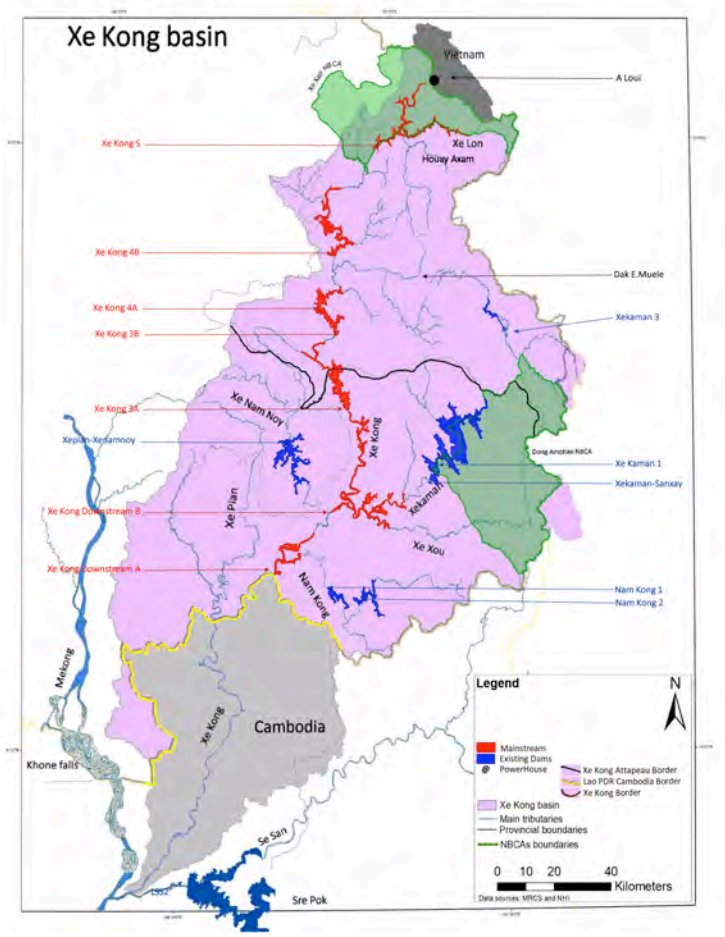

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Acronyms

3S	Xe Kong, Se San and Sre Pok Rivers, known collectively as the "3S" rivers
ADB	Asian Development Bank
AIT	Asian Institute of Technology
ASEAN	Association of Southeast Asia Nations
BOO	Build-Operate-Own projects
BOS	Balance of System
BOT	Build-Operate Transfer projects
CA	Concession Agreement
CAPEX	Capital Expenditure (or upfront capital expenditure)
CFD	Computational Fluid Dynamics
CIA	Cumulative Impact Assessment
CIAGs	Cumulative Impact Assessment Guidelines
CIP	Committee for Investment Promotion and Management
CIR	Capacity Inflow Ratio
COD	Commercial Operation Date
CPU	Catch Per Unit
CPUE	Catch Per Unit Effort
DEB	Department of Energy Business
DEPP	Department of Energy Policy and Planning
DNEI	Department of Natural Resources and Environment Inspection
DNREP	Department of Natural Resources and Environmental Policy
DWR	Department of Water Resources
ECAFE	Economic Commission for Asia and the Far East
ECC	Environmental Compliance Certificate
EDL	Électricité du Laos
EIA	Environmental Impact Assessment
EMDP	Ethnic Minority Development Plan
EMMP	Environmental Management and Monitoring Plan
EPA	Environmental Protection Agency of the United States
EPC	Engineering Procurement and Construction
EPCI	Equity Project Cost Investment
EPRI	Electric Power Research Institute (of the US)
ESIA	Environmental and Social Impact Assessment
ESMMP	Environmental and Social Management and Monitoring Plan

EVN	Électricité du Vietnam; and same acronym refers to energy demand curve
FI	Flood Index
FS	Feasibility Study
FTCC	Floating Tracking Cooling Concentrator
GHI	Global Horizontal Irradiance
GL	Gigaliters
GMS	Greater Mekong System
GoL	Government of Lao PDR
GWh	Gigawatt hours
GWh/y	Gigawatt hours per year
HIA	Health Impact Assessment
HPD	Hydropower Development
HSAP	Hydropower Sustainability Assessment Protocol (of IHA)
HWL	High Water Level
IADB	Inter-American Development Bank
IC	Insurance Cost
IDC	Interest During Construction
IEE	Initial Environmental Examination
IEI	Inverter Warranty Extension Investment
IFC	International Finance Corporation
IFI	International Finance Institutions
IFReDI	Inland Fisheries Research and Development Institute
IHA	International Hydropower Association
IMC	Inter-Ministerial Committee
IP	Ingress Protection
IP65	International classification for the ingress protection
IPP	Independent Power Producer
IRD	Irradiance
IRENA	International Renewable Energy Agency
ITRPV	International Technology Roadmap of Photovoltaic
JICA	Japanese International Development Agency
JMA	Japan Meteorological Agency
Km	Kilometers
kPA	Kilopascal, a unit of pressure
kWac	kilowatt AC power

kWp	Kilowatt peak (peak power)
LAC	Limits of Acceptable Change
LAK	Lao Kip (currency of Lao PDR)
LEK	Local Ecological Knowledge
LEPTS	Lao Electrical Power Technical Standards
LMB	Lower Mekong Basin
LMS	Lower Migratory System
LSS2	Lower Se San 2
LTCR	Long-Term Capacity Ratio
m	Meters
m^3/s	Meters per second
mill m^3	Million meters cubed (for total reservoir volume)
MAF	Ministry of Agriculture and Forestry
MDS	Multi-Dimensional Scaling
MEM	Ministry of Energy and Mines
MIGA	Multilateral Investment Guarantee Agency
MMS	Middle Migratory System
MoNRE	Ministry of Natural Resources and Environment
MoF	Ministry of Finance
MOU	Memorandum of Understanding
MPI	Ministry of Planning and Investment
MR	Mutilation Ratio (a component of a blade strike model)
MRF	Multiple Reference Frame
MRC	Mekong River Commission
MRCS	Mekong River Commission Secretariat
MSSS	Maximum Sustainable Swimming Speed
MTBF	Mean Time Between Failures
Mt/yr	Metric ton per year
MW	Megawatts
MWac	Megawatt AC power
MWp	Megawatt peak
NBCA	National Biodiversity Conservation Areas
NDR	Nominal Discount Rate
NHI	Natural Heritage Institute
NTEC	Nam Theun 2 Electricity Consortium

NTFPs	Non-Timber Forest Products
NUoL	National University of Lao
OAAs	Other Aquatic Animals
O&M	Operation & Management/ Operating & Maintenance Cost
PAPs	Project-Affected Persons
PDA	Project Development Agreement
PDEM	Provincial Department of Energy and Mines
PDPI	Provincial Department of Planning and Investment
PDPVII	The Power Development Plan VII
PID-free	The PV module is free from Potential-Induced Degradation
PPA	Power Purchasing Agreement
PPP	Public-Private Partnerships
PR	Performance Ratio
PSHD	Policy on Sustainable Hydropower Development in Lao PDR
PV	Photo Voltaic
RAP	Resettlement Action Plan
RC	Resettlement Committee
rpm	revolutions per minute
RSCP	River System Coordination Plan
R&R	Resettlement and Relocation
SDR	System Degradation Rate
SERIS	Solar Energy Research Institute of Singapore
SESO	The Standard Environmental and Social Obligations
SHA	Shareholder Agreement
SIA	Social Impact Assessment
SOP	Social Action Plan
SR	Scoping Report
SSY	Suspended Sediment Yield
ST	Stung Treng monitoring site
SWAT	Soil and Water Assessment Tool
TbEIA	Transboundary Environmental and Social Impact Assessment
TF	Total Flow
ToR	Terms of Reference
TP	Tax Payment
NT2	Nam Theun 2

TWL	Tail Water Levels
UN	United Nations
UPS	Upper Migratory System
W/m	Watts per cubic meter, such as the measurement for Turbulence
Wp	Watt-peak
XK1	Xe Kaman 1 Hydropower project

EXECUTIVE SUMMARY AND CONCLUSIONS

INTRODUCTION

The Master Plan sets forth a scenario for hydropower development in the Xe Kong basin in which hydropower facilities are sited, designed and operated to maintain the natural functions of the Xe Kong River in a manner that complies with the Policy on Sustainable Hydropower Development decreed by the Prime Minister on January 12, 2015. The Master Plan provides a functional definition of "sustainable hydropower" that can guide future planning for the entire nation. An "implementation plan" is needed because the Master Plan represents a radical change in the way hydropower development planning and approvals are currently conducted. Currently, the process for hydropower development planning and approvals is driven largely by investor initiative. often with some equity participation by Électricité du Laos (EDL). The project developers identify potential sites and project parameters and then apply for a Memorandum of Understanding (MOU) from the Ministry of Planning and Investment (MPI) that confers an exclusive right to conduct feasibility studies and environmental and social impact studies for a project at that site. The Ministry of Planning and Investment generally issues such MOUs to any and all applicants on a first come, first served basis. Project initiated in this way go through an assessment and approval pipeline that eventually leads to a concession agreement to build, own, operate and then transfer the project. At no stage is there an assessment or decision whether the proposed site, design or operations are the best ones, or whether they satisfy meaningful principles and standards for hydropower sustainability. All of the technical and financial analysis is conducted by the developers and their consultants with some degree of oversight by the Ministry of Energy and Mines (MEM) and Ministry of Natural Resources and Environment (MoNRE). But, these ministries lack the technical capacity to independently review the technical analysis performed by the developers, and the means to acquire that expertise. The Master Plan would invert this process by giving the Government of Lao (GoL) the leading role in determining at the river basin scale the project sites, designs and operations on which it wishes have developers to conduct feasibility studies. This modification to current practice will provide major benefits to the GoL and private developers for reasons discussed in this Section of the Master Plan.

THE CURRENT LEGAL AND INSTITUTIONAL FRAMEWORK FOR HYDROPOWER PLANNING, APPROVAL AND REGULATION IN LAO PDR

This Section outlines how hydropower development is planned, approved, regulated and monitored under existing decrees, laws, regulations, policies, guidelines, standard forms of agreement and institutional practices in Lao PDR.

Key Requirements of the Policy on Sustainable Hydropower Development

- §5.1a) **The Government** agencies are to ensure that potential negative impacts on the environment and social system are prevented or mitigated.

- §5.3b) **Project developers** shall prevent and mitigate any potential risks to the natural resources and the environment in the design, construction and operation stages.

- §5.7 **All hydropower projects** shall undertake a comprehensive Environmental and Social Impact Assessment. For any project with large transboundary impacts, the EIA shall include a cumulative and transboundary impact assessment.

- §5.7 The environmental and social impact assessments will "include a **risk assessment** over the entire life-span of the [the] 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 the basin and/or sub-basin levels.

- §5.7b The Department of Natural Resources and Environmental Policy (DNREP) of MoNRE is charged with the responsibility for "ensuring that hydropower projects are fully in compliance with the regulations on environmental and social impact assessment.

- §5.11 **Natural conserved habitat** losses due to hydropower development projects shall be avoided and mitigated as much as possible.

- §5.1a) **Use of water for ecological maintenance** is recognized as a legitimate water right.

- §5.1a) Multiple hydropower projects on a single river are to be developed in an **integrated** manner.

- §5.1a) All **costs** associated with environmental and social impact avoidance, mitigation, compensation or restoration are to be treated as project expenses to be borne by the project developer.

- §5. b and §5.2b assigns to the Ministry of Energy and Mines, and specifically the **Department of Energy Policy and Planning (DEPP) the lead role** for implementation of the policy in close consultation with the other responsible agencies of the Government of Lao PDR. Responsible agencies are to develop detailed procedures, technical guidelines, supporting decrees/regulations, and/or institutional capacity building.

- §5.1a) The GoL will ensure **integrity, accountability, and transparency** of hydropower projects through compliance monitoring, reporting and information disclosure.

- §5.10 provides that "All hydropower development project shall be undertaken on the basis of **transparency and openness**."

- § 5.10a) notes that the ESIA regulations require "**public disclosure of information** related to the project development and their social and environmental impacts.

- §5.2 **Stakeholders are to be included** in the process of planning, implementation and monitoring of projects. While the "stakeholders" are not defined explicitly, the term

apparently includes at least the local affected peoples and government officials. §5.8 makes clear that persons subject to displacement and relocation have a right to consultation and as "project-affected persons (PAPs).

- §5.1a) and §5.14 **Existing hydropower projects** will be reviewed to ensure that unsustainable aspects are adequately addressed (i.e., projects at any stage of development, including those for which feasibility studies have been conducted under existing MOUs are not exempt from the policy).

Hydropower Development Planning

Under the Electricity Law of 2012, the MEM is responsible for developing the official governmental plans for the power sector for approval by the Prime Minister, but the law does not mandate the preparation of strategic plans at the river basin scale. Thus, the planning process for individual projects is left to the initiative of the developers rather than these government agencies. The new Water Resources Law may change that, as discussed below.

The steps in the approval process for hydropower projects include:

- A prospective developer obtains a Memorandum of Understanding, by submitting an application to the "One-Stop Service" office at the Ministry of Planning and Investment (MPI),
    - After the MOU is signed (valid for 24-months), investors are required to deposit funds depending on the range of installed capacity.
    - The MOU confers an exclusive right to conduct a feasibility study, subject to approval by MEM, including social, economic, environmental, technical and financial feasibility aspects of a hydropower scheme at a specified site. The terms of the MOU also require an environmental and social impact assessment (ESIA) of the proposed project.
- Following the signing of the MOU, the developer prepares a scoping report (SR) and terms of reference (TOR) for an environmental assessment. Requirements for hydropower developers in the ESIA process include assessment of the potential social and environmental impacts and measures to mitigate the impacts. The ESIA must include an Environmental and Social Management and Monitoring Plan (ESMMP).
- When the ESIA and FS have been approved by MoNRE and MEM, respectively, a developer can apply for a Project Development Agreement (PDA). This is a commitment by the Government of Lao that the proponent can undertake the additional financial and technical preparations, such as preliminary site work (e.g. building roads), for a Concession Agreement (CA) without competition by others for that site.
    - The rights conferred by the PDA are contingent upon: 1) the approval by DEPP of the final technical feasibility study, 2) approval by MEM of the grid connection (if the project is to connect to EDL's existing grid), 3) the approval of the economic terms, including the tariff to be paid by EDL and 4) a determination by

the GoL that the proposed project satisfies the January 12, 2015 Policy on Sustainable Hydropower Development. As previously noted, however, it is not specified in current laws or policies how or what entity makes this determination. In actual practice, there has not been an explicit determination with respect to hydropower projects that have been granted PDAs since the Policy was decreed.

- During the PDA mandate period, the developers negotiate a Power Purchase Agreement (PPA) that includes firm commitments to purchase specified amounts of power at a specified price (the tariff).

- The PPA provides the assured revenue stream that is essential to secure the debt financing for the project, and may also be necessary to firm up the equity investments. These arrangements constitute the financial package for the project.

- Finally, the project developer applies for a Concession Agreement from MPI. Under the CA, the developer builds, owns, and operates the hydropower plant for a specified concession period, which can range from 25-40 years, for payments of royalties and/or taxes at a specified annual rate. At the expiration of the concession period, the facility is transferred to the GoL (Ministry of Energy and Mines) to own and operate.

Under the Policy, a cumulative impact assessment (CIA) will be required for projects on river basis in which other hydropower plants are located or planned. Cumulative impacts should include not only impacts on the biophysical and social environments, but also impacts on the financial viability of other investment projects that could be affected by, for instance, the allocation of water rights to the hydropower project. Also, under the new Policy, developers and DNREP is required to take account of transboundary impacts. Any project that captures sediment that would otherwise flow across international boundaries and any project that poses a barrier to migratory fish should be assumed to have such transboundary impacts.

Compliance with the Policy on Sustainable Hydropower Development

Notably, at the time of this writing, it has not been possible to ascertain the extent to which DNREP requires the ESIAs for hydropower projects to comply with the new requirements set forth in the Guidelines for Implementation of the Policy on Sustainable Hydropower Development in Lao PDR, because DNREP has failed to respond to requests to review these documents. For instance, it is not apparent that DNREP has implemented the requirements for:

- A risk analysis over the entire life span of the project,
- An analysis of alternatives for project structure and locations, including a no-project alternative,
- Lessons learned from previous projects,
- Cumulative impact analysis
- A meaningful assessment of transboundary impacts, as required by Section 7 of the Policy
- A determination whether all "potential negative impacts on the environment and social system can be prevented and/or mitigated", as required by Section 4 of the Policy.

- Openness, transparency and information disclosure" as the basis for undertaking all hydropower projects (Section 10) as DNREP continues to treat ESIAs as confidential documents that are the property of the developer.

It is also notable that at no stage in this process does MoNRE make an explicit determination of compliance with the Policy on Sustainable Hydropower Development. Nor has it articulated substantive standards or criteria for making that determination. Indeed, there are no sustainability criteria specified anywhere in the existing law. Nor do the Guidelines specify which agency is to promulgate standards or criteria to implement the Policy. As a consequence, the compliance with the decree today is more procedural rather than substantive.

If the ESIA and ESMMP are deemed satisfactory, MoNRE issues an Environmental Compliance Certificate; if not, MoNRE either issues requirements for revision and re-submission, or rejects the project. The ECC is valid for 2-5 years and renewable throughout the investment period. Any mitigation requirements imposed by DNREP are included as terms and conditions of the ECC.

In theory, projects can be rejected because of substantial, unavoidable and irremediable social and environmental impacts or inconsistency with the National Environmental Policy and Strategic Plan of MoNRE. In practice however, rejection of projects is rare. DNREP routinely approves the ESIA on the basis of content rather than quality of analysis. If it deems the impacts to be unacceptably large or believes there are less impactful alternatives, it can, and sometimes does, require the developer to incorporate additional mitigation measures, such as fish passage facilities, in the design of the project.

If the ECC contains conditions for project approval, failure to comply can result in revocation or suspension of the ECC at any time during the project investment period. Two rounds of warnings for project owners to fix non-compliance are issued by MoNRE before revocation or suspension can be carried out: the first warning is for 90 days and the second is for 60 days.

Application of the Water Resources Law of 2017

The revised Water Resources Law of 2017 requires the developer to obtain a permit for the obstruction and impoundment of water in a river. It is not clear when the permit must be obtained in the approval process, but it would make sense for this to occur during the PDA stage and before consideration of an application for a Concession Agreement. The water use permit confers a right of use, ensuring developers that their projects will have enough water for operation. The permit is expected to contain certain conditions to protect the interests of other water users on the same river.

The GoL has indicated its intention to establish a river system coordination plan to prevent conflicts arising from water rights and water usage across multiple hydropower projects and/or water users. MoNRE, in coordination with relevant local administration, is responsible for planning of river basins for consideration and approval by higher authorities. This planning will include a River System Coordination Plan (RSCP), which will aim for optimal development of river basins and may take into account the anticipated number, types and locations of hydropower projects, potential non-power uses, and economic factors.

Application of the Forest Protection Regulations

Development of hydropower can also require approvals with respect to any impacts on protected forests, conservation forests or production forests. For such areas to be used for reservoirs, conversion of the status of the forest must be approved as follows:

1. For forests administered at the national level, approval must come from the Standing Committee of the National Assembly based on request of the government,

2. For forests administered at the district level, approval must National Land Administration in agreement with the Ministry of Agriculture and Forestry, and

3. For forests administered at the village level, approval must come from the Provincial Administration based on request of the Provincial Land Administration in agreement with the Provincial Department of Agriculture and Forestry

The main requirement for approval of such forest areas for hydropower projects is if it "creates optimal benefits to the country" and do not cause severe impacts on the environment (Decree on Protection Forest 2010, Article 19, Decree on Conservation Forest 2015, Article 25).

CRITICAL OUTSTANDING ISSUES IN EXISTING LEGAL AND INSTITUTIONAL FRAMEWORK AND PROPOSED RESOLUTION TO FACILITATE IMPLEMENTATION OF MASTER PLAN

The existing legal and institutional framework for hydropower planning, approval and regulation leaves unresolved several issues that are critical for implementing the sustainable hydropower Master Plan.

What are the Standards and Criteria for Determining Sustainability of a Hydropower Project?

To implement the Policy, the GoL needs a set of functional criteria or standards or attributes of sustainability which can be applied by government regulators to determine the locations, scales, designs, operations and timing of projects for which it will accept applications for construction, and that can serve as a checklist for developers so they can focus their feasibility study investments on projects with confidence that they will qualify for approval. The Policy and implementing Guidelines do not not specifically assigned the function of promulgating the standards and criteria is to any particular department of the Government of Lao PDR that are charged with implementing the Policy. This ambiguity has resulted in no department yet taking that responsibility.

The 2005 Policy on Sustainable Hydropower Development is the closest that the existing frameworks comes to providing a substantive definition, which is affirmed and reiterated in the 2015 version. That policy states:

> **"ecological sustainability relies upon the avoidance of irreversible environmental impacts such as the loss of biodiversity or disruption of ecological cycles."**

Notably, this statement focuses on ecosystem processes and biodiversity rather than a more utilitarian standard such as maximizing food security or other environmental services. What it lacks, however, is guidance on the acceptable levels of "avoidance" or protection. Given that all

hydropower projects alter the natural functions of rivers to a greater or lesser extent, the question for sustainability determinations is: **how much alteration is too much?**

The answer in the 2015 guidelines seems to be: "as little as possible". It establishes a hierarchy of strategies to cope with impacts. Avoidance is the preferred strategy, followed by minimization, mitigation, and compensation or offsets as the strategy of last resort. It also states that before a project can be approved, it must "ensure . . . that potential negative impacts on the environment and social [system] can be prevented and/or mitigated". This implies that projects that cause impacts that cannot be prevented or mitigated cannot be approved. This possibility is not just theoretical: Section 5 of the Master Plan demonstrates that whereas fish passage around and through dams may be mitigatable, in some cases hydropower reservoirs create impacts that cannot be mitigated.

To assist the GoL in promulgating principles and standards for determining the sustainability of a proposed hydropower project, the Master Plan in Section 6 proposes a functional definition of "sustainable hydropower" in terms of the attributes of projects that counteract their most significant impacts on the physical processes of rivers that sustain their ecosystems. The Master Plan also cites guidance from the International Hydropower Association, the Asian Development Bank and the International Finance Corporation that can inform the GoL in adopting appropriate principles and standards.

How, When, and Where is the Determination of Sustainability Made?

The Policy and Guidelines are ambiguous on these issues. On the one hand, the MEM is assigned the lead responsibility for implementing the Policy in coordination with the other agencies (Article 2). Overall guidance is to be provided by an Inter-Ministerial Committee formed by MEM. Under the Guidelines, DEPP "will be responsible for forging effective implementation of this policy in close consultation with concerned agencies and provinces (§2.2). On the other hand, DNREP at MoNRE "is responsible for ensuring that hydropower projects are fully in compliance with the Environmental Impact Assessment decree. So, which entity makes the call on "sustainability", under what standards and criteria, and at what stage in the process?

Since these standards are at the very heart of the Policy, MoNRE

A standing task force under the Inter-Ministerial Committee set up by the Policy would be the appropriate body to develop the principles and standards for approval by the Committee itself.

we suggest that they be issued by the Inter-Ministerial Committee, based on proposals drafted by MoNRE as the agency with the greatest technical expertise on the relevant issues.

The sustainability principles and criteria should be applied at two phases. (1) In the future, the Master Plan recommends that the determination of environmental sustainability be made in the process of preparing a basin-wide hydropower development plan that is specifically oriented to satisfy standards and criteria for environmental sustainability. Such plans will identify the projects (sites, designs and operations) that are "pre-qualified" as sustainable and that will be offered to investors to develop and propose for approval.

(2) We also suggest that the sustainability determination be an explicit step in the approval process for individual projects as part of the project- environmental impact assessment process and MoNRE should make a determination that the principles and standards are met as a condition to issuing an Environmental Compliance Certificate (ECC) after consultations with stakeholders as contemplated by the Policy Guidelines.

Processes for Stakeholder Involvement

The usual practice today limits the public involvement to the early stages and does not include the outputs of the ESIA or ESMMP, perhaps because MoNRE continues to treat those documents as the confidential property of the developers, which is inconsistent with the express instructions in the Policy. This should be rectified, and we make a recommendation on how to improve stakeholder involvement in the following section.

What are the Rights and Entitlements Conferred by a MOU, a PDA or an ECC?

One of the most important issues to be resolved in implementing the Policy on Sustainable Hydropower Development is: What rights and entitlements are conferred on a hydropower developer by the issuance of a MOU to conduct a feasibility study, by a Project Development Agreement, or by an Environmental Compliance Certificate (ECC)? Do these documents confer any promise or guarantee that the project will ultimately be awarded a CA? This is of paramount importance because it affects the sustainability determination for projects that have already received either an MOU or a PDA, which includes all of the Xe Kong mainstream projects.

Under the applicable laws and regulations in Lao PDR, developers that have received an MOU or PDA are guaranteed an exclusive franchise to conduct feasibility, environmental impact, financial viability and other investigations at a specific site. If these studies convince the GoL that the project is feasible and sustainable, the developer has an exclusive right to the award of a CA on a non-competitive basis. However, the MOUs and PDAs do not provide any assurance that the GoL will decide to approve the project. Projects that receive an ECC on the basis of an ESIA that does not satisfy the new requirements in the Policy, that have been recited above, or that does not include an explicit finding that all significant environmental impacts will be prevented or mitigated are not eligible for a CA. These new requirements include an assessment of cumulative and transboundary impacts and assessment of siting, design and operational alternatives. Holding an MOU or a PDA does not waive these requirements.

MODIFICATIONS OF CURRENT PROCESS NEEDED TO IMPLEMENT THE MASTER PLAN

As described above, the current process for hydropower development planning and approvals in Lao PDR is driven largely by investor initiative, with some oversight by the Ministry of Energy and Mines and other relevant ministries. The role of the Government is reactive rather than proactive. Consequently, development occurs in a rather ad hoc manner, without consideration of the optimal basin-scale alternatives, and on the basis of procedural compliance rather than substantive standards.

The Sustainable Hydropower Master Plan for the Xe Kong Basin illustrates how this process can be improved to comply with the Policy on Sustainable Hydropower Development and the newly

revised Water Resources Law. To Implement the Master Planning approach, the GoL would assume a proactive role in determining in the first instance what facilities it wants to have studied for technical, economic and environmental feasibility. This will include decisions on sites, scale, designs, operational policies, timelines, and mitigation requirements. All of these, except the timeline, will be set forth in the master plans.

In addition to leading to more sustainable projects, such a centralized planning approach will also provide major benefits for the GoL and private developers. The GoL will be in a position to define a set of projects that are approvable under the GoL's Policy on Sustainability to maximize energy generation at a lower cost. System-wide planning will streamline the project development process because some of the early studies can be conducted in concert. This will save money in the long run, and produce valuable information that will reduce some of the uncertainties and financial risks typically associated individual, developer-driven projects. The GoL will become "the master of its own house" in terms of the sustainable, economic development of its water resources to attain the highest possible benefits for the people of Lao, now and for future generations.

This change in the process for planning and approving hydropower projects will require some modifications in the existing laws, regulations and institutional practices. This sub-section makes recommendations for the modifications that will be needed to fully implement the Policy on Sustainable Hydropower Development in Lao PDR.

Recommendation 1: The Ministry of Energy and Mines Should Prepare Basin-Wide Sustainable Hydropower Master Plans

DEPP already has the authority and mandate to develop electricity development plans at the national scale (see electricity law). However, action may be necessary by the National Assembly and/or the Prime Minister to command that future hydropower development occur only within the framework of basin-scale development plans the lay out the locations, designs and operational policies for hydropower projects.

As the Master Plan illustrates, the main challenges in developing environmentally sustainable hydropower development plans entails the following steps:

1. Survey of suitable sites for hydropower projects in terms of the necessary physical conditions. These are topography, hydrology and geology.
2. For each of these sites, assess the effect that the dams and reservoirs would have on migratory fish and on endemic resident fish species. Eliminate or assign lower priority to those sites that would have appreciable adverse impacts.
3. For the remaining sites, assess designs that will facilitate sediment discharge and maximal fishery mitigation measures.
4. Define operational policies for these dams that maintain a semblance of the natural flow regime that is conducive to the maintenance of ecological values.
5. Estimate the potential power output from these projects.
6. Conduct an economic cost-benefit analysis of these projects to assure that they would produce positive net economic benefits.
7. Offer the best performing alternatives, perhaps in rank order, to the private investors through a public tender.

When these steps are completed, the current process for approval of the individual projects in the basin-wide master plan would be implemented, including the MOU, FS, ESIA, and CA stages. All of these stages would greatly facilitated by the technical work to produce the basin-wide master plan. But, the site-specific process would be conducted at more definitive level of analysis that would also include the engineering and financial aspects.

If the GoL decides to include in a basin-wide "master plan" a project that already has received a MOU for a feasibility study, the holder of that franchise will be eligible to enter into a CA on a non-competitive (sole source) basis. For projects in the master plan that are not under an existing MOU, the government will open a global public tender to accept competitive applications from prospective developers to undertake feasibility studies. If those studies prove positive, and the project is deemed to meet the sustainability criteria, that developer will be entitled to a Concession Agreement to construct and operate the project.

Recommendation 2: DNREP Should Fully Implement the Instructions in the Policy for Social and Environmental Impact Assessments and Sustainability Determinations

The existing mandates are sufficient for the environmental and social impact assessment and sustainability determination. What is needed is full compliance with these existing legal requirements, particular those mandated by the Policy on Sustainable Hydropower Development and especially with respect to the ESIA process. Specifically, the following requirements for an approvable ESIA should be enforced by DNREP:

1. a risk analysis over the entire life span of the project,
2. an analysis of alternatives for project structure and locations, including a no-project alternative,
3. lessons learned from previous projects,
4. cumulative impact analysis
5. an assessment of transboundary impacts

Before it issues an Environmental Compliance Certificate, DNREP should make an explicit finding that all "potential negative impacts on the environment and social system can be prevented and/or mitigated" by the project as designed and proposed. And DNREP should require that all ESIA's be available for review and comment by stakeholders, Project Affected Persons, and the general public to comply with the instruction of the Policy that hydropower projects be undertaken on the basis of "openness, transparency and information disclosure". In sum, implementation of the Policy on Sustainable Hydropower Development does not require new laws, it just requires compliance with existing laws.

Recommendation 3: Improve Public Involvement in the Approval Process

The Guidelines for the Implementation of the Policy on Sustainable Hydropower Development, the regulations on environmental and social impact assessments, and the regulations on the Initial Environmental Examination call for stakeholder consultations and public participation in the process of approving hydropower projects. These authorities recognize that stakeholder consultations promote sustainable decisions by bringing into the process the needs, interests and views of all stakeholders. Among issues of concern for stakeholders are the social and

environmental impacts, environmental and social monitoring and management plans, mitigation measures, and resettlement plans.

It is important that consultations begin before any major decisions are made and continue throughout construction and operation. The public participation will be most meaningful and effective if it is initiated early in the process and continued to the end. The most important and useful stage will be as soon as possible after the initial ESIA and ESMMP have been completed and before an ECC and SESO are issued. At this stage, MoNRE and the developers should jointly convene a series of public meetings or focus group sessions with the PAPs and other stakeholders to brief them on the findings in the ESIA and ESMMP, to answer questions, and to gather feedback. This engagement will be much more useful if the ESIA includes the assessment of alternatives that is mandated by the Guidelines on Implementation of the Policy on Sustainable Hydropower Development. The usual practice today limits the public involvement to the early stages and does not include the outputs of the ESIA or ESMMP, perhaps because MoNRE continues to treat those documents as the confidential property of the developers, which is inconsistent with the express instructions in the Policy. This should be rectified.

Key aspects for preparation plan include:

- Formation of the consultation/public participation teams (the core team).
- Training of the core, including principles and methodologies for effective consultations including grievance mechanisms.
- Hiring facilitators or providing special training on facilitation to the core team.
- Testing of approaches, tools and techniques to be used in the consultation plan. Different tools and techniques shall be required for different stakeholders.
- Establishment of a mechanism for stakeholders to raise their concerns and suggested solutions throughout the project life circle. The GoL and developer should implement a grievance mechanism to be responsive to any concerns/ complaints of stakeholders, including all stakeholders not just project affected people and including all aspects of sustainability, not just resettlement.

Recommendation 4: Establish a Funding Mechanism for Sustainable Hydropower Planning in Lao PDR

The Master Plan provides a template for sustainable hydropower development planning that can be further refined for the Xe Kong Basin and propagated in the other river basins in Lao PDR and, indeed, throughout the Mekong River System. Implementing such Master Plans will require the Ministry of Energy and Mines and the Ministry of Natural Resources and Environment to assume a more proactive role in the process of identifying suitable sites, designing the projects, and defining operational policies for sustainable projects. Historically, the hydropower developers have initiated and financed the technical studies to formulate viable projects and assess their environmental and social impacts, with some degree of oversight by these Ministries. For these Ministries to assume the initiative in the future would require a substantial investment in technical capacity.

It is not realistic to expect DEPP undertake the technical analysis necessary to produce basin-wide master plans to guide further hydropower development and implement the Policy without

the financial means to do so. Therefore, a financing mechanism is a prerequisite to implementation of this new approach.

NHI has found no exact model from other settings to emulate in recommending a funding mechanism for the sole purpose of financing sustainable, basin- or system-wide hydropower planning. The best approach is to create a revolving fund that would be initiated with an initial infusion of funding from a multi-donor trust fund, such as the Asian Development Bank's (ADB) Asia Pacific Project Preparation Facility (A3PF) and then replenished from assessments of projects as they move through the approval process.

One of the ways to recapitalize the hydropower planning fund is to collect assessments on projects as part of the auctioning process for feasibility studies of selected sites. It is important that the funding mechanism be strictly managed and remains dedicated for the purpose it was set up. Added to that process at the concession agreement stage would be an assessment of funds that would be used to replenish the initial fund, which would then be used for further master planning on another basis. This would establish a hydropower planning facility that can be sustained indefinitely.

Fees can also be collected at the end of the auction process when a winning bid has been awarded. This example is used in Brazil, Spain and elsewhere. Another option is to require a resource levy or impact fee as part of the concession agreement. This could be a preferred source for replenishing the hydropower planning fund in cases where projects are under existing MOU and developed using a non-competitive bidding process. For example, under the Draft Concession Agreement for the Nam Theun II (900 MW) project in Lao PDR, the GoL received a royalty up to 30% of gross income and a Resource Levy up to 30% of net income from the Nam Theun 2 Electricity Consortium (NTEC). Such a resource levy could be placed on new projects and the money used to fund the planning for the next tier of projects in the Master Plan, and contribute to initiatives to restore or mitigate social and environmental impacts. In addition, Srinivasan (2013) suggests "As part of a memorandum of understanding or agreement signed between the developer and the government, the government fund might earn warrants or equity in the project. These warrants could be sold at financial close" (pg. 4).

Recommendation 5: Adapt the Laws and Procedures for Public Tenders and Competitive Bidding for Implementation of the Master Plan

The Master Plan for Sustainable Hydropower Development in Xe Kong River Basin is the first of its kind in Lao PDR. It provides an approach for the Government of Laos to assess and select hydropower development options in advance of entertaining proposals from private developers (or public developers such as EDL or EDL-Gen). Projects that the GoL finds to be the best options in terms of location, design and operations would then be offered to the hydropower developers under a public tender on a schedule that meets the power and revenue goals of the GoL, using a government managed-bidding process.

As Section 7 of the Master Plan shows, there are five projects that are deemed to satisfy the sustainability criteria proposed in Section 6 that are already under study with existing MOUs or PDAs. These MOUs and PDAs confer on the holders an exclusive right to develop these projects on a non-competitive basis in the event that the Government of Lao ultimately selects these

projects for construction, as the Master Plan recommends. Therefore, the competitive procurement process described below would not apply to these projects.

Some skepticism has been expressed about the practicality of applying competitive bidding to select investors to construct projects selected by the GoL. The approach recommended in here does not propose that. Instead it is only the selection of a developer to undertake a feasibility study that would be conducted through competitive bidding. If that developer succeeds in demonstrating the feasibility of the project and in satisfying the sustainability standards, it would have an exclusive and sole-source right to a concession agreement to build, own and operate the project for the concession period.

NHI believes that the current laws and procedures for procurement through competitive bidding can be adapted to also perform well for the selection of investors/developers to undertake the projects identified in the Master Plan as sustainable by adapting the two-tier process described on pages 56 of this Implementation Section. This might be done as follows:

When the Ministry of Energy and Mines wishes to move ahead with a feasibility study for a project identified in the Master Plan, it will invite submission of expressions of interest through the usual announcement process and also actively outreach to potential investors/developers. Rather than provide a complete statement of the specifications for the invited project, MEM would invite bidders to propose technical details for the project that conform with the specifications in the Master Plan as to project location, design and operations. Bidders submit offers without specifying the price. What will be awarded initially through the competitive bidding process is not a concession agreement to build the project, but an MOU to proceed with a full-fledged feasibility study that goes well beyond the pre-feasibility or reconnaissance level of analysis that produced the Master Plan.

After evaluating and ranking the submission, MEM will engage in negotiations with the top ranked bidders on the project details. The technical and quality requirements set forth in the initial specifications and criteria may be modified as a result of these negotiations (Ministry of Finance 2004, Article 11).

Bids are evaluated on the basis of technical merit and the capabilities and performance record of the bidders. In the absence of any responsive bid, MEM will review the designs and technical specifications and decide whether to make any revision before re-bidding.

EXECUTIVE SUMMARY AND CONCLUSIONS – LAO TRANSLATION

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ບົດສັງເຂບ ແລະ ຂໍ້ສະຫລຸບ

ພາກສະເຫນີ

ແຜນແມ່ບົດນີ້ ໄດ້ສ້າງຮູບແບບການພັດທະນາພະລັງງານໄຟຟ້າໃນອ່າງຮັບນ້ຳເຊກອງ ເຊິ່ງເຂື່ອນໄຟຟ້ານ້ຳຕົກ ໄດ້ຮັບການຈັດວາງ, ອອກແບບ ແລະ ດຳເນີນການ ເພື່ອຮັກສາຫນ້າທີ່ທາງທຳມະຊາດ ຂອງແມ່ນ້ຳເຊກອງ ໃຫ້ສອດຄ່ອງກັບ ດຳລັດຂອງນາຍົກລັດຖະມົນຕີກ່ຽວກັບ ການພັດທະນາພະລັງງານໄຟຟ້າແບບຍືນຍົງ ສະບັບ ລົງວັນທີ 12 ມັງກອນ 2015. ແຜນແມ່ບົດດັ່ງກ່າວໄດ້ໃຫ້ຄຳນິຍາມກ່ຽວກັບ"ພະລັງງານໄຟຟ້າແບບຍືນຍົງ" ເຊິ່ງສາມາດເປັນແນວທາງ ໃນການວາງແຜນການໃນອະນາຄົດສຳລັບປະເທດຊາດ. "ແຜນການຈັດຕັ້ງ ປະຕິບັດ" ແມ່ນຈຳເປັນເນື່ອງຈາກວ່າແຜນແມ່ບົດດັ່ງກ່າວສະແດງເຖິງ ການປ່ຽນແປງຢ່າງເຫລີກເຊິ່ງໃນການ ວາງແຜນການ ແລະການອະນຸມັດການພັດທະນາເຂື່ອນໄຟຟ້ານ້ຳຕົກ ໃນປະຈຸບັນຂະບວນການສຳລັບການວາງ ແຜນການ ແລະການອະນຸມັດການພັດທະນາພະລັງງານໄຟຟ້ານ້ຳຕົກສ່ວນໃຫຍ່ແມ່ນການລິເລີ່ມຈາກນັກລົງທຶນ ເຊິ່ງມັກຈະມີສ່ວນຮ່ວມຈາກລັດວິສະຫະກິດໄຟຟ້າລາວ (EDL).

ນັກພັດທະນາໂຄງການລະບຸສະຖານທີ່ທີ່ມີຄວາມສາມາດເປັນໄປໄດ້ ແລະອົງປະກອບຕ່າງໆຂອງໂຄງການ, ແລະຫລັງຈາກນັ້ນ ກ່ຳສະເຫນີຂໍ ບົດບັນທຶກຄວາມເຂົ້າໃຈ ຈາກກະຊວງແຜນການ ແລະການລົງທຶນ ເພື່ອ ດຳເນີນການສຶກສາຄວາມເປັນໄປໄດ້ ແລະການສຶກສາຜົນກະທົບທາງດ້ານສິ່ງແວດລ້ອມແລະສັງຄົມ ໃນ ສະຖານທີ່ດັ່ງກ່າວ. ກະຊວງແຜນການ ແລະການລົງທຶນຈະໃຫ້ບົດບັນທຶກຄວາມເຂົ້າໃຈບົນພື້ນຖານຜູ້ໃດມາ ກ່ອນໄດ້ກ່ອນ ໂຄງການຕ່າງໆທີ່ລິເລີ່ມດ້ວຍວິທີການດັ່ງກ່າວ ໂດຍຜ່ານຂະບວນການການປະເມີນຜົນ ແລະ ຮັບຮອງຈະນຳໄປສູ່ ສັນຍາສຳປະທານເພື່ອສ້າງ, ເປັນເຈົ້າຂອງ, ດຳເນີນການແລະໂອນໂຄງການດັ່ງກ່າວ ເຊິ່ງ ໃນຂັ້ນຕອນໃດກ່ຳບໍ່ມີ ການປະເມີນ ຫລືຕັດສິນໃຈວ່າ ແມ່ນ ສະຖານທີ່ໃດ, ການອອກແບບ ຫລື ການດຳເນີນ ງານໃດຈະດີທີ່ສຸດ ຫລື ວ່າຈະເປັນໄປຕາມຫລັກການ ແລະມາດຕະຖານທີ່ມີຄວາມຫມາຍສຳລັບການພັດທະນາ ພະລັງງານໄຟຟ້າແບບຍືນຍົງຫລືບໍ່. ການວິເຄາະທາງດ້ານເຕັກນິກ ແລະ ການເງິນແມ່ນດຳເນີນ ໂດຍຜູ້ ພັດທະນາ ແລະ ທີ່ປຶກສາຂອງພວກເຂົາເຈົ້າ ໂດຍໄດ້ຮັບການຄວບຄຸມບາງລະດັບຈາກ ກະຊວງພະລັງງານ ແລະ ບໍ່ແຮ່ (ກພຮ) ແລະ ກະຊວງຊັບພະຍາກອນທຳມະຊາດ ແລະ ສິ່ງແວດລ້ອມ (ກຊສ). ແຕ່ບັນດາ ກະຊວງດັ່ງກ່າວ ຍັງຂາດຄວາມສາມາດທາງດ້ານວິຊາການເພື່ອກວດກາ ການວິເຄາະດ້ານວິຊາການໂດຍນັກ ພັດທະນາ ແລະ ວິທີການເພື່ອໃຫ້ໄດ້ຄວາມຊ່ຽວຊານດັ່ງກ່າວ ແຜນແມ່ບົດນີ້ຈະປ່ຽນຂະບວນການນີ້ໂດຍ ລັດຖະບານ ສປປລາວ ຈະເຮັດການຕັດສິນໃຈໃນ ລະດັບອ່າງຮັບນ້ຳເພື່ອອະນຸມັດໂຄງການ ໂດຍອີງຕາມ ປັດໃຈດ້ານທີ່ຕັ້ງຂອງເຂື່ອນ, ການອອກແບບ, ການດຳເນີນງານ, ທີ່ລັດຖະບານຢາກໃຫ້ມີການດຳເນີນການສຶກ ສາຄວາມເປັນໄປໄດ້ ການປັບປຸງວິທີການໃນປະຈຸບັນຈະໃຫ້ຜົນປະໂຫຍດໃຫຍ່ຫລວງຕໍ່ກັບລັດຖະບານ ແຫ່ງ ສປປ ລາວ ແລະ ຜູ້ພັດທະນາເອກະຊົນ ດ້ວຍເຫດຜົນທີ່ໄດ້ອະທິບາຍໃນພາກນີ້ຂອງແຜນແມ່ບົດ

ກອບນິຕິກຳ ແລະສະຖາບັນເພື່ອການວາງແຜນ, ການອະນຸມັດ ແລະ ການຄວບຄຸມ ໂຄງການພັດທະນາພະລັງງານໄຟຟ້າ ໃນ ສປປ ລາວ

ພາກນີ້ສະເຫນີ ກ່ຽວກັບການວາງແຜນ, ອະນຸມັດ, ຄວບຄຸມ ແລະຕິດຕາມກວດກາ ການພັດທະນາ ພະລັງງານໄຟຟ້ານ້ຳຕົກ ຕາມນະໂຍບາຍ, ກົດຫມາຍ, ດຳລັດ, ລະບຽບການ, ບົດແນະນຳ, ຮູບແບບ ມາດຕະຖານຂອງສັນຍາ ແລະການປະຕິບັດດ້ານສະຖາບັນໃນ ສປປລາວ.

ຂໍ້ກຳນົດຫຼັກໃນນະໂຍບາຍກ່ຽວກັບການພັດທະນາພະລັງງານໄຟຟ້າແບບຍືນຍົງ

§5.1a) ຂະແໜງການຕ່າງໆຂອງລັດ ຕ້ອງຮັບປະກັນວ່າຜົນກະທົບທາງລົບຕໍ່ສິ່ງແວດລ້ອມ ແລະ ສັງຄົມໄດ້ ຮັບການຫລີກຫລ່ຽງ ຫລືຫຼຸດຜ່ອນ.

•§5.3b) ຜູ້ພັດທະນາໂຄງການຈະຕ້ອງຫລີກຫລ່ຽງ ແລະຫຼຸດຜ່ອນຄວາມສ່ຽງທີ່ອາດເກີດຂຶ້ນກັບ ຊັບພະຍາກອນທຳມະຊາດ ແລະ ສະພາບແວດລ້ອມ ໃນການອອກແບບ, ການກໍ່ສ້າງ ແລະການປະຕິບັດງານ.

§5.7 ໂຄງການພະລັງງານໄຟຟ້າທັງຫມົດຈະຕ້ອງປະເມີນຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມ ແລະສັງຄົມທີ່ສົມບູນ ແບບ. ສຳລັບບັນດາໂຄງການທີ່ມີຜົນກະທົບຂ້າມແດນ, EIA ຄວນປະກອບມີການປະເມີນຜົນກະທົບສະສົມ ແລະ ຜົນກະທົບຂ້າມແດນ.

§5.7 ການປະເມີນຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມ ແລະສັງຄົມຈະ “ລວມເອົາການປະເມີນຄວາມສ່ຽງສຳລັບທຸກໆຂັ້ນ ຕອນຂອງໂຄງການ, ທາງເລືອກສຳລັບໂຄງລ່າງພື້ນຖານ ແລະ ທີ່ຕັ້ງ ນັບທັງທາງເລືອກ ບໍ່ມີ-ໂຄງການ, ບົດຮຽນທີ່ຫອດຖອນໄດ້ຈາກໂຄງການທີ່ຜ່ານມາອື່ນໆ ແລະການວິເຄາະຜົນກະທົບສະສົມ ໃນລະດັບອ່າງຮັບນ້ຳ ຫລື ອ່າງຮັບນ້ຳຍ່ອຍ.

•§5.7b ກົນປະເມີນຜົນກະທົບ ສິ່ງແວດລ້ອມ ແລະ ສັງຄົມ ຂອງ ກຊສ ຮັບຜິດຂອບກ່ຽວກັບການ "ຮັບປະກັນວ່າບັນດາໂຄງການໄຟຟ້ານ້ຳຕົກ ປະຕິບັດຕາມລະບຽບການກ່ຽວກັບການປະເມີນຜົນກະທົບຕໍ່ ສິ່ງແວດລ້ອມ ແລະສັງຄົມຢ່າງເຕັມສ່ວນ”.

• §5.11 ຄວາມເສັຍຫາຍທີ່ເກີດຈາກການພັດທະນາພະລັງງານໄຟຟ້ານ້ຳຕົກຕໍ່ກັບທີ່ຢູ່ອາໄສທາງອະນຸລັກຄວນ ໄດ້ຮັບການຫຼີກລ້ຽງ ແລະຫຼຸດຜ່ອນໃຫ້ຫຼາຍເທົ່າທີ່ເປັນໄປໄດ້.

§5.1a) ການນຳໃຊ້ນ້ຳສຳລັບການບຳລຸງຮັກສາລະບົບນິເວດວິທະຍາແມ່ນເປັນທີ່ຮັບຮັບຮູ້ ແລະເປັນສິດທີ່ຖືກຕ້ອງຕາມກົດໝາຍ.

•§5.1a) ໂຄງການພະລັງງານໄຟຟ້າຫຼາຍໆໂຄງການໃນແມ່ນ້ຳດຽວຕ້ອງໄດ້ຮັບການພັດທະນາແບບປະສົມປະສານ.

•§5.1a) ຄ່າໃຊ້ຈ່າຍທັງໝົດທີ່ກ່ຽວຂ້ອງກັບການຫລີກລ້ຽງ, ການຫຼຸດຜ່ອນ, ການຊົດເຊີຍ ຫຼືການຟື້ນຟູ ຜົນກະທົບດ້ານສິ່ງແວດລ້ອມ ແລະສັງຄົມ ແມ່ນຖືວ່າເປັນຄ່າໃຊ້ຈ່າຍຂອງໂຄງການ ແລະ ຈະໄດ້ຮັບການຈ່າຍໂດຍຜູ້ພັດທະນາໂຄງການ.

§5. b ແລະ §5.2b ມອບໃຫ້ກະຊວງພະລັງງານແລະບໍ່ແຮ່ (MEM), ແລະໂດຍສະເພາະແມ່ນ ກົມນະໂຍບາຍ ແລະ ແຜນການພະລັງງານ (DEPP) ພາລະບົດບາດເປັນຜູ້ນຳໃນການຈັດຕັ້ງປະຕິບັດນະໂຍບາຍດັ່ງກ່າວ ໂດຍການປຶກສາຫາລືຢ່າງໃກ້ຊິດກັບຂະແໜງການອື່ນໆຂອງລັດ. ຂະແໜງການທີ່ມີຄວາມຮັບຜິດຊອບດັ່ງກ່າວຈະຕ້ອງພັດທະນາລະບຽບການລະອຽດ, ຄຳແນະນຳດ້ານເຕັກນິກ, ລັດຖະດຳລັດ/ລະບຽບການ ແລະ/ຫຼື ການສ້າງຄວາມອາດສາມາດຂອງສະຖາບັນ.

•§5.1a) ລັດຖະບານລາວຈະຮັບປະກັນຄວາມສົມບູນ, ຄວາມຮັບຜິດຊອບ ແລະຄວາມໂປ່ງໃສຂອງບັນດາໂຄງການໄຟຟ້ານ້ຳຕົກໂດຍຜ່ານການຕິດຕາມກວດກາການຈັດຕັ້ງປະຕິບັດຕາມ, ການລາຍງານ ແລະການເປີດເຜີຍຂໍ້ມູນຂ່າວສານ.

§5.10 ອະທິບາຍວ່າ "ໂຄງການພັດທະນາເຂື່ອນໄຟຟ້າທັງໝົດຈະຕ້ອງໄດ້ຮັບການປະຕິບັດບົນພື້ນຖານຄວາມໂປ່ງໃສ ແລະ ເປີດເຜີຍ".

•§ 5.10a) ລະບຸວ່າລະບຽບ ESIA ຕ້ອງມີ "ການເປີດເຜີຍຂໍ້ມູນກ່ຽວກັບການພັດທະນາໂຄງການ ແລະຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມແລະ ສັງຄົມ ໃຫ້ສາທາລະນະ".

§5.2 ພາກສ່ວນຕ່າງໆທີ່ກ່ຽວຂ້ອງຕ້ອງມີສ່ວນຮ່ວມໃນຂະບວນການວາງແຜນ, ການຈັດຕັ້ງປະຕິບັດແລະຕິດຕາມໂຄງການ. ໃນຂະນະທີ່ "ພາກສ່ວນທີ່ກ່ຽວຂ້ອງ" ຍັງບໍ່ໄດ້ຖືກກຳນົດຢ່າງຊັດເຈນ, ເປັນທີ່ຈະແຈ້ງວ່າຢ່າງຫນ້ອຍ ພາກສ່ວນດັ່ງກ່າວປະກອບດ້ວຍປະຊາຊົນທີ່ໄດ້ຮັບຜົນກະທົບແລະ ຂະແໜງການຕ່າງໆທີ່ກ່ຽວຂ້ອງຂອງລັດໃນທ້ອງຖິ່ນ.

§5.8 ລະບຸຢ່າງຈະແຈ້ງວ່າບຸກຄົນທີ່ຖືກ ຍົກຍ້າຍຈັດສັນ ແລະ ຍັບຍ້າຍ ມີສິດທິໃນການປຶກສາຫາລື ແລະເປັນ "ບຸກຄົນທີ່ໄດ້ຮັບຜົນກະທົບ (ທີ່ຖືກກະທົບ).

•§5.1a) ແລະ§5.14 ລະບຸວ່າບັນດາໂຄງການໄຟຟ້ານ້ຳຕົກທີ່ມີຢູ່ ຈະໄດ້ຮັບການທົບທວນຄືນເພື່ອຮັບປະກັນວ່າລັກສະນະບໍ່ຍືນຍົງຂອງບັນດາໂຄງການດັ່ງກ່າວໄດ້ຮັບການແກ້ໄຂຢ່າງເໝາະສົມ (ຫມາຍຄວາມວ່າ ບັນດາໂຄງການຢູ່ໃນຂັ້ນຕອນຂອງການພັດທະນາໃດຫນຶ່ງ, ລວມທັງບັນດາໂຄງການທີ່ໄດ້ເຮັດການສຶກສາຄວາມເປັນໄປໄດ້ ພາຍໃຕ້ ຂໍ້ບົດບັນທຶກຄວາມເຂົ້າໃຈ MoU ທີ່ມີຢູ່ແລ້ວ ກໍ່ຈະບໍ່ມີການຍົກເວັ້ນຈາກນະໂຍບາຍດັ່ງກ່າວ).

ການວາງແຜນການພັດທະນາພະລັງງານໄຟຟ້ານ້ຳຕົກ

ພາຍໃຕ້ກົດຫມາຍໄຟຟ້າ ປີ 2012, ກະຊວງພະລັງງານ ແລະບໍ່ແຮ່ ມີຄວາມຮັບຜິດຊອບໃນການສ້າງແຜນການຂອງຂະແຫນງພະລັງງານ ເພື່ອອະນຸມັດຈາກລັດຖະບານ ແຫ່ງ ສປປ ລາວ, ແຕ່ກົດຫມາຍບໍ່ໄດ້ກຳນົດການສ້າງແຜນຍຸດທະສາດໃນລະດັບອ່າງຮັບນ້ຳ. ດັ່ງນັ້ນຂະບວນການວາງແຜນແມ່ນອີງໃສ່ການສະເຫນີຂອງນັກລົງທຶນເປັນລາຍໂຄງການ, ເຊິ່ງບໍ່ແມ່ນອີງຕາມຂະແຫນງການຂອງລັດ. ເຖິງຢ່າງໃດກໍ່ຕາມ, ກົດຫມາຍວ່າດ້ວຍນ້ຳ ແລະຊັບພະຍາກອນນ້ຳ ອາດປ່ຽນແປງວິທີການວາງແຜນການດັ່ງກ່າວ ດັ່ງທີ່ໄດ້ອະທິບາຍຂ້າງລຸ່ມນີ້:

<u>ຂັ້ນຕອນໃນຂະບວນການອະນຸມັດໂຄງການໄຟຟ້ານ້ຳຕົກລວມມີ</u>:

- ຜູ້ພັດທະນາຍື່ນໃບຄຳຮ້ອງໃຫ້ຫ້ອງການ "One-Stop Service" ,ກະຊວງແຜນການແລະການລົງທຶນ ເພື່ອຂອບົດບັນທຶກຄວາມເຂົ້າໃຈ (MoU).
    - ຫລັງຈາກເຊັນບົດບັນທຶກຄວາມເຂົ້າໃຈ, ເຊິ່ງມີອາຍຸ 24 ປີ, ນັກລົວທຶນຕ້ອງໄດ້ວາງເງິນຄ້ຳປະກັນ ເຊິ່ງຂຶ້ນກັບຂະຫນາດຂອງກຳລັງຕິດຕັ້ງ,
    - ບົດ MOU ມອບສິດທິພິເສດໃຫ້ຜູ້ລົງທຶນ ດຳເນີນການສຶກສາຄວາມເປັນໄປໄດ້, ເຊິ່ງຕ້ອງໄດ້ຮັບການອະນຸມັດຈາກ MEM, ລວມທັງ ຄວາມເປັນໄປໄດ້ທາງດ້ານສັງຄົມ, ເສດຖະກິດ, ສິ່ງແວດລ້ອມ, ຕັກນິກ ແລະການເງິນ ຂອງໂຄງການໄຟຟ້າ ຢູ່ໃນສະຖານທີ່ໃດຫນຶ່ງ. ຂໍ້ກຳນົດຂອງ MoU ຍັງລວມມີ ການປະເມີນຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມແລະສັງຄົມ (ESIA) ຂອງໂຄງການທີ່ໄດ້ສະເຫນີ.
- ຫລັງຈາກການລົງນາມໃນ MOU, ຜູ້ພັດທະນາ ຈະກຽມບົດລາຍງານກ່ຽວກັບການກຳນົດຂອບເຂດ (SR) ແລະ ເງື່ອນໄຂການອ້າງອີງ (TOR) ສຳລັບການປະເມີນຜົນກະທົບດ້ານສິ່ງແວດລ້ອມ ແລະ ສັງຄົມ. ເງື່ອນໄຂສຳລັບຜູ້ພັດທະນາໄຟຟ້າໃນຂະບວນການ ESIA ລວມມີການປະເມີນຜົນກະທົບທາງດ້ານສັງຄົມ ແລະສິ່ງແວດລ້ອມທີ່ອາດເປັນໄປໄດ້ ແລະມາດຕະການເພື່ອຫຼຸດຜ່ອນຜົນກະທົບ. ESIA ຕ້ອງມີແຜນການຄຸ້ມຄອງ ແລະຕິດຕາມສິ່ງແວດລ້ອມ ແລະສັງຄົມ (ESMMP).

- ເມື່ອ ESIA ແລະ FS ໄດ້ຮັບອະນຸມັດໂດຍ ກຊສ ແລະ ກພບ, ຜູ້ພັດທະນາ ສາມາດຮ້ອງຂໍ ເອກະສານຂໍ້ຕົກລົງການພັດທະນາໂຄງການ (PDA). ນີ້ແມ່ນຄວາມມຸ່ງໝັ້ນ ຂອງລັດຖະບານ ສປປ ລາວ ວ່າໂຄງການທີ່ສຳເໜີ ສາມາດດຳເນີນການກະກຽມທາງດ້ານການເງິນ ແລະ ເຕັກນິກເພີ່ມເຕີມ ເຊັ່ນ:ວຽກງານກໍ່ສ້າງເບື້ອງຕົ້ນ (ຕົວຢ່າງ:ການສ້າງຖະໜົນຫົນທາງ), ສຳລັບສັນຍາສຳປະທານໂດຍບໍ່ ມີການແຂ່ງຂັນຈາກຄົນອື່ນໆສຳລັບສະຖານທີ່ດັ່ງກ່າວ.

    - ສິດທິຕ່າງໆທີ່ໄດ້ຮັບຈາກ PDA ແມ່ນຂຶ້ນກັບ 1) ການການອະນຸມັດຈາກ ກົມແຜນການ ແລະນະໂຍບາຍພະລັງງານ ກ່ຽວກັບການສຶກສາຄວາມເປັນໄປໄດ້ທາງດ້ານເຕັກນິກຂັ້ນສຸດ ທ້າຍ 2) ການອະນຸມັດຂອງ ກພບ ກ່ຽວກັບ ການເຊື່ອມຕໍ່ຕາຂ່າຍໄຟຟ້າ (ຖ້າແມ່ນໂຄງການ ເຊື່ອມຕໍ່ກັບຕາຂ່າຍໄຟຟ້າທີ່ມີຢູ່ຂອງ ບໍລິສັດໄຟຟ້າລາວ), 3) ການອະນຸມັດ ຂອງເງື່ອນໄຂ ທາງເສດຖະກິດ, ລວມທັງລາຄາທີ່ຈະຕ້ອງຈ່າຍໃຫ້ ບໍລິສັດໄຟຟ້າລາວ ແລະ 4) ການ ຕັດສິນໃຈໂດຍ ລັດຖະບານ ແຫ່ງ ສປປ ລາວ ວ່າໂຄງການທີ່ສະເໜີສອດຄ່ອງກັບ ນະໂຍບາຍການພັດທະນາໄຟຟ້າແບບຍືນຍົງແບບຍືນຍົງ (ສະບັບລົງວັນທີ 12 ມັງກອນ 2015). ເຖິງຢ່າງໃດກໍ່ຕາມ, ກົດໝາຍ ຫຼືນະໂຍບາຍໃນປະຈຸບັນຍັງບໍ່ໄດ້ກຳນົດໄວ້ວ່າ ແມ່ນ ພາກສ່ວນໃດຈະເປັນຜູ້ເຮັດການຕັດສິນໃຈດັ່ງກ່າວ ຫລື ດ້ວຍວິທີໃດ. ໃນພາກປະຕິບັດຕົວຈິງ ຍັງບໍ່ມີການຕັດສິນໃຈຢ່າງຊັດເຈນກ່ຽວກັບໂຄງການໄຟຟ້າທີ່ໄດ້ຮັບອະນຸຍາດ PDA ນັບ ຕັ້ງແຕ່ໄດ້ມີນະໂຍບາຍດັ່ງກ່າວ.

    - ໃນຊ່ວງໄລຍະເວລາຂອງ PDA, ຜູ້ພັດທະນາຈະເຈລະຈາສັນຍາຊື້ໄຟຟ້າ (PPA) ເຊິ່ງ ປະກອບມີຄຳໝັ້ນສັນຍາການຊື້ໄຟຟ້າໃນລາຄາທີ່ກຳນົດໄວ້ (ລາຄາ).

    - PPA ໃຫ້ກະແສລາຍຮັບທີ່ແນ່ນອນ ທີ່ຈຳເປັນເພື່ອຮັບປະກັນການຈັດຫາເງິນກູ້ຢືມຂອງ ໂຄງການ ແລະອາດຈະມີຄວາມຈຳເປັນໃນການເຮັດໃຫ້ການລົງທຶນມີຄວາມໝັ້ນຄົງຂຶ້ນ. ຂໍ້ ຕົກລົງດັ່ງກ່າວຖືເປັນຊຸດການເງິນສຳລັບໂຄງການ.

- ໃນທີ່ສຸດ ຜູ້ພັດທະນາໂຄງການສາມາດ ສະເໜີຂໍສັນຍາສຳປະທານ (CA) ຈາກ ກະຊວງແຜນການ ແລະການລົງທຶນ (MPI). ພາຍໃຕ້ CA, ນັກພັດທະນາຈະ ກໍ່ສ້າງ, ເປັນເຈົ້າຂອງ ແລະດຳເນີນງານ ພະລັງງານໄຟຟ້ານ້ຳຕົກໃນໄລຍະເວລາທີ່ໄດ້ຮັບສຳປະທານ, ຊຶ່ງສາມາດມີອາຍຸຕັ້ງແຕ່ 25-40 ປີ ພ້ອມກັບ ຊຳລະຄ່າພາກຫລວງ ແລະ/ຫຼື ພາສີ ຕາມອັດຕາປະຈຳປີທີ່ໄດ້ກຳນົດໄວ້. ເມື່ອໝົດອາຍຸສຳ ປະທານ, ເຂື່ອນໄຟຟ້າຈະຖືກໂອນໃຫ້ລັດຖະບານ ແຫ່ງ ສປປ ລາວ (ກະຊວງພະລັງງານ ແລະບໍ່ ແຮ່) ເພື່ອເປັນເຈົ້າຂອງ ແລະດຳເນີນງານຕໍ່ໄປ.

ພາຍໃຕ້ນະໂຍບາຍດັ່ງກ່າວ, ຕ້ອງໄດ້ເຮັດການປະເມີນຜົນກະທົບສະສົມ (CIA) ສຳລັບໂຄງການຕ່າງໆໃນອ່າງ ຮັບນ້ຳ ເຊິ່ງມີໂຄງການພະລັງງານໄຟຟ້າອື່ນໆຢູ່ແລ້ວ ຫລືກຳລັງມີແຜນຈະສ້າງ. ການປະເມີນຜົນກະທົບສະສົມ ຄວນປະກອບມີການປະເມີນບໍ່ສະເພາະ ແຕ່ຜົນກະທົບຕໍ່ ສະພາບແວດລ້ອມທາງຊີວະພາບ ແລະສັງຄົມເທົ່ານັ້ນ , ແຕ່ຍັງຕ້ອງມີການປະເມີນຜົນກະທົບຕໍ່ຄວາມສາມາດດ້ານການເງິນຂອງໂຄງການລົງທຶນອື່ນໆ ເຊັ່ນ ສິດໃນ ການນຳໃຊ້ນ້ຳຂອງບັນດາໂຄງການດັ່ງກ່າວ. ພ້ອມກັນນັ້ນ ພາຍໃຕ້ນະໂຍບາຍດັ່ງກ່າວ, ຜູ້ພັດທະນາ ແລະ ກົມນະໂຍບາຍ ຊັບພະຍາກອນທຳມະຊາດ ແລະສິ່ງແວດລ້ອມ ຕ້ອງຄະນຶງເຖິງຜົນກະທົບຂ້າມແດນລະຫວ່າງ ຊາດ. ໂຄງການໃດທີ່ກັກເກັບກະກອນ ເຊິ່ງໄຫຼຜ່ານເຂດແດນສາກົນ ແລະໂຄງການໃດກໍ່ຕາມທີ່ເປັນອຸປະສັກຕໍ່ ການອົບພະຍົບຂອງປາຄວນຖືວ່າມີຜົນກະທົບຂ້າມແດນດັ່ງກ່າວ.

ຄວາມສອດຄ່ອງກັບນະໂຍບາຍກ່ຽວກັບການພັດທະນາພະລັງງານໄຟຟ້າແບບຍືນຍົງ

ໃນຂະນະທີ່ຊຸມບົດລາຍງານນີ້ DESIA ຍັງບໍ່ສາມາດໃຫ້ຄວາມໝັ້ນໃຈວ່າໃນລະດັບໃດວ່າ ກົມ ນະໂຍບາຍ ຊັບພະຍາກອນທຳມະຊາດ ແລະສິ່ງແວດລ້ອມ ຮຽກຮ້ອງໃຫ້ ໂຄງການພັດທະນາພະລັງງານ ໄຟຟ້າ ປະຕິບັດຕາມ ຂໍ້ກຳນົດທີ່ສຳຄັນໃນບົດແນະນຳການປະຕິບັດນະໂຍບາຍການພັດທະນາພະລັງງານ ໄຟຟ້າແບບຍືນຍົງໃນສປປລາວ, ເນື່ອງຈາກວ່າ ກົມດັ່ງກ່າວບໍ່ໄດ້ໃຫ້ຄຳຕອບກັບຄຳຮ້ອງຂໍໃຫ້ທົບທວນ ເອກະສານເຫລົ່ານີ້. ຕົວຢ່າງ, ບໍ່ເປັນທີ່ຈະແຈ້ງວ່າ ກົມດັ່ງກ່າວໄດ້ຈັດຕັ້ງປະຕິບັດ ຂໍ້ກຳນົດສຳລັບ:

1. ການວິເຄາະຄວາມສ່ຽງໃນຕະລອດໄລຍະເວລາທັງໝົດຂອງໂຄງການ,

2. ການວິເຄາະທາງເລືອກສຳລັບໂຄງສ້າງ ແລະ ສະຖານທີ່ ຂອງໂຄງການ, ລວມທັງທາງເລືອກທີ່ບໍ່ມີ ໂຄງການ,

3. ບົດຮຽນທີ່ໄດ້ມາຈາກບັນດາໂຄງການທີ່ຜ່ານມາ,

4. ການວິເຄາະຜົນກະທົບສະສົມ

5. ການປະເມີນຜົນກະທົບຂ້າມແດນ, ຕາມຂໍ້ກຳນົດ ໃນພາກ 7 ຂອງນະໂຍບາຍຄວາມຍືນຍົງດັ່ວກ່າວ,

6. ການຕັດສິນໃຈວ່າ "ຜົນກະທົບທາງລົບຕໍ່ສິ່ງແວດລ້ອມ ແລະສັງຄົມ ທີ່ສາມາດຫລີກຫລ່ຽງ ຫຼືຫຼຸດຜ່ອນ ໄດ້" ຕາມຂໍ້ກຳນົດໃນພາກ 4 ຂອງນະໂຍບາຍດັ່ງກ່າວ.

7. ຄວາມເປີດກວ້າງ, ຄວາມໂປ່ງໃສ ແລະການເປີດເຜີຍຂໍ້ມູນ" ທີ່ເປັນພື້ນຖານສຳລັບການດຳເນີນງານ ໂຄງການໄຟຟ້າທັງໝົດ (ພາກ 10) ອາດຍ້ອນວ່າ ກົມດັ່ງກ່າວ ຍັງສືບຕໍ່ຖື ESIAs ເປັນເອກະສານລັບທີ່ ເປັນຊັບສິນຂອງຜູ້ພັດທະນາ.

ນອກນັ້ນ ຍັງສັງເກດເຫັນວ່າໃນປະຈຸບັນ ກຊສກ ຍັງບໍ່ໄດ້ມີການກຳນົດຄວາມສອດຄ່ອງກັບນະໂຍບາຍການ ພັດທະນາໄຟຟ້າແບບຍືນຍົງຢ່າງຈະແຈ້ງ ແລະກໍ່ຍັງບໍ່ທັນມີການລະບຸມາດຕະຖານຫຼືເງື່ອນໄຂທີ່ສຳຄັນສຳລັບ ການຕັດສິນໃຈດັ່ງກ່າວ. ຍັງບໍ່ມີມາດຕະຖານສຳລັບການກຳນົດຄວາມຍືນຍົງໃນກົດໝາຍທີ່ມີຢູ່ແລ້ວ. ນອກນັ້ນ

ບົດແນະນຳ ຍັງບໍ່ໄດ້ຊີ້ບອກວ່າອົງການໃດທີ່ຈະອອກກຳນົດມາດຕະຖານຫລືເງື່ອນໄຂ ເພື່ອຈັດຕັ້ງປະຕິບັດ ນະໂຍບາຍຄວາມຍືນຍົງດັ່ງກ່າວ. ດັ່ງນັ້ນການປະຕິບັດຕາມນະໂຍບາຍດັ່ງກ່າວ ແມ່ນມີລັກສະນະຂະບວນການ ຫລາຍກ່ວາ ສາລະສຳຄັນ.

ຖ້າ ESIA ແລະ ESMMP ເປັນທີ່ພໍໃຈ, ກຊສ ຈະອອກໃບຢັ້ງຢືນສິ່ງແວດລ້ອມ; ຖ້າບໍ່ເປັນທີ່ພໍໃຈ ກຊສ ຈະ ອອກຂໍ້ກຳນົດສຳລັບການທົບທວນ ແລະຍື່ນຄືນ ຫຼືປະຕິເສດໂຄງການ. ECC ແມ່ນມີຜົນສັກສິດ 2-5 ປີ ສາມາດຕໍ່ອາຍຸໄດ້ ໃນຕະຫຼອດໄລຍະເວລາຂອງການລົງທຶນ. ຂໍ້ກຳນົດການຫຼຸດຜ່ອນຜົນກະທົບແມ່ນຈະຖືກລະບຸ ເຂົ້າໃນເງື່ອນໄຂຂອງ ECC.
ໃນທາງທິດສະດີ ໂຄງການສາມາດຖືກປະຕິເສດ ເນື່ອງຈາກຜົນກະທົບດ້ານສັງຄົມແລະສິ່ງແວດລ້ອມທີ່ບໍ່ ສາມາດຫຼີກເວັ້ນໄດ້, ບໍ່ສາມາດແກ້ໄຂໄດ້ ຫຼືບໍ່ສອດຄ່ອງກັບນະໂຍບາຍດ້ານສິ່ງແວດລ້ອມແລະແຜນຍຸດທະສາດ ຂອງ ກຊສ. ເຖິງຢ່າງໃດກໍ່ຕາມ, ໃນພາກປະຕິບັດ ການປະຕິເສດໂຄງການແມ່ນຫາຍາກ. DESIA ມັກຈະ ຮັບຮອງ ESIA ບົນພື້ນຖານຂອງເນື້ອໃນຫຼາຍກ່ວາຄຸນນະພາບຂອງການວິເຄາະ. ຖ້າເຫັນວ່າຜົນກະທົບທີ່ບໍ່ ສາມາດຍອມຮັບໄດ້ເປັນຂະຫນາດໃຫຍ່ ຫຼືເຊື່ອວ່າມີທາງເລືອກທີ່ມີຜົນກະທົບຫນ້ອຍລົງ, ກໍ່ສາມາດເຮັດໄດ້ ແລະບາງຄັ້ງກໍ່ໃຫ້ຜູ້ພັດທະນາ ຕື່ມມາດຕະການຫຼຸດຜ່ອນເພີ່ມເຕີມເຊັ່ນ: ສິ່ງອຳນວຍຄວາມສະດວກໃນການ ເຄື່ອນຍ້າຍຂອງປາ ໃນການອອກແບບໂຄງການ.

ຖ້າ ECC ບັນຈຸເງື່ອນໄຂສຳລັບ ການອະນຸມັດໂຄງການ, ການລົ້ມແຫລວໃນການປະຕິບັດຕາມ ສາມາດມີຜົນ ໃນການເຮັດໃຫ້ ECC ຖືກຍົກເລີກ ຫຼືຢຸດໄດ້ ໃນຊ່ວງການລົງທຶນຂອງໂຄງການ. ຈະມີການແຈ້ງເຕືອນສອງ ຄັ້ງ ສຳລັບເຈົ້າຂອງໂຄງການໃນການແກ້ໄຂຂໍ້ບົກພ່ອງ ເຊິ່ງແຈ້ງໂດຍ MONRE ກ່ອນທີ່ຈະຖືກໂຈະ ຫລື ຍົກເລີກ: ຄຳເຕືອນຄັ້ງທຳອິດແມ່ນ 90 ວັນ ແລະທີສອງແມ່ນ 60 ວັນ.

ການຂໍອະນຸຍາດການນຳໃຊ້ນ້ຳ ພາຍໃຕ້ກົດຫມາຍນ້ຳ ແລະຊັບພະຍາກອນນ້ຳປີ 2017

ກົດຫມາຍນ້ຳ ແລະຊັບພະຍາກອນນ້ຳສະບັບປັບປຸງປີ 2017 ໄດ້ກຳນົດໃຫ້ນັກພັດທະນາຂໍໃບອະນຸຍາດ ການນຳໃຊ້ນ້ຳ. ຍັງບໍ່ຊັດເຈນເທື່ອວ່າຈະຕ້ອງຂໍໃບອະນຸຍາດດັ່ງກ່າວໃນຊ່ວງເວລາໃດໃນຂະບວນການອະນຸມັດ ການພັດທະນາພະລັງງານໄຟຟ້ານ້ຳຕົກ, ແຕ່ຈະເປັນການສົມເຫດສົມຜົນ ຖ້າຫາຕ້ອງຂໍໃບອະນຸຍາດການນຳໃຊ້ ນ້ຳດັ່ງກ່າວໃນລະຫວ່າງຂັ້ນຕອນຂອງ PDA ແລະ ກ່ອນການພິຈາລະນາຄຳຮ້ອງຂໍສັນຍາສຳປະທານ (CA). ໃບອະນຸຍາດນຳໃຊ້ນ້ຳມອບສິດການນຳໃຊ້ນ້ຳ, ຮັບປະກັນໃຫ້ຜູ້ພັດທະນາວ່າໂຄງການຂອງພວກເຂົາຈະມີນ້ຳ ພຽງພໍສຳລັບການດຳເນີນງານ. ໃບອະນຸຍາດຄາດວ່າຈະມີເງື່ອນໄຂສະເພາະໃດຫນຶ່ງເພື່ອປົກປ້ອງ ສິດຜົນປະໂຫຍດຂອງຜູ້ນຳໃຊ້ນ້ຳອື່ນໆໃນແມ່ນ້ຳດຽວກັນ.

ລັດຖະບານແຫ່ງ ສປປ ລາວ ໄດ້ສະແດງຄວາມຕັ້ງໃຈທີ່ຈະສ້າງແຜນການລະບົບການປະສານງານໃນແມ່ນ້ຳ ເພື່ອປ້ອງກັນຂໍ້ຂັດແຍ່ງທີ່ອາດເກີດຂຶ້ນຈາກສິດທິນ້ຳ ແລະ ການນຳໃຊ້ນ້ຳ ໃນປັນດາໂຄງການພະລັງງານໄຟຟ້າ ແລະ/ຫຼືຜູ້ໃຊ້ນ້ຳຕ່າງໆ. ໂດຍການປະສານສົມທົບກັບອົງການຄຸ້ມຄອງທ້ອງຖິ່ນທີ່ກ່ຽວຂ້ອງ, ກຊສ ມີຄວາມຮັບຜິດຊອບໃນການວາງແຜນຄຸ້ມຄອງອ່າງຮັບນ້ຳ ເພື່ອການພິຈາລະນາ ແລະອະນຸມັດຈາກການນຳຂັ້ນສູງ. ການວາງແຜນນີ້ຈະປະກອບມີແຜນການປະສານງານລະບົບນ້ຳ (River System Coordination Plan or RSCP), ເຊິ່ງແນໃສ່ການພັດທະນາອ່າງຮັບນ້ຳໃຫ້ເກີດປະໂຫຍດສູງສຸດ ແລະ ຄຳນຶງເຖິງຈຳນວນ, ປະເພດ ແລະ ສະຖານທີ່ຂອງໂຄງການໄຟຟ້າ, ການນຳໃຊ້ນ້ຳທີ່ບໍ່ແມ່ນພະລັງງານໄຟຟ້າ ແລະປັດໄຈດ້ານເສດຖະກິດ.

ການຂໍອະນຸຍາດການນຳໃຊ້ປ່າໄມ້ຕາມລະບຽບການກ່ຽວກັບປ່າສະຫງວນ, ປ່າປ້ອງກັນ ແລະປ່າຜະລິດ

ຕ້ອງມີການຂໍອະນຸມັດການນຳໃຊ້ ປ່າສະຫງວນ, ປ່າປ້ອງກັນ ແລະປ່າຜະລິດ ຖ້າຫາກການພັດທະນາ ພະລັງງານໄຟຟ້າມີຜົນກະທົບຕໍ່ກັບປ່າປະເພດຕ່າງໆດັ່ງກ່າວ. ການຂໍອະນຸມັດແມ່ນມີຄືດັ່ງຕໍ່ໄປນີ້:

1. ສຳລັບປ່າໄມ້ທີ່ຄຸ້ມຄອງໃນລະດັບຊາດ, ຕ້ອງໄດ້ຮັບການການອະນຸມັດຈາກຄະນະປະຈຳສະພາແຫ່ງ ຊາດ ຕາມຄຳສະເໜີຂອງລັດຖະບານ,

2. ສຳລັບປ່າໄມ້ທີ່ຄຸ້ມຄອງໃນຂັ້ນເມືອງ, ຕ້ອງໄດ້ຮັບການອະນຸມັດຈາກ ອົງການຄຸ້ມຄອງທີ່ດິນແຫ່ງຊາດ ຕາມການສະເໜີຂອງ ກະຊວງກະສິກຳ ແລະປ່າໄມ້,

3. ສຳລັບປ່າໄມ້ທີ່ຄຸ້ມຄອງໃນຂັ້ນບ້ານ, ຕ້ອງໄດ້ຮັບການອະນຸມັດ ຈາກອົງການປົກຄອງແຂວງໂດຍອີງ ຕາມການສະເໜີ ຂອງອົງການຄຸ້ມຄອງທີ່ດິນແຂວງ ຕາມການເຫັນດີຂອງພະແນກກະສິກຳ ແລະປ່າໄມ້ແຂວງ.

ຂໍ້ກຳນົດຕົ້ນຕໍສຳລັບການອະນຸມັດພື້ນທີ່ປ່າໄມ້ສຳລັບການພັດທະນາໂຄງການໄຟຟ້າ ແມ່ນຖ້າຫາກວ່າ ໂຄງການດັ່ງກ່າວສາມາດ "ສ້າງຜົນປະໂຫຍດສູງສຸດຕໍ່ປະເທດຊາດ" ແລະ ບໍ່ກໍ່ໃຫ້ເກີດຜົນກະທົບທີ່ຮ້າຍແຮງຕໍ່ ສິ່ງແວດລ້ອມ (ດຳລັດວ່າດ້ວຍປ່າປ້ອງກັນ 2010, ມາດຕາ 19, ດຳລັດວ່າດ້ວຍປ່າສະຫງວນ 2015, ມາດຕາ 25).

ປະເດັນທີ່ພົ້ນເດັ່ນໃນກອບກົດໝາຍ ແລະນິຕິກຳທີ່ມີຢູ່ ແລະ ຂໍ້ສະເໜີວິທີການແກ້ໄຂ ເພື່ອຈັດຕັ້ງປະຕິບັດແຜນແມ່ບົດ.

ຍັງມີປະເດັນທີ່ຕ້ອງໄດ້ແກ້ໄຂໃນກອບກົດໝາຍ ແລະສະຖາບັນທີ່ມີຢູ່ ສຳລັບການວາງແຜນ, ການອະນຸມັດ ແລະການຄວບຄຸມໂຄງການພັດທະນາພະລັງງານໄຟຟ້າ ເພື່ອຈັດຕັ້ງປະຕິບັດແຜນແມ່ບົດທີ່ມີຄວາມຍືນຍົງ.

ແມ່ນຫຍັງທີ່ເປັນມາດຕະຖານ ແລະເງື່ອນໄຂໃນການກຳນົດຄວາມຍືນຍົງຂອງໂຄງການໄຟຟ້ານ້ຳຕົກ

ເພື່ອຈັດຕັ້ງປະຕິບັດນະໂຍບາຍຄວາມຍືນຍົງດັ່ງກ່າວ, ລັດຖະບານຕ້ອງກຳນົດເງື່ອນໄຂ ຫຼືມາດຕະຖານ ຫຼືຄຸນລັກສະນະຂອງຄວາມຍືນຍົງ ເຊິ່ງສາມາດນຳໃຊ້ໂດຍໜ່ວຍງານທີ່ກ່ຽວຂ້ອງຂອງລັດຖະບານ ໃນການກຳນົດສະຖານທີ່, ຂະໜາດ, ການອອກແບບ, ການດຳເນີນງານ ແລະເວລາຂອງໂຄງການ ທີ່ສາມາດຮັບໃບຄຳຮ້ອງເພື່ອການກໍ່ສ້າງ ແລະ ທີ່ສາມາດໃຫ້ເປັນລາຍການກວດສອບສຳລັບຜູ້ພັດທະນາ ເພື່ອໃຫ້ພວກເຂົາເຈົ້າສາມາດສຸມການລົງທຶນໃສການສຶກສາຄວາມເປັນໄປໄດ້ຂອງໂຄງການ ດ້ວຍຄວາມໝັ້ນໃຈວ່າພວກເຂົາຈະມີເງື່ອນໄຂໃນການພິຈາລະນາ ແລະອະນຸມັດ. ນະໂຍບາຍ ແລະບົດແນະນຳການຈັດຕັ້ງປະຕິບັດນະໂຍບາຍດັ່ງກ່າວ ບໍ່ໄດ້ມອບໝາຍໜ້າທີ່ສະເພາະໃຫ້ກົມກອງໃດໃນການກຳນົດມາດຕະຖານ ແລະເງື່ອນໄຂ ເຊິ່ງຄວາມບໍ່ຈະແຈ້ງດັ່ງກ່າວເຮັດໃຫ້ຂາດພາກສ່ວນທີ່ຈະມີຄວາມຮັບຜິດຊອບນີ້.

ນະໂຍບາຍກ່ຽວກັບການພັດທະນາພະລັງງານໄຟຟ້າແບບຍືນຍົງ ປີ 2005 ເປັນກອບທີ່ໃກ້ງທີ່ສຸດ ໃນກອບທີ່ມີຢູ່ ເພື່ອໃຫ້ຄຳນິຍາມທີ່ມີເນື້ອໃນ ເຊິ່ງໄດ້ຢືນຢັນ ແລະຍ້ຳຄືນໃນດຳລັດ ປີ 2015. ນະໂຍບາຍດັ່ງກ່າວລະບຸວ່າ:

"ຄວາມຍືນຍົງດ້ານນິເວດວິທະຍາແມ່ນອີງໃສ່ການຫລີກລ້ຽງຜົນກະທົບດ້ານສິ່ງແວດລ້ອມທີ່ບໍ່ສາມາດຍ້ອນກັບໄດ້ເຊັ່ນ: ການສູນເສຍຊີວະນາໆພັນ ຫຼືການຢຸດສະງັກຂອງວົງຈອນນິເວດວິທະຍາ"

ຖະແຫຼງການນີ້ເນັ້ນໃສ່ຂະບວນການຂອງລະບົບນິເວດ ແລະຊີວະນາໆພັນ ຫຼາຍກວ່າມາດຕະຖານການນຳໃຊ້ ເຊັ່ນ ເພີ່ມຄວາມໝັ້ນຄົງສູງສຸດດ້ານສະບຽງອາຫານຫຼືການບໍລິການດ້ານສິ່ງແວດລ້ອມອື່ນໆ ສິ່ງທີ່ຍັງຂາດຢູ່ແມ່ນຄຳແນະນຳກ່ຽວກັບລະດັບ "ການຫລີກລ່ຽງ" ຫຼືການປ້ອງກັນທີ່ເປັນທີ່ຍອມຮັບໄດ້ ເນື່ອງຈາກວ່າໂຄງການໄຟຟ້ານ້ຳຕົກທັງໝົດປ່ຽນແປງໜ້າທີ່ທາງທຳມະຊາດຂອງແມ່ນ້ຳ ຂະໜາດຫຼາຍ ຫຼືນ້ອຍ ຄຳຖາມສຳລັບການກຳນົດຄວາມຍືນຍົງແມ່ນ: **ຫລາຍປານໃດຈຶ່ງເອີ້ນວ່າການປ່ຽນແປງຫລາຍເກີນໄປ?**

ຄຳຕອບໃນບົດແນະນຳໃນປີ 2015 ເບິ່ງຄືວ່າ: "ໃຫ້ນ້ອຍທີ່ສຸດເທົ່າທີ່ເປັນໄປໄດ້" ນີ້ໄດ້ສ້າງລະດັບຊັ້ນດ້ານຍຸດທະສາດເພື່ອຮັບມືກັບຜົນກະທົບ. ການປ້ອງກັນແມ່ນກົນລະຍຸດທີ່ຕ້ອງການ ຕາມມາດ້ວຍການຫລຸດຜ່ອນ, ການບັນເທົາຜົນກະທົບ ແລະການຊົດເຊີຍ ເປັນຍຸດທະສາດສຸດທ້າຍ. ນອກຈາກນີ້ຍັງໄດລະບຸວ່າກ່ອນທີ່ໂຄງການຈະໄດ້ຮັບການອະນຸມັດຈະຕ້ອງ "ຮັບປະກັນວ່າ...ຜົນກະທົບທາງລົບຕໍ່ສິ່ງແວດລ້ອມ ແລະສັງຄົມທີ່ອາດເກີດຂຶ້ນ

ສາມາດທີ່ຈະປ້ອງກັນ ແລະ/ຫຼືຫຼຸດຜ່ອນໄດ້". ນີ້ຫມາຍຄວາມວ່າໂຄງການທີ່ກໍ່ໃຫ້ເກີດຜົນກະທົບທີ່ບໍ່ສາມາດປ້ອງກັນ ຫຼືຫລຸດຜ່ອນໄດ້ ບໍ່ສາມາດຈະຖືກອະນຸມັດ. ຄວາມເປັນໄປໄດ້ນີ້ບໍ່ພຽງແຕ່ເປັນທິດສະດີ: ພາກທີ 5 ຂອງ ແຜນແມ່ບົດນີ້ ສະແດງໃຫ້ເຫັນວ່າໃນຂະນະທີ່ການເຄື່ອນທີ່ຂອງປາຜ່ານ ແລະອ້ອມເຂື່ອນຕ່າງໆ ອາດສາມາດ ຈະຫຼຸດຜ່ອນໄດ້, ໃນບາງກໍລະນີ ອ່າງຮັບນ້ຳຂອງເຂື່ອນໄຟຟ້າກໍ່ສ້າງຜົນກະທົບທີ່ບໍ່ສາມາດຫຼຸດຜ່ອນໄດ້.

ເພື່ອຊ່ວຍລັດຖະບານແຫ່ງ ສປປ ລາວ ໃນການກຳນົດຫຼັກການແລະມາດຕະຖານເພື່ອກຳນົດຄວາມຍືນຍົງຂອງ ໂຄງການໄຟຟ້າທີ່ໄດ້ສະເຫນີ, ພາກ 6 ໃນແຜນແມ່ບົດນີ້ໄດ້ສະເຫນີຄຳນິຍາມກ່ຽວກັບ "ພະລັງງານໄຟຟ້າແບບ ຍືນຍົງ" ໃນແງ່ຄຸນລັກສະນະຕ່າງໆຂອງໂຄງການທີ່ຈະຊ່ວຍ ປ້ອງກັນຜົນກະທົບທີ່ສຳຄັນທີ່ສຸດ ຕໍ່ຂະບວນການ ທາງກາຍຍະພາບຂອງແມ່ນ້ຳທີ່ ຮັກສາລະບົບນິເວດຂອງພວກເຂົາ. ແຜນແມ່ບົດຍັງອ້າງອີງຄຳແນະນຳຈາກ ສະມາຄົມພະລັງງານໄຟຟ້ານ້ຳຕົກສາກົນ, ທະນາຄານພັດທະນາອາຊີ ແລະອົງການການເງິນສາກົນທີ່ສາມາດ ຊ່ວຍລັດຖະບານແຫ່ງ ສປປ ລາວ ໃນການຮັບຮອງເອົາຫຼັກການແລະມາດຕະຖານຢ່າງເຫມາະສົມ.

ຈະກຳນົດຄວາມຍືນຍົງ ດ້ວຍວິທີໃດ, ເວລາໃດ ແລະຢູ່ໃສ?

ນະໂຍບາຍ ແລະບົດແນະນຳ ມີຄວາມບໍ່ຊັດເຈນກ່ຽວກັບບັນດາບັນຫານີ້. ກະຊວງພະລັງງານ ແລະບໍ່ແຮ່ໄດ້ຖືກ ມອບຫມາຍໃຫ້ຮັບຜິດຊອບກ່ຽວກັບ ການຈັດຕັ້ງປະຕິບັດນະໂຍບາຍຄວາມຍືນຍົງ ໂດຍປະສານສົມທົບກັບ ຂະແຫນງການອື່ນໆ (ມາດຕາ 2). ຄະນະກຳມະການລະຫວ່າງຂະແຫນງການຈະຖືກຈັດຕັ້ງຂຶ້ນໂດຍກະຊວງ ພະລັງງານ ແລະບໍ່ແຮ່ ເພື່ອໃຫ້ການຊີ້ນຳລວມ. ພາຍໃຕ້ບົດແນະນຳຄວາມຍືນຍົງ, ກົມແຜນການ ແລະ ນະໂຍບາຍພະລັງງານ "ຈະມີຄວາມຮັບຜິດຊອບໃນການຈັດຕັ້ງປະຕິບັດນະໂຍບາຍນີ້ຢ່າງມີປະສິດທິຜົນໂດຍ ປຶກສາຫາລືຢ່າງໃກ້ຊິດກັບບັນດາຂະແຫນງການ ແລະແຂວງຕ່າງໆທີ່ກ່ຽວຂ້ອງ" (§2.2). ກົມປະເມີນຜົນກະທົບ ດ້ານສິ່ງແວດລ້ອມ ແລະສັງຄົມ, ກຊສ, "ມີຄວາມຮັບຜິດຊອບໃນການຮັບປະກັນວ່າໂຄງການໄຟຟ້ານ້ຳຕົກມີ ຄວາມສອດຄ່ອງກັບດຳລັດວ່າດ້ວຍການປະເມີນຜົນກະທົບດ້ານສິ່ງແວດລ້ອມ. ດັ່ງນັ້ນແມ່ນຫນ່ວຍງານໃດແທ້ທີ່ ຮັບຜິດຊອບກ່ຽວກັບ "ຄວາມຍືນຍົງ", ພາຍໃຕ້ມາດຕະຖານ ແລະເງື່ອນໄຂໃດ ແລະ ໃນຂັ້ນຕອນໃດໃນ ຂະບວນການພັດທະນາພະລັງງານໄຟຟ້າ?

ເນື່ອງຈາກມາດຕະຖານເຫຼົ່ານີ້ເປັນຈຸດໃຈກາງຂອງນະໂຍບາຍຄວາມຍືນຍົງດ້ານພະລັງງານໄຟຟ້າ, ຫນ່ວຍງ ງານສະເພາະກິດ ພາຍໃຕ້ການຊີ້ນຳຂອງຄະນະກຳມະການລະຫວ່າງກະຊວງທີ່ຖືກສ້າງຂຶ້ນໂດຍນະໂຍບາຍ ດັ່ງກ່າວ ຈະເປັນຫນ່ວຍງານທີ່ເຫມາະສົມທີ່ຈະພັດທະນາຫຼັກການແລະມາດຕະຖານເພື່ອການອະນຸມັດ ໂດຍ ຄະນະກຳມະການນັ້ນເອງ.

ພວກຂ້າພະເຈົ້າຂໍແນະນຳວ່າ ຫລັກການ ແລະມາດຕະຖານດັ່ງກ່າວ ແມ່ນຮັບຮອງເອົາໂດຍ ຄະນະກຳມະການ ລະຫວ່າງກະຊວງ ຕາມການສະເຫນີ ຂອງ ກຊສ ເຊິ່ງເປັນອົງການທີ່ມີຄວາມຊຳນານດ້ານວິຊາການທີ່ດີທີ່ສຸດ ກ່ຽວກັບບັນຫາດັ່ງກ່າວ.

ຫຼັກການ ແລະ ເງື່ອນໄຂດັ່ງກ່າວ ຄວນຖືກນຳໃຊ້ໃນສອງຂັ້ນຕອນ. (1) ໃນອະນາຄົດ, ແຜນແມ່ບົດແນະນຳ ໃຫ້ການກຳນົດຄວາມຍືນຍົງດ້ານສິ່ງແວດລ້ອມໃນຂັ້ນຕອນການວາງແຜນພັດທະນາເຂື່ອນໄຟຟ້ານ້ຳຕົກໃນ ລະດັບອ່າງຮັບນ້ຳ ເພື່ອຮັບປະກັນມາດຕະຖານແລະເງື່ອນໄຂສຳລັບຄວາມຍືນຍົງດ້ານສິ່ງແວດລ້ອມ. ແຜນ ດັ່ງກ່າວຈະກຳນົດໂຄງການຕ່າງໆ (ສະຖານທີ່, ການອອກແບບແລະການປະຕິບັດງານ) ທີ່ໄດ້ "ມາດຕະຖານ" ຄວາມຍືນຍົງ ແລະຈະໃຫ້ຜູ້ລົງທຶນພັດທະນາ ແລະສະເໜີຂໍອະນຸມັດ.

(2) ພວກຂ້າພະເຈົ້າຢາກແນະນຳອີກວ່າການກຳນົດຄວາມຍືນຍົງເປັນຂັ້ນຕອນທີ່ຊັດເຈນໃນຂະບວນການ ອະນຸມັດໂຄງການ ທີ່ເປັນສ່ວນໜຶ່ງຂອງຂະບວນການປະເມີນຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມ ແລະສັງຄົມ ແລະ ກຊສ ຄວນຈະກຳນົດວ່າ ໂຄງການທີ່ສະເໜີແມ່ນໄດ້ຕາມ ຫຼັກການແລະມາດຕະຖານ ແລະຖືເປັນ ເງື່ອນໄຂໜຶ່ງໃນການອອກໃບຢັ້ງຢືນສິ່ງແວດລ້ອມ.

ຂະບວນການສຳລັບການມີສ່ວນຮ່ວມຂອງພາກສ່ວນຕ່າງໆທີ່ກ່ຽວຂ້ອງ

ໃນພາກປະຕິບັດຕາມປົກກະຕິໃນປະຈຸບັນແມ່ນໃຫ້ມີການມີສ່ວນຮ່ວມຂອງປະຊາຊົນໃນໄລຍະຕົ້ນ ແຕ່ຂາດການ ມີສ່ວນຮ່ວມໃນໄລຍະຜົນໄດ້ຮັບຂອງ ESIA ຫຼື ESMMP, ເຊິ່ງອາດຈະເປັນເພາະວ່າ ກຊສ ຖືວ່າເອກະສານ ເຫຼົ່ານັ້ນເປັນຊັບສິນທີ່ເປັນຄວາມລັບຂອງຜູ້ພັດທະນາ, ເຊິ່ງບໍ່ສອດຄ່ອງກັບນິດແນະນຳການຈັດຕັ້ງປະຕິບັດ ນະໂຍບາຍຄວາມຍືນຍົງ ເຊິ່ງຄວນຈະຖືກແກ້ໄຂ ພວກເຮົາຂໍແນະນຳກ່ຽວກັບການປັບປຸງການມີສ່ວນຮ່ວມຂອງ ພາກສ່ວນຕ່າງໆທີ່ກ່ຽວຂ້ອງໃນພາກຕໍ່ໄປ.

ສິດ ແລະສິດທິຫຍັງທີ່ໄດ້ຮັບອະນຸຍາດຈາກ MoU, PDA ຫຼື ECC?

ຫນຶ່ງໃນບັນຫາທີ່ສຳຄັນທີ່ສຸດໃນການຈັດຕັ້ງປະຕິບັດນະໂຍບາຍການພັດທະນາໄຟຟ້າແບບຍືນຍົງຄື ສິດ ແລະ ສິດທີ່ໄດ້ມອບຫມາຍໃຫ້ແກ່ຜູ້ພັດທະນາໄຟຟ້າໂດຍ MoU ເພື່ອດຳເນີນການສຶກສາຄວາມເປັນໄປໄດ້, ໂດຍ ສັນຍາການພັດທະນາໂຄງການ ຫຼື ໃບຢັ້ງຢືນສິ່ງແວດລ້ອມ (ECC)? ເອກະສານຕ່າງໆດັ່ງກ່າວ ໄດ້ໃຫ້ຄຳ ສັນຍາໃດໆ ຫຼືຮັບປະກັນວ່າໂຄງການຈະໄດ້ຮັບ ການສຳປະທານຫລືບໍ່? ນີ້ແມ່ນສຳຄັນຫລາຍທີ່ສຸດເພາະວ່າ ຈະມີຜົນຕໍ່ການກຳນົດຄວາມຍືນຍົງ ສຳລັບບັນດາໂຄງການທີ່ໄດ້ຮັບ MoU ຫຼື PDA ແລ້ວ, ເຊິ່ງລວມທັງ ໂຄງການຕ່າງໆຕາມແມ່ນ້ຳສາຍຫລັກ ເຊກອງ.

ພາຍໃຕ້ກົດຫມາຍ ແລະລະບຽບການຕ່າງໆທີ່ກ່ຽວຂ້ອງໃນສປປລາວ, ຜູ້ພັດທະນາທີ່ໄດ້ຮັບ MOU ຫຼື PDA ໄດ້ຮັບການຮັບປະກັນສິດທິພິເສດສຳລັບການສຶກສາຄວາມເປັນໄປໄດ້, ຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມ, ຄວາມ ສາມາດທາງດ້ານການເງິນ ແລະການກວດສອບອື່ນໆໃນສະຖານທີ່ສະເພາະໃດຫນຶ່ງ. ຖ້າການສຶກສາເຫຼົ່ານີ້ ສະແດງໃຫ້ ລັດຖະບານເຫັນວ່າໂຄງການແມ່ນເປັນໄປໄດ້ແລະມີຄວາມຍືນຍົງ, ໂຄງການດັ່ງກ່າວ ມີສິດໄດ້ຮັບ ສັນຍາສຳປະທານ ບົນພື້ນຖານທີ່ບໍ່ມີການແຂ່ງຂັນ. ເຖິງຢ່າງໃດກໍ່ຕາມ MOUs ແລະ PDAs ບໍ່ໄດ້ໃຫ້ຄວາມ

ແນ່ນອນວ່າລັດຖະບານຈະຕັດສິນໃຈອະນຸມັດໂຄງການດັ່ງກ່າວ. ໂຄງການທີ່ໄດ້ຮັບ ECC ໂດຍອີງໃສ່ ESIA ທີ່ບໍ່ປະຕິບັດຕາມມາດຖານໃຫມ່ໃນນະໂຍບາຍດັ່ງກ່າວຂ້າງເທິງ ຫຼືບໍ່ປະກອບມີການຄົ້ນພົບຢ່າງຊັດເຈນວ່າຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມທີ່ສໍາຄັນທັງຫມົດຈະຖືກປົກປ້ອງ ຫຼືຫຼຸດຜ່ອນ ຈະບໍ່ມີເງື່ອນໄຂໃນການໄດ້ຮັບສັນຍາສໍາປະທານ CA ຂໍ້ບັງຄັບໃຫມ່ເຫຼົ່ານີ້ປະກອບມີການປະເມີນຜົນກະທົບສະສົມ ແລະຜົນກະທົບຜ່ານແດນ ແລະການປະເມີນຜົນ ຈຸດທີ່ຕັ້ງຂອງເຂື່ອນ, ການອອກແບບ ແລະທາງເລືອກດ້ານການດໍາເນີນງານ. ການຖືຄອງ MoU ຫຼື PDA ບໍ່ໄດ້ຮັບການຍົກເວັ້ນຈາກເງື່ອນໄຂຕ່າງໆດັ່ງກ່າວ.

ການປັບປຸງຂະບວນການທີ່ຈໍາເປັນເພື່ອຈັດຕັ້ງປະຕິບັດແຜນແມ່ບົດ

ດັ່ງທີ່ໄດ້ອະທິບາຍຂ້າງເທິງ, ຂະບວນການປະຈຸບັນສໍາລັບການວາງແຜນການພັດທະນາພະລັງງານໄຟຟ້າ ແລະການອະນຸມັດໃນ ສປປລາວ ແມ່ນເປັນຜົນມາຈາກການລິເລີ່ມຂອງນັກລົງທຶນ, ໂດຍມີການຄວບຄຸມບາງລະດັບຈາກກະຊວງພະລັງງານແລະບໍ່ແຮ່ ແລະກະຊວງອື່ນໆທີ່ກ່ຽວ. ພາລະບົດບາດຂອງລັດຖະບານໃນທີ່ຜ່ານມາແມ່ນມີລັກສະນະຕອບສະຫນອງ ແທນທີ່ ຈະເປັນເຊີງບຸກ. ດັ່ງນັ້ນ, ການພັດທະນາກໍ່ເກີດຂຶ້ນໃນຮູບແບບຕາມມີຕາມເກີດ, ໂດຍຂາດການຄໍານຶງເຖິງທາງເລືອກທີ່ດີທີ່ສຸດໃນລະດັບອ່າງຮັບນ້ໍ, ແລະບົນພື້ນຖານການປະຕິບັດຕາມຂັ້ນຕອນແທນທີ່ຈະເປັນມາດຕະຖານທີ່ສໍາຄັນ.

ແຜນແມ່ບົດເຂື່ອນໄຟຟ້ານ້ໍາຕົກແບບຍືນຍົງສໍາລັບອ່າງຮັບນ້ໍາເຊກອງ ສະແດງໃຫ້ເຫັນວ່າຂະບວນການນີ້ສາມາດປັບປຸງ ໃຫ້ສອດຄ່ອງກັບນະໂຍບາຍກ່ຽວກັບການພັດທະນາພະລັງງານໄຟຟ້າແບບຍືນຍົງ ແລະກົດຫມາຍຊັບພະຍາກອນນ້ໍາສະບັບປັບປຸງ. ເພື່ອຈັດຕັ້ງປະຕິບັດແຜນແມ່ບົດ ລັດຖະບານຈະມີບົດບາດເຊີງບຸກໃນການພິຈາລະນາວ່າສິ່ງອໍານວຍຄວາມສະດວກທີ່ຕ້ອງການສຶກສາຄວາມເປັນໄປໄດ້ ດ້ານ ເຕັກນິກ, ເສດຖະກິດ ແລະ ສິ່ງແວດລ້ອມ ເຊິ່ງຈະລວມເຖິງ ການຕັດສິນໃຈກ່ຽວກັບ ສະຖານທີ່, ຂະຫນາດ, ການອອກແບບ, ການດໍາເນີນງານ, ໄລຍະເວລາ ແລະຂໍ້ກໍານົດໃນການຫຼຸດຜ່ອນຜົນກະທົບ. ທັງຫມົດເຫຼົ່ານີ້ ຍົກເວັ້ນໄລຍະເວລາ ຈະຖືກກໍານົດໄວ້ໃນແຜນແມ່ບົດ.

ນອກຈາກການນໍາໄປສູ່ໂຄງການທີ່ມີຄວາມຍືນຍົງຫຼາຍຂຶ້ນ, ວິທີການວາງແຜນແບບລວມສູນຈະໃຫ້ຜົນປະໂຫຍດທີ່ສໍາຄັນສໍາລັບ ລັດຖະບານ ແລະບັນດາຜູ້ພັດທະນາ. ລັດຖະບານ ແຫ່ງ ສປປ ລາວ ຈະຢູ່ໃນຖານະ ທີ່ຈະກໍານົດຊຸດໂຄງການ ທີ່ສາມາດຈະອະນຸມັດໄດ້ ພາຍໃຕ້ນະໂຍບາຍຂອງ ລັດຖະບານ ແຫ່ງ ສປປ ລາວ ກ່ຽວກັບຄວາມຍືນຍົງ ເພື່ອເພີ່ມການຜະລິດພະລັງງານທີ່ມີຕົ້ນທຶນຕໍ່ານ. ການວາງແຜນທົ່ວລະບົບຈະປັບປຸງຂະບວນການພັດທະນາໂຄງການຍ້ອນວ່າບາງສ່ວນຂອງການສຶກສາຕົ້ນໆສາມາດດໍາເນີນການຮ່ວມກັນໄດ້. ນີ້ຈະຊ່ວຍປະຢັດເງິນໃນໄລຍະຍາວ ແລະຜະລິດຂໍ້ມູນທີ່ມີຄຸນຄ່າທີ່ຈະຫຼຸດຜ່ອນຄວາມບໍ່ແນ່ນອນ ແລະຄວາມສ່ຽງທາງດ້ານການເງິນທີ່ກ່ຽວຂ້ອງກັບບຸກຄົນ, ໂຄງການພັດທະນາທີ່ເປັນຜົນມາຈາກ ການລິເລີ້ມຂອງນັກ

ພັດທະນາ. ລັດຖະບານ ແຫ່ງ ສປປ ລາວ ຈະກາຍເປັນ "ຕົ້ນສະບັບຂອງເຮືອນຂອງຕົນເອງ" ກ່ຽວກັບການ ພັດທະນາເສດຖະກິດແບບຍືນຍົງ ຂອງຊັບພະຍາກອນນ້ຳຂອງຕົນເອງ ເພື່ອບັນລຸຜົນປະໂຫຍດທີ່ສູງສຸດສຳລັບ ປະຊາຊົນລາວ ນັບທັງລຸ້ນປະຈຸບັນ ແລະໃນອະນາຄົດ.

ການປັບປຸງໃນຂະບວນການວາງແຜນ ແລະອະນຸມັດໂຄງການໄຟຟ້ານ້ຳຕົກນີ້ ຈະຕ້ອງມີການປັບປຸງບາງຢ່າງ ໃນກົດໝາຍ, ກົດລະບຽບ ແລະການປະຕິບັດທາງສະຖາບັນ. ພາກຍ່ອຍນີ້ຂໍໃຫ້ຄຳແນະນຳສຳລັບການປັບປຸງ ທີ່ຈຳເປັນ ເພື່ອສາມາດຈັດຕັ້ງປະຕິບັດນະໂຍບາຍການພັດທະນາພະລັງງານໄຟຟ້າແບບຍືນຍົງ ໃນ ສປປລາວ ໄດ້ຢ່າງເຕັມສ່ວນ.

ຄຳແນະນຳທີ 1: ກະຊວງພະລັງງານແລະບໍ່ແຮ່ ກະກຽມແຜນການສ້າງເຂື່ອນໄຟຟ້ານ້ຳຕົກແບບຍືນ ຍົງລະດັບອ່າງຮັບນ້ຳ

ກົນໄກແຜນການແລະນະໂຍບາຍພະລັງງານ ມີພາລະບົດບາດໃນການສ້າງແຜນພັດທະນາໄຟຟ້າໃນລະດັບ ຊາດ (ເບິ່ງກົດໝາຍວ່າດ້ວຍໄຟຟ້າ). ແຕ່ວ່າ ສະພາແຫ່ງຊາດແລະ/ ຫຼືນາຍົກລັດຖະມົນຕີ ຄວນມີຄຳສັ່ງ ໃຫ້ການພັດທະນາໄຟຟ້າໃນອະນາຄົດເກີດຂຶ້ນໃນກອບຂອງແຜນການພັດທະນາລະດັບອ່າງຮັບນ້ຳເທົ່ານັ້ນ ໃນ ການຈັດວາງສະຖານທີ່, ອອກແບບ ແລະນະໂຍບາຍການດຳເນີນງານສຳລັບໂຄງການໄຟຟ້ານ້ຳຕົກ.

ແຜນແມ່ບົດສະແດງໃຫ້ເຫັນເຖິງຄວາມທ້າທາຍຫລັກ ໃນການພັດທະນາແຜນການພັດທະນາພະລັງງານໄຟຟ້ານ້ຳຕົກທີ່ຍືນຍົງ ເຊິ່ງຕ້ອງຄຳນຶງເຖິງຂັ້ນຕອນຕໍ່ໄປນີ້:

1. ການສຳຫຼວດສະຖານທີ່ທີ່ເໝາະສົມສຳລັບໂຄງການໄຟຟ້ານ້ຳຕົກ ໃນແງ່ຂອງເງື່ອນໄຂທາງດ້ານກາຍະ ພາບທີ່ຈຳເປັນ ເຊິ່ງແມ່ນ ພູມີປະເທດ, ອຸທົກກະສາດ ແລະໂທລະນິວິທະຍາ.

2. ສຳລັບແຕ່ລະສະຖານທີ່, ປະເມີນຜົນກະທົບຂອງເຂື່ອນແລະ ອ່າງເກັບນ້ຳ ເຊິ່ງຈະມີຜົນກະທົບຕໍ່ການເຄື່ອນ ຍ້າຍຂອງປາ ແລະປາທີ່ຢູ່ອາໄສໃນທ້ອງຖິ່ນ. ລົບລ້າງ ຫຼືໃຫ້ບູລິມະສິດທີ່ຕ່ຳລົງໃຫ້ກັບສະຖານທີ່ທີ່ມີຜົນກະທົບ ທີ່ບໍ່ປາດຖະໜາ.

3. ສຳລັບສະຖານທີ່ທີ່ຍັງເຫຼືອ ປະເມີນການອອກແບບທີ່ຈະຊ່ວຍການໄຫລຂອງຕະກອນ ແລະມາດຕະການ ຫຼຸດຜ່ອນການປະມົງສູງສຸດ.

4. ກຳນົດນະໂຍບາຍການດຳເນີນງານສຳລັບເຂື່ອນທີ່ຮັກສາຄວາມຄ້າຍຄືກັນຂອງລະບົບການໄຫຼແບບທຳມະ ຊາດທີ່ເປັນປະໂຫຍດຕໍ່ການຮັກສາຄຸນຄ່າຂອງນິເວດ.

5. ຄາດຄະເນຜົນຜະລິດພະລັງງານໄຟຟ້າຈາກໂຄງການເຫຼົ່ານີ້.

6. ດຳເນີນການວິເຄາະຕົ້ນທຶນ ແລະຜົນປະໂຫຍດທາງດ້ານເສດຖະກິດຂອງໂຄງການດັ່ງກ່າວ ເພື່ອຮັບປະກັນວ່າໂຄງການດັ່ງກ່າວຈະຜະລິດຜົນປະໂຫຍດດ້ານເສດຖະກິດສຸດທິທາງບວກ.

7. ສະເໜີທາງເລືອກທີ່ດີທີ່ສຸດ, ອາດຈະຈັດອັນດັບໃຫ້ແກ່ນັກລົງທຶນເອກະຊົນ ຜ່ານການປະມູນສາທາລະນະ.

ເມື່ອຂັ້ນຕອນເຫຼົ່ານີ້ສຳເລັດແລ້ວ ກໍ່ຈະສາມາດດຳເນີນການອະນຸມັດໂຄງການແຕ່ລະໂຄງການໃນແຜນແມ່ບົດໃນລະດັບອ່າງຮັບນ້ຳຕາມຂະບວນການໃນປະຈຸບັນ, ລວມທັງຂັ້ນຕອນຂອງ MoU, FS, ESIA ແລະ CA. ຂັ້ນຕອນທັງໝົດເຫຼົ່ານີ້ຈະໄດ້ຮັບການອຳນວຍຄວາມສະດວກຢ່າງຫຼວງຫຼາຍ ໂດຍການເຮັດວຽກດ້ານວິຊາການເພື່ອ ສ້າງແຜນແມ່ບົດລະດັບອ່າງຮັບນ້ຳ. ແຕ່ວ່າຂະບວນການສະເພາະສະຖານທີ່ໃດໜຶ່ງຈະດຳເນີນຢູ່ໃນລະດັບທີ່ລະອຽດຫລາຍຂຶ້ນໃນການວິເຄາະ ເຊິ່ງຈະລວມເຖິງດ້ານວິສະວະກຳ ແລະດ້ານການເງິນ.

ຖ້າລັດຖະບານແຫ່ງ ສປປ ລາວ ຕັດສິນໃຈໃຫ້ໂຄງການທີ່ໄດ້ເຊັນບົດບັນທຶກຄວາມເຂົ້າໃຈແລ້ວ ແລະດຳເນີນການສຶກສາຄວາມເປັນໄປໄດ້ ບັນຈຸຢູ່ໃນ "ແຜນແມ່ບົດ", ເຈົ້າຂອງໂຄງການດັ່ງກ່າວ ກໍ່ຈະມີສິດທີ່ຈະເຂົ້າຫາຂັ້ນຕອນຂອງ CA ໂດຍປາດສະຈາກການແຂ່ງຂັນ. ສຳລັບບັນດາໂຄງການໃນແຜນແມ່ບົດທີ່ບໍ່ທັນໄດ້ເຊັນບົດບັນທຶກຄວາມເຂົ້າໃຈ, ລັດຖະບານຈະເປີດການປະມູນລະດັບສາກົນ ເພື່ອຮັບເອົາຄຳຮ້ອງສະໝັກທີ່ມີຄວາມສາມາດແຂ່ງຂັນຈາກຜູ້ພັດທະນາໃນອະນາຄົດ ເພື່ອສຶກສາຄວາມເປັນໄປໄດ້. ຖ້າການສຶກສາຄົ້ນຄວ້າເຫຼົ່ານີ້ສະແດງໃຫ້ເຫັນຜົນໃນທາງບວກແລະໂຄງການດັ່ງກ່າວໄດ້ຕາມມາດຕະຖານຄວາມຍືນຍົງ, ຜູ້ພັດທະນາດັ່ງກ່າວຈະໄດ້ຮັບສິດສັນຍາສຳປະທານເພື່ອກໍ່ສ້າງແລະດຳເນີນໂຄງການ.

ຄຳແນະນຳທີ 2: ກົມນະໂຍບາຍຊັບພະຍາກອນທຳມະຊາດ ແລະສິ່ງແວດລ້ອມ ຄວນຈັດຕັ້ງປະຕິບັດຄຳແນະນຳໃນນະໂຍບາຍກ່ຽວກັບການປະເມີນຜົນກະທົບດ້ານສິ່ງແວດລ້ອມ ແລະສັງຄົມ ແລະການກຳນົດຄວາມຍືນຍົງ

ພາລະບົດບາດທີ່ມີຢູ່ແລ້ວແມ່ນພຽງພໍສຳລັບການປະເມີນຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມແລະສັງຄົມ ແລະການກຳນົດຄວາມຍືນຍົງ. ສິ່ງທີ່ຈຳເປັນແມ່ນການປະຕິບັດຕາມຂໍ້ກຳນົດທາງກົດໝາຍມີຢູ່ທັງໝົດ, ໂດຍສະເພາະແມ່ນນະໂຍບາຍກ່ຽວກັບການພັດທະນາພະລັງງານໄຟຟ້າແບບຍືນຍົງ ແລະໂດຍສະເພາະແມ່ນຂະບວນການ ສຳລັບ ESIA. ຄວາມຕ້ອງການສຳລັບການຮັບຮອງ ESIA ດັ່ງຕໍ່ໄປນີ້ ຄວນຖືກບັງຄັບໃຊ້ໂດຍ ກົມນະໂຍບາຍຊັບພະຍາກອນທຳມະຊາດ ແລະສິ່ງແວດລ້ອມ:

1. ການວິເຄາະຄວາມສ່ຽງຕະຫລອດໄລຍະເວລາຂອງໂຄງການ,

2. ການວິເຄາະທາງເລືອກສຳລັບໂຄງສ້າງໂຄງການແລະສະຖານທີ່, ລວມທັງທາງເລືອກທີ່ບໍ່ມີໂຄງການ,

3. ບົດຮຽນຈາກບັນດາໂຄງການທີ່ຜ່ານມາ,

4 ການວິເຄາະຜົນກະທົບສະສົມ

5. ການປະເມີນຜົນກະທົບຂ້າມແດນ.

ກ່ອນທີ່ຈະອອກໃບຢັ້ງຢືນສິ່ງແວດລ້ອມ, ກົມນະໂຍບາຍ ຊັບພະຍາກອນທຳມະຊາດ ແລະສິ່ງແວດລ້ອມ ຄວນ ສະຫລຸບໄດ້ຢ່າງຊັດເຈນວ່າ "ຜົນກະທົບທາງລົບຕໍ່ສິ່ງແວດລ້ອມແລະສັງຄົມສາມາດປ້ອງກັນໄດ້ ແລະ/ຫຼື ຫຼຸດຜ່ອນໄດ້" ໂດຍໂຄງການ ຕາມການອອກແບບ ແລະສະເໜີ. ພ້ອມກັນນັ້ນ ກົມນະໂຍບາຍ ຊັບພະຍາກອນທຳມະຊາດ ແລະສິ່ງແວດລ້ອມ ຄວນກຳນົດວ່າ ESIA ທັງໝົດຈະພ້ອມສຳລັບການກວດສອບ ແລະສະແດງຄວາມຄິດເຫັນ ຈາກພາກສ່ວນຕ່າງໆທີ່ກ່ຽວຂ້ອງ, ຜູ້ໄດ້ຮັບຜົນກະທົບຈາກໂຄງການ, ແລະ ປະຊາຊົນທົ່ວໄປ ເພື່ອໃຫ້ສອດຄ່ອງກັບບົດຄຳແນະນຳການຈັດຕັ້ງປະຕິບັດນະໂຍບາຍວ່າໂຄງການພະລັງງານ ໄຟຟ້ານ້ຳຕົກ", ເຊິ່ງລະບຸວ່າ ໂຄງການພະລັງງານໄຟຟ້ານ້ຳຕົກຄວນໄດ້ຮັບການພັດທະນາບົນພື້ນຖານຂອງ “ຄວາມເປີດເຜີຍ, ໂປ່ງໃສ ແລະການເປີດເຜີຍຂໍ້ມູນ". ໂດຍລວມແລ້ວ, ການປະຕິບັດນະໂຍບາຍກ່ຽວກັບການ ພັດທະນາພະລັງງານໄຟຟ້າແບບຍືນຍົງບໍ່ຈຳເປັນຕ້ອງມີກົດໝາຍໃໝ່, ພຽງແຕ່ຕ້ອງປະຕິບັດຕາມກົດໝາຍທີ່ ມີຢູ່ແລ້ວ.

ຄຳແນະນຳທີ 3: ປັບປຸງ ການມີສ່ວນຮ່ວມຂອງປະຊາຊົນໃນຂະບວນການອະນຸມັດ

ບົດແນະນຳການຈັດຕັ້ງປະຕິບັດນະໂຍບາຍກ່ຽວກັບການພັດທະນາພະລັງງານໄຟຟ້າແບບຍືນຍົງ,ກົດລະບຽບ ກ່ຽວກັບການປະເມີນຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມແລະສັງຄົມ ແລະກົດລະບຽບກ່ຽວກັບການປະເມີນຜົນ ສິ່ງແວດລ້ອມໃນເບື້ອງຕົ້ນໄດ້ກຳນົດໃຫ້ມີການປຶກສາຫາລືກັບພາກສ່ວນຕ່າງໆທີ່ກ່ຽວຂ້ອງ ແລະການມີສ່ວນ ຮ່ວມຂອງປະຊາຊົນໃນຂະບວນການອະນຸມັດໂຄງການໄຟຟ້ານ້ຳຕົກ. ປະເດັນທີ່ພາກສ່ວນຕ່າງໆທີ່ກ່ຽວຂ້ອງມັກ ໃຫ້ຄວາມສົນໃຈ ໄດ້ແກ່ຜົນກະທົບດ້ານ ສິ່ງແວດລ້ອມ ແລະສັງຄົມ, ແຜນການຄຸ້ມຄອງແລະຕິດຕາມປະເມີນ ຜົນສິ່ງແວດລ້ອມແລະສັງຄົມ, ມາດຕະການຫຼຸດຜ່ອນຜົນກະທົບ ແລະແຜນການຍົກຍ້າຍຈັດສັນ.

ສິ່ງສຳຄັນຄືການປຶກສາຫາລືກ່ອນທີ່ຈະມີການຕັດສິນໃຈທີ່ສຳຄັນໆ ແລະສືບຕໍ່ການປຶກສາຫາລືໃນຊ່ວງການ ກໍ່ສ້າງແລະດຳເນີນງານ. ການມີສ່ວນຮ່ວມຂອງປະຊາຊົນຈະມີຄວາມໝາຍແລະປະສິດທິຜົນສູງທີ່ສຸດຖ້າວ່າ ການປຶກສາຫາລືໃນຊ່ວງເລີ້ມຕົ້ນຂອງໂຄງການ ແລະ ສືບຕໍ່ຈົນສິ້ນສຸດໂຄງການ. ຂັ້ນຕອນທີ່ສຳຄັນແລະເປັນ ປະໂຫຍດທີ່ສຸດແມ່ນ ຂັ້ນຕອນການປຶກສາຫາລືໃຫ້ໄວຫຼັງຈາກ ESIA ແລະ ESMMP ໃນເບື້ອງຕົ້ນໄດ້ສຳ ເລັດຜົນ ແລະກ່ອນທີ່ ECC ແລະ SESO ຈະໄດ້ຮັບການອະນຸມັດ. ໃນຂັ້ນຕອນນີ້ ກຊສ ແລະນັກພັດທະນາ ຄວນ ຈັດກອງປະຊຸມປຶກສາຫາລືສາທາລະນະ ຫຼື ປຶກສາຫາລືລະດັບກຸ່ມຮ່ວມກັນ ກັບກຸ່ມທີ່ໄດ້ຮັບຜົນກະທົບ (PAPs) ແລະພາກສ່ວນຕ່າງໆທີ່ກ່ຽວຂ້ອງ ເພື່ອສະຫຼຸບຜົນການຄົ້ນພົບໃນ ESIA ແລະ ESMMP, ເພື່ອ ຕອບຄຳຖາມແລະເກັບກຳຄຳຄິດເຫັນ. ການມີສ່ວນຮ່ວມນີ້ຈະມີຜົນປະໂຫຍດຫຼາຍທີ່ສຸດ ຖ້າ ESIA ປະກອບມີ ການປະເມີນຜົນທາງເລືອກ ຕາມທີ່ໄດ້ຖືກມອບໝາຍໂດຍບົດແນະນຳກ່ຽວກັບການຈັດຕັ້ງປະຕິບັດນະໂຍບາຍ

ການພັດທະນາໄຟຟ້ານ້ຳຕົກແບບຍືນຍົງ. ການປະຕິບັດຕາມປົກກະຕິໃນທີ່ຜ່ານມາສ່ວນຫລາຍແລ້ວການມີສ່ວນຮ່ວມຂອງປະຊາຊົນຈະມີໄລຍະຕົ້ນເທົ່ານັ້ນ ແລະບໍ່ຄ່ອຍມີໃນຊ່ວງທີ່ໄດ້ຮັບຜົນທາງດ້ານ ESIA ຫຼື ESMMP ແລ້ວ, ເຊິ່ງອາດເນື່ອງຈາກວ່າ ກຊສ ຍັງຖືວ່າເອກະສານຕ່າງໆດັ່ງກ່າວເປັນຊັບສິນທີ່ເປັນຄວາມລັບຂອງຜູ້ພັດທະນາ, ເຊິ່ງບໍ່ສອດຄ່ອງກັບຄຳແນະນຳໃນນະໂຍບາຍຄວາມຍືນຍົງ, ເຊິ່ງຄວນຈະມີການແກ້ໄຂ.

ປະເດັນສຳຄັນສຳລັບການກະກຽມແຜນການການປຶກສາຫາລືກັບພາກສ່ວນຕ່າງໆທີ່ກ່ຽວຂ້ອງປະກອບມີ:

- ສ້າງຕັ້ງທີມງານການປຶກສາຫາລື/ການມີສ່ວນຮ່ວມຂອງປະຊາຊົນ (ທີມງານຫຼັກ)

- ຝຶກອົບຮົມໃຫ້ທີມງານຫລັກ, ລວມທັງການຝຶກອົບຮົມ ຫຼັກການແລະວິທີການຕ່າງໆເພື່ອການປຶກສາຫາລືທີ່ມີປະສິດຕິພາບລວມທັງກົນໄກການຮ້ອງທຸກ.

- ວ່າຈ້າງຜູ້ອຳນວຍຄວາມສະດວກ ຫຼື ຈັດການຝຶກອົບຮົມສະເພາະດ້ານການອຳນວຍຄວາມສະດວກໃຫ້ແກ່ທີມງານຫຼັກ.

- ທົດສອບວິທີການ ເຄື່ອງມືແລະເຕັກນິກທີ່ຈະໃຊ້ໃນແຜນການປຶກສາຫາລື. ພາກສ່ວນທີ່ກ່ຽວຂ້ອງທີ່ແຕກຕ່າງກັນ ອາດໃຊ້ເຄື່ອງມື ແລະເຕັກນິກທີ່ແຕກຕ່າງກັນ.

- ສ້າງກົນໄກເພື່ອໃຫ້ພາກສ່ວນຕ່າງໆທີ່ກ່ຽວຂ້ອງສາມາດ ສົ່ງຄຳຄິດຄຳເຫັນ ຫລືຄວາມຫ່ວງໃຍຂອງເຂົາເຈົ້າ ແລະສະເໜີວິທີການແກ້ໄຂ ໃນຕະຫຼອດວົງຈອນຊີວິດຂອງໂຄງການ. ພາກລັດ ແລະນັກພັດທະນາຄວນໃຊ້ກົນໃກ ການຮ້ອງທຸກ ເພື່ອຕອບສະໜອງຕໍ່ກັບຄວາມກັງວົນ/ຂໍ້ສະເໜີ ຂອງພາກສ່ວນຕ່າງໆກ່ຽວຂ້ອງ (ທຸກໆພາກສ່ວນທີ່ກ່ຽວຂ້ອງ, ບໍ່ແມ່ນສະເພາະແຕ່ສຳລັບປະຊາຊົນທີ່ໄດ້ຮັບຜົນກະທົບ) ແລະລວມທຸກໆດ້ານຂອງຄວາມຍືນຍົງ, ບໍ່ສະເພາະແຕ່ການຍົກຍ້າຍຈັດສັນ.

ຄຳແນະນຳ 4: ສ້າງກົນໄກການລະດົມເງິນທຶນເພື່ອການວາງແຜນການພັດທະນາພະລັງງານໄຟຟ້າແບບຍືນຍົງໃນ ສປປລາວ

ແຜນແມ່ບົດເປັນແມ່ແບບສຳລັບການວາງແຜນການພັດທະນາເຂື່ອນໄຟຟ້ານ້ຳຕົກແບບຍືນຍົງທີ່ສາມາດປັບປຸງໄດ້ຕື່ມອີກ ສຳລັບອ່າງຮັບນ້ຳເຊກອງ ແລະຂະຫຍາຍໄປສູ່ ອ່າງຮັບນ້ຳອື່ນໆໃນ ສປປລາວ ແລະ ໃນອ່າງຮັບນ້ຳແມ່ນ້ຳຂອງ. ການດຳເນີນການຕາມແຜນແມ່ບົດດັ່ງກ່າວ ຈະຕ້ອງມີ ກະຊວງ ພະລັງງານ ແລະບໍ່ແຮ່ ແລະ ກະຊວງຊັບພະຍາກອນທຳມະຊາດ ແລະສິ່ງແວດລ້ອມ ທີ່ຕ້ອງມີບົດບາດເຊີງບຸກໃຫ້ຫລາຍຂຶ້ນ ໃນການ

ກຳນົດສະຖານທີ່ທີ່ເໝາະສົມ, ການອອກແບບໂຄງການ ແລະກຳນົດນະໂຍບາຍການດຳເນີນງານໂຄງການ ແບບຍືນຍົງ. ໃນອະດີດ ນັກພັດທະນາເຂື່ອນໄຟຟ້າເປັນຜູ້ລິເລີ່ມ ແລະສະໜັບສະໜູນການສຶກສາດ້ານ ເຕັກນິກ ເພື່ອສ້າງໂຄງການທີ່ມີກາຍະພາບ ແລະປະເມີນຜົນກະທົບທາງດ້ານສິ່ງແວດລ້ອມແລະສັງຄົມ, ດ້ວຍ ການຄວບຄຸມບາງລະດັບຈາກກະຊວງຕ່າງໆດັ່ງກ່າວ. ສຳລັບບັນດາກະຊວງດັ່ງກ່າວນີ້ທີ່ຈະລິເລີ່ມໃນອະນາຄົດ ອາດຈະຕ້ອງມີການລົງທຶນຢ່າງຫຼວງຫຼາຍໃນດ້ານເຕັກນິກ.

ການຄາດການວ່າ ກົນແຜນການ ແລະນະໂຍບາຍພະລັງງານ, ກະຊວງພະລັງງານ ແລະບໍ່ແຮ່ ຈະເຮັດການ ວິເຄາະດ້ານເຕັກນິກທີ່ຈຳເປັນ ໃນການສ້າງແຜນແມ່ບົດລະດັບອ່າງຮັບນ້ຳ ເພື່ອນຳໄປສູ່ການພັດທະນາ ພະລັງງານໄຟຟ້າໃນອະນາຄົດ ແລະຈັດຕັ້ງປະຕິບັດນະໂຍບາຍຄວາມຍືນຍົງ ໂດຍປາດສະຈາກວິທີການທາງ ດ້ານການເງິນແມ່ນເປັນໄປໄດ້ຍາກ ດັ່ງນັ້ນກົນໄກທາງການເງິນຈຶ່ງເປັນສິ່ງຈຳເປັນສຳລັບການໃຊ້ວິທີການໃໝ່ ນີ້.

ສະຖາບັນອະນຸລັກທຳມະຊາດ (NHI) ບໍ່ໄດ້ພົບເຫັນຮູບແບບທີ່ແນ່ນອນຈາກບ່ອນອື່ນ ເພື່ອຖອດຖອນບົດຮຽນ ໃນການແນະນຳກົນໄກການລະດົມທຶນ ເພື່ອຈຸດປະສົງການວາງແຜນການຜະລິດໄຟຟ້ານ້ຳຕົກແບບຍືນຍົງ ລະດັບອ່າງຮັບນ້ຳພຽງຈຸດປະສົງດຽວ. ວິທີການທີ່ດີທີ່ສຸດແມ່ນສ້າງກອງທຶນຫມູນວຽນທີ່ຈະເລີ່ມຕົ້ນດ້ວຍການ ລະດົມທຶນຄັ້ງທຳອິດຈາກຜູ້ສະໜັບສຸໜູນຫລາຍໆອົງການ ເຊັ່ນ: ໂຄງການການກະກຽມໃນໂຄງການ ເອ ເຊັຍ-ປາຊີຟິກ ຂອງທະນາຄານພັດທະນາອາຊີ (ADB) ແລະ ຈາກການປະເມີນຜົນຂອງໂຄງການ ເມື່ອ ໂຄງການດັ່ງກ່າວຜ່ານຂັ້ນຕອນຂອງການອະນຸມັດ.

ອີກວິທີການໜຶ່ງ ໃນການເພີ້ມເຕີມທຶນສຳລັບການວາງແຜນການພັດທະນາພະລັງງານໄຟຟ້າແບບຍືນຍົງແມ່ນ ການລວບລວມການປະເມີນຜົນໃນໂຄງການ ເປັນສ່ວນໜຶ່ງຂອງຂະບວນການປະມູນ ເພື່ອການສຶກສາຄວາມ ເປັນໄປໄດ້ໃນບສະຖານທີ່ທີ່ໄດ້ເລືອກໄວ້. ສິ່ງສຳຄັນກໍ່ຄືກົນໄກການລະດົມທຶນດັ່ງກ່າວຕ້ອງໄດ້ຮັບການຄຸ້ມຄອງ ຢ່າງເຂັ້ມງວດ ແລະ ຕ້ອງໃຊ້ທຶນດັ່ງກ່າວສຳລັບຈຸດປະສົງທີ່ມັນຖືກສ້າງຂຶ້ນມາເທົ່ານັ້ນ. ອີກຂັ້ນຕອນໜຶ່ງທີ່ ຕ້ອງໄດ້ເພີ້ມເຕີມໃສ່ຂັ້ນຕອນຂອງຂອງສັນຍາສຳປະທານ ແມ່ນ ການປະເມີນເງິນທຶນທີ່ຈະນຳມາໃຊ້ເພື່ອເສີມ ສ້າງກອງທຶນເບື້ອງຕົ້ນ ເຊິ່ງອາດສາມາດນຳມາໃຊ້ເພື່ອການວາງແຜນແມ່ບົດໃນຂັ້ນຕອນຕໍ່ໄປ. ນີ້ຈະສ້າງກົນໄກ ການວາງແຜນການຜະລິດພະລັງງານໄຟຟ້ານ້ຳຕົກທີ່ສາມາດຍືນຍົງໄດ້ຢ່າງບໍ່ມີກຳນົດ.

ຍັງສາມາດເກັບຄ່າທຳນຽມໄດ້ອີກເມື່ອສິ້ນສຸດຂັ້ນຕອນການປະມູນ ຕົວຢ່າງນີ້ໃຊ້ໃນປະເທດບຣາຊິນ, ສະເປນ ແລະປະເທດ ອື່ນໆ. ທາງເລືອກອື່ນແມ່ນການກຳນົດໃຫ້ມີຄ່າທຳນຽມຊັບພະຍາກອນ ຫລືຄ່າຊົດເຊີຍຜົນກະທົບ ເປັນສ່ວນໜຶ່ງຂອງສັນຍາສຳປະທານ. ນີ້ອາດເປັນແຫລ່ງທີ່ຕ້ອງການສຳລັບການເພີ້ມເຕີມເງິນໃນກອງທຶນວາງ ແຜນພະລັງງານໄຟຟ້າ ໃນກໍລະນີທີ່ໂຄງການ ຢູ່ພາຍໃຕ້ບົດບັນທຶກຄວາມເຂົ້າໃຈທີ່ມີຢູ່ ແລະ ໃຊ້ຂະບວນການ

ປະມູນທີ່ບໍ່ມີການແຂ່ງຂັນ. ຍົກຕົວຢ່າງ, ພາຍໃຕ້ສັນຍາສໍາປະທານຂອງ ໂຄງການນ້ໍາເທີນ II (900 MW) ໃນສປປລາວ, ລັດຖະບານລາວໄດ້ຮັບຄ່າພາກຫລວງເຖິງ 30% ຂອງລາຍຮັບລວມ ແລະຄ່າທໍານຽມການໃຊ້ ຊັບພະຍາກອນ ເຖິງ 30% ຂອງລາຍໄດ້ສຸດທິຈາກບໍລິສັດໄຟຟ້ານ້ໍາເທີນ 2. ຄ່າທໍານຽມການນໍາໃຊ້ ຊັບພະຍາກອນດັ່ງກ່າວອາດເກັບຈາກໂຄງການໃຫມ່ ແລະໃຊ້ເຂົ້າໃນການວາງແຜນສໍາລັບ ກຸ່ມໂຄງການໃຫມ່ ໃນແຜນແມ່ບົດ ແລະປະກອບສ່ວນເຂົ້າໃນກິດຈະກໍາຕ່າງໆເພື່ອຟື້ນຟູ ຫຼືຫຼຸດຜ່ອນຜົນກະທົບດ້ານສັງຄົມແລະ ສິ່ງແວດລ້ອມ. ນອກຈາກນັ້ນ, Srinivasan (2013) ສະເຫນີວ່າ "ເປັນສ່ວນຫນຶ່ງຂອງບົດບັນທຶກຄວາມ ເຂົ້າໃຈ ຫຼືສັນຍາລະຫວ່າງຜູ້ພັດທະນາແລະລັດຖະບານ, ທຶນຂອງລັດຖະບານອາດຈະເປັນ ສິດທິຫຼືທຶນໃນ ໂຄງການ. ສິດທິດັ່ງກ່າວສາມາດຂາຍໄດ້ໃນເວລາປິດການເງິນ "(ຫນ້າ 4).

ຄໍາແນະນໍາ 5: ປັບກົດຫມາຍແລະຂັ້ນຕອນການປະມູນສາທາລະນະ ແລະ ການປະມູນແບບແຂ່ງຂັນ ໃນການຈັດຕັ້ງປະຕິບັດແຜນແມ່ບົດ

ແຜນແມ່ບົດສໍາລັບການພັດທະນາພະລັງງານໄຟຟ້າແບບຍືນຍົງໃນອ່າງຮັບນ້ໍາເຊກອງ ແມ່ນຄັ້ງທໍາອິດ ໃນ ສປປ ລາວ ເຊິ່ງເປັນວິທີການ ທີ່ ລັດຖະບານແຫ່ງ ສປປ ລາວ ສາມາດໃຊ້ ພື່ອປະເມີນ ແລະເລືອກເອົາທາງ ເລືອກການພັດທະນາພະລັງງານໄຟຟ້າກ່ອນ ຂໍ້ສະເຫນີຕ່າງໆ ຈາກຜູ້ພັດທະນາເອກະຊົນ (ຫຼືຜູ້ພັດທະນາ ສາທາລະນະເຊັ່ນ EDL ຫຼື EDL-Gen). ໂຄງການຕ່າງໆທີ່ ລັດຖະບານ ເຫັນວ່າເປັນທາງເລືອກທີ່ດີທີ່ສຸດໃນ ດ້ານ ສະຖານທີ່, ການອອກແບບ ແລະການປະຕິບັດງານ ຈະໄດ້ຖືກອະນຸມັດໃຫ້ຜູ້ພັດທະນາໄຟຟ້າພາຍໃຕ້ ການປະມູນສາທາລະນະ ຕາມກໍານົດເວລາ ເຊິ່ງກົງກັບ ເປົ້າຫມາຍດ້ານພະລັງງານ ແລະລາຍຮັບຂອງ ລັດຖະບານແຫ່ງ ສປປ ລາວ, ໂດຍໃຊ້ຂະບວນການປະມູນ ທີ່ຄຸ້ມຄອງໂດຍ ລັດຖະບານ.

ດັ່ງທີ່ໄດ້ລະບຸໃນພາກທີ 7 ຂອງແຜນແມ່ບົດ, ມີ 5 ໂຄງການທີ່ຖືວ່າໄດ້ມາດຕະຖານທີ່ມີຄວາມຍືນຍົງທີ່ໄດ້ ສະເຫນີຢູ່ໃນພາກທີ 6 ທີ່ມີການສຶກສາຄວາມເປັນໄປໄດ້ ພາຍໃຕ້ບົດບັນທຶກຄວາມເຂົ້າໃຈ ຫຼື PDA ທີ່ມີຢູ່ ແລ້ວ ບົດບັນທຶກຄວາມເຂົ້າໃຈ MOU ແລະ PDA ໃຫ້ສິດພິເສດໃຫ້ ຜູ້ຖືຖືຄອງ ໃນການພັດທະນາໂຄງການ ເຫຼົ່ານີ້ບົນພື້ນຖານທີ່ບໍ່ມີການແຂ່ງຂັນ ໃນກໍລະນີທີ່ລັດຖະບານລາວ ເລືອກໂຄງການເຫຼົ່ານີ້ສໍາລັບການກໍ່ສ້າງ ຕາມທີ່ແຜນແມ່ບົດແນະນໍາ. ດັ່ງນັ້ນຂະບວນການປະມູນທີ່ອະທິບາຍຂ້າງລຸ່ມນີ້ຈະບໍ່ສາມາດນໍາໃຊ້ກັບໂຄງການ ເຫຼົ່ານີ້.

ໄດ້ມີບາງຂໍ້ສົງໄສກ່ຽວກັບຄວາມເປັນໄປໄດ້ໃນການນໍາໃຊ້ການປະມູນທີ່ມີການແຂ່ງຂັນເພື່ອຄັດເລືອກນັກລົງທຶນ ສໍາລັບກໍ່ສ້າງໂຄງການທີ່ລັດຖະບານໄດ້ເລືອກໄວ້ ວິທີການທີ່ແນະນໍາໃນທີ່ນີ້ບໍ່ໄດ້ແນະນໍາແນວນັ້ນ ແຕ່ແມ່ນການ ຄັດເລືອກຜູ້ພັດທະນາເພື່ອດໍາເນີນການສຶກສາຄວາມເປັນໄປໄດ້ ໂດຍການຄັດເລືອກຈາກການປະມູນແບບ ແຂ່ງຂັນ. ຖ້າຜູ້ພັດທະນານັ້ນສາມາດສະແດງຄວາມເປັນໄປໄດ້ຂອງໂຄງການແລະໄດ້ ມາດຕະຖານຄວາມຍືນ

ຍົງ, ຜູ້ພັດທະນາດັ່ງກ່າວຈະມີສິດຢ່າງຂາດຕົວໃນການຮັບສັນຍາສຳປະທານ ເພື່ອ ການກໍ່ສ້າງ, ເປັນເຈົ້າຂອງ ແລະດຳເນີນໂຄງການໃນໄລຍະເວລາຂອງການສຳປະທານ.

ສະຖາບັນອະນຸລັກທຳມະຊາດ (NHI) ເຊື່ອວ່າຍັງສາມາດປັບປຸງກົດໝາຍ ແລະລະບຽບການໃນການຈັດຫາ ຜ່ານການປະມູນທີ່ມີການແຂ່ງຂັນ ສຳລັບການເລືອກນັກລົງທຶນ/ນັກພັດທະນາເພື່ອດຳເນີນໂຄງການທີ່ໄດ້ກຳນົດ ໄວ້ໃນແຜນແມ່ບົດ ເຊິ່ງເປັນກຸ່ມໂຄງການທີ່ມີຄວາມຍືນຍົງ ດ້ວຍການປັບປຸງຂະບວນການສອງຂັ້ນຕອນທີ່ໄດ້ ອະທິບາຍໃນໜ້າ _____ ຂອງ ນີ້ພາກການຈັດຕັ້ງປະຕິບັດ ທີ່ອາດສາມາດເຮັດໄດ້ດັ່ງຕໍ່ໄປນີ້:

ໃນເວລາທີ່ກະຊວງພະລັງງານແລະບໍ່ແຮ່ ມີຈຸດປະສົງທີ່ຈະດຳເນີນການສຶກສາຄວາມເປັນໄປໄດ້ ສຳລັບ ໂຄງການທີ່ໄດ້ກຳນົດໄວ້ໃນແຜນແມ່ບົດ, ກະຊວງດັ່ງກ່າວກໍ່ສາມາດເຊື້ອເຊີນຄວາມສົນໃຈຂອງນັກລົງທຶນ ຜ່ານ ຂະບວນການປະກາດແຈ້ງການຕາມປົກກະຕິ ແລະພ້ອມກັນນັ້ນກໍ່ເຂົ້າເຖິງນັກລົງທຶນ/ນັກພັດທະນາທີ່ມີສັກກາ ຍະພາບ. ແທນທີ່ຈະໃຫ້ຂໍ້ມູນຄົບຖ້ວນສົມບູນກ່ຽວກັບຂໍ້ກຳນົດສຳລັບໂຄງການທີ່ໄດ້ແຈ້ງການ, ກະຊວງ ພະລັງງານ ແລະບໍ່ແຮ່ ຈະໃຫ້ຜູ້ເຂົ້າຮ່ວມປະມູນສະເໜີລາຍລະອຽດດ້ານເຕັກນິກ ສຳລັບໂຄງການ ໃຫ້ ສອດຄ່ອງກັບຂໍ້ກຳນົດໃນແຜນແມ່ບົດ ໃນແງ່ຂອງທີ່ຕັ້ງ, ການອອກແບບ ແລະ ການທຳງານ. ຜູ້ປະມູນ ໂຄງການຈະຍື່ນຂໍ້ສະເໜີ ໂດຍບໍ່ຕ້ອງສະເໜີລາຄາ. ສິ່ງທີ່ຈະໄດ້ຮັບໂດຍຜ່ານຂັ້ນຕອນການປະມູນທີ່ມີການ ແຂ່ງຂັນ ບໍ່ແມ່ນສັນຍາສຳປະທານທີ່ຈະສ້າງໂຄງການ ແຕ່ວ່າເປັນບົດບັນທຶກຄວາມເຂົ້າໃຈ MoU ເພື່ອດຳເນີນ ການສຶກສາຄວາມເປັນໄປໄດ້ຢ່າງສົມບູນ ເຊິ່ງຈະເກີນກ່ວາລະດັບຄວາມເປັນໄປໄດ້ ຫລື ການສຳຫລວດກ່ອນ ທີ່ຈະມີການວິເຄາະ ສຳລັບການສ້າງແຜນແມ່ບົດ.

ຫຼັງຈາກການປະເມີນ ແລະຈັດລຳດັບການຍື່ນສະເໜີ, ກະຊວງພະລັງງານ ແລະບໍ່ແຮ່ ຈະເຈລະຈາກັບຜູ້ເຂົ້າ ຮ່ວມການປະມູນທີ່ໄດ້ຮັບການຈັດອັນດັບສູງສຸດ ດ້ານລາຍລະອຽດຂອງໂຄງການ ຂໍ້ກຳນົດທາງດ້ານເຕັກນິກ ແລະຄຸນນະພາບທີ່ໄດ້ກຳນົດໄວ້ໃນຂໍ້ກຳນົດແລະເງື່ອນໄຂໃນເບື້ອງຕົ້ນອາດຈະຖືກດັດແກ້ ເນື່ອງຈາກຜົນຂອງ ການເຈລະຈານີ້ (ກະຊວງການເງິນ 2004, ມາດຕາ 11).

ການປະເມີນການປະມູນແມ່ນອີງໃສ່ ເງື່ອນໄຂທາງດ້ານເຕັກນິກ ແລະ ຄວາມສາມາດ ແລະຄວາມສຳເລັດໃນ ທີ່ຜ່ານມາ. ບາງຄັ້ງ ແຜນແມ່ບົດສຳລັບອ່າງຮັບນ້ຳບາງອ່າງອາດປະກອບມີໂຄງການເຂື່ອນໄຟຟ້າກຸ່ມໜຶ່ງ ທີ່ມີ ຄວາມເປັນໄປໄດ້ເທົ່ານັ້ນ, ຫຼືຈະໄດ້ຜົນປະໂຫຍດສູງສຸດ ຖ້າຫາກວ່າດຳເນີນການແບບທີ່ມີການປະສານສົມທົບ. ໂດຍທົ່ວໄປ, ການປະຕິບັດງານແບບປະສານສົມທົບແມ່ນຈະເຮັດໄດ້ດີທີ່ສຸດໂດຍເຈົ້າຂອງດຽວແລະຜູ້ປະກອບ ການດຽວ. ດັ່ງນັ້ນ, ໃນກໍລະນີດັ່ງກ່າວ, ກະຊວງພະລັງງານ ແລະບໍ່ແຮ່ ອາດຈະຕັດສິນໃຈທີ່ຈະເລືອກເອົາຜູ້ ສະໜັກທີ່ ສະແດງຄວາມຕັ້ງໃຈ ແລະສາມາດທີ່ຈະນຳໃຊ້ວິທີການພັດທະນາທີ່ມີການປະສານສົມທົບ.ໃນກໍລະນີ ທີ່ບໍ່ມີການຕອບໜອງກັບການປະມູນ, ກະຊວງພະລັງງານ ແລະບໍ່ແຮ່ ຈະທົບທວນການອອກແບບ ແລະຂໍ້ກຳ ນົດດ້ານເຕັກນິກ ແລະຕັດສິນໃຈວ່າຈະເຮັດການປັບປຸງໃດໆກ່ອນການປະມູນຄືນໃໝ່.

THE CURRENT LEGAL AND INSTITUTIONAL FRAMEWORK FOR HYDROPOWER PLANNING, APPROVAL AND REGULATION IN LAO PDR

Background

The Master Plan sets forth a scenario for hydropower development in the Xe Kong basin in which hydropower facilities are sited, designed and operated to maintain the natural functions of the Xe Kong River that sustain its exceptional fishery productivity. The Master Plan also provides a functional definition of "sustainable hydropower" that can guide future planning for the entire nation. This work is necessary because the current proposals for hydropower development in the Xe Kong basin clearly do not qualify as environmentally "sustainable" under any meaningful definition of that term in that they are unnecessarily damaging to fishery resources in Lao as well as posing large transboundary risks to the downstream fishery in Cambodia and Vietnam.

In undertaking this work, the Natural Heritage Institute (NHI) was also requested by the Ministry of Energy and Mines (MEM) to include a "road map" or "instruction manual" for each relevant department of the government on how to implement such a basin-wide approach to hydropower development in a manner that complies with the Decree on Sustainable Hydropower Development. Such an "implementation plan" is needed because the Master Plan calls for a quite significant change in the way hydropower development planning and approvals are currently conducted by these departments. Today, the development schemes are initiated by outside investors, often with some equity participation by Électricité du Laos (EDL), while the relevant departments of the government play an oversight role that is largely reactive. In applying for a Memorandum of Understanding to conduct a feasibility study of a project, the developers select a proposed location, design and operation. If that proposal proves to be feasible both technically and financially, the project moves through the approval pipeline to an eventual concession agreement. The details of this current process are summarized in the section below. In sum, development occurs in an ad hoc manner initiated by the developers rather than in a coherent fashion orchestrated by the Government of Lao to assure the best sites, designs and operations are pursued.

Under the master plan approach, the Government of Lao PDR takes the initiative to survey and assess potential hydropower sites in a river basin to determine the locations that would best satisfy sustainability principles and standards. For the sites identified, it would then prescribe designs and operations to maintain sediment flows, afford fish passage, and otherwise mitigate effects on natural and social resources. To make these determinations, the GoL would conduct a programmatic-level environmental and social assessment, the core of which is comparison of alternative sites, designs and operation and their social and environmental costs and benefits, as exemplified in the proposed Master Plan for the Xe Kong Basin. This review is at a reconnaissance level of analysis that aims to identify the projects that seem most likely to meet sustainability criteria (environmental, technical and financial) for purposes of inviting further and more definitive studies by interested developers in a full-fledged feasibility study and project-specific environmental and social impact assessment, just as is done under current practice.

In sum, the current process would be revised in three ways:

1) The Ministry of Energy and Mines and the Ministry of Natural Resources and Environment would identify potential hydropower projects that satisfy sustainability principles and criteria by conducting and comparing site suitability surveys and environmental and social impact assessments at a pre-feasibility or reconnaissance level of analysis, as illustrated by the Master Plan for the Xe Kong Basin.

2) The Ministry of Planning and Investment would offer to prospective developers on a competitive basis the opportunity to enter into a Memorandum of Understanding to conduct a technical and financial feasibility study, under the processes currently used, and to conduct an environmental and social impact assessment.

3) Before issuing Environmental Compliance Certificates, MoNRE would assure that the ESIAs fully comply with the new requirements prescribed in the Policy on Sustainable Hydropower Development and its implementing guidelines with respect to scope and content. These new requirements are as follows:

   - an analysis of alternatives for project structure and locations, including a no-project alternative,
   - cumulative impact analysis (see discussion below at page 17),
   - a meaningful assessment of transboundary impacts,
   - lessons learned from previous projects,
   - a risk analysis over the entire life span of the project,

   Furthermore, before issuing an Environmental Compliance Certificate, MoNRE would:
   - make a determination whether all "potential negative impacts on the environment and social system can be prevented and/or mitigated,
   - require assurance from the developer that it has made the ESIA availably to the public upon request in compliance with the instruction that hydropower development is to be conducted with openness, transparency and information disclosure.

Overview of the Current Process

This Section outlines how hydropower development is planned, approved, regulated and monitored under existing decrees, laws, regulations, policies, guidelines, standard forms of agreement and institutional practices in Lao PDR, including, among others, the following sources of law and guidance:

- Policy Guidelines for the implementation of the Policy on Sustainable Hydropower in Lao PDR
- Environmental Protection Law.
- Decree on Environment Impact Assessment and its technical guidelines,
- Ministerial Instructions on the Process of Environmental and Social Impact Assessment of the Investment Projects and Activities, 2013
- Law on water resources,
- Pending Electricity Law
- Decree on Protection Forest
- Decree on Compensation and Resettlement of People affected by Development Projects, 2016.
- Investment Law 2016
- Standard form Memoranda of Understanding issued by the Ministry of Planning and Investment for hydropower feasibility studies,
- Standard form Project Development Agreements,
- Standard form Concession Agreements
- Standard form Power Purchase Agreements with EDL
- Standard form ESIA (Environmental and Social Impact Assessment) Compliance Certificates
- Likely standard form Water Impoundment Permits

Because the main purpose of this Implementation Section is to chart a course for implementation of the Master Plan in conformance with the relatively new Policy on Sustainable Hydropower Development, it will be useful to first outline the salient features of that Policy and then describe how the process for hydropower planning, approval and regulation works—or more, precisely, should work—with the requirements of that policy factored in.

Key requirements of the Policy on Sustainable Hydropower Development

- §5.1a) **The Government** agencies are to ensure that potential negative impacts on the environment and social system are prevented or mitigated.

- §5.3b) **Project developers** shall prevent and mitigate any potential risks to the natural resources and the environment in the design, construction and operation stages.

- §5.7 **All hydropower projects** shall undertake a comprehensive Environmental and Social Impact Assessment. For any project with large transboundary impacts, the EIA shall include a cumulative and transboundary impact assessment.

- §5.7 The environmental and social impact assessments will "include a **risk assessment** over the entire life-span of the [the] 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 the basin and/or sub-basin levels. [The requirement for assessment of alternative sites and designs of hydropower

projects is particularly relevant to this Master Plan, which is essentially just that: an assessment of sustainable alternatives to proposed projects.]

- §5.7b The Department of Natural Resources and Environmental Policy of MoNRE is charged with the responsibility for "ensuring that hydropower projects are fully in compliance with the [regulations on environmental and social impact assessment]. [Yet, notably, neither the Policy Guidelines nor the ESIA regulations specify which agency of the Government of Lao PDR is responsible for the determination whether a proposed project is environmentally or socially "sustainable", the process for making that determination, or the substantive standard that is to be applied. This is the greatest major omission of the Lao Policy.]

- §5.11 **Natural conserved habitat** losses due to hydropower development projects shall be avoided and mitigated as much as possible.[1]

- §5.1a) **Use of water for ecological maintenance** is recognized as a legitimate water right.

- §5.1a) Multiple hydropower projects on a single river are to be developed in an **integrated** manner.

  §5.1a) All **costs** associated with environmental and social impact avoidance, mitigation, compensation or restoration are to be treated as project expenses to be borne by the project developer.

- §5. b and §5.2b assigns to the Ministry of Energy and Mines, and specifically the Department of Energy Policy and Planning (DEPP) the lead role for implementation of the policy in close consultation with the other responsible agencies of the Government of Lao PDR. Responsible agencies are to develop detailed procedures, technical guidelines, supporting decrees/regulations, and/or institutional capacity building.

- §5.1a) The GoL will ensure integrity, accountability, and transparency of hydropower projects through compliance monitoring, reporting and information disclosure.

- §5.10 provides that "All hydropower development project shall be undertaken on the basis of transparency and openness."

[1] §5.11 "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. [The developer m]ust also develop a sustainable biodiversity management plan, consider compensation or help mitigate the impact on the local natural resource base".

- § 5.10a) notes that the ESIA regulations require "public disclosure of information related to the project development and their social and environmental impacts. [Notably, however, this injunction has not (yet) been applied to public access to environmental and social impact assessments which are still regarded by the MoNRE as the property of the developers (who do, indeed, pay for their preparation as required by §5.7 of the Guidelines).][2]

- §5.2 **Stakeholders are to be included** in the process of planning, implementation and monitoring of projects. While the "stakeholders" are not defined explicitly, the term apparently includes at least the local affected peoples and government officials. §5.8 makes clear that persons subject to displacement and relocation have a right to consultation and as "project-affected persons (PAPs).

- §5.1a) and §5.14 **Existing hydropower projects** will be reviewed to ensure that unsustainable aspects are adequately addressed (i.e., projects at any stage of development, including those for which feasibility studies have been conducted under existing MOUs are not exempt from the policy).

Hydropower development planning

Under the Electricity Law of 2012, the MEM is responsible for developing the official governmental plans for the power sector (Article 10) in coordination with the relevant departments of various ministries including Planning and Investment, Natural Resources and Environment, National Defense, Public Security, Finance, and local authorities (Article 63). According to Article 6 of the Law on the Government of Lao PDR (2003), the "government" that approves such plans consists of the Prime Minister, Deputy Prime Ministers, Ministers and Chiefs of relevant Committees with equal status to MEM.

The Electricity Law calls for development strategies and plans in the short, medium and long-terms, but does not mandate the preparation of such plans at the river basin scale. Thus, the government does not provide a comprehensive river basin development plan (Article 10) that the individual hydropower projects are required to fit within, although the new Water Resources Law may change that (see discussion at page 24). Rather, the planning process for individual projects is left to the initiative of the developers rather than these government agencies. The Electricity Law (2012) does set out the steps for the developers to follow submitting their own plans in terms of data collection and guidance on design, construction, installation, generation, transmission, distribution, and provision of export-import and services (Article 9).

The new Policy on Sustainable Hydropower Development in Lao PDR (PSHD 2015), requires that, to achieve social, economic and environmental sustainability, electricity planning is to be undertaken in collaboration with relevant stakeholders in the management, utilization of water and water resources for "optimal benefits" (Section 5.2, paragraph 1). The term "stakeholders"

[2] §5.7a) notes that the regulations of MoNRE require public participation during the preparation of the environmental and social impact assessments as well as disclosure of "public information". No definition of that term is provided, however.

is not defined in this Policy, but usually stakeholders include relevant government departments at the national and local levels and the affected local people. Requirements for stakeholder participation (including project affected people) are found in the Policy Guidelines (Section 3, Page 3), but it is not clear how meaningful and high-quality participation is to be ensured. The term "optimal benefits" is also not defined and there is no standard or process to ascertain the optimal benefits.

Process and standards/criteria for approval of a hydropower project

The steps in the approval process include obtaining a Memorandum of Understanding (MOU), a Project Development Agreement (PDA), and, finally, a Concession Agreement (CA) (Electricity Law 2012, Article 29). Figure 12-1 shows these steps. These steps are required for build-operate-transfer (BOT) projects and for build-own-operate (BOO) projects. The Department of Energy Business (DEB) of MEM is the focal agency for the management of the process of independent power producer (IPP) (Policy Guidelines for the Implementation of the Policy on Sustainable Hydropower in Lao PDR, 2015).

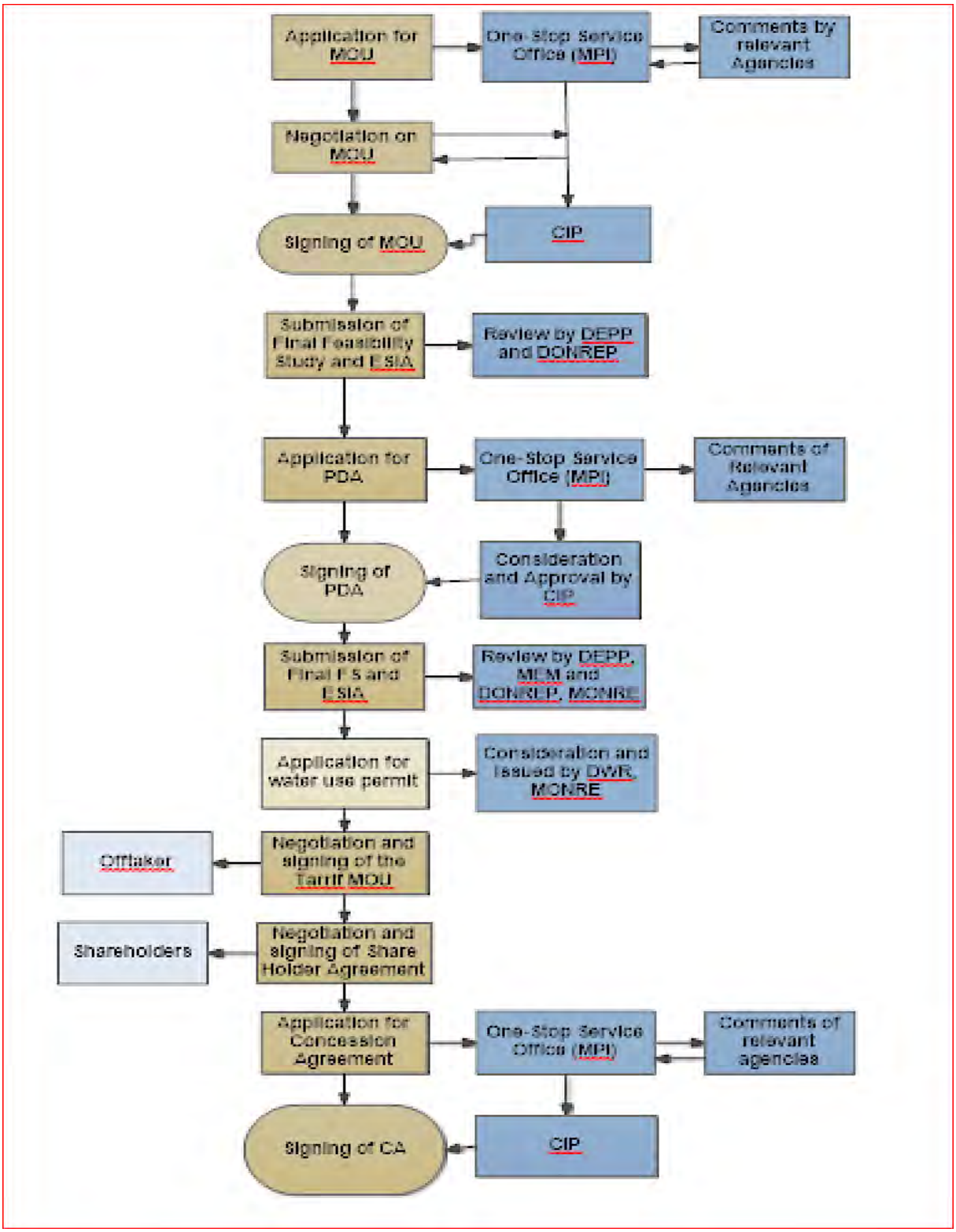

Figure 12-1. Hydropower Development Process. Source: Policy Guidelines on the implementation of the Policy on Sustainable Hydropower Development in Lao PDR 2016, Law on the Promotion of Investment (2016), Environmental Protection Law (2013), Law on Water and Water Resources (2017).

MOU stage

A prospective developer obtains a MOU from the Ministry of Planning and Investment. The MOU confers an exclusive right to conduct a feasibility study including social, economic, environmental, technical and financial feasibility aspects of a hydropower scheme at a specified site (Electricity Law 2012, Article 3). The terms of the MOU also require an environmental and social impact assessment (ESIA) of the proposed project.

Application process

According to the Law on Investment Promotion (2016), Article 45, a party wishing to operate a business, including a hydropower project, submits an application for a Memorandum of Understanding (MOU) with supporting documents to the "one-stop service" office at the Ministry of Planning and Investment (MPI) at the national level for large scale projects (more than 15 MW) and at the Department of Planning and Investment (DPI) local level for smaller projects (less than 15 MW). Figure 12-2 shows MOU Steps. The application for a MOU for a hydropower project requires that preliminary data be collected. Permission to do so must be sought from the Department of Energy Policy and Planning (DEPP) under the Ministry of Mines and Energy (MEM) for projects larger than 15 MW (large projects), and Provincial Department of Energy and Mines (PDEM) for projects less than 15 MW.

The required documents for submitting an MOU application are as follows (One-Stop Service Guidebook, Page 23-24):

1. Application for electricity investment in hard copy.
2. Brief project proposal, certified by the CEO of the applicant.
3. Biography and experience of the company, including license or business registration certificate.
4. General business agreement (in case of two companies or more).
5. Power of attorney for the representative of stockholders or company, in case the person filing the application is not at the CEO.
6. Map indicating the project location.
7. Documentation of the technical aspects of the projects.
8. Documentation on the preliminary data collection for the project.
9. Supporting letter of financial institutes or banks (if any).
10. Other related documents (if any).

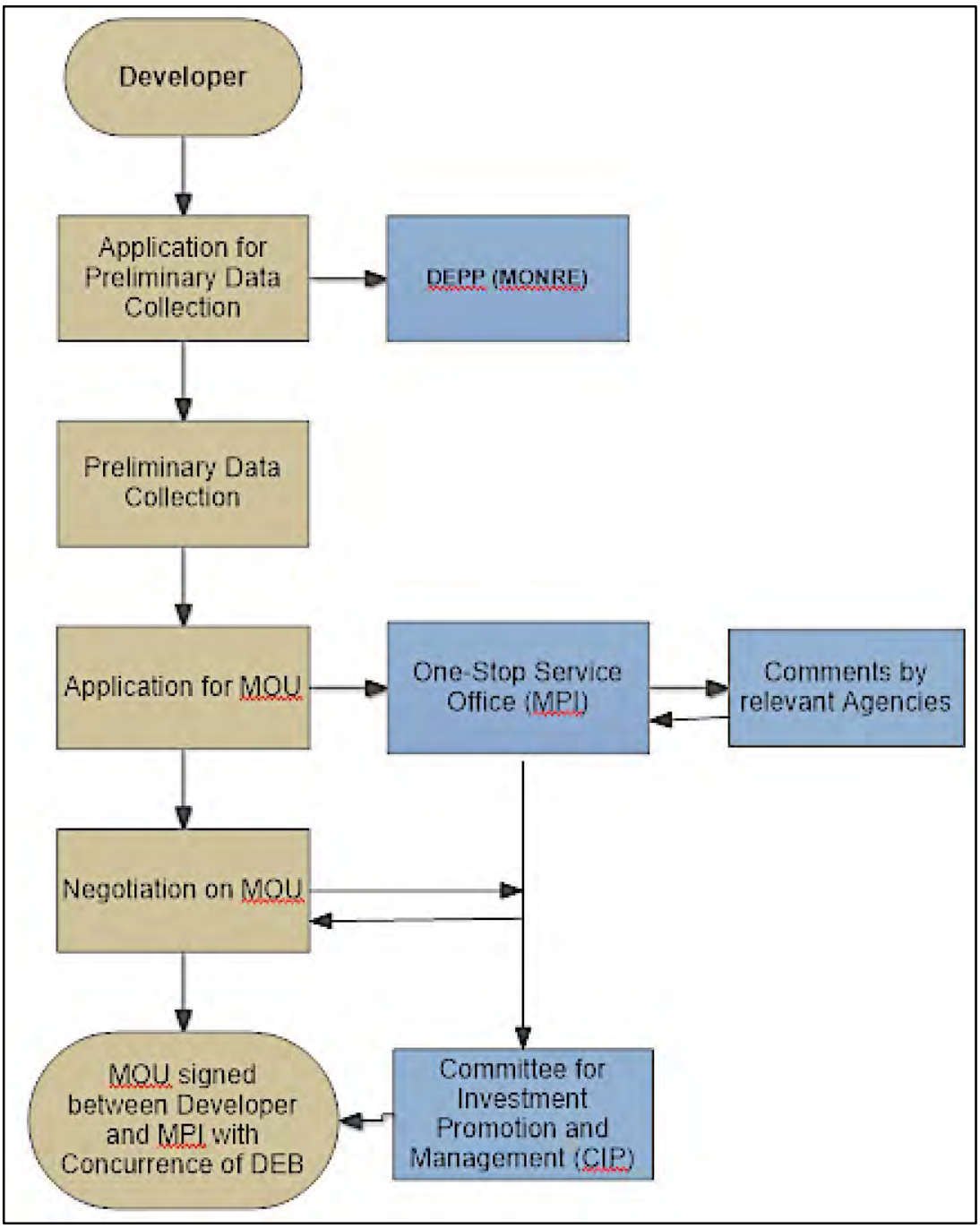

Figure 12-2. MOU Stage. Source: Policy Guidelines on the implementation of the Policy on Sustainable Hydropower Development in Lao PDR 2016, Law on the Promotion of Investment (2016), Environmental Protection Law (2013).

Consideration of the application takes up to 65 working days from the date of receipt of complete application by the One-Stop Service Office.

The process is summarized as follows.

After receiving a complete set of applications from any developer, the One-Stop Service Office will circulate the application documents to relevant agencies at central and local level for comments within 3 days. Key relevant agencies would include members of the Committee for

Investment Promotion and Management (CIP), namely MoNRE (Department of Natural Resources and Environment Policy (DNREP)), MEM (Department of Energy Business, (DEB), Department of Energy Policy and Planning (DEPP), and Department of Energy Management (MEM)) and MPI itself. (Guidelines for the Implementation of the Policy on Sustainable Hydropower Development in Lao PDR 2016, Annex 1, Section 1.2). The CIP is established at two levels: central and local (Law on Investment Promotion, Article 75-77). CIP at central level consists of:

a) Deputy Prime Minister as chair
b) Minister of MPI as deputy chair and standing member,
c) Minister of the Ministry of Industry and Commerce as deputy chair
d) Deputy Minister of MPI as member
e) Deputy Minister of the Ministry of Finance as member
f) Deputy Minister of the Ministry of Natural Resources and Environment as member
g) Deputy Minister of the Ministry of Energy and Mines as member
h) Deputy Minister of the Ministry of Agriculture and Forestry as member
i) Deputy Minister of the Minister of Labour and Social Welfare as member
j) Deputy Minister of the Ministry of Public Works and Transport as member
k) Deputy Minister of the Ministry of Information, Culture and Tourism as member
l) Deputy Minister of the Ministry of Public Security as member (Law on Investment Promotion, Article 76).

1. Responses of the relevant agencies must be provided within 30 working-days, without which they are considered to have approved the application implicitly).

2. Based on comments obtained the CIP considers and approves the application in principle.

3. The One-Stop Service Office and the developer then enter into negotiations on any outstanding issues, with participation of relevant agencies at the central and local levels. The results of the negotiation are reported to the CIP for consideration in its decision whether to sign the MOU.

4. The MOU is signed by the developer and the Ministry of Planning and Investment (MPI) with concurrence of MEM (DEB, DEPP & DEM).

5. After the MOU is signed, investors are required to deposit funds as stipulated in the MOU (Law on Investment Promotion 2016, Article 46), the amount depending on the range of installed capacity. Table 12-1 shows the deposits based on installed capacity.

Table 12-1. Deposits for MOU's warranties by installed capacity. Source: Adapted from the One-Stop Service Guide Book, page 24.

Installed capacity	Warranties in US$
Up to 5 mw	10.000
5 MW - 100 MW	30.000
>100 MW	50.000

6. The On-Stop Service Office issues an investment license within three working days after signing of the MOU. If an application is rejected, the investor is notified within 3 working days of rejection (Law on Investment Promotion 2016, Article 46).

A MOU is valid and enforceable for a period of 24 months (Revised Electricity Law 2017). Expired MOUs maybe extended upon request of the developers and approval by MPI or the Provincial Department of Planning and Investment, depending on the scale of the hydropower project. Requests for extension of an MOU must be made at least one month before the expiration date (Electricity Law 2012, Article 29).

A MOU may be terminated if:

1) the developer fails to rectify a breach of contract within 60 days of written notification, (Model MOU, Article 12, (i)),
2) the feasibility study or environmental and social impact assessment find that the project is not feasible. If so, either the developer or the GOL may terminate the MOU by providing at least 60 days of notice to the developer (Model MOU, Article 12),
3) the developer fails to transfer money to MPI within 30 days from the signing of the MOU to guarantee on implementation of the project (Model MOU, Article 5, K).

Once an MOU has been signed, MEM has the following obligations. MEM shall:

1) Not negotiate, consider or accept any other proposal or offer from the third party, apart from the developer, for the development and implementation of the Project,
2) Authorize access for the developer to enter the site and under prescribed conditions for the conduct of field activities,
3) Assist the developer in obtaining visas, permits, approvals, licenses or authorizations from central, regional or local governments or communities that maybe necessary for the implementation of the mandate under the MOU,
4) Provide appropriate information, if available, to facilitate the feasibility study and environmental and social impact assessment, which information the developer pays for at a reasonable rate, and
5) Introduce the Project to relevant local authorities through meetings in the province where the project is located (Sample MOU, Article 6).

Sometimes the MOU holder is a speculator who transfers the rights to potential investors. This is supposed to be approved by MPI, but that approval is not always sought.

Feasibility study stage

As noted, the MOU confers an exclusive right on the developer to conduct a feasibility study for a project at the specified site, assuring that its investment in the study will not be jeopardized by competing applicants. All hydropower development projects are required to conduct a comprehensive study to ensure economic, technical and financial feasibility. The projects are also required to assess the potential negative social and environmental impacts and how they can be prevented or mitigated, which is discussed below at page 13-26 (Policy Guidelines for the Implementation of Policy on Sustainable Hydropower Development in Lao PDR 2016, Section 5.4).

The feasibility study should address the design, construction, installation and operation of projects, including transmission lines and other related facilities. The content of the feasibility study includes:

- Design details: The project design has to meet international standards for large dams over the economic life of the project, including the long-term benefits of the GOL (Sample PDA, Clause 7.2). The design details should include design of the gates for release of environmental flows.

- Construction plans, methods and materials and the contracts for project design, engineering and construction (Sample PDA, Clause 7.2),

- Projection of the monthly energy production, including measures to assure high quality and efficiency of energy production,

- Measures to assure dam safety,

- Measures to assure avoidance, minimization, and compensation of damages to the natural resources, life, health and property (Policy Guidelines for the Implementation of Policy on Sustainable Hydropower Development in Lao PDR 2016, Section 5.4),

- Projection of the sediment trapping in the reservoir over the project life cycle and proposed solution for the sediment (Sample PDA, Clause 6.1),

- Preliminary financial assumptions for the purpose of estimation of the Project Cost (Sample PDA, Clause 7.2 (a)).

The technical factors that must be included in the feasibility studies are set forth in the Lao Electrical Power Technical Standard (LETPS). The LEPTS, however, is not available for review at the time of this writing. It is not clear if the LEPTS includes technical risks such as availability and reliability of the hydrological resources, seismic stability, natural hazards, asset safety, access to construction materials, geotechnical stability, etc., yet it is hard to image a feasibility study being adequate for investors and power customers unless these factors are resolved.

These factors in the feasibility study are reviewed and, if acceptable, approved by MEM. The review process involves consultation with relevant agencies at both the national and local levels (Policy Guidelines for the Implementation of Policy on Sustainable Hydropower Development in Lao PDR 2016, Clause 5.4). DEPP is responsible for consideration of the economic aspects (Clause 5.5) and DEM is responsible for consideration of technical factors, which are to conform to the LEPTS. (Clause 5.6). Review of the technical aspects related to flood management are the responsibility of MoNRE and MPI (Policy Guidelines for the Implementation of Policy on Sustainable Hydropower Development in Lao PDR 2016, Clause 5.6).

It is unclear whether the economic factors examined by DEPP include financial risks such as inability to meet project costs, uncertainties in meeting revenue streams, market stability, difficulty in access to project finances, etc. Also, it is not clear if the economic aspects include additional benefits that may accrue from the project, such as water supply, or the social and environmental costs, and whether a net economic benefit calculation is required. Analyses of such risks at the early stage of the feasibility study can ensure that they are identified before large investments are made in projects.

It is also not clear if the assessment of feasibility considers the risks associated with availability of water for life of the project, taking into account future demand over water and changes in hydrology due to climate change. Indeed, this should also be assessed by the Department of Water Resources (DWR) of MoNRE from the perspective of river basin planning and management, including water allocation, as discussed at pages 21 and 33 below.

If the feasibility study is deemed adequate by these several agencies, a feasibility certificate is issued by the DEPP.

Environmental and Social Impact Assessment (ESIA), and Environmental and Social Management and Monitoring Plan (EMMP)

Following the signing of the MOU, the developer prepares a scoping report (SR) and terms of reference (TOR) for an environmental assessment. Investors can start conducting the ESIAs after approval of their respective scoping reports and ToRs (Ministerial Instruction on the Process of Environmental Impact Assessment of the Investment Projects and Activities 2012, Section 2.4). The SR specifies the types of impacts to be assessed and the data to be collected and analyzed. The ToR describes the work to be performed to conduct the environmental impact assessment. The ToR must conform to the designated format and technical guidelines. Assurance of appropriate public involvement is required (Ministerial Instruction on the Process of Environmental Impact Assessment of the Investment Projects and Activities 2012, Clause 2.3).

The Environmental and Social Impact Assessment is governed by the laws, standards and guidelines listed in Annex 12.1. Requirements for hydropower developers in the ESIA process include the following (Ministerial Instruction on the Process of Environmental and Social Impact Assessment of Investment Projects and Activities 2013, Clause 2.12):

- Undertake studies on physical, biological and socio-economic aspects and assess the potential social and environmental impacts. Data and information for such assessment

can be obtained from concerned departments of the national and local government field surveys, and consultations with the Project Affected Persons (PAPs) and other stakeholders.

- Prepare the ESIA Report defining all the protective and mitigation measures for the social and environmental impacts.

- Coordinate with MoNRE on public involvement in strict compliance with the MoNRE public involvement process to ensure that there is no threat, coercion, force, violence, bribery or deception involved. This process will include consultations at the village, district, provincial and national levels and technical meetings as necessary.

- Coordinate with MoNRE on information dissemination at the national and local levels, especially to explain the project plan, potential benefits, and the social and environmental impacts.

- Based on feedback, revise and submit the scoping report, terms of reference and final ESIA report to MoNRE for review and approval prior to implementation of any project activities.

The ESIA must include an Environmental and Social Management and Monitoring Plan (ESMMP). Requirements for ESMMPs are specified in the Ministerial Instructions on the Process of Environmental and Social Impact Assessment of the Investment Projects and Activities, 2013, Clause 2.9, which can be summarized as follows.

- Incorporate ESMMP into the package of the ESIA Report,

- Prepare the ESMMP in Lao Language,

- Evaluate the implementation of the ESMMP during the construction period and report on compliance 6 months before the commencement of operations. Subsequent revisions of ESMMP are to be submitted to MoNRE for approval,

- In case of projects with major social and environmental impacts and/or "complicated" projects, the Ministerial Instructions require preparation of a separate ESMMP for the construction and operation period for approval by MoNRE before construction and operation can begin (Ministerial Instructions on the Process of Environmental and Social Impact Assessment of the Investment Projects and Activities, 2013, Clause 2.9).

Developers are to strictly implement the environmental and social management and monitoring measures as specified in the ESMMP throughout the project life cycle and revise the ESMMP periodically, to reflect actual circumstances of each period of the investment projects and submit it to MoNRE for renewal of the ECC. The review and approval process should be completed within 30 business days, excluding time spent for revision.

With more than one hydropower plant located on river basin or sub-basin, cumulative impact assessment (CIA) will be required as per ESIA and IEE regulations (Policy Guidelines for the Implementation of the Policy on Sustainable Hydropower Development in Lao PDR 2016, Clause 5.11, a). The fact, however, is that cumulative impacts occur not just because of hydropower projects, but also others such as mining, large scale irrigation, large scale concessional agriculture, etc. Cumulative impacts should include not only impacts on the biophysical and social environments, but also impacts on the financial viability of other investment project located in nearly area (Policy Guidelines for the Implementation of the Policy on Sustainable Hydropower Development in Lao PDR 2016, Clause 5.7). Thus, the notion of cumulative impact includes such factors a water availability for downstream users.

Nominally, the DNREP is required to take account of transboundary impacts. Any project that captures sediment that would otherwise flow across international boundaries and any project that poses a barrier to migratory fish should be assumed to have such transboundary impacts.

Notably, however, DNREP does not at the time of this writing require the ESIA to comply with important requirements set forth in the Guidelines for Implementation of the Policy on Sustainable Hydropower Development in Lao PDR. For instance, DNREP has not implemented the requirements for:

- a risk analysis over the entire life span of the project,
- an analysis of alternatives for project structure and locations, including a no-project alternative,
- lessons learned from previous projects,
- cumulative impact analysis,
- a meaningful assessment of transboundary impacts, as required by Section 7 of the Policy,
- a determination whether all "potential negative impacts on the environment and social system can be prevented and/or mitigated", as required by Section 4 of the Policy. This omission is of concern in light of the findings in Section 5 of the Master Plan that some of the impacts of the reservoir on migratory fish survival cannot be mitigated.
- openness, transparency and information disclosure" as the basis for undertaking all hydropower projects (Section 10) as DNREP continues to treat ESIAs as confidential documents that are the property of the developer.[3]

[3] If the MOU is terminated, the GOL has the right to use the information of the FS and ESIA at no cost. (Sample MOU, Article 9). The MOU and all information disclosed by one party to the other in connection with the MOU shall be deemed to be confidential during the Mandate Period and 2 months after the expiry of the Mandate Period (Sample MOU, Article 10).

When the ESIA is completed, it is submitted to (DNREP) for review of the contents. The Department of Environmental and Social Impact Assessment has recently been split into the Department of Natural Resources and Environment Policy (DNREP) and the Department of Natural Resources and Environment Inspection (DNEI). The former is responsible for reviewing and approval of ESIA, while the latter is responsible for ESIA inspection for compliance (Interview with staff of the DNEP, October 2017).

For routine projects, the review of the ESIA and SEMMP Reports by MoNRE can take up to 95 business days to complete, excluding time spent for revision, if required. For projects considered to be "complicated" by MoNRE based on review of the Scoping Report and TOR, the review process may take up to 120 days to allow time for consideration by a technical expert committee, involving domestic and foreign experts and consultants appointed by MoNRE.[4] The review process includes distribution of the ESIA Report (with ESMMP) to relevant agencies for comments and holding technical and consultative meetings to explain the report to the national and local levels and obtain their feedback.

Notable, at no stage in this process does MoNRE make an explicit determination of compliance with the Policy on Sustainable Hydropower Development. Nor has it articulated substantive standards or criteria for making that determination. Indeed, there are no sustainability criteria specified anywhere in the existing law. As a consequence, the compliance with the decree today is more procedural rather than substantive. Nor do the Guidelines specify which agency is to promulgate standards or criteria to implement the Policy. Section 2.2 of the Guidelines assign to the DEPP the responsibility for "forging effective implementation of this policy" and assigns to "the responsible agencies" the task of developing "detailed procedures, technical guidelines, supporting decrees/regulations, and or/institutional capacity building to ensure effective implementation of the updated policy . . ." However, Section 7.2 of the Guidelines assigns to DNREP the responsibility for "ensuring that hydropower projects are fully in compliance with the Environmental Impact Assessment decree."

Notably, the Integrated Environmental and Social Obligations for Projects does incorporate by reference other sources of guidance on sustainably hydropower development, including the Sustainability Protocols of the International Hydropower Association, the Safeguards Policies of the Asian Development Bank (ADB), and the Guidelines on Sustainable Hydropower Development from the International Finance Corporation (IFC). The extent to which substantive criteria or standards for sustainable hydropower development can be derived from these guidance documents is assessed in Annex 12.3

[4] For projects involving compensation and resettlement, preparation of ESIA and ESMMP, developers will be required to prepare the social impact assessment report and the environmental impact assessment report separately. While the review process of the latter shall comply with the procedures for preparation and review of ESIA Report as specified by the Ministerial Instruction on the Process of ESIA, the former will need to comply with the procedures stipulated by the Decree on Compensation and Resettlement No. 192, dated 7/7/2005. In addition to the requirements of the Ministerial Instruction on the Process of ESIA, the Decree on Compensation and Resettlement requires that developers prepare and implement plans for: 1) compensation, 2) resettlement 3) livelihood rehabilitation.

If the ESIA and ESMMP are deemed satisfactory, MoNRE issues an Environmental Compliance Certificate; if not, MoNRE either issues requirements for revision and re-submission, or rejects the project. The ECC is valid for 2-5 years and renewable throughout the investment period. Any mitigation requirements imposed by DNREP are included as terms and conditions of the ECC.

In theory, the main reasons for rejection include substantial, unavoidable and irremediable social and environmental impacts or inconsistency with the National Environmental Policy and Strategic Plan of MoNRE (Ministerial Instructions on the Process of Environmental and Social Impact Assessment of the Investment Projects and Activities, 2013). In practice however, rejection of projects is rare. DNREP routinely approves the ESIA on the basis of content rather than quality of analysis. If it deems the impacts to be unacceptably large or believes there are less impactful alternatives, it can, and sometimes does, require the developer to incorporate additional mitigation measures, such as fish passage facilities, in the design of the project.

If the ECC contains conditions for the project owners to strictly comply with, failure to do so can result in revocation or suspension of the ECC at any time during the project investment period. Two rounds of warnings for project owners to fix non-compliance are issued by MoNRE before revocation or suspension can be carried out: the first warning is for 90 days and the second is for 60 days.

An ECC approving ESIA Report lasts as long as the investment period, which may be the same duration of the Concession Agreement (Ministerial Instructions on the Process of ESIA of the Investment Projects and Activities, 2013, Clause 2.10). However, the ECC approving the ESMMP, may be valid for only 2-5 years, depending on the severity of impacts. Nevertheless, the ECC is renewable periodically throughout the investment period. An ECC can be voided by MoNRE unless progress is made within 2 years. Progress is determined by MoNRE. Once an ECC is void, application for a new ECC is allowed only once, if investment is to continue.

Substantive environmental performance standards incumbent upon developers that receive ECCs are set forth in Annex 12.1.

PDA stage

When the ESIA and FS have been approved by MoNRE and MEM, respectively, the developer applies to MPI for a Project Development Agreement (PDA). This is a commitment by the Government of Lao that the proponent can undertake the additional financial and technical preparations for a Concession Agreement without competition by others for that site. The PDA does not guarantee that the GoL will ultimately decide to authorize such a project, but only that, if it does so, the developer will have an exclusive and non-competitive right to obtain the Concession Agreement.

According to the sample PDA, Clause 3, the purpose of the Project Development Agreement is to:

- Confirm the terms and conditions of the right conferred on the developer to carry out all activities as specified in the PDA to develop the project on a build, own, operate and transfer basis. These terms and activities are presented below.

- Confirm the agreement of the GoL and developer to negotiate the necessary project documents in accordance with commercial principles and the objectives of the PDA, and after completion of all requirements, to proceed with the development of the Project by the project company to be established during the Mandate Period of the PDA, and

- Assign specific tasks and responsibilities to each of the respective parties of the PDA to enable the project documents to be signed and the financial closing to take place, to achieve the scheduled commercial operation date.

Activities that may be carried out during the Mandate Period, upon written approval of the GoL, include:

- "Preliminary construction work", provided that such activities shall comply with Laws of the Lao PDR, especially the environmental aspects. This probably means only site preparation work such as building roads and clearing the prospective reservoir area.

- Importation of equipment and materials for use by such preliminary construction works (Clause 5.2).

Activities not permitted during the Mandate Period include commencement of compensation and/or relocation of Project Affected Persons.

The rights conferred by the PDA are contingent upon:

- The approval by DEPP of the final technical feasibility study,

- The approval by MEM of the grid connection (if the project is to connect to EDL's existing grid),

- The approval of the economic evaluation that the energy tariff is affordable by EDL,

- The satisfactory conclusion and approval of an ESIA, and Health Impact Assessment (HIA)[5],

- A determination by the GoL that the proposed project satisfies the January 12, 2015 Policy on Sustainable Hydropower Development. As previously noted, however, how and by what entity this determination is to be made is not specified in current laws or policies. In actual practice, there has not been an explicit determination with respect to hydropower projects that have been granted PDAs since the Policy was decreed.

[5] Usually as a part of the social impact assessment, reviewed and approved by the Department of Natural Resources and Environment Policy.

Procedure for obtaining PDA

The procedure for obtaining a PDA is similar to the procedure for an MOU (One-Stop Service Guides, Page 25), described under the MOU section above. Figure 12-3 shows these procedures. A PDA is signed by the developers and MPI with DEB as "witness" (which seems to mean "concurrence"). The mandate period is for 24 months. A request for an extension of the mandate period can be made to the MPI not less than 60 days prior to the expiration of the original term. The PDA is governed by the laws of the Lao PDR. "If the laws are found to be silent on the issue in question, then for the purposes of interpreting and supplementing the terms and conditions of such issue, general principles of commercial contract law as applied in English Law shall apply" (Sample PDA, Clause 15.1).

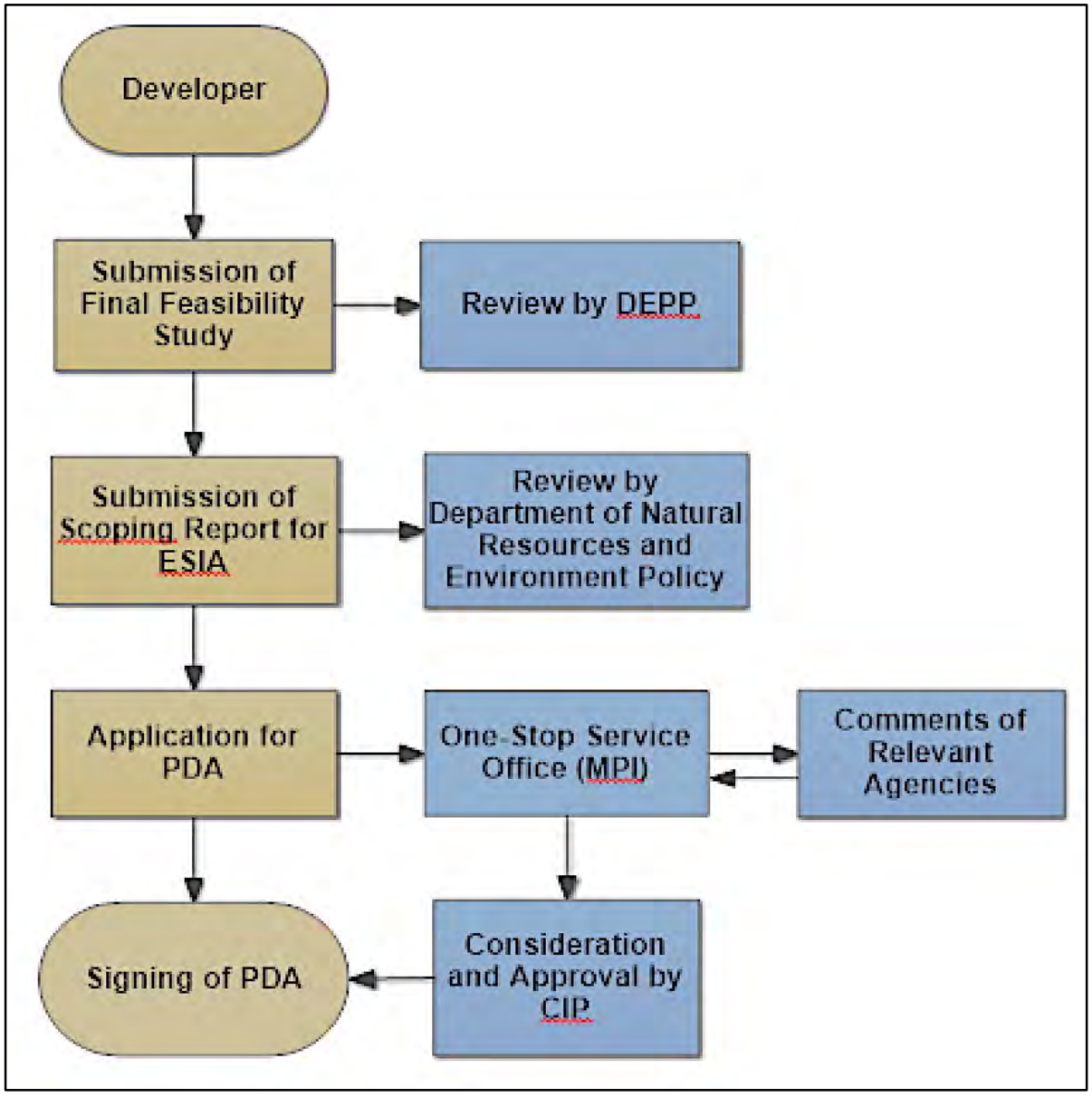

Figure 12-3. PDA Stage. Source: Policy Guidelines on the implementation of the Policy on Sustainable Hydropower Development in Lao PDR 2016, Law on the Promotion of Investment (2016), Environmental Protection Law (2013).

Documents to be prepared, negotiated, and finalized or endorsed for signature during the mandate period include the following.

1. Final feasibility study,
2. Environmental Impact Assessment, Social Impact Assessment, and Health Impact Assessment, a Resettlement Action Plan (RAP), a Social Action Plan (SAP), an Ethnic Minority Development Plan (EMDP), and an Environmental Management and Monitoring Plan (EMMP) in accordance with the Laws of the Lao PDR.
3. Shareholder Agreement by the project company,
4. Endorsement of government-led resettlement committee (RC) in relation to social aspects,
5. Finalization of the integrated social and environmental obligations of the Project Company,
6. Execution of the Tariff MOU,
7. Finalization of the terms of the Concession Agreement,
8. Advancement of the Financing Documents,
9. Engineering, Procurement, and Construction Contract or bidding documents.

Application of the Water Resources Law of 2017 and the Forest Protection Regulations

The revised Water Resources Law of 2017, as approved by the National Assembly, requires the developer to obtain a permit for the obstruction and impoundment of water in a river. It is not clear when the permit must be obtained in the approval process, but it would make sense for this to occur during the PDA stage and before consideration of an application for a Concession Agreement (CA). It would be risky to issue a CA without a permit for use of water resources due to issues of water availability/sufficiency. Sub-regulations will be prepared which may clarify this question.

Application for a water use permit would be submitted to the Department of Water Resources in MoNRE at the national or local level, depending on the scale of water use. Hydropower generation of 1- 15 MW installed capacity or 100-1,500 ha of reservoir is under the jurisdiction of the provincial level of while more than 15 MW or 1,500 ha of resource is under the jurisdiction of the national government (Article 37 and 38, Draft Revised Water Law).

The water use permit confers a right of use, ensuring developers that their projects will have enough water for operation. The permit is expected to contain certain conditions to protect the interests of other water users on the same river. While the law itself does not specify the interests to be protected or how, we presume that the implementing regulations will do so. In the case of hydropower projects, two types of conditions may be needed to protect other users:

1. Projects that impound water for use at a powerhouse that is located at the dam site may store and release water on a daily and/or seasonal basis. That may radically

change the downstream flow pattern. Operations of downstream hydropower projects may be severely impacted. Conditions on the impoundment of water may therefore be necessary in the water use permit.

2. Projects that use a barrage to divert water out of the river and into a penstock which conveys it to a remote downstream powerhouse may severely deplete, as well as distort, the flow pattern between the point of diversion and the point of discharge of this water. Intervening water users may not have sufficient water at the right time for their use. Again, conditions in the water use permit may be necessary to prevent or ameliorate these impacts. Additionally, minimum stream flow requirements may need to be included in the terms and conditions of the water use certificate.

Article 42 states that issuance of a certificate for use of water is based on the ESIA and other relevant regulations. ESIA regulations, however, look at how hydropower projects affect social, economic and environmental conditions. They do not address the issue of how other water uses would affect the proposed hydropower project, or how the hydropower project would affect other users. Impacts of climate change on hydrology will bear on these water availability issues. There is a need to take into account river basin management plan, including water allocation plan, looking at water availability and uses for the basin as a whole.

The GoL has indicated an intention to establish a river system coordination plan to prevent conflicts arising from water rights and water usage across multiple hydropower projects and/or water users. MoNRE, in coordination with relevant local administration, is responsible for planning of river basins for consideration and approval by higher authorities. River basin planning should conform with the vision, strategy and plan of social economic development at the national and local levels based on local conditions, characteristics and geographical location of each river basin (Draft Law on Water Resources, Article 16). This planning will include a River System Coordination Plan (RSCP), which will aim for optimal development of river basins and may take into account the anticipated number, types and locations of hydropower projects, potential non-power uses, and economic factors. (Sample CA, Clause 4.9, (b).

In developing the RSCP, the MoNRE may conduct a review of existing water rights and obligations (Sample CA, Clause 4.9, (c)). The RSCP may address the possibility of joint or coordinated generation and reservoir management and operations that could increase total power generation as well as non-power benefits and the appropriate sharing of any increased benefits among stakeholders. Factors for consideration shall include operating rule curves, maintenance planning, and information sharing and communication protocols including emergency warning systems. The RSCP shall also address matters such as contractual obligations, consultation, coordination, compensation mechanism, monitoring and reporting (Sample CA, Clause 4.9, (d).

It is not clear on the face of the revised water law what should be the terms and conditions of the water use certificate, such as the duration, the priorities of water use in the context of the river basin plan, the social and environmental impact mitigation requirements, or how these will be determined

The revised water law does not indicate whether existing projects must obtain certificates. It is also not clear from the revised water law if water released from hydropower dams/plants are considered a waste water discharge. If so, as discharge permit would also be required.

Application of the Forest Protection Regulations

Development of hydropower can also require approvals with respect to any impacts on protected forests, conservation forests or production forests. For such areas to be used for reservoirs, conversion of the status of the forest must be approved by the proper authorities, depending on the status of the forest designation (Decree on the Protected Forest 2010, Article 19, Decree on Conservation Forest 2015, Article 14):

4. For forests administered at the national level, approval must come from the Standing Committee of the National Assembly based on request of the government,

5. For forests administered at the district level, approval must come from the Prime Minister based on request of the National Land Administration in agreement with the Ministry of Agriculture and Forestry, and

6. For forests administered at the village level, approval must come from the Provincial Administration based on request of the Provincial Land Administration in agreement with the Provincial Department of Agriculture and Forestry

Like protected and conservation forests, the use of production forest for hydropower sites must be approved in the same manner (Interview with Senior Management of the Department of Forest Resource Management, MAF, on 30 August 2017). Projects involving conversion of less than 100 ha or less of degraded forest land is subject to consideration and approval by relevant authorities at the provincial level (Article 50).

The main requirement for approval of such forest areas for hydropower projects is if it "**creates optimal benefits to the country**" and **do not cause severe impacts on the environment** (Decree on Protection Forest 2010, Article 19, Decree on Conservation Forest 2015, Article 25). There is no definition of "optimal benefits". It is not clear in the existing legislation when process of hydropower development the approval for the conversion of such forest should occur, but an interview with a senior official of the Department of Forest Resource Management, Ministry of Agriculture and Forestry (MAF), indicates that conversion from the status of such forest to other purpose such as hydropower must be approved before such use can start.

Financing Documents

It is apparently during the PDA mandate period that the developers negotiate a Power Purchase Agreement (PPA) that includes firm commitments to purchase specified amounts of power at a specified price (the tariff). The PPA and tariff negotiations will involve EDL, if it is to act as an investor, initial purchaser, wheeler or distributor, and will involve the ultimate power grid system if the power is to be exported. In the future, EDL may be the wholesale purchaser of all new power generation and provide transmission services to the ultimate power distribution system. As such, EDL will increasingly act as a power system operator for the entire nation.

The PPA provides the assured revenue stream that is essential to secure the debt financing for the project, and may also be necessary to firm up the equity investments. These arrangements constitute the financial package for the project.

Negotiations on the Tariff Agreement is carried out in parallel with the negotiation on the PPA. The tariff terms are subject to approval by MEM (Sample PDA, Article 6.2 Clause 7.2). The PPA is to be executed immediately after the execution of the Concession Agreement (Sample PDA, Article 6.2 (b)).

Drafting, negotiation and completion of the financial documents are undertaken with participation of the GoL as appropriate (Sample PDA, Clause 6.1). The final project development expenditures are subject to an audit by an international auditing firm acceptable to both developer and the GOL. The results of the audit must be submitted to the GoL before approval of the Concession Agreement by the GoL (Sample PDA, Clause 5.1).

Concession agreement stage

The final step for the project developers is to apply for a Concession Agreement (CA) from MPI. Under the CA, the developer builds, owns, and operates the hydropower plant for a specified concession period, which can range from 25-40 years, for payments of royalties and/or taxes at a specified annual rate. At the expiration of the concession period, the facility is transferred to the GoL (Ministry of Energy and Mines) to own and operate.

Procedures for obtaining a CA

Procedures for obtaining a CA are similar to these applied for MOU and PDA, described earlier, in that they include application to MPI, comments by relevant agencies and consideration by the CIP, and final sign-off by MPI, representing the GoL (Figure 12-4). A key difference in the requirements at this stage is that the project developer must establish a company under the laws of Lao PDR to sign the CA (One-Stop Service Guidebook, Section 3.5, C). All the documents from the previous stages need to be finalized and approved, including FS, ESIA, tariff MOU and Shareholder Agreement (SHA), before the developer can submit an application for CA to the One-Stop Service at MPI. An investment license is issued after signing of the CA.

The authority issuing the CA for hydropower projects depends on the installed capacity. Smaller projects (<15 MW) have historically been under the authority of the provincial level of government, whereas larger projects (>15 MW) have been under the authority of the national government. However, this threshold is likely to be reduced to 2 MW in the future. It is also possible for small-scale hydropower projects of less than 15 MW to operate without a CA, on the premise that such projects do not pose serious harmful social economic and environmental impacts. They must nonetheless comply with other provisions of relevant laws and regulations (Electricity Law 2012, Article 34). Also, the CA must be considered and approved by the National Assembly if it involves “serious impacts” on environmental and natural resources and society (Law on Investment Promotion 2016, Article 49).

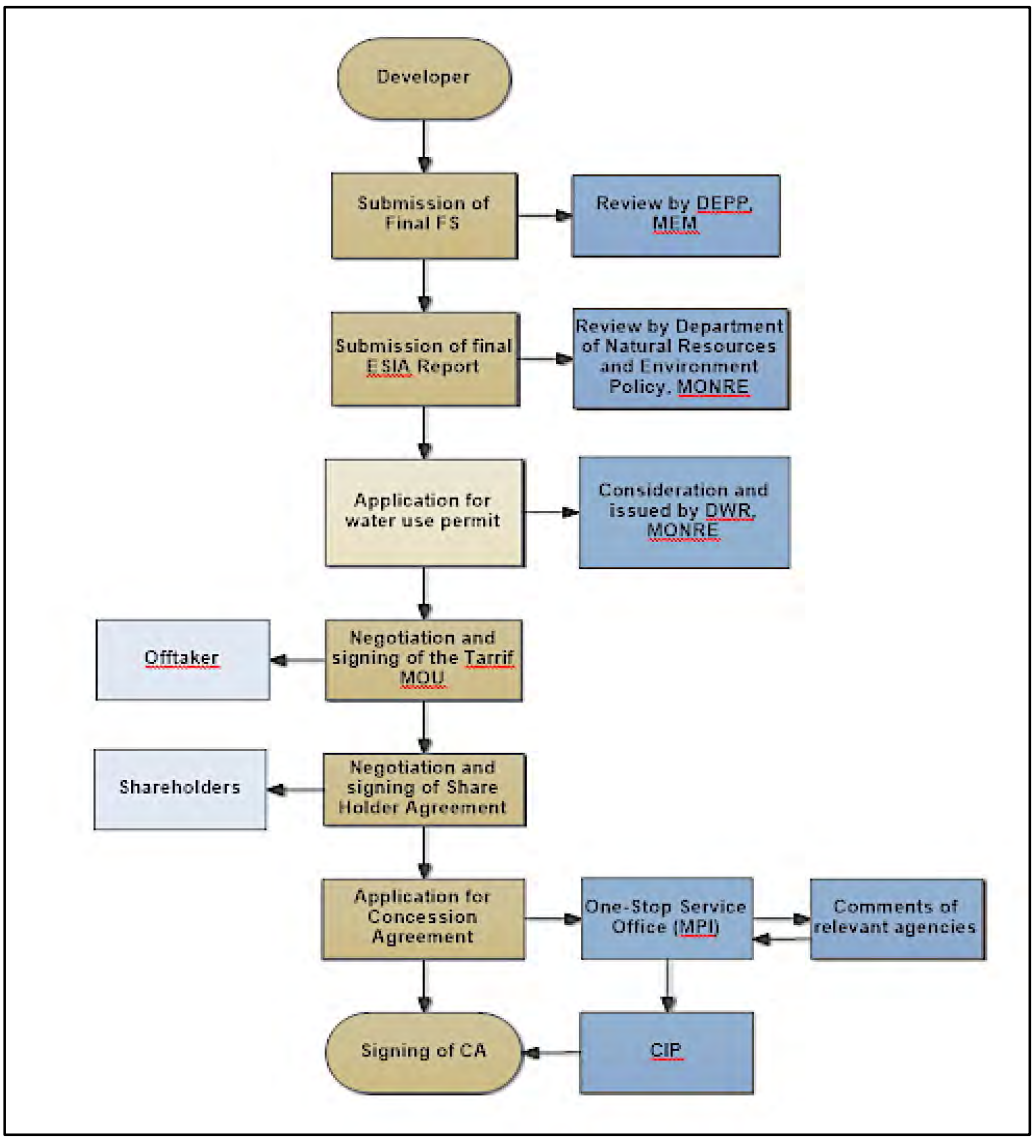

Figure 12-4. Procedures for consideration and approval of concessional agreement (CA). Source: Policy Guidelines on the implementation of the Policy on Sustainable Hydropower Development in Lao PDR 2016, Law on the Promotion of Investment (2016), Environmental Protection Law (2013), Law on Water and Water Resources (2017).

A concession term lasts for up to 30 years, starting from the commencement of operation date. Developers shall transfer the entire activities of the hydropower project to the Government in good and operational conditions, certified by an independent engineer (Electricity Law 2012, Article 33). Concession rights may be transferred from one concession investor to another in part or in whole subject to the fulfilment of the following conditions (Article 48, Law on Investment Promotion 2016):

1. Approval is obtained from the government at the national or provincial level;

2. after having invested and successfully completed activities of 45% of the Master Plan and approval of the technical analysis report or implementation plan and having fulfilled financial and other obligations;

3. The project is not in the mediation, lawsuit or judicial proceedings;

4. The project is not bankrupt.

An investment license will be issued within 3 working days after signing of a CA (Law on Investment Promotion, 2016). Such licenses for hydropower projects maybe suspended, cancelled or terminated based on request of investor/s or relevant sectors due to non-compliance with relevant investment objectives, agreement or laws and regulations (Law on Investment Promotion 2016, Electricity Law 2012). In addition, according to the Law on Water Resources (2017), water permits for hydropower projects maybe suspended or modified for reasons of: emergency, drought, maintenance of minimum flow, request of other developers, complaints of people, transfer to others without authorization, decision of court, need for public uses with appropriate compensation, severe social and environmental impacts and violation of regulations on use of water resources (Article 40).

Rights and Responsibilities

The rights conferred by a CA include:

- The right to lease the site, including rights of occupation, access, use and possession of the land within the site and water ways thereon and the use of public roads, necessary to implement the project and to engage in project management.
- The right to register and operate Company,
- The right to design, finance, construct, own, maintain and operate the project facilities on the site
- The right to sell electricity generated according to the PPA,
- The right to use the water, including the right to divert, dam, retain, store and use of the river in the immediate area of the site, solely to the extent required for the purposes of the project, subject to the River System Coordination Plan, if any, and maintaining environmental releases from the reservoir at all times. Discharge in cubic meters per second is specified in the CA, but how this is to be determined is not clear.
- The right to use the soil, rock, sand, gravel and limestone as required by the project construction,
- The right to cut and remove non-commercial timber as required for the project construction and management.
- Payment of relevant fees, charges,
- Payment for compensation required by the affected party,
- The right to import into and re-export equipment and materials required for the projects based on PPA.
- The right to declare and pay dividends and distributions to shareholders (Sample CA, Clause 2.1).

Sample CA, Clause 4.25 (a) requires that the Company ensures the safe operation of the project facilities, including dam safety and develop emergency plan, setting out measures that the company will carry out in case emergencies. The company shall provide a copy of the initial Emergency Plan to the GoL for approval and to each member of the Dam Safety Review Panel. The Company shall incorporate any recommendations of the GoL and/or of the Dam Safety Review Panel. Notwithstanding the consultation with and recommendations of the GoL, the

Company remains liable for all injuries, damage and claims arising from the implementation of the Emergency Plan, under applicable Laws (to the extent such liability arises).

The Company is obliged to comply with all procedures of general application to Lao hydropower projects that are adopted or promulgated by the GoL concerning Emergencies event if such compliance is in conflict with obligations of the Company specified under any Project documents The Sample CA, Clause 4.25 (b).

Throughout the CA period the Company is to retain and produce upon request of the GOL, at any time and from time to time, complete copies of data and information that the Company may collect, produce, hire of production of, receive or obtain or which it has the right to receive with internationally accepted practices and organized in a way to facilitate effective review, search and monitoring by GoL, regarding:

- Company's compliance with the additional project obligations,
- Any alleged, reported or confirmed non-compliance together with proposed solutions, mitigation, remediation or rectification of any violation or non-compliance,
- Other information as maybe necessary.

The Company is to provide complete, printed and/or digital copies of such data and information to GoL at the end of the CA Period (Integrated Environmental and Social Obligations for Project, Clause 10). The Company is responsible, in all material respects, for the accuracy, completeness and reliability (Clause 11). Reasonable and prudent safeguards will be agreed on by the Company and the GoL to protect confidential/sensitive information (Clause 12, a). Otherwise, unless instructed in writing by the GoL, the Company is to release to the public information on the Company, advise impacts and other aspects of the project (Clause 12, b). Please see Text Box 12-1 for the sample list of information to be made available to the public. Timing and method for information release are indicated by the CA (Clause 12, c).

Text Box 12-1. Sample information to be made available to the public. Source: Integrated Environmental and Social Obligations for Projects, Clause 12, b.

1. the name and address of the Company, its sponsor(s)/investor(s) (including the previous sponsor(s)/investor(s) at the time of the occurrence of any reportable event), the members of its board of directors, and each of its most senior officers,
2. the specific location and coordinates of each Project current and proposed activity,
3. the Company's Additional Project Obligations,
4. information concerning discharges and/or emissions from the Project and the Company's operations;
5. the results of all self-monitoring carried out by the Company;
6. all information obtained by or available to the Company concerning the incidence of Adverse Impacts on PAPs, Persons Working for the Company and persons in neighbouring communities,
7. all information obtained by or available to the Company concerning breach or non-compliance with the conditions of the Assessments and Plans, Permits and this Annex,
8. budgets outlining the Company's obligations as specified under this Annex,
9. each study, Assessment and Plan and its respective updates approved by GoL, and the reports produced by the Company as required under the Assessments and Plans and this Annex;
10. any warnings, penalties or other sanctions issued to or imposed on the Company,
11. all the reports prepared by the Monitoring Agency(ies) including schedules and supplemental materials attached to or contained or referenced in such reports, and
12. any other report, information or data instructed by GOL to be disclosed by the Company as GOL in its sole discretion may deem appropriate or necessary.

Roles, rights & responsibilities of relevant government agencies and developers

To summarize the hydropower decision making process, it is useful to itemize the roles, rights and responsibilities of all of the key player, as below:

National Assembly

National Assembly has the authority to approve (or disapprove) the following type of projects (Law on Investment Promotion 2016, Article 49):

- Joint venture between the Government and private sector of more than 20 billion Lao Kip (LAK)
- Extension of concession in special economic zones,
- Projects requiring conversion of national protected and conservation forests, approved by the Standing Committee of the National Assembly based on request of the Government.
- Projects with severe social and environmental impacts such as water diversion, resettlement of more than 500 households,
- Concession of more than 10,000 ha of land,
- Projects that have been designated for special promotion by the government, such as those within a special geographic zone,
- Hydropower projects with installed capacity of more than 100MW (Electricity Law 2012, Article 34).

Also, the National Assembly has the authority to inspect projects by investors, including hydropower projects. (Law on Investment Promotion 2016, Article 103, Decree on the Environmental Impact Assessment 2010).

The Government

- Approval of plan for electricity development,
- Approval of hydropower projects with the use of forests administered at the district level, by the Prime Minister based on request of the National Land Administration in agreement with the Ministry of Agriculture and Forestry.

Provincial Assembly

According to the Law on Investment Promotion 2016, Article 50, the Provincial Assemblies have the power to consider and approve the following investments:

- conversion of 100 hectares or less of degraded forest land that may not be self-rehabilitated upon request by the provincial, capital administration;
- conversion of complete deforested land from 30 to 200 hundred hectares per business operation upon request by the provincial, capital administration;
- lease or concession of degraded forest land that may not be self-rehabilitated of 150 hectares or less per business operation with the maximum term of lease or concession of 30 years upon request by the provincial, capital administration;
- business operation that have impact on environment, nature and society at the provincial, capital level.

Provincial Governors

- Approval of forests administered at the village level, based on request of the Provincial Land Administration in agreement with the Provincial Department of Agriculture and Forestry.

Committee for Investment Promotion (CIP) at Central Level

The Committee for Investment Promotion (CIP) at central level is to:

- consider and approve concessional business, such as hydropower development projects,
- Inspect the implementation of laws, relevant regulations and agreements,
- consider and approve modification, cancelation/termination of hydropower projects,
- Report to the Government regularly.

Ministry of Planning and Investment

On behalf of the Government, MPI with its One-Stop Service Office has the following duties and responsibilities:

- Admission of applications from developers for MOU for projects larger than 15 MW,
- Circulation of MOU application to relevant agencies for comments,
- Undertake negotiations with developers on any outstanding issues, with participation of relevant agencies at the central and local levels. The results of the negotiation are reported to the CIP for consideration in its decision whether to sign the MOU.

- Signing of MOU,
- Issuing of the investment license to developers,
- Notification to developers, if their MOUs are rejected,
- Issuing of extension of MOU based on request of developers,
- Termination of MOUs by providing at least 60 days of notice to developers,
- Consideration and approval of requests of MOU Holders to transfer the rights to potential investors,
- Consideration and approval of PDA,
- Consideration and approval of CA,
- Issuing, suspension, cancellation or termination of investment license after signing of the CA.

Provincial Department of Planning and Investment

- Consideration and approval of MOU, PDA and CA for projects less than 15 MW,
- Undertaking all activities as listed above for MPI at the provincial level.

Ministry of Energy and Mines

The Ministry of Energy and Mines is the implementing and monitoring agency of hydropower development projects, representing the GoL to exercise its rights and performing the obligations of the GoL as stated in any MOU, PDA and CA of hydropower projects of more than 15 MW.

Overall roles and responsibilities of the Ministry are as follows:

- Elaborating the strategic plans, electricity development plans, laws and regulations on electricity activities;
- Inspection of the implementation of electricity activities;
- Data collection survey and statistic registration on electricity sources throughout the country;
- Technically manage and monitor the electricity business of both public and private sectors;
- Study and research and give technical advice on the investment in electricity businesses within the scope of its responsibility;
- Study on the extension, suspension or withdrawal of the electricity business licenses of the investors;
- Provision of instructions to the electricity business operators on the import of electricity, electrical facilities;
- Build, improve and upgrade the knowledge capacity of technical and managerial staffs on electricity development activities;
- Approval of the appointment of the Chief Engineers under its responsibility on the proposal of the electricity business operators;
- Study and research the electricity prices and submit them to the Government for consideration;
- Coordination with other sectors and relevant local administrations in management of electricity business (Law on Electricity 2011), Article 64).

More specific responsibilities and rights include the following:

a) For hydropower projects of more than 15 MW, during the MOU stage, not negotiate, consider or accept any other proposal or offer from the third party, apart from the developer, for the development and implementation of the Project;
b) Grant permission to developers to undertake preliminary/data collection;
c) Authorize access for developer to the site and provide authorizations and secure working conditions for field activities on the site;
d) Assist developers in obtaining visas, permits, approvals, licenses or authorizations from central, regional or local governments or communities that maybe necessary for the implementation of the mandate under an MOU;
e) Provide appropriate information, if available, to facilitate the feasibility study and environmental and social impact assessment, while the developer would pay for the information at reasonable rate;
f) Review and approval of feasibility study. DEPP is responsible for review of economic aspects, DEM is responsible for technical aspects;
g) Issuing of feasibility study certificate by DEPP;
h) Concurrence of the signing of PDA;
i) Introduce the Project to relevant local authorities through meeting in the province where the project is located (Sample MOU, Article 6).

Provincial Department of Energy and Mines (PDEM)

- Responsible for hydropower projects of less than 15 MW. All specific responsibilities and rights listed above for MEM are applicable to PDEM, implemented within provincial boundaries.

Ministry of Natural Resources and Environment

The Department of Natural Resources and Environment Policy is responsible for review and approval of hydropower larger than 15 MW with respect to:

- Feasibility study (particularly technical aspects related to flood management),
- Environmental and social impact assessment,
- Environmental and social management and monitoring plan,
- Cumulative impact assessment,
- Transboundary environmental and social impact assessment (TbEIA),
- Integrated environmental and social obligations for hydropower projects, used as an Annex to the Concessional Agreement,
- Inspection of compliance (by the newly established DNEI),
- Renewal, revocation or suspension of Environmental Compliance Certificates,
- Consideration and approval of application for water use permit (by DWR),
- Suspension and modification of water use permits (by DWR).

The recently established Department of Natural Resources and Environment Inspection (DNEI) is responsible for inspection of the implementation of hydropower projects with respect to social and environmental aspects.

The Department of Water Resources is responsible for consideration and approval of certificates for use of water resources, including hydropower projects. If release of water from dam is seen as "waste water" discharge, then certificate for such release will also be considered and issued by DWR. At present, however, no legislation stating such issue.

Provincial Department of Natural Resources and Environment

- All responsibilities listed above for MoNRE are applicable to PONRE with hydropower projects of less than 15MW, implemented within the provincial boundaries.

EDL

Électricité Du Laos (EDL) owns and operates generation, transmission, and distribution of electricity in Laos. It also manages electricity imports and exports. Specific roles in the hydropower development process include the following:

- Enter into Tariff MOU with Developer, stating key terms and conditions, including price of energy (Sample PDA, Clause 19),
- Enter into Power Purchase Agreement with Hydropower Companies concerning the sale of electricity after the execution of the Concession Agreement (Sample PDA, Clause 19).

Developers

- Application of MOU submitted to MPI;
- Negotiation with the One-Stop Service Office on any outstanding issues;
- Request for extension of MOU, if necessary;
- Transfer money to MPI within 30 days from the signing of the MOU to guarantee on implementation of the project;
- Preparation of Scoping Report and terms of reference (ToR) for an environmental assessment;
- Undertaking the ESIA after approval of their respective scoping reports and ToRs;
- Preparation, revision and finalization of EISA Report, including ESMMPs;
- Undertake CIA, in case of more than one hydropower project is located on the river basin or sub-river basin;
- Coordinate with MoNRE on public involvement;
- Coordinate with MoNRE on information dissemination;
- Implementation of the ESMMP;
- Evaluation of the implementation of the ESMMP during the construction and compliance during the operation; sub-sequent revisions of ESMMP;
- Submission of application to renew environmental compliance certificates,
- Application for PDA;
- Finalization of PDA, including FS, ESIA, tariff MOU and Shareholder Agreement;
- Application for CA;
- Establishment of a company to sign the CA.

The rights conferred by a CA include:

- The right to lease the site, including rights of occupation, access, use and possession of the land within the site and water ways thereon and the use of public roads, necessary to implement the project and to engage in project management;
- The right to register and operate Company;
- The right to design, finance, construct, own, maintain and operate the project facilities on the site;
- The right to sell electricity generated according to the PPA;
- The right to use the water, including the right to divert, dam, retain, store and use of the river in the immediate area of the site, solely to the extent required for the purposes of the project, subject to the River System Coordination Plan, if any, and maintaining environmental releases from the reservoir at all times. Discharge in cubic meters per second is specified in the CA, but how this is to be determined is not clear.
- The right to use the soil, rock, sand, gravel and limestone as required by the project construction;
- The right to cut and remove non-commercial timber as required for the project construction and management;
- Payment of relevant fees, charges;
- Payment for compensation required by the affected party;
- The right to import into and re-export equipment and materials required for the projects based on PPA;
- The right to declare and pay dividends and distributions to shareholders (Sample CA, Clause 2.1);
- Ensure the safe operation of the project facilities;
- Provide a copy of the initial Emergency Plan to the GoL for approval and to each member of the Dam Safety Review Panel;
- Incorporate any recommendations of the GoL and/or of the Dam Safety Review Panel;
- Liable for all injuries, damage and claims arising from the implementation of the Emergency Plan, under applicable Laws;
- Obliged to comply with all procedures of general application to Lao hydropower projects that are adopted or promulgated by the GoL concerning Emergencies;
- Throughout the CA period the Company is to retain and produce upon request of the GoL, at any time and from time to time, complete copies of data and information that the Company may collect, produce, hire of production of, receive or obtain or which it has the right to receive with internationally accepted practices and organized in a way to facilitate effective review, search and monitoring by GoL;
- The Company is to provide complete, printed and/or digital copies of such data and information to GoL at the end of the CA Period;
- The Company is responsible, in all material respects, for the accuracy, completeness and reliability;
- Reasonable and prudent safeguards will be agreed on by the Company and the GoL to protect confidential/sensitive information.

Terms and Conditions of Water Rights Permits

The revised Water Resources Law of 2017 mandates that MoNRE, in coordination with relevant ministries and local authorities, issues permit for large-scale use of water, which includes impoundments and flow regulation for hydropower projects. PONRE, in coordination with relevant provincial departments and local authorities considers and issues permits for medium-scale use of water. Regulations to implement the revised water law are being drafted. These provide that terms and conditions will be included in each permit for hydropower developers that will address operating regimes, measures to protect rights of existing users (including downstream users, water supply, irrigation, etc.), minimum flow requirements, relevant water allocations and the achievement of ambient water quality standards. Failure to comply constitutes grounds for termination of permits.

Permits should reflect the river basin plans that MoNRE is charged to develop. These will prescribe the allocation of water in a basin for all uses, including hydropower. The revised water laws 2017 stipulates that permit for water use will be based on EIA regulations and other relevant regulations. It is best, however, if water allocation within the framework of river basin planning be included as one of the bases for consideration of permits. This ensures that hydropower will have sufficient water during the period of their concession agreement.

Processes for Stakeholder Involvement

The Guidelines for the Implementation of the Policy on Sustainable Hydropower Development, the regulations on environmental and social impact assessments, and the regulations on the initial environmental examination (IEE) call for stakeholder consultations and public participation in the process of approving hydropower projects. These authorities recognize that stakeholder consultations promote sustainable decisions by bringing into the process the needs, interests and views of all stakeholders. It is important that consultations begin before any major decisions are made and continue throughout construction and operation.

The Guidelines mandate that:

> "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" (Clause 5.9).

The ESIA and IEE regulations require:

> "[P]ublic participation during the preparation of the ESIA/IEE reports" (Ministerial Instruction on the Process of Environmental and Social Impact Assessment of the Investment Projects and Activities, Clause 2.14, and Ministerial Instruction on the Process of Initial Environment Examination of the Investment Projects and Activities, 2013, Clause 2.10).

According to the Ministerial Instruction on ESIA, Clause 2.14, the "public" refers to the Project-Affected Persons (PAP) and other stakeholders associated with drafting and reviewing of ESIA Report. Other stakeholders in this sense include the firms involved in the hydropower project and the government agencies involved in the review and approval. According to the "Integrated

Environmental and Social Obligations for [] Project" or SESO: Project Affected Persons are classified into 3 categories, differentiated by the degree and types of impacts as follows.

Category 1 includes "any person, household or legal entity:

i. who as a result of the Project will lose all or most of the residential, agricultural and commercial land that such person, household or legal entity is the legal, customary or usufruct owner of and the remaining land is rendered insufficient to re-establish houses or other structures or the remaining land is rendered economically unviable; and

ii. who has permanent residence on and is the legal, customary or usufruct owner of the land that at any point is located at a horizontal distance of three (3) meters or less to the Probable Maximum Flood contour line".

Category 2 includes "any person or household who will lose any part of their residential, agricultural or commercial land but is not the Resettlers. For the avoidance of doubt, any person or household residing in the host village who will lose any of their land by the resettlement and relocation of the Resettlers shall also be categorized as the Project Affected Persons (Category 2) as well".

Category 3 includes "any person who will not lose any use of land but lose any part of their source of economic opportunity or livelihood (including without limitation the water supply source or fishery activities in the downstream areas)" (Integrated Environmental and Social Obligations for [] Project" (Integrated Environmental and Social Obligations for[] Project, Appendix 5).

These stakeholder groups have the right to:

- Receive information on the development plans, benefits, and the social and environmental impacts, including the ESIA report and progress report on the implementation of the environmental and social management and monitoring measures,
- Provide information on the local social and environmental status,
- Participate in the field inspection and consultations,
- Propose to local officials ideas for resolving their social and environmental concerns, and,
- Participate in monitoring activities.

The Ministerial Instruction on ESIA (2013), Clause 2.15, instructs MoNRE, local administrators, investors and project owners to share joint responsibility for conducting the consultations with stakeholders, PAPs and the public. These entities are to take the following steps jointly with MoNRE:

- Disseminate project plans and social and environmental impacts and obtain comments through meetings conducted at the village, district, provincial and national levels.

- At the end of the project, inform the PAPs regarding the implementation of the closure and rehabilitation plan. This is to allow them to provide comments, which are required for MoNRE to issue a formal letter confirming the end of the investment project/s.

The usual practice today limits the public involvement to the early stages and does not include the outputs of the ESIA or ESMMP, perhaps because MoNRE continues to treat those documents as the confidential property of the developers, which is inconsistent with the express instructions in the Policy. This should be rectified. Recommendations for a more effective process are provided below at page 46-50.

CRITICAL OUTSTANDING ISSUES IN EXISTING LEGAL AND INSTITUTIONAL FRAMEWORK AND PROPOSED RESOLUTION TO FACILITATE IMPLEMENTATION OF MASTER PLAN

The existing legal and institutional framework for hydropower planning, approval and regulation leaves unresolved several issues that are critical for implementing the sustainable hydropower Master Plan. These have been noted in passing in the sections above outlining the existing framework. This section extracts those issues and proposes how they may be resolved by the GoL in a manner that facilitates implementation of the Master Plan.

What are the Standards and Criteria for Determining Sustainability of a Hydropower Project

The most notable deficiency of the existing framework is that it does not provide a substantive definition of sustainability by which the agencies of the GoL can determine whether a proposed project should be approved. The instructions and guidance provided in the Policy itself, and in the Guidelines for its implementation, are expressed in terms of objectives to be achieved, such as prevention and mitigation of adverse impacts; processes and procedures for identifying and assessing such impacts, such as cumulative and transboundary impact assessments; and data and information to be gathered and considered, such as the nature and location of critical habitats at risk. What is needed in addition is a set of functional criteria or standards or attributes of sustainability which can be applied by government regulators to determine the locations, scales, designs, operations and timing of projects for which it will accept applications for feasibility studies, and that can serve as a checklist for developers so they can focus their feasibility study investments on projects with confidence that they will qualify for approval.

The closest the existing framework comes to such a substantive definition is found in the 2005 Policy on Sustainable Hydropower Development, which is affirmed and reiterated in the 2015 version. That policy states:

> **"ecological sustainability relies upon the avoidance of irreversible environmental impacts such as the loss of biodiversity or disruption of ecological cycles."**

Notably, this statement focuses on ecosystem processes and biodiversity rather than a more utilitarian standard such as maximizing food security or other environmental services. What it lacks however is guidance on the acceptable levels of "avoidance" or protection. Given that all

hydropower projects alter the natural functions of rivers to a greater or lesser extent, the question for sustainability determinations is: **how much alteration is too much?**

The answer in the 2015 guidelines seems to be: "as little as possible". It establishes a hierarchy of strategies to cope with impacts. Avoidance is the preferred strategy, followed by minimization, mitigation, and compensation or offsets as the strategy of last resort. It also states that before a project can be approved, it must "ensure . . . that potential negative impacts on the environment and social [system] can be prevented and/or mitigated". This implies that projects that cause impacts that cannot be prevented or mitigated cannot be approved. This possibility is not just theoretical: Section 5 of the Master Plan demonstrates that whereas fish passage around and through dams may be mitigatable, in some cases hydropower reservoirs create impacts that cannot be mitigated.

The Master Plan in Section 6 undertakes to propose a functional definition of "sustainable hydropower" in terms of the attributes of projects that counteract their most significant impacts on the physical processes of rivers that sustain their ecosystems. In this Implementation Section, we provide some additional guidance from other sources. Section 6 provides a checklist of attributes of hydropower projects that counteract the three main types of impacts that they can cause to the natural functions of river systems at each of the three critical decision points for hydropower development, siting, design and operation. This checklist can be readily applied to determine how "sustainable" a project is or is not. This approach does not necessarily provide a "bright line" but rather sustainability is a matter of degree. Projects that satisfy all of the attributes, such as the alternative projects cited in Section 7 of the Master Plan, are clearly sustainably; projects that satisfy few of them, such as the proposed mainstream projects, are clearly unsustainable; the gradations in between establish a relative priority for approval.

The Integrated Environment and Social Obligations for Projects does make reference to several guidance documents on sustainable hydropower. These include the IHA Hydropower Sustainability Assessment Protocols (Annex 12.2), the ADB Safeguards policies, and the IFC's cumulative impact assessment guidelines (Annex 12.3). NHI has analyzed these to see if they provide the needed substantive content for a functional definition of sustainability. The basic conclusion is that these, like the Lao Policy Guidelines themselves, express sustainability mostly in terms of goals and objectives, processes and procedures, and data and information that is to be gathered and considered. These, in the main, parallel the attributes of sustainability proposed in Section 6 of the Master Plan. To the extent that these provide a functional definition or itemization of attributes that distinguishes "sustainable" projects from "unsustainable" projects, these may provide useful guidance to the GoL in implementing the Policy (see Annex 12.3).

How, When, and Where is the Determination of Sustainability Made?

Analysis

The function of promulgating the standards and criteria is left to the departments of the Government of Lao PDR that are charged with implementing it. Article 2 of the Prime Minister's decree assigns to the Ministry of Energy and Mines the responsibility for "coordinating with other ministries or equivalent agencies and local authorities for effective implementation of the

Policy . . .". (Article 2). Overall guidance is to be provided by an Inter-Ministerial Committee formed by MEM. Under the Guidelines, DEPP "will be responsible for forging effective implementation of this policy in close consultation with concerned agencies and provinces (§2.2). On the other hand, DNREP at MoNRE "is responsible for ensuring that hydropower projects are fully in compliance with the Environmental Impact Assessment decree. So, which entity makes the call on "sustainability", under what standards and criteria, and at what stage in the process? Perhaps it was the intention of the Prime Minister that MEM would develop the substantive standards through the Inter-Ministerial Committee that it is instructed to establish.

Proposed resolution

First, the determination should be made on the basis of clear, objective and transparent criteria or standards that specify the attributes of projects that are sustainable. This will require an agency of the GoL to establish the criteria and standards, as these are not provided by the Policy or it Guidelines. The Master Plan proposes a set of attributes of sustainability that can be adopted as the substantive standard. As noted above, the HSAP and the IFC's Guidelines provide compatible and complementary performance standards. We recommend in this Implementation Section that the responsible agency promulgate the applicable standards as formal regulations so that all stakeholders, including project proponents, will know in advance what types of projects will and will not be approved.

Since these standards are at the very heart of the Policy, we suggest that they be issued by the Inter-Ministerial Committee, based on proposals drafted by MoNRE as the agency with the greatest technical expertise on the relevant issues. A standing task force under the Inter-Ministerial Committee set up by the Policy would be the appropriate body to develop the principles and standards for approval by the Committee itself.

The sustainability principles and criteria should be applied at two phases. (1) In the future, the Master Plan recommends that the determination of environmental sustainability be made in the process of preparing a basin-wide hydropower development plan that is specifically oriented to satisfy standards and criteria for environmental sustainability. Such plans will identify the projects (sites, designs and operations) that are "pre-qualified" as sustainable and that will be offered to investors to develop and propose for approval.

(2) We also suggest that the sustainability determination be an explicit step in the approval process for individual projects as part of the project- environmental impact assessment process and MoNRE should make a determination that the principles and standards are met as a condition to issuing an Environmental Compliance Certificate after consultations with stakeholders, as contemplated by the Policy Guidelines.

How the assessment of sustainability should be made is more complicated in light of the reality that it is a matter of degree. Two principles should be applied:

i) The mandate in the current Policy Guidelines that the environmental assessments include a consideration of alternative structures and locations, and also include comparison of a no project alternative, should finally be implemented. This allows the

matter of degrees to become explicit. It also allows a transparent assessment of the tradeoffs between costs of mitigation strategies and their efficacy.

ii) The hierarchy of strategies for attaining sustainability set forth in the current guidelines should also be implemented and should bear on the sustainability rating. This hierarchy requires avoidance of impacts to the extent feasible, then minimization, then mitigation and then compensation or offsets.

We hasten to add, however, that revisions of the process for planning, approvals and regulation of hydropower development in Lao PDR that are proposed in the next sub-section of this Implementation Section, would make resolution of all of these issues unnecessary because a Master Plan for sustainable development would be promulgated by the Government of Lao as the first step, before proposals to build the specified projects are invited. Under this approach, all invited projects would be made compliant with the Policy during the planning stage.

What are the Rights and Entitlements Conferred by an MOU, a PDA or an ECC

One of the most important issues to be resolved in implementing the Policy on Sustainable Hydropower Development is: What rights and entitlements are conferred on a hydropower developer by the issuance of a MOU to conduct a feasibility study, by a Project Development Agreement, or by an Environmental Compliance Certificate (ECC)? Do these documents confer any promise or guarantee that the project will ultimately be awarded a CA. This is of paramount importance because it affects the sustainability determination for projects that have already received either an MOU or a PDA, which includes all of the Xe Kong mainstream projects.

Analysis

There seems to be a lingering presumption in MEM and MoNRE that projects with MOU's or PDAs should be granted a CA if they demonstrate technical and financial feasibility and also comply with all procedural requirements in the environmental and social impact assessment process and implement whatever impact mitigation requirements may be imposed by DNREP within that process. In other words, there is a presumption that once a project has obtained an Environmental Compliance Certificate, it has been judged to be "sustainable".

There are several counterarguments to this view:

- It is clear that existing projects are not "grandfathered" out from the Policy on Sustainable Hydropower Development. Section 1 of the Guidelines provides that: "Existing hydropower projects will also be reviewed to ensure that any unsustainable aspects could be adequately addressed." If existing project are within the sweep of the policy and its substantive requirements, it seems clear that projects that do not yet exist, but have only received permission to continue to be developed, are also included in the scope.

- Because MoNRE does not disclose the content of ESIAs, it is not apparent that it fully complies with the instructions contained in the Policy and its Guidelines on the scope and content of the ESIAs in several important respects that bear on the determination of

sustainability. These likely deficiencies call into question the legal validity of the Environmental Compliance Certificates:

1. The ESIAs that have been approved for the mainstream projects MAY not include a cumulative impact analysis that takes account of the operations of all the other six proposed mainstream dams in the cascade (Policy §7).

2. The ESIAs MAY not take account of the large transboundary impacts that would occur in the downstream system in Cambodia and Vietnam (Policy §7).

3. The ESIAs MAY not include a risk analysis over the entire life span of the project (Guidelines §7.1)

4. The ESIAs MAY not include an analysis of alternatives for project structure and locations, such as are provided in the Master Plan (Guidelines §7.1).

5. DNREP does make the ESIA's or ECCs publicly available, in contravention of the clear instruction in the Guidelines and Policy that "All hydropower projects shall be undertaken on the basis of transparency and openness".

- Compliance with mitigation measures required in an ECC may not be sufficient to assure "sustainability". §7 of the Policy which states that "before a project can be approved the ESIA must ensure that potential negative impacts on the environment and social [system] can be prevented and/or avoided". However, Section 5 of the Master Plan finds that some impacts from the mainstream impoundments cannot be mitigated, specifically, the barrier to migration that the reservoirs themselves present.

- Under the newly decreed Water Resources Law of 2017, a hydropower power project cannot proceed without a water right certificate, which will require that the project inflict "minimum impact" on the environment and meet minimum stream flow requirements. These conditions may represent a higher standard than currently implemented by DNREP in issuing ECCs.

Proposed resolution

Developers that have already received an MOU or PDA are guaranteed an exclusive franchise to conduct feasibility, environmental impact, financial viability and other investigations at a specific site. These studies may (or may not) demonstrate the technical, environmental and financial "sustainability" of the project. In the event that the GoL eventually determines that the project meets the sustainability test and approves the project, that developer has an exclusive right to the award of a CA on a non-competitive basis. However, the MOUs and PDAs do not provide any assurance that the GoL will decide to approve the project. The Master Plan casts doubt on whether the proposed mainstream dam projects can satisfy a meaningful definition of environmental sustainability.

Projects that receive an ECC on the basis of an ESIA that does not include a robust assessment of cumulative and transboundary impacts and, siting, design and operational alternatives, or that does not include an explicit finding that all significant environmental impacts will be prevented or mitigated are not eligible for a CA unless they undergo further environmental review in compliance with the relevant requirements of the Policy and Guidelines.

In the future, the Master Plan recommends that the determination of environmental sustainability be made in the first instance by MEM and MoNRE in the process of preparing a basin-wide hydropower development plan that is specifically oriented to satisfy standards and criteria for environmental sustainability. Such plans will identify the projects (sites, designs and operations) that are "pre-qualified" as sustainable and that will be offered to investors to prepare feasibility studies.

The possibility that a project will not be approved after it has completed all tasks under an MOU or PDA is a normal business risk that is part of the cost of doing business in the hydropower sector. But, it can be substantially reduced through the promulgation of a development master plan in advance. When that is done, as the Master Plan proposes for the Xe Kong, the projects should be offered to the developers, in the order of priority determined by the Master Plan through a competitive public tender that specifies all relevant terms and conditions required by the GoL to assure that the project is sustainable. The approval process will include a project-specific environmental and social impact assessment, as well as all the other steps currently required for project approval. But many of the environmental issues will already be substantially resolved in the master planning process so that ultimate approval is highly likely, if not inevitable.

This analysis raises important issues with respect to the legal status of the seven proposed mainstream dam projects in the Xe Kong basin. All of these have completed feasibility studies as of the time of this writing. Yet none of them have a current and permanent Environmental Compliance Certificate. The ECC for Xe Kong 5 is temporary and not final, and the ECCs for Xe Kong Downstream A and B have expired. Also, none of these projects have signed a power purchase agreement. Therefore, none are yet eligible to receive a concession agreement to build, own and operate the project.

Note, NHI has not been able to ascertain whether the ESIAs submitted by these projects fully comply with the new requirements in the Policy and its Guidelines regarding scope and content because MoNRE has not responded to repeated requests to provide those documents for review. If the ESIAs are not fully compliant, NHI recommends that it require the assessments to be redone and, in particular, to include an assessment of alternative sites, including those proposed in the Master Plan, and detailed cumulative transboundary impact assessment comparable to that provided in the Master Plan. NHI believes that such assessments, if done candidly, would show that these projects do not satisfy meaningful sustainability criteria. We also point out that MoNRE has not made an explicit finding with respect to these ESIAs that they show that all environmental impacts would be successfully mitigated. Particularly, the barrier that the reservoirs pose to fish migration may not be capable of successful mitigation, as shown in Section 5 of the Master Plan.

MODIFICATIONS OF CURRENT PROCESS NEEDED TO IMPLEMENTATION THE MASTER PLAN

The current process for hydropower development planning and approvals is driven largely by investor initiative. The project developers identify potential sites and project parameters, apply for an exclusive right to conduct feasibility studies and environmental and social impact studies, negotiate financial terms, and obtain a concession agreement to build, own, operate and then transfer the project. All of the technical and financial analysis is conducted by the developers and their consultants with some degree of oversight by the Ministry of Energy and Mines and Ministry of Natural Resources and Environment. But these ministries lack both the technical capacity to independently review the technical analyses performed by the developers and the means to acquire that expertise. Consequently, development occurs in a rather ad hoc manner, without consideration of the optimal basin-scale alternatives.

The Policy on Sustainable Hydropower Development, which requires a consideration of least impactful alternatives, and the recently revised Water Resources Law, which calls for basin-scale water resource allocation decisions, calls for an inversion of this process, and the Sustainable Hydropower Master Plan for the Xe Kong Basin illustrates how this can be done. To Implement the Master Planning approach, the GoL would assume a proactive role in determining in the first instance what facilities it wants to have built, where and how. This will include decisions on sites, scale, designs, operational policies, timelines, and mitigation requirements. All of these except the timeline will be set forth in the master plans. This is sometimes called "hydropower by design". The socialist development paradigm calls it "centralized economic planning". By any name, it amounts to the Government of Lao becoming the master of its own house when it comes to the economic development of its water resources to attain the highest possible benefits for the people of Lao, not just for the immediate term, but in a sustainable manner for future generations.

The major change is simply that MEM would conduct a reconnaissance level assessment of siting, design and operational alternatives for hydropower development in each major catchment in Lao PDR. MoNRE would conduct a programmatic-level environmental and social impact assessment of these alternatives to ascertain which of the alternative sites, designs and locations could best avoid, minimize, mitigate or compensate for the adverse impacts. From these assessments, MEM and MoNRE would together prepare a master plan that specifies and rank orders the projects for which the GoL should solicit and accept proposals from developers/investors for MoUs to conduct detailed technical and economic feasibility studies, and project-specific environmental and social impact assessment. In awarding MoU's, the government will open a global public tender to accept competitive applications from prospective developers to construct and operate a project that meets the announced specifications for location, design, operations, etc. The bids will include the proposed financial benefit package to the GoL. The MEM will then award a concession agreement to the offer that it finds superior. The winning proposal would be selected on a competitive basis in terms of demonstrated capabilities and performance records rather than on price terms. Where the master plan includes a series of projects in the same basin would best be operated in a coordinated fashion, it may well decide to select a developer that will undertake to build, own and operate the entire suite of projects. The price would be determined by negotiations of

financing terms, power purchase agreements, and tariff negotiations. With these changes, the procedure of obtaining an Environmental Compliance Certificate, water rights certificate, project development agreement, and concession agreement would be the same as under the current practice.

The change in existing procedures that this calls for may seem rather modest, but would have transformative effects. It would assure that the projects that enter the approval pipeline are ones that the government-controlled planning process determines meet the sustainability principles and standards. Equally important, it would assure that projects that do not meet such standards and principles do not receive the impetus that conferring an MoU currently provides.

In addition to leading to more sustainable projects, such a centralized planning approach will also provide major benefits for the GoL and private developers. System-wide planning will streamline the project development process because many of the issues that complicate and delay project approval will have been resolved before a feasibility study is initiated. This master planning approach will also reduce the risk that a project will ultimately fail to receive the necessary approvals. This will save money in the long run, and will reduce financial risks typically associated with ad hoc or individual, developer-driven projects. At the same time, the GoL will hold "the cards" to advertise projects for development on their own terms as laid out in the master plan.

Other benefits include:

- Engaging a variety of stakeholders and capturing their perspectives and participation at an early stage of planning (Opperman et al., 2017), which also reduces the chance of delays;
- Fostering coordinated basin-wide development plans;
- Creating an enabling environment for Public-Private Partnerships (PPPs)
- Identifying project sites with secured grid connections;
- Expediting financing approval-time and creating more favorable financing terms due to the reduced financial risk to lenders and equity investors (Srinivasan, 2013 and personal communication with J. Raepple);
- Reducing the lead time for developing a project (Srinivasan, 2013: 4);
- Building technical capacity of GoL staff.

As under the current process, a project that receives a MOU for a feasibility study will have an exclusive right, on a non-competitive (sole source) basis to build, own and operate the project, if the project proves to be technically and financially feasible and other procedural requirements are satisfied.

It will be noted that most if not all of the river basin in Lao already have existing hydropower projects and prospective projects for which feasibility studies are already underway under existing MoUs. However, that state of affairs does not preclude, and may actually facilitate preparation of basin-wide master plans to guide future development. With respect to existing projects, the siting criteria applied for the Xe Kong Master Plan give priority to new sites located above these existing projects on the rationale that these are inaccessible to migratory fish. Some of these sites may already be the subject of existing feasibility studies. If those projects otherwise satisfy sustainability principles and criteria, they should be given a priority for

approval under the existing process. If such sites have been studied and proven to be infeasible, of course they should not be included in the master plan for that river basin. The major difficulty is with respect to project currently undergoing feasibility studies that are not included in the master plan because they are deemed to not satisfy the sustainability principles and criteria. This is the situation with the mainstream dam proposals in the Xe Kong, in the view of the NHI Team. The question is, how can these be cancelled?

The answer has several components:

- First, as noted in this implementation section, the holder of an MoU for a feasibility study enjoys an exclusive right to develop that project should it prove to be feasibility and ultimately be found to be "sustainable" under criteria to be developed by the GoL, but it does not have a guarantee that that approval will be forthcoming. Even existing projects are subject to review under the Policy on Sustainable Hydropower Development; therefore certainly project merely being studied are not exempt.

- Second, these projects must comply with the new requirements for environmental impact assessment, which includes assessment of alternative sites and designs as well as cumulative and transboundary impacts. This impact disclosure and alternative assessment serves the purpose of enabling MoNRE to determine whether a project should go forward or not; it is not just a *pro forma* procedural hurdle. Projects that have not fully complied with these more demanding impact assessment requirements should be required to re-do their assessments before they are entitled to receive an Environmental Compliance Certificate.

This change in the process for planning and approving hydropower projects will require some modifications in the existing laws, regulations and institutional practices. This sub-section makes recommendations for the modifications that will be needed to fully implement the Policy on Sustainable Hydropower Development in Lao PDR.

Recommendation 1: The Ministry of Energy and Mines Should Prepare Basin-Wide Sustainable Hydropower Master Plans

DEPP already has the authority and mandate to develop electricity development plans at the national scale (Policy Guidelines on the Implementation of the Policy on Sustainable Hydropower Development in Lao PDR 2016, Section 5.2, b, the Electricity Law 2012, Article 10).). It can implement that authority to develop basin-wide hydro development plans in the manner exemplified by the Xe Kong Master Plan. It also has reason to do so to satisfy the river basin-scale approach to the issuance of water rights certificates by DWR or PONRE/DONRE depending on the scale of use under the revised Law on Water and Water Resources 2017. This Master Plan provides the template on how to do basin-wide planning, and the Policy on Sustainable Hydropower provides the procedural framework. What DEPP lacks is the mandate, the substantive standards, and the financial means to do so.

Action may be necessary by the National Assembly and/or the Prime Minister to command that future hydropower development occur only within the framework of basin-scale development plans the lay out the locations, designs and operational policies for hydropower projects.

As the Master Plan illustrates, the main challenges in developing environmentally sustainable hydropower development plans entails the following steps:

1. Survey of suitable sites for hydropower projects in terms of the necessary physical conditions. These are topography, hydrology and geology.
2. For each of these sites, assess the effect that the dams and reservoirs would have on migratory fish and on endemic resident fish species. Eliminate or assign lower priority to those sites that would have appreciable adverse impacts.
3. For the remaining sites, assess designs that will facilitate sediment discharge and maximal fishery mitigation measures.
4. Define operational policies for these dams that maintain a semblance of the natural flow regime that is conducive to the maintenance of ecological values.
5. Estimate the potential power output from these projects.
6. Offer the best performing alternatives, perhaps in rank order, to the private investors through a public tender.

For the Xe Kong, the Master Plan offered by the NHI project completes all of these steps at a pre-feasibility or reconnaissance level, except the last one. When these steps are completed, the current process for approval of the individual projects in the basin-wide master plan would be implemented, including the MOU, FS, ESIA, and CA stages. All of these stages would greatly facilitated by the technical work to produce the basin-wide master plan. But, the site-specific process would be conducted at more definitive level of analysis that would also include the engineering and financial aspects.

Recommendation 2: The Inter-Ministerial Committee Should Articulate the Substantive Standards and Criteria for Determining the Sustainability of Hydropower Projects

The Policy on Sustainable Hydropower Development appropriately states that "sustainability" has several dimensions, including environmental, social, technical and financial sustainability. The Sustainable Hydropower Master Plan for the Xe Kong is oriented toward the environmental dimension, and therefore this Section addresses primarily that aspect of implementation. Notably, the Policy is also oriented mostly toward the environmental concerns of hydropower development. It seems plain that, for this dimension, the proper agency to formally promulgate the applicable standards, and to make the initial determination as to whether the standards are met, is MoNRE. However, because these standards are foundational for the implementation of the policy, and will determine the course of future hydropower development in Lao PDR, it is appropriate that these standards be ultimately approved by the Inter-Ministerial Committee (IMC) that the MEM is to establish.

However, during the review and comments on the internal review draft of the Master Plan, it was pointed out that inter-ministerial committees are much better at performing oversight than in executing tasks and achieving results. It was therefore proposed that the Inter-Ministerial Committee (IMC) appoint a standing task force of staff members to actually develop and vet the standards and criteria, for ultimate approval by the IMC. This seems a sensible recommendation.

As noted, the Policy on Sustainable Hydropower Development states goals to be attained and procedures to be followed, but it does not provide the substantive tests or criteria for determining what projects qualify as sustainable, or the degrees of sustainability. The Xe Kong Master Plan provides a functional definition sustainability expressed in terms of the attributes of sustainable projects. The attributes and their rationales are discussed in Section 6 of the Master Plan. NHI recommends that these attributes constitute the core of the official definition of "sustainable hydropower" by the IMC.

The Integrated Environmental and Social Obligations for Projects does make reference to several guidance documents on sustainable hydropower. These include the IHA Hydropower Sustainability Assessment Protocols (see Annex 12.2), the ADB Safeguards policies, and the IFC's cumulative impact assessment guidelines (Annex 12.3). NHI has analyzed these to see if they provide the needed substantive content for a functional definition of sustainability. The basic conclusion is that these, like the Lao Policy Guidelines themselves, express sustainability mostly in terms of goals and objectives, processes and procedures, and data and information that is to be gathered and considered. To the extent that these provide a functional definition or itemization of attributes that distinguishes "sustainable" projects from "unsustainable" projects, these are noted in Annex 12.3. These, in the main, parallel the attributes of sustainability proposed in Section 6 of the Master Plan.

In considering the adoption of sustainability guidelines from external sources, it may also be useful to review those proposed by the IFC in view of its intention to focus on the Xe Kong Basin as a pilot for demonstrating the implementation of its Cumulative Impact Assessment Guidelines (see Annex 12.3).

Recommendation 3: DNREP Should Fully Implement the Instructions in the Policy for Social and Environmental Impact Assessments and Sustainability Determinations

The existing mandates are sufficient for the environmental and social impact assessment and sustainability determination. What is needed is full compliance with these existing legal requirements, particular those mandated by the Policy on Sustainable Hydropower Development and especially with respect to the ESIA process. Specifically, the following requirements for an approvable ESIA should be enforced by DNREP:

1. a risk analysis over the entire life span of the project,

2. an analysis of alternatives for project structure and locations, including a no-project alternative,

3. lessons learned from previous projects,

4. cumulative impact analysis (see discussion below at page 17)

5. a meaningful assessment of transboundary impacts, as required by Section 7 of the Policy (see discussion below at pages 17)

6. a determination whether all "potential negative impacts on the environment and social system can be prevented and/or mitigated", as required by Section 4 of the Policy. This omission is of concern in light of the findings in Section 5 of the Master Plan that some of the impacts of the reservoir on migratory fish survival cannot be mitigated.

7. openness, transparency and information disclosure" as the basis for undertaking all hydropower projects (Section 10) as DNREP continues to treat ESIAs as confidential documents that are the property of the developer.[6]

Before it issues an Environmental Compliance Certificate, DNREP should make an explicit finding that all "potential negative impacts on the environment and social system can be prevented and/or mitigated" by the project as designed and proposed. And DNREP should require that all ESIA's be available for review and comment by stakeholders, Project Affected Persons, and the general public to comply with the instruction of the Policy that hydropower projects be undertaken on the basis of "openness, transparency and information disclosure". In sum, implementation of the Policy on Sustainable Hydropower Development does not require new laws, it just requires compliance with existing laws.

Recommendation 4: Improve Implementation of the Instruction in the Policy Regarding Public Involvement in the Approval Process

The Guidelines for the Implementation of the Policy on Sustainable Hydropower Development and the regulations on environmental and social impact assessments and the regulations on the Initial Environmental Examination call for stakeholder consultations and public participation in the process of approving hydropower projects. These authorities recognize that stakeholder consultations promote sustainable decisions by bringing into the process the needs, interests and views of all stakeholders. Among issues of concern for stakeholders are the social and environmental impacts, environmental and social monitoring and management plans, mitigation measures, and resettlement plans.

It is important that consultations begin before any major decisions are made and continue throughout construction and operation. The public participation will be most meaningful and effective if it is initiated early in the process and continued to the end. The most important and useful stage will be as soon as possible after the initial ESIA and ESMMP have been completed and before an ECC and SESO are issued. At this stage, MoNRE and the developers should jointly convene a series of public meetings or focus group sessions with the PAPs and other stakeholders to brief them on the findings in the ESIA and ESMMP, to answer questions, and to gather feedback. This engagement will be much more useful if the ESIA includes the assessment of alternatives that is mandated by the Guidelines on Implementation of the Policy on Sustainable Hydropower Development. The usual practice today limits the public involvement

[6] If the MOU is terminated, the GOL has the right to uses the information of the FS and ESIA at no cost. (Sample MOU, Article 9). The MOU and all information disclosed by one party to the other in connection with the MOU shall be deemed to be confidential during the Mandate Period and 2 months after the expiry of the Mandate Period (Sample MOU, Article 10).

to the early stages and does not include the outputs of the ESIA or ESMMP, perhaps because MoNRE continues to treat those documents as the confidential property of the developers, which is inconsistent with the express instructions in the Policy. This should be rectified.

Table 12-2 provides suggested stages of stakeholder involvements.

Table 12-2. Stages of Stakeholders Consultation.

Stages of the project life cycle	Stakeholder consultations
MOU-PDA & ESIA/ESSMP	• Early consultation to provide an opportunity for the stakeholders to comment on what they see as main issues and priorities regarding the effects of the project. • Preparation of the stakeholder consultation plan. • Briefings on content and results of ESIA/ESSMP including alternatives assessment • Respond to questions and glean feedback for consideration in preparing final documentation and ECC and SESO
PDA-CA	• Implementation of the stakeholder consultation plan • Consultation with stakeholders before final decisions are made.
CA-Construction	• Inform the stakeholders regarding the decisions
Construction/Operation	• Post decision-making stakeholder involvement on project implementation with respect to grievance and monitoring mechanism • Stakeholders should be engaged in monitoring and evaluation and helping in identifying corrective actions. Involving stakeholders, including local stakeholders, rather than relying on experts can increase acceptability of the stakeholders (as results are derived from different points of view), knowledge and interest, increase a sense of ownership, and thereby make the project more sustainable.

Consultation planning

Suggested elements for the consultation plan include the following:

- Objectives,
- Issues relating to sustainability,
- Scale of consultations: e.g. central/inter-ministerial, national (public), provincial, district, sub-district, and village level,
- Timeline,
- Institutional arrangement with roles and responsibilities. A Core Team should be appointed specifically to conduct the consultations and to serve as a body to address the grievances of stakeholders.
- Identification of stakeholders,

- Methods, techniques and tools to be used,
- Documentation: how the results of the consultation process be captured, documented, tracked and disseminated,
- Mechanisms for communication with the developers, relevant government agencies and stakeholders,
- Human resources required,
- Budget.

Objectives for stakeholder consultation

Each stage of hydropower development may need a different approach to consultation with different stakeholders. For example, during the MOU stage, the objectives of the consultation would be to disclose relevant project information and obtain concerns of stakeholders. The concerns then will be included in the TOR. The ToR describes the work to be performed to conduct the ESIA, conforming to the designated format and technical guidelines. Assurance of appropriate public involvement is required (Ministerial Instruction on the Process of Environmental Impact Assessment of the Investment Projects and Activities 2012, Clause 2.3).

As another example, before finalization of ESIA Report, the objective for public consultations would be to learn whether stakeholders' concerns have been adequately addressed and learn about stakeholders' preferences regarding the alternatives that are assessed.

Stakeholders identification

The process of identifying the key stakeholders, where they come from, and their key issues and concerns is called "stakeholder mapping" When and how this is to be undertaken is not further defined in the regulations nor is the process by which stakeholders are to be engaged.

Stakeholders be grouped into categories as follows:

- *Statutory*: MPI, MoNRE, MEM, PONRE, Provincial Department of Energy and Mines (PDEM), DPI, District and Village Authorities.

- *Beneficiaries & Affected People:* Affected people include not only those whose property is affected, but also competing water users, those tilling river bank gardens (due to fluctuation of water), and fisherman. Some of these impacted people may be trans-boundary.

- *Interested/influential stakeholders:* private sector firms, banks, shareholders, lenders, international organizations, civil society organizations, academic institutions, and other peoples/organizations who have interest in the hydropower development.

Preparation of the consultation plan

Key aspects for preparation plan include:

- Formation of the consultation/public participation teams (the core team)

- Training of the core team, including principles and methodologies for effective consultations including grievance mechanisms.

- Hiring facilitators or providing special training on facilitation to the core team.

- Testing of approaches, tools and techniques to be used in the consultation plan. Different tools and techniques shall be required for different stakeholders. For example, tools typically used by social scientists such as problem trees, seasonal calendar, historical timeline and resource mapping would be suitable for affected local people, while PowerPoint presentation, followed by group discussion would be useful for stakeholders such as international organizations, academic institutions and NGOs. Materials such as PowerPoint Presentation and handouts need to be prepared in Lao language and perhaps ethnic language as applicable to ensure that they correctly understand what is presented.

- Establishment of a mechanism for stakeholders to raise their concerns and suggested solutions throughout the project life circle. The GoL and developer shall implement a grievance mechanism to be responsive to any concerns/complaints of stakeholders, including all stakeholders not just project affected people and including all aspects of sustainability, not just resettlement. The grievance mechanism should allow comments/feedback on issues before decisions are made at each stage of the project, particularly the MOU, PDA, CA, construction and operation stages. For example, the grievance mechanism should allow for participation of stakeholders on the assessment of project alternatives in the form of comments/feedback. A grievance process for stakeholders to raise their concerns, grievance and legitimate complaints and to track and respond to grievance should have the following elements:

    - Grievances can be received either verbally or in written form, including phone calls.
    - Once received, the grievance is registered. The acknowledgement of the receipt of the grievance must be provided within a definitive time such as 3 days due to the need for screening and processing.
    - Screening of grievance is provided to determine responses: e.g., no solutions, immediate response/solutions, medium and long-term solutions.
    - Implementation and follow-up of the proposed corrective actions then shall be carried out, after which the complainant shall be informed of the action. Explanation as to why action is not required must be provided, if no action is required.

Communication

The following methods of communication with the public are suggested:

a) Face to face meetings with the public.

b) Awareness raising leaflets and booklets. The leaflet should include the most important information about the project, its website, contact details including telephones. This is to

ensure transparency and availability of information about the project planning, construction and operation.

c) Dissemination of information via mass media and internet based media.

d) Reports, including environmental decisions and permits should be made available at local administration offices, developer's website, and local media.

e) Non-technical summaries, Stakeholder Engagement Plan, Environmental and Social Action Plan, ESIA reports should be made available upon request in offices of relevant agencies and developer offices.

Information disclosure

Disclosure of information about the project is necessary to provide an understanding of the project opportunities, impacts and risks. However, to avoid possible competition, developers often impose confidentiality restrictions, particularly at the early stages. Where confidentiality restrictions apply, consultations must not disclose such information.

Documentation

Depending on the nature and type of stakeholders under consultations, documentation should be done through one or a combination of the followings:

a) Notetaking,
b) Audio recorder,
c) Video recorder,
d) Flip charts.

The reports should be transparent, including number of people consulted, broken down into types of stakeholders, sources of information such as interview, focus group discussion, village meeting, district or provincial consultation workshops. Cross-cutting issues, particularly gender, vulnerable groups and ethnicity should be included. Stakeholders shall be given a chance to review and comment the report and response.

During the implementation process, roles and responsibilities of the government agencies should include:

- Advice,
- Facilitation,
- Negotiation,
- Review of results of consultation,
- Ensure integration with ESIA process,
- Organization of local, regional and national consultations,
- Reporting and monitoring of effectiveness.

Recommendation 5: Establish a Funding Mechanism for Sustainable Hydropower Planning in Lao PDR[7]

The Master Plan provides a template for sustainable hydropower development planning that can be further refined for the Xe Kong Basin and propagated in the other river basins in Lao PDR and, indeed, throughout the Mekong River System. Implementing such Master Plans will require the Ministry of Energy and Mines to assume a more proactive role in the process of identifying suitable sites, designing the projects, and defining operational policies for sustainable projects, and it will require and the Ministry of Natural Resources and Environment to play a more proactive role in the environmental and social impact assessment process by preparing programmatic assessments of the environmental and social impacts sufficient to permit the best performing alternative projects to be selected for the master plan. Historically, the hydropower developers have initiated and financed the technical studies to formulate viable projects and assess their environmental and social impacts, with some degree of oversight by these Ministries. For these Ministries to assume the initiative in the future would require a substantial investment in technical capacity.

It is not realistic to expect DEPP undertake the technical analysis necessary to produce basin-wide master plans to guide further hydropower development and implement the Policy without the financial means to do so. Therefore, a financing mechanism is a prerequisite to implementation of this new approach. Likely, the most efficient approach would be for these Ministries to hire the necessary expertise from the commercial consulting firms and international NGOs in a manner tailored to the particular geographic settings and technical issues, just as the private project developers have done historically. The difference is that these experts would be engaged not for the purpose of defining a particular project opportunity, but to prepare a preferred basin-wide development scenario—a master plan. Another important difference is that the allegiance of these consultants would now be to the GoL, whose interest is the long-term sustainability of a project, rather than the developers, whose interest is in short term maximization of return on investment. This is likely to substantially improve the quality and scientific integrity of the studies.

Precedents for sustainable hydropower planning funds

Creating and administering a mechanism to generate the needed funds will require a dedicated team of seasoned government staff who can work across different ministries and departments to hire the advisors or technical experts. Seasoned financial experts or project development professionals would be critical advisors to such a fund team, as their experience could help ensure that fund is properly managed. Unless the fund is independent of potential investors or developers, it could be misused to promote unsustainable projects.

NHI has found no exact model from other settings to emulate in recommending a funding mechanism for the sole purpose of financing sustainable, basin- or system-wide hydropower

[7] Significant contributions to this section were provided by Mr. Justus Raepple of The Nature Conservancy. He works within the Global Rivers Program and as a Deal Lead for NatureVest, the TNC's impact investment division, where he identifies and structures transactions that create a financial return for investors as well as a conservation benefit to the environment.

planning. The closest example is from The Nature Conservancy's (TNC) work on "Hydropower by Design" in river basins around the world, in which they are partnering with governmental agencies in Mexico and Myanmar, among other countries, to design funding mechanisms (Ingram, E. 2017; also see The Nature Conservancy, WWF, and the University of Manchester, 2016). Based on the experience of TNC, the best approach for setting up a financial mechanism for hydropower master planning in Laos is to create a revolving fund that would be initiated with an initial infusion of funding from a multi-donor trust fund, such as the Asian Development Bank's Asia Pacific Project Preparation Facility (A3PF), and then replenished from assessments of projects as they move through the approval process.

Project preparation funds, such as the A3PF, have been established by many international and multilateral development banks, including the International Finance Corporation (IFC)[8], the Inter-American Development Bank (IDB)[9], and the ADB to provide funding and advisory services for "early stage" project development of infrastructure, such as hydropower and solar. Generally, these programs are targeted toward developing countries and helping them to achieve their sustainable development objectives. A PPF provides funding to support early stage development activities such as "feasibility and environmental studies, legal analyses and transaction structuring to make projects attractive to investors. They also can provide a framework to help governments meet strategic priorities for infrastructure and develop a realistic pipeline of projects to meet those targets" (Opperman *et al*, 2017:121).

This model has been developed for technical work on feasibility studies, to improve the design of individual projects at an early stage of development, or for stakeholder consensus-building processes.[10] It would have to be adapted to fund hydropower "master plans" which involves a basin-wide development approach rather than individual projects.

NHI recommends that the GoL work with the A3PF[11] to provide the initial or first round of funding to produce an initial master plan, such as the one that NHI has proposed for the Xe Kong

[8] The Infrastructure Development Collaboration Partnership Fund (DevCo) is a multi-donor facility founded in 2003 and managed by the IFC. It provides advisory services to governments in the poorer (DAC I and II) countries to help them structure transactions that facilitate private sector participation in infrastructure projects, including in the power and renewable energy sector.
http://www.ifc.org/wps/wcm/connect/industry_ext_content/ifc_external_corporate_site/ppp/partners/devco

[9] The IDB manages the Sustainable Pipeline Accelerator (ACL), a component of NDC Invest, which supports pre-development activities and the additional costs associated with ensuring that infrastructure projects are planned, designed and managed to meet countries' sustainable development goals in Latin America and the Caribbean. https://www.ndcinvest.org

[10] In addition, many development banks, such as the Asian Development Bank's A3PF are willing to support innovative, first-of-its-kind projects that other funding sources might not take on.

[11] "The $73 million Asia Pacific Project Preparation Facility (AP3F) is a multi-donor trust fund (managed by the Asian Development Bank) aiming to increase the level of infrastructure development and enhance the quality of infrastructure in Asia and the Pacific" (AP3F webpage, 2017). AP3F provides financial assistance to central and local governments (or their public agencies) from Developing Member Countries of the ADB to support the financial, legal, and technical advisory services required to prepare and structure PPP transactions, including enabling reforms and capacity building.

Basin. That plan will produce a pipeline of sustainable projects that will be offered to the development community for applications for the various stages of the existing approval process.

Examples of how to replenish the hydropower planning fund

One of the ways to recapitalize the hydropower planning fund is to collect assessments on projects as part of the auctioning process for selected sites (Opperman *et al.*, 2017). This It is important that the funding mechanism be strictly managed and remains dedicated for the purpose it was set up. Added to that process at the concession agreement stage would be an assessment of funds that would be used to replenish the initial fund, which would then be used for further master planning on another basis. This would establish a hydropower planning facility that can be sustained indefinitely.

Fees can also be collected at the end of the auction process when a winning bid has been awarded. This example is used in Brazil, Spain and elsewhere. The Energy Planning Agency (EPE) of Brazil is responsible for "preparing a hydropower inventory and environmental assessment studies within a river basin and then recommends projects for auction that are consistent with its basin plan. It is partly financed by developers who win the auctions and then reimburse the agency for its planning outlays" (The Nature Conservancy, WWF, and the University of Manchester, 2016: 48). Spain also collects a fee from successful bidders in their renewable energy (wind and biomass) auctions in the amount of 0.17 Euro/kW (or ~US$0.20/kW) to cover administrative costs. In addition, it is common for bidders, to provide financial guarantees that help ensure the project(s) will be built. In the Brazilian auction system, for example, a bid bond of 1% of the project's estimated investment cost is required for bidders to enter phase 1 of the auction, and then the bid bond raises to 5% of the project's estimated investment in phase 2 (Barroso, 2012; IRENA, 2013; Forster and Amazo, 2016). The bid bonds are deposits and are returned upon successful completion of the project, whereas application or development fees are non-refundable.

Another option is to require a resource levy or impact fee as part of the concession agreement. This could be a preferred source for replenishing the hydropower planning fund in cases where projects are under existing MOU and developed using a non-competitive bidding process. For example, under the Draft Concession Agreement for the Nam Theun II (900 MW) project in Lao PDR, the GoL received a royalty up to 30% of gross income and a Resource Levy up to 30% of net income from the Nam Theun 2 Electricity Consortium (NTEC). Such a resource levy could be placed on new projects and the money used to fund the planning for the next tier of projects in the Master Plan, and contribute to initiatives to restore or mitigate social and environmental impacts. In addition, Srinivasan (2013) suggests "As part of a memorandum of understanding or agreement signed between the developer and the government, the government fund might earn warrants or equity in the project. These warrants could be sold at financial close" (pg. 4).

The GoL could collect application fees from prospective developers who wish to bid on a project identified in the Master Plan. The United States Environmental Protection Agency (EPA) uses a model under the Water Infrastructure Finance and Innovation Act of 2014 (WIFIA), in which the EPA is authorized "to charge fees to recover all or a portion of the Agency's cost of providing credit assistance and the costs of retaining expert firms, including financial, engineering, and

legal services for water infrastructure projects (EPA, 2017). Each project that is invited to submit an application is required to pay a non-refundable application fee that is equal to 0.5% of the minimum threshold project cost ($5-20 million depending on the size of the community that the project will serve) (EPA, 2017). In the case of Lao PDR, the hydropower projects in the Master Plan could generate significant revenue for a hydropower planning fund using this model.

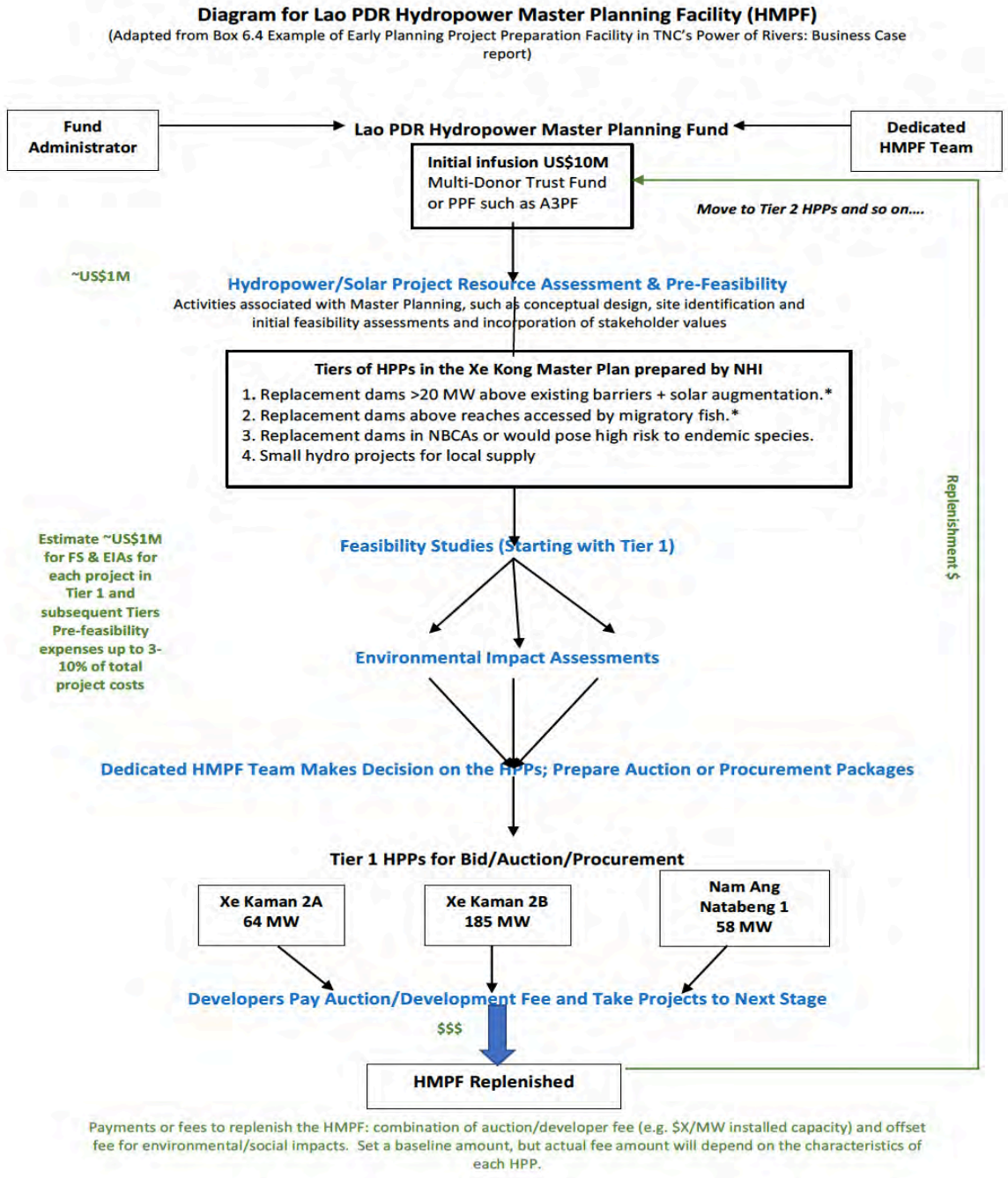

Figure 12-5. Diagrammatic example of a revolving funding mechanism for funding hydropower master planning in Lao PDR. Adapted from TNC's Power of Rivers: Business Case by J.J. Opperman et al., 2017: page 122-123. * Tier 1 and Tier 2 projects would provide approximately 816MW and a total of 2604 GWh/y of new power, enough to replace all of the proposed mainstream dams except the highest one (Xe Kong 5). That would make all of the major tributaries below the headwaters accessible to migratory fish.

Diagrammatic example of a revolving hydropower planning fund

To help shed light on the topics described above, NHI has adapted a diagrammatic example of an early project planning facility from TNC's Power of Rivers: Business Case (Opperman et al., 2017), that is loosely based on the Brazilian system of energy planning and also draws on examples and PPFs mentioned above. Figure 12-5 above utilizes the TNC concept and inserts the Tiers of Hydropower Projects identified in the Master Plan for the GoL to show how a hydropower planning fund could be initially funded, how it could be structured and replenished. We also display the TNC's original diagram (Figure 12-6) to show how the hydropower planning fund would fit into broader scope of the project development process.

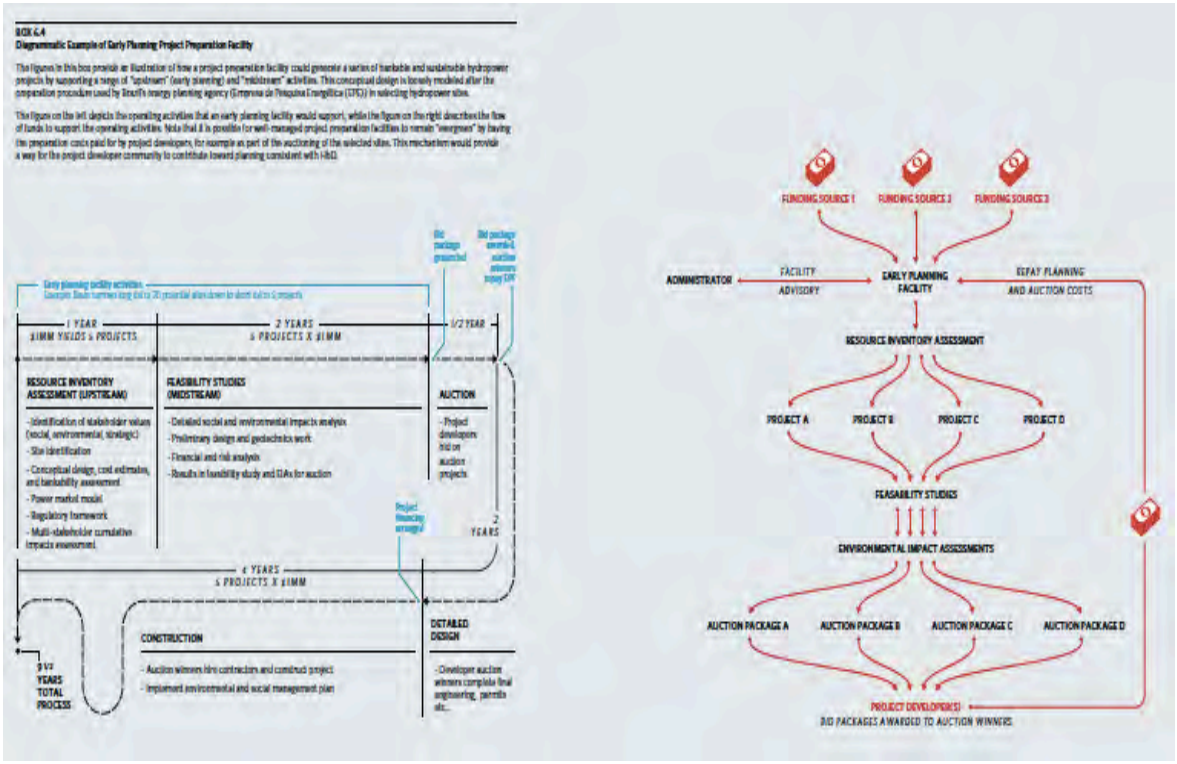

Figure 12-6. Diagrammatic Example of Early Planning Project Preparation Facility. Source: Box 6.4 from TNC's Power of Rivers: Business Case by J.J. Opperman et al., 2017: page 122-123.

Recommendation 6: Adapt the Laws and Procedures for Public Tenders and Competitive Bidding for Implementation of the Master Plan

The Master Plan for Sustainable Hydropower Development in Xe Kong River Basin is the first of its kind in Lao PDR. It supersedes previous "master plans", such as the 1995 study by JICA (Japanese International Development Agency), which did not purport to present an environmentally sustainable development pathway (see Section 1 of the Master Plan for discussion), and is intended as a model for sustainable hydropower planning at the basin scale that can be applied to other river basins in Lao PDR, elsewhere in the Mekong River Basin, or anywhere in the world. It provides an approach for the Government of Laos to assess and select hydropower development options in advance of entertaining proposals from private developers (or public developers such as EDL or EDL-Gen) to conduct feasibility studies on such projects. Projects that the GoL finds to be the best options in terms of location, design and operations

would then be offered to the hydropower developers under a public tender on a schedule that meets the power and revenue goals of the GoL, using a government managed-bidding process. For this purpose, Annex 12.5 summarizes the existing procurement framework for infrastructure project in Lao PDR.

First, it is necessary to refer back to the previous discussion in this Implementation Section on the rights and responsibilities conferred on project proponents by existing MOUs and PDA's. As Section 7 of the Master Plan shows, there are five projects that are deemed to satisfy the sustainability criteria proposed in Section 6 that are already under study with existing MOUs or PDAs. Indeed, three of these are assigned the highest priority for construction. This implementation section concludes at pages 38-40 that these MOUs and PDAs confer on the holders an exclusive right to develop these projects on a non-competitive basis in the event that the Government of Lao ultimately selects these projects for construction, as the Master Plan recommends. Therefore, the competitive procurement process described below would not apply to these projects.

NHI believes that the current laws and procedures for procurement through competitive bidding can be adapted to also perform well for the selection of investors/developers to undertake feasibility studies for the projects identified in the Master Plan as sustainable by adapting the two-tier process described on pages 46 of this Implementation Section. This might be done as follows:

The two-tier procurement process

Decree No.03PM, and its implementing rules and regulations (see Annex 12.5) require pre-qualification and public bidding for hydropower projects of the scale featured in the Master Plan. Standards and conditions are stipulated and statements of qualifications would be evaluated by a tender committee. All firms meeting the standards and conditions are then invited to participate in the competition. State enterprises are also eligible to bid if they are legally and financially autonomous from the Ministry of Energy and Mines. It is unclear if EDL is eligible to bid for any hydropower projects under this Decree as it is legally under MEM. The bidder may be required to furnish evidence of their financial capacity to fulfill the requirements of the contract. Evidence maybe furnished by (1) certified statements from banks, (2) presentation of the bidder's balance sheet, or (3) evidence of a record of satisfactory completion of with civil works projects, or furnishing of goods or services similar to those required in the contract for the previous three-year period (Ministry of Finance 2004, Article 17).

Evidence of technical ability maybe furnished by means of:

- Professional and educational qualifications of the bidder and/or its managerial and supervisory staff and, in particular, of persons responsible for carrying out the particular works or services for the proposed contract.

- A list of hydropower projects carried out, with certificates of satisfactory execution for similar works, issued b previous clients.

When the Ministry of Energy and Mines wishes to move ahead with a project identified in the Master Plan through the two-stage bidding process, it will invite submission of expressions of interest through the usual announcement process and also actively outreach to potential investors/developers. MEM would provide a statement of the site, design and operational specifications for the invited project only at the level of detail that is determined in the master planning process. MEM would invite bidders to propose any additional technical details for the project that conform with the specifications in the Master Plan. Bidders submit offers to conduct feasibility studies in a particular manner and timeline. What will be awarded initially through the competitive bidding process is not a concession agreement to build the project, but an MOU to proceed with a full-fledged feasibility study that goes well beyond the pre-feasibility or reconnaissance level of analysis that produced the Master Plan.

After evaluating and ranking the submission, MEM will select the top ranked bidder on the basis of demonstrated capabilities, financial assurance, and performance record. (Ministry of Finance 2004, Article 11). Often, the master plan for a particular basin may include a suite of hydropower projects that are only feasible, or would be optimal, if operated in a coordinated manner. Generally, integrated operations are best carried out by a single owner and operator. Therefore, in such cases, MEM may well decide to choose an applicant that can demonstrate the intent and capability to pursue such a coordinated development approach.

Any information related to the examination and evaluation of bids and proposals, deliberations related to the evaluation and the award decision shall be kept confidential by the Tender Committee and may not be disclose to bidders or unrelated persons until the award decision has been approved and the contract accepted (Ministry of Finance, Article 26).

The GoL can develop procedures for competitive procurement of hydropower projects by drawing lessons from other countries that have a well-developed practice, such as Brazil and from the guidelines provided by the Asian Development Bank for projects that it finances (see Annex 12.4).

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ANNEXES

Annex 12.1:
Applicable Laws and Standards

Annex 12.1: Applicable Laws and Standards

Applicable Laws

Applicable Laws include, but are not limited to the following:

- The Constitution of the Lao People's Democratic Republic dated 15 August 1991, amended on 28 May 2003
- The Law on Investment Promotion, No. 02/NA, dated 8 July 2009
- The Law on Electricity (Amended), No 03/NA, dated 20 Dec 2011
- The Law on Environmental Protection, No. 29/NA, 18 December 2012
- The Law on Water and Water Resources, No 02-96/NA dated 11 October 1996
- The Law on Forestry, No. 06/NA, dated 24 December 2007
- The Law on Aquatic and Wildlife Animals, No 07/NA, dated 24 December 2007
- The Law on Land, No. 02/NA, dated 21 October 2003
- The Law on Fishery No. 03/NA, dated 9 July 2009
- The Decree on the Implementation of the Land Law, No. 88/PM, dated 3 June 2008
- The Decree on State Land Lease or Concession, No. 135/PM, dated 25 May 2009
- The Executive Decree on State Land Lease and Concession Fees Rate, No. 02/PR, dated 18 November 2009
- The Decree on the Compensation and Resettlement of Development Projects, No. 84/PM, dated 5 April 2016
- The Ministerial Instruction on the Environmental and Social Impact Assessment for the Investment Projects and Activities No.8030/MONRE, dated 17 December 2013
- Regulations for Implementing Decree 192/PM on Compensation and Resettlement of People Affected by Development Projects, No. 2432/STEA, dated 11 November 2005
- Decision on the Management of Quality Standards for Drinking Water and Household Water Supply No 1371/MOH dated 4 October 2005
- Agreement on National Environmental Standards, No 2734/PMO.MONRE dated 7 December 2009
- Regulation on logging and clearance after logging for a hydropower power project reservoir area, No. 0112/MAF, dated 25 November 2008

GOL Guidelines

- Step-by-Step Environmental Guidelines for Biomass Removal from Hydropower Reservoirs in Lao PDR, MONRE December 2012
- Technical Guidelines on Compensation and Resettlement of People Affected by Development Projects, MONRE June 2011
- Environmental and Social Operational Manual for the Road Sector, Ministry of Public Works and Transport, March 2009

- National Policy on Environmental and Social Sustainability of the Hydropower Sector in Lao PDR, 7th June 2005.
- Health Impact Assessment No. 365, MOPH, dated 1 March 2006
- Health Impact Assessment Guidelines, Ministry of Public Health, 2010.

IFC Performance Standards

- Performance Standard 1: Social and Environmental Assessment and Management Systems
- Performance Standard 2: Labor and Working Conditions
- Performance Standard 3: Pollution Prevention and Abatement
- Performance Standard 4: Community Health, Safety and Security
- Performance Standard 5: Land Acquisition and Involuntary Resettlement
- Performance Standard 6: Biodiversity Conservation and Sustainable Natural Resource Management
- Performance Standard 7: Indigenous Peoples
- Performance Standard 8: Cultural Heritage

IFC Environmental Health and Safety Guidelines

- IFC Environmental Health and Safety Guidelines: General EHS Guidelines, Air Emission and Ambient Air Quality, April 30, 2007
- IFC Environmental Health and Safety Guidelines: General EHS Guidelines, Waste Water and Ambient Water Quality, April 30, 2007
- IFC Environmental Health and Safety Guidelines: General EHS Guidelines, Hazardous Materials Management, April 30, 2007
- IFC Environmental Health and Safety Guidelines: General EHS Guidelines, Waste Management, April 30, 2007
- IFC Environmental Health and Safety Guidelines: General EHS Guidelines, Noise Management, April 30, 2007
- IFC Environmental Health and Safety Guidelines: General EHS Guidelines, Contaminated Land, April 30, 2007
- IFC Environmental Health and Safety Guidelines: Electric Power Transmission and Distribution, April 30, 2007
- IFC Environmental Health and Safety Guidelines: Waste Management Facilities, December 10, 2007
- IFC Environmental Health and Safety Guidelines: Water and Sanitation, December 10, 2007
- IFC Environmental Health and Safety Guidelines: General EHS Guidelines, Energy Conservation, April 30, 2007
- IFC Environmental Health and Safety Guidelines: General EHS Guidelines, Water Conservation, April 30, 2007
- IFC Environmental Health and Safety Guidelines: General EHS Guidelines, Community Health and Safety, April 30, 2007

- IFC Environmental Health and Safety Guidelines: General EHS Guidelines, Construction and Decommissioning, April 30, 2007
- IFC Environmental Health and Safety Guidelines: Toll Roads, April 30, 2007
- IFC Environmental Health and Safety Guidelines: Construction Materials Extraction, April 30, 2007
- IFC Handbook for Preparing a Resettlement Action Plan, 2002

ADB Applicable Standards

- ADB's Safeguards Policy Statement (June 2009)
- Public Communications Policy (October 2011)
- Social Protection Strategy (2001)

Other International Standards and Guidelines

- ISO 14001 Environmental Management System Standard, 2004
- ISO 1996-1:2003 Acoustics - Description, measurement and assessment of environmental noise - Part 1: Basic quantities and assessment procedures
- ISO 1996-2:2007 Acoustics - Description, measurement and assessment of environmental noise - Part 2: Determination of environmental noise levels
- IEC 61672-1 Electroacoustics - Sound Level Meters - Part 1: Specifications
- IEC 61672-2 Electroacoustics - Sound level meters - Part 2: Pattern evaluation tests
- IEC 60942 IEC 60942 - Electroacoustics - Sound calibrators
- Draft Hydropower Sustainability Assessment Protocol, International Hydropower Association, August 2009

Requirements to ESMMP-CP and ESMMP-OP

VOLUME I: OBLIGATIONS, PLANS AND PROGRAMS

0.0 Terms and Definitions

1.0 General

- 1.1 Project Profile, Maps and Project Operations
- 1.2 Purpose of this ESMMP-CP/ESMMP-OP
- 1.3 The scope of the ESMMP-CP/ESMMP-OP and list of all sub-plans and SSESMMPs

2.0 Policy

This part shall contain a representation by the Company that the ESMMP-CP/ ESMMP-OP is in all material respects, clear, complete, accurate and not misleading; that it complies with the Company's Environmental Management System; and that it is professionally created by duly qualified consultants and experts; and that it complies with Standards including Applicable Laws.

- 2.1 The Company's environmental policy statement
- 2.2 Corporate environmental commitments

3.0 Legal and other requirements

Details and justification of Best Available Techniques to be used and legal and other related requirements;

3.1 Applicable Laws

3.2 Other Standards

3.3 BAT and Best Practices

4.0 ESMMP-CP/ESMMP-OP Organizational Structure, Roles and Responsibilities

This part shall describe the Company's organization and contain specification of capabilities, support mechanisms and resources necessary to achieve the Company's environmental policy, objectives and targets, including the definition of: a) responsible personnel with appropriate knowledge, skills and training for specific tasks; and b) communication and reporting responsibilities.

5.0 Authorities and other Stakeholders

6.0 Overview of Measures and Monitoring

6.1 Overview of Adverse Impacts and Measures

Identification of the environmental aspects of the Company's work and identification and evaluation of the Project impacts (including environmental Adverse Impacts) that the Company's activities, the Project and activities related thereto will have on the physical, biological, social and socio-economic environment and conditions, including Reservoir management.

Measures which the Company is responsible to perform, including environmental plans and management programs addressing the Measures, which are to be addressed by the Company;

Thematic overview of environmental Adverse Impacts as in the example below:

Environmental Aspect/Issue	Impacts and causes of impacts, their geographic location and impacted area	Measures to avoid, prevent, remedy or compensate the impacts	Residual Impacts (duration and timing, reversible/irreversible, scale and magnitude)	Compliance: (Reference to applicable Standards, BAT, Best Practices, guidelines)	Responsible Unit and Reference to Sub-Plans or SSESMMPs
Theme Water Quality					
Reservoir water quality					
Downstream water quality					
Effluents					
etc					
Theme: Fish and other aquatic life					

Site or area specific overview of Adverse Impacts as in the example below:

Site or Area/ Environmental Aspects/Issues	Impacts and causes of impacts	Measures to avoid, prevent, remedy or compensate the impacts	Residual Impacts (duration and timing, reversible/irreversible, scale and magnitude)	Compliance: (Reference to applicable Standards, BAT, Best Practices, guidelines)	Responsible Unit and Reference to Sub-Plans or SSESMMPs
Reservoir					
Water quality					
Hydrology					
Fish					
Navigation					
Bank erosion					
Dam Site					

6.2 Overview of Environmental and Social Monitoring

Thematic overview of environmental monitoring as in the example below:

Environmental Aspect/Issue	Compliance: (Standards, BAT, Best Practices)	Monitoring methods	Monitoring frequency	Responsible Unit	Reference to Sub-Plans or SSESMMPs
Theme: Water Quality					
Reservoir water quality					
Downstream water quality					
Effluents					
etc					
Theme: Fish and other aquatic life					

Site or area specific overview of monitoring

Site or Area/ Environmental Aspects/Issues	Compliance: (Standards, BAT, Best Practices)	Monitoring methods	Monitoring frequency	Responsible Unit	Reference to Sub-Plans or SSESMMPs
Reservoir					
Water quality					
Hydrology					
Fish					
Navigation					
Bank erosion					
Dam Site					
Water release					
Water quality					

7.0 Site or Area Specific Plans and Programs

These Plans and Programs shall include objectives and time scaled targets. They shall identify, map and describe project operations and schedules. They shall clearly identify and characterize impacts and risks and their causes / possible causes, and include plans and measures to ensure full compliance with Standards including without limitation emission limit values for discharges to water and to air, quantities of such discharges, waste management, ambient water, air and noise limits or standards, and any other measures necessary for environmental protection. Furthermore, where relevant they shall state specifications for: i) environmental flow / riparian release; ii) dams and Reservoir management; and iii) aquatic weed and vector control; and water quality (physical, chemical and biological parameters) modelling and monitoring of upstream, Reservoir and downstream water bodies; iv) vegetation management in Transmission Line Corridor, drawdown zones, project sites, v) drainage, erosion control and management, etc.

The plans and Programs shall contain all necessary engineering drawings, specifications, layout plans, location maps, cross-sections, transects, aerial photos and satellite imagery. Such items shall be in proper scale and layout design for use by managers, field officers, and regulators (MONRE Officers).

Staffing, qualifications and responsibilities for project operations, monitoring, checking and control shall be clearly accounted for.

7.1 Reservoir Management Plan including biomass removal plan

7.2 Upstream and Reservoir Watershed Monitoring Plan

7.3 Downstream Area Management Plan

7.4 Dam Site and Camps Management Plan

7.5 Processing Plant, Quarry and Borrow Pit Management Plan

7.6 Landfills and Spoil Disposal Management Plan

7.7 Fuel and Hazardous Material Storage and Station, Mechanical and Electrical Equipment Depots Management Plan

7.8 Transmission Line Corridor Management Plan

7.9 Watershed Management Plan

7.10 Biodiversity Offset Plan

7.11 Biomass Clearance Plan

7.12 Environmental Flow Requirements

7.13 Others

8.0 Thematic Plans and Programs

Same requirements as for the Site and Area Specific Plans and Programs

8.1 Biodiversity, wildlife and aquatic life management (including biodiversity offsets and other conservation measures)

8.2 Hazardous Substances Management

8.3 Wastewater and Runoff Management

8.4 Solid Waste Management

8.5 Transport, traffic and road/river/Reservoir safety

8.6 Emergency Management and Planning

8.7 Capacity Building Plans and Programs

8.8 Labor and Personnel Management

8.9 Health and Safety

8.10 Community Relations

8.11 Others

VOLUME II: PROCEDURES

9.0 Implementation and Operation

This part shall contain procedures for how the Company will measure, monitor and evaluate its environmental performance, including corrective and preventative action procedures. It shall contain details of how the Company will develop, review and improve its ESMMP-CP/ESMMP-OP, with the objective of improving its overall environmental performance, and details of its auditing policies and programs.

9.1 Competence, training and awareness

9.2 Internal and External Communication

9.3 Documentation (GIS, GPS, photos, video recording, forms and reports etc)

9.4 Control of Documents

9.5 Operational Control

9.6 Emergency preparedness and response

10.0 Checking

10.1 Monitoring, measurements

10.2 Evaluation of Compliance

10.3 Non-compliance, corrective action and prevention action

10.3.1 Non-compliance Level and Communication

10.3.2 Non-compliance procedure

10.4 Control of Records

10.5 Internal Audit

10.6 External Audit

11.0 Management review

12.0 Cross Reference of ISO 14001:2004 Requirements and Sections in the ESMMP-CP/ESMMP-OP

13.0 Cross Reference to Standards

Annex 12.2:

International Hydropower Associations' Hydropower Sustainability Assessment Protocol

Annex 12.2: IHA's Hydropower Sustainability Assessment Protocol

Available at: http://www.hydrosustainability.org

Disclaimer: This assessment is an Unofficial assessment as it does not comply with the necessary terms required of an Official assessment. The results of this assessment do not necessarily reflect the quality required of an Official assessment and may not be an accurate reflection of the sustainability of the assessed project. 'Furthermore, this assessment does not have the benefit of evidence that would have been supplied by the Project Sponsor to complete the assessment.

The biophysical aspects that are taken into account in the Hydropower Sustainability Assessment Protocol include water quality, biodiversity, downstream flow, erosion and sedimentation. The Protocol cites "best practices" as the indicia of sustainability. In other words, the guidance in these Protocols relate more to what "sustainable hydropower" should aim to achieve rather than how to do it.

The substantive standards and criteria for, or attributes of, environmentally sustainable hydropower projects that can be gleaned from the Protocols are itemized below. In this list, we account for those that pertain to the bio-physical impacts of hydropower projects rather than the socio-economic ones, while also acknowledging the importance of the latter. The net conclusion is that all of these protocols are incorporated in the Master Plan to the extent appropriate to the Xe Kong situation.

- **Siting on tributary streams rather than mainstream rivers.** We note however that this criterion may only apply to pristine river basins. In already-developed river basins, such as the Mekong, the opposite criteria may make more sense. In the case of the Mekong, of instance, it is highly likely that additional mainstream dams between Xayaburi and the Chinese cascade, such as the proposed Pak Beng project, would be less impactful than the dams proposed for the Xe Kong tributary.

- **Avoidance of high value biodiversity areas.** This criterion underscores the priority of avoiding river reaches that have not just high biodiversity but, even more important, high endemism. The main concern should be over the endangerment of species extinctions. The Master Plan implements this criterion to the extent possible under the current state of knowledge regarding biodiversity in the basin, but we must note that effective implementation requires the conduct of field work to identify reaches of high biodiversity and endemism as a precondition of siting decisions.

- **Increasing the effectiveness of existing water and energy infrastructure.** This is a key criterion in the Master Plan, which gives the highest priority to projects to augment the output of existing hydropower projects by integrating solar photovoltaic component to create a hybrid facility. Properly designed and operated, such hybrid facilities would pose NO incremental natural resource damages on the river system. The potential for this strategy is very large and merits emphasis in sustainability planning.

- **Give priority to alternatives that provide multiple use benefits**. Whether multiple use projects that also provide flood control and water supply benefits are more sustainable from an environmental sustainability standpoint (as contrasted to a net economic benefit standpoint) is situational. It is notable that such projects will give

hydropower generation the lowest operational priority in terms of the storage and discharge regime.

- **Give priority to projects that are on already developed river systems.** Stated more precisely the priority to be to further develop portions of river systems that are already developed, and, ever more specifically, to confine the development to the catchment areas above the existing projects. This criterion is incorporated in the Master Plan.

- **Give priority to projects that minimize the area flooded per unit of energy (GWh) produced.** This criterion is more pertinent to effective management of sediment flows that biodiversity. As such, it is incorporated into the Master Plan.

- **Avoid exceptional natural and human heritage sites.** This criterion is incorporated in the Master Plan by giving the projects that would impact the National Biodiversity Conservation Areas a lower priority for development, or requiring that the impacts be offset by funding restoration or enhancement of the natural values in that or other NBCAs.

- **Give priority to projects that have lower impacts on rare, threatened or vulnerable species and that maximize habitat restoration and protect high quality habitats**. This criterion is incorporated in the Master Plan in the lower priority it gives to projects that pose a risk to reaches that may have high endemism. For those projects, the Master Plan recommends that species surveys be conducted before decisions are made to approve the project.

- **Give priority to projects that achieve objectives in downstream areas (i.e. environmental flows).** This criterion is incorporated in the Master Plan in the recommendations for operations of the existing dams that control flow patterns into the portions of the basin that are important for migratory fish spawning.

- **Give priority to projects that have associated catchment management benefits.**

- **Give priority to projects that have lower sedimentation and erosion risks.** This criterion is incorporated in the Master Plan in the recommendations on design and operation of the reservoirs to facilitate sediment discharge.

- **Give priority to projects that avoid exceptional greenhouse gas emissions from reservoirs.** This criterion is satisfied by projects that do not inundate extensive forested areas, or projects that remove the timber before the area is inundated. Since timber harvest before inundation is the usual practice in the Mekong Basin, the Master Plan does not specifically incorporate this measure.

- **Incorporate measures for passage of aquatic species.** Design and operation of such measures to assure their effectiveness are treated in detail in Section 8 of the Master Plan.

- **Incorporate measures to prevent invasive species.** Notably, the measures cited in the IHA protocols do not include the avoidance of the most pervasive and impactful practice:

the introduction of aquaculture into the reservoirs. Exotic species that escape confinement in fish farms have typically causes the most fundamental changes to the aquatic ecosystem. The Master Plan does not include aquaculture as a measure for mitigating the losses to the natural capture fishery.

- **Incorporate erosion and sedimentation management measures.** These are discussed at length in Section 9 of the Master Plan. Notably, the IHA Protocols miss the point that the most important consideration in reservoir sediment management relate to the proper geometry of the reservoir (i.e., siting criteria), installation of sediment discharge gates in the dam, and operations of the reservoir to discharge sediment, which has a direct effect on hydropower generation.

- **Specify downstream flow regimes.** This measure is included in the sustainability criteria presented in the Master Plan. For the stream reaches below the dams incorporated in the Master Plan, minimum stream flow criteria are expressed in terms of magnitude, seasonality, frequency, and duration. This is included in Section 10 of the Master Plan.

Annex 12.3:

International Finance Corporation's Cumulative Impact Assessment Guidelines for HPP in Lao PDR

Annex 12.3: International Finance Corporation's Cumulative Impact Assessment Guidelines for HPP in Lao PDR

Available at: https://www.ifc.org/wps/wcm/connect/fbd4691c-2905-4bdd-bc01-cb8c17ec2de5/Lao+PDR+HPP+CIA+Guidelines_English+version.pdf?MOD=AJPERES

The IFC's Cumulative Impact Assessment Guidelines (CIAGs) do not provide an agreed standard or criteria for sustainability, but suggest instead the need to establish thresholds:

> "Thresholds are limits beyond which cumulative change becomes a concern and can be expressed in terms of **goals or targets, standards and guidelines, carrying capacity, or limits of acceptable change (LAC).** Scientific data and societal values are reflected, to various degrees, in each description."

There are several problems with this approach to operationalizing the principle of sustainable hydropower:

- The thresholds of tolerance of the ecosystem to alterations caused by hydropower are difficult to set as there is often a degree of uncertainty in the data related to the responses of components of the ecosystem change.

- There are more likely to be gradations than thresholds in the responses of the ecosystem to changes.

- Acceptable degrees of impairment of the system are more a matter of social choices than scientific judgements.

- Stating limits to tolerance to impacts essentially states a quota, but provides no guidance on the allocation of that quota among competing or alternative projects. A project that uses up less that the full quota but much more than it needs to could be considered "sustainable" under this approach.

The most useful guidance from IFC is found in Performance Standard 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources. Applying these to the Sustainable Hydropower Master Plan for the Xe Kong Basin yields the following findings in green type:

Standard: No significant conversion or degradation of **natural habitats**, unless all of the following are demonstrated:

- No other viable alternatives within the region exist for development of the project on modified habitat,

  The Master Plan is essentially an alternative development assessment. Specifically, it presents a development scenario that is a complete alternative to the proposed mainstream dams which, it shows, would cause substantial degradation of the natural riverine habitats that are essential to reproduction of migratory species by converting them into lakes that would constitute barriers to the movement of the migratory fish and their eggs and larvae. Clearly, here, viable alternatives do exist and have been identified and described. The alternatives are

dams sited in the portions of the catchment that are inaccessible to migratory species either because they would be in reaches that have been modified by existing dams or are located so far up in the catchment that few migratory fish would be affected.

- Consultation has established the views of stakeholders, including Affected Communities, with respect to the extent of conversion and degradation. . .

  There is no record of consultations with affected communities having been conducted for the mainstream dam proposals. For the alternative sites, the areas are the communities that could be affected are sparse.

- Any conversion or degradation is mitigated according to the mitigation hierarchy (Page 42-43).

  See below.

Standard: Mitigation measures will be designed to achieve no net loss of biodiversity where feasible in areas of **natural habitat**. Appropriate actions include:

- Avoidance of impacts on biodiversity through the identification and protection of set asides,

  Set asides means areas that are designated as "off limits" to hydropower development. The Master Plan proposes that the mainstream Xe Kong be set aside as not eligible for hydropower development.

- Implementation of measures to minimize habitat fragmentation such as biological corridors,

  Measures to minimize the barrier effect of the mainstream dams are assessed in detail in Section 8 of the Master Plan, which finds them inadequate to prevent fragmentation and severe impairment of the migratory fishery.

- Restoration of habitats during operations and/or after operations, and

  Section 5 of the Master Plan demonstrates that the mainstream Xe Kong is unique and irreplaceable as spawning habitat for migratory species. Restoration is not an option.

- Implementation of biodiversity offsets (Page 43).

  "Offsets" means creating or restoring habitats to compensate for the loss of the natural habitats. Section 5 of the Master Plan demonstrates that the mainstream Xe Kong is unique and irreplaceable as spawning habitat for migratory species. Offsets are not an option.

Standard: In areas of **critical habitat**, no implementation of any project activities unless all of the following are demonstrated[1]:

- No other viable alternatives within the region exist for development of the project on modified or natural habitats that are not critical;

  The Master Plan shows that viable alternatives to the mainstream dams do exist.

- No measurable adverse impacts by the project on those biodiversity values for which the critical habitat was designated, and on the ecological processes supporting those biodiversity values,

  Section 5 shows that the impacts from the mainstream dams would be large.

- The project does not lead to a net reduction in the global and/or national/regional population of any Critically Endangered or Endangered Species over a reasonable period of time, and

  Sections 3 and 5 of the Master Plan show that the mainstream dams would endanger the continued existence of many of the migratory species.

- A robust, appropriately designed, and long-term biodiversity monitoring and evaluation program is integrated into the client's management program (Page 44).

  No such program has been proposed for the mainstream dams and would come too late to reverse the damage that they would cause.

Standard: No intentional introduction of any **new alien species** unless it is conducted in accordance with the existing regulatory framework for such introduction (Page 45).

Aquaculture is specifically rejected as a compensation measure in the Master Plan. Notably, DEPP has expressed the view that aquaculture with alien species is an acceptable measure for mitigating the loss of the natural capture fishery. However, escapes of these alien species from the fish farms would surely transform the aquatic ecosystem.

Standard: Where **alien species** are already stablished, the developer will exercise diligence in not spreading them into areas in which they have not already been established. Measures should be taken to eradicate such species from the natural habitats over which they have management control, as practical (Page 45).

See above.

[1] Because the Xe Kong is a unique and irreplaceable spawning habitat for migratory fish species that move up and down the entire Lower Mekong system, it should be considered a critical habitat.

Standard: As determined by the identification process of risks and impacts, where a project is likely to have adverse impacts on ecosystem services, the developer will conduct a systematic review to identify priority ecosystem services. If the impacts are unavoidable, the developer will minimize them and carry out implementation measures, aiming at maintaining the value and functionality of priority service. On impacts on priority ecosystem services on which the project depends, impacts on ecosystem services should be minimized and measures that increase resources efficiency of operations should be implemented (Page 45).

This performance measure is unrealistic for the ecosystem services that would be lost due to the mainstream dams. The services at stake are food sufficiency not only for the residents of the basin and, indeed, the population of Lao generally, but for the harvest of fish throughout the Lower Mekong Basin, and especially in Cambodia. It is hard to imagine a program that could "maintain the value and functionality" of the migratory fish reproduction that takes place in the Xe Kong. In any event, no systematic review has been conducted by any of the developers of the mainstream dams.

Standard: For the protection and conservation of biodiversity, the mitigation hierarchy includes **biodiversity offsets**, which may be considered only after appropriate avoidance, minimization and restoration measures have been applied (Page 42).

See above.

Annex 12.4:

Lessons from Other Examples for Developing Procedures for Competitive Procurement of Hydropower Projects

Annex 12.4: Lessons from Other Examples for Developing Procedures for Competitive Procurement of Hydropower Projects

The GoL can develop procedures for competitive procurement of hydropower projects by drawing lessons from other countries that have a well-developed practice, such as Brazil (see page below) and from the guidelines provided by the Asian Development Bank (ADB) for projects that it finances.

Lessons from ADB's Procurement Guidelines 2015

The ADB's Procurement Guidelines 2015 apply to all contracts for goods and works financed in whole or in part by ADB (ADB 2015, Clause 1.5).

Eligibility

Bidders from all eligible countries are permitted to offer goods, works and services for ADB-financed projects. Any conditions for participation are limited to those that are important to ensure the bidder's capability to fulfill the contract in question. In case of any contract to be financed in whole or in part by ADB, bidders cannot be denied participation for reasons unrelated to its capability and resources to successfully perform the contract. Hence, borrowers should carry out due diligence on the technical qualification of bidders to be assured of their capabilities in connection with the specific contract (Clause 16-17).

Joint ventures

Any firm may bid independently or as a joint venture, either with domestic firms and/or with foreign firms, so long as joint and several liabilities are confirmed. However, ADB guidelines do not accept bidding conditions that require mandatory joint ventures or other forms of mandatory associations between firms (Clause 1.10).

Procurement plans

National governments seeking funds from the ADB ("borrowers") are required to prepare a procurement plan for approval by ADB setting forth: (1) the particular contracts for the works, goods and/or services required to implement the project during the initial period of at least 18 months, (2) the proposed methods for procurement of such contracts that are permitted under the financing agreement, and (3) the related procedures of ADB. The procurement plan must be updated annually or as needed throughout the project life cycle. The procurement plan shall be implemented in the manner in which it has been approved by ADB (Clause 1.16).

Two-stage bidding

In the case of large, complex facilities such as hydropower projects, it may be impractical to prepare complete technical specifications in advance. In such cases, a two-stage bidding procedure may be applied, under which unpriced technical proposals are invited first. These are prepared on the basis of a conceptual design and are subject to clarifications and adjustments. In the first stage, technical proposal clarification is followed by issuance of amended bidding documents and the submission of the final technical proposal. Priced bids are accepted in the second stage (ADB 2015, Clause 2.6).

Notification and advertising

The notice shall contain information on the borrower or prospective borrower, amount and purpose of the loan, scope of procurement, the name, telephone number, e-mail address or fax number and the address of the borrower's agency responsible for the procurement and the website address where specific procurement notice will be posted. The schedule date for the availability of prequalification or bidding documents, if available, should also be indicated. Related prequalification or bidding documents shall not be released to the public earlier than the date of publication of the general procurement notice, except in case of advance contracting (Clause 2.7).

Invitations to prequalify or to bid as the case may be, are to be advertised as specific procurement notices on ADB's website as well as in (1) a newspaper of national circulation in the borrower's country or (2) on an internationally known and freely accessible website in English. A copy of the invitation for bids shall be submitted to ADB for approval and for publication in ADB's website (Clause 2.8).

Pre-qualification of bidders

Pre-qualification maybe needed for large or complex works or in any other circumstances in which the high costs of preparing detailed bids could discourage competition. It is also to ensure that invitations to bed are extended only to those who have enough capabilities and resources. Prequalification takes into account: (1) experience and past performance on similar contracts, (2) capabilities with respect to construction or manufacturing facilities, and (3) financial position (Clause 2.9).

The invitation to pre-qualify for bidding shall be advertised and notified as indicated in the section on notification and advertising. There is no limit on the number of bidders that can be prequalified. All capable bidders that meet the approved pre-qualification criteria should be pre-qualified and invited to submit bids. The scope of the contract and a clear statement of the qualification requirements are sent to those who respond to the invitation. A minimum period of 6 weeks is allowed for submission of applications. As soon as pre-qualification is complete, the bidding documents are made available to the pre-qualified, prospective bidders.

Bidding documents

It is important that bidding documents provide all the information needed for bidders for preparation of responsive bids. Bidding documents normally include: invitation for bids; instructions to bidders; bidding forms; conditions of contract, both general and special; technical specifications; bill of quantities and drawings; schedule of prices and necessary appendices; proforma bid securities and performance securities (Clause 2.11 (b)).

Validity of bids and bid security

Bidders are required to submit bids valid for a period indicated in the bidding documents, which are sufficient to enable the borrowers to complete the comparison and evaluation of bids, review the recommendation of award with ADB and obtain all the necessary approvals so that the contract can be awarded within that period (Clause 2.13). Borrowers have the option of requiring a bid security. Bid security shall be released to unsuccessful bidders once the contract has been signed with the winning bidders (Clause 2.14).

Clarity of bidding documents

Bidding documents should be so worded as to allow and encourage international competition and set forth clearly and precisely the work to be carried out; the location of work; the goods to be supplied; the place of delivery or installation; the schedule for delivery or completion; minimum performance requirements; and the warranty, maintenance requirements and any other pertinent terms and conditions. The bidding documents, where appropriate, shall define the tests, standards and methods that will be employed to judge the conformity of work as performed with specifications (Clause 2.16).

The bidding documents shall specify any factors in addition to price, which shall be taken into consideration in evaluating bids and how such factors will be quantified or evaluated (Clause 2.17).

All prospective bidders are provided with the same information and shall be assured of equal opportunities to obtain additional information on a timely basis. Reasonable access to project sites for visit by the prospective bidders will be provided (Clause 2.18).

Standards

Standards and technical specifications quoted in bidding documents shall ensure the critical performance or other requirements for works/goods under the procurement, while also promoting the broadest possible competition. Borrowers shall specify internationally accepted standards as far as possible, such as those issued by the International Standards Organization. If such standards are not available, national standards may be applied (ABD 2015, Clause 2.19).

Pricing

Bidders for civil works contracts should be required to quote unit prices or lump sum prices for the performance of the works. Such prices shall include all duties, taxes and other levies. Bidders are allowed to obtain all inputs from any eligible sources so that they may offer the most competitive bids (Clause 2.23).

Terms and methods of payment

Payment terms are to be in accordance with the international commercial practices applicable to the specific goods and works, and are made in accordance with the procedures provided in the ADB's Loan Disbursement Handbook (Clause 2.34). Bidding documents shall specify the payment method and terms offered; if alternative payment methods and terms will be permitted, and if so, how the terms will affect bid evaluation (Clause 2.36).

Time for preparation of bids

Generally, no less than 6 weeks shall be allowed for international competitive bidding, from the date of the invitation to bid or the date that the bidding documents become available, whichever is later. However, the time allowed for preparation and submission of bids are determined with due consideration of the particular circumstances of the project and the magnitude and complexity of the contract. Where large works are involved, a longer period maybe needed to enable prospective bidders to conduct investigations before submitting their bids.

Bid opening procedures

The time for opening the bids is the same as the deadline for receipt of bids, or promptly thereafter, and the time should be announced together with the place for bid opening in the bid invitation. Bids are opened in public with the presence of the bidders or their representatives. The name of the bidder and total amount of each bid, and of any alternative bids if they have been requested or allowed, are read out and recorded when opened. A copy of this record will be promptly sent to ADB and all bidders who submitted bids on time. Bids received after the time indicated and those not opened and read out at bid opening will not be considered. When electronic bid submission is used, an online bid opening procedure acceptable to ADB can be used (Clause 2.45).

Examination of bids

The borrowers are ascertained if the bids (1) meet the eligibility requirements, (2) are properly signed, (3) are accompanied by the required securities or required declaration signed, (4) are substantially responsive to the bidding documents, and (5) are otherwise generally in order. The bidder is not allowed to correct or withdraw material deviations or reservations once bids have been opened (Clause 2.48).

Evaluation and comparison of bids

The purpose of the bid evaluation is to determine the cost to borrower of each bid in a manner that allows a comparison on the basis of their evaluated cost. The bid with the lowest evaluated cost, but not necessarily the lowest submitted price, shall be selected for award (Clause 2.49). The bid price read out at the bid opening are to be adjusted to correct any arithmetical errors. Price adjustment provisions applying to the period of implementation of the contract are not taken into account in the evaluation (Clause 2.50).

Award of contract

The bidder who meets the appropriate standards of capability and resources and whose bid has been determined (1) to be substantially responsive to the bidding documents and (2) to offers the lowest evaluated cost will be awarded the contract within the period of the validity of bids (Clause 2.59).

Publication of the award of contract

Within two weeks of receiving ADB's "no objection" notice to the contract award recommendation, the borrower shall publish in an English language newspaper or well-known and freely accessible website, the results identifying the bid with the following information: (1) name of bidder who submitted a bid, (2) bid prices as read out at bid opening, (3) name and evaluated prices of each bid that was evaluated, (4) name of bidders whose bids were rejected and the reasons for their rejection, and (5) name of winning bidder and the price if offered, as well as the duration and summarized scope of the contact awarded (Clause 2.60).

Rejection of all bids

"Bidding documents usually provide that borrowers may reject all bids. Rejection of all bids is justified when there is a lack of effective competition or bids are not substantially responsive or when bid prices are substantially higher than (the) existing budget…If all bids are rejected, the

borrower shall review the causes justifying the rejection and consider making revisions to the conditions of the contract, design and specifications, scope of the contract or a combination of these before inviting new bids" (Clause 2.61).

Wider advertising is to be considered if the rejection of all bids is due to lack of competition. New bids may be invited from the initially pre-qualified firms or with the agreement of ADB from only those that submitted bids in the first instance, if the rejection is due to most or all of the bids being nonresponsive (Clause 2.62).

Procurement under BOO/BOT/BOOT, concessions and similar private sector arrangements

Where ADB is financing a BOO/BOT/BOOT or similar type of project, either of the following procurement procedures are used:

(1) Using suitable procedures, the project sponsor for a BOO/BOT/BOOT or similar type of project, selected in a transparent manner, particularly through competitive bidding procedures acceptable to ADB, possibly including several stages to arrive at the optimal combination of criteria, shall be free to procure the goods and works required for the facility from eligible countries.

Or,

(2) The goods and works required for the facility to be financed by ADB shall be procured from eligible countries in a transparent manner, through competitive bidding procedures acceptable to ADB, if the project sponsor has not been selected in the manner as described in Clause (1) above (Clause 3.13).

Community participation in procurement

"Where, in the interest of project sustainability, or to achieve certain specific social objectives of the project, it is desirable in selected project components to (a) call for the participation of local communities and/or nongovernmental organizations (NGOs) in the delivery of services, or (b) increase the utilization of local know-how and materials, or (c) employ labor-intensive and other appropriate technologies, the procurement procedures, specifications, and contract packaging shall be suitably adapted to reflect these considerations, provided these are efficient and are acceptable to ADB" (Clause 3.17).

Lessons from Brazil

In Brazil, the Ministry of Mines and Energy (MME) publishes the Brazilian Energy Expansion Plan (PDE) every year. It presents the results of prospective studies of energy demand and supply, guiding the development and investment in power supply and distribution projects over a ten-year period, including proposed hydropower projects. This is similar to a Master Plan with priorities and timelines included. A legal framework was set up by the Brazilian government in 2004 to use energy auctions in which private companies participate in a government-managed bidding process to ensure the full compliance of the PDE. The Brazilian Agência Nacional de Energia Elétrica (ANEEL) is responsible for managing energy auctions. The Brazilian auction system (Table 12.4-1) creates the incentives and security necessary for investors to finance cheap, but capital-intensive renewable energy technology and build the required capacity indicated in the 10-year PDE plan. To ensure an optimal energy mix and create a market for

renewable energy technologies such as wind and solar power, the Brazilian auction model holds separate auctions for all larger generation technologies" (World Bank, 2015). Moreover, the energy projects must obtain their environmental licenses before they go to auction, which reduces the risks for investors and developers (MME, 2014).

Table 12.4-1. Summary of the major characteristics of auctions in Brazil. Source: IRENA, 2013: 19.

CHARACTERISTICS OF THE AUCTIONS IN BRAZIL	
Legal basis	Laws 10,847 and10,848 adopted in 2004
Authorities in charge	Government: Ministry of Energy and Mines (MME) Executive body: Electricity Regulatory Agency (ANEEL)
Eligible technologies	Auctions can be technology-specific (e.g. biomass only auction in 2008 and wind only auction in 2009 and 2010), alternative energy auctions (wind, small hydro and biomass in 2007 and in 2010) and technology-neutral auctions (carried out regularly since 2005, where all RETs have been participating since 2011). ANEEL determines which RET are eligible in auctions and they can compete with conventional power (as in the case of 2011 auction)
Selection process	Pre-requisite to bid for projects: prior environmental license; grid access approval; technology specific documents (such as fuel contracts for biomass and certified production for wind) Selection in 2 stages: Stage 1 descending price clock auction; Stage 2: final pay-as-bid auction
Agenda of auctions	New energy auctions annually based on forecast energy capacity needs. These auctions are technology neutral but the government can determine the eligible technologies, thus allowing exclusive participation of RE. Reserve auctions are held at the discretion of the MME. Typically one reserve energy auction is held for RE-based power generation every year but this is not the rule.
Duration of tariff	Typically 20 years for wind; 20 years for biomass; 30 years hydro
Compliance	Long list of technical documents to participate. Bidders have to deposit several guarantees, including a bid bond of 1% of project's estimated investment cost and a project completion bond of 5% of project's estimated investment cost. Penalties for delays and under production. Contract termination for delays greater than one year.

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Annex 12.5:

Procedures and Practices for Competitive Procurement of Infrastructure Projects

Annex 12.5: Procedures and Practices for Competitive Procurement of Infrastructure Projects

Decree 03/PM of the Prime Minister on Government Procurement of Goods, Construction, Maintenance and Services, dated 09 January 2004, known as Decree No. 03/PM, sets "the rules, forms and procedures for government procurement of goods, construction, [and] repair and ensure[s], efficien[cy], transparen[cy] and economy in government procurement". It covers infrastructure projects such as hydropower dams (Article 2, Definition 4).

Negotiation and finalization of major construction contracts, based on internationally recognized standards forms, are jointly undertaken by the GoL and developer. Key features of the construction documents include:

- Competitive bidding on an open-book basis,
- Guaranteed performance levels,
- Maximum contract prices,
- Guaranteed completion dates,
- Guaranteed good quality of dam throughout the project life cycle,
- Liquidated damages for breaches of contract terms,
- Performance incentives, if any,
- Management of environmental impacts.

As provided by the Integrated Environmental and Social Obligations, Sample PDA and Sample CA, requirement for procurement is limited to construction related works (civil work and permanent infrastructure, hydro-mechanical equipment, electro-mechanical equipment and transmission network (Sample CA, Clause 4.7, (d)) and for monitoring on behalf of the GoL (Integrated Environmental and Social Obligations, Clause 28, a, b). The Company is to ensure that procurement, among others, is planned and implemented in such manner with such skill, materials and equipment and at such standards as maybe necessary to enable the Project Facilities to achieve as useful life no less than the Economic Operating Life (Sample CA, Clause 4.7, (b)).

Developers are obliged to submit quarterly progress reports to the GoL implementing body. If the developer fails to do so within 10 days after receipt of notice of breach, the developer is considered having abandoned the Project. (Sample PDA, Clause 7.2 (g)). Text Box 12.5-1 provides the tentative content of the quarterly progress report.

Text Box 12.5-1. Tentative content of quarterly progress during the PDA stage. Source: Sample PDA, Schedule 4.

1.0	Introduction
2.0	Description of the Project including maps
3.3	Progress of Final Feasibility Study in general
4.0	Consulting Service Agreements
5.0	Field Investigations activities (including photos)
6.0	Geology and Seismology survey
7.0	Hydrology data and record
8.0	Topography survey
9.0	Environmental, Social and Health Impact Assessment (ESHIA), including Terms of Reference and Village Surveys
10.0	Project Layout including transmission line rout
11.0	Energy Export & Domestic Consumption
12.0	Actual implementation status vs Implementation schedule
13.0	number of worker, staff and expert working for the Project
13.0	Conclusions &Recommendations (including work plan and next quarter's activities)

Procurement methods authorized by Decree No.03PM, and its implementing rules and regulations include public bidding, limited bidding, direct contracting and price comparison (Decree No. 03/PM), Article 10). Public bidding is required for most hydropower development because of the high monetary value of these projects. public bidding is required if the value of work is in between 300 million Kip-25 Billion Kip, and in case of international competitive bidding the value of the work is more than 25 Billon Kip. (Ministry of Finance 2004, Article 13).

Pre-qualification

In the case of large-scale, complex, and high value projects such as hydropower, the qualifications of bidders are evaluated prior to bidding. Standards and conditions are stipulated and statements of qualifications are evaluated by the tender committee. All firms meeting the standards and conditions are then invited to participate in the price competition (Decree No.03/PM).

Procedures for Public Bidding

1) Notification is widely provided through the media or official means. The time limits for the preparation and submission of bids are 45 days.

2) Tender documents shall be complete and precise, containing information on goods, works and services, covering technical specifications, place of delivery, time, bidding conditions, terms of contract, standards applied to the evaluation of bids to be properly acknowledged by bidders.

3) All bids must be opened in public immediately at the deadline set for the bid submission at the date, time and place indicated in the tender documents in the presence of the bidders or their representatives.

4) Following opening of the bids, bidders may not revise or add anything to their documents and proposals, except in the case the procurement committee requires clarification, which shall be sought in writing from the concerning responsive bidders.

5) The examination and evaluation of bids is carried out in accordance with the criteria and conditions indicated in the bidding documents. The evaluation of bids must indicate the proposals of all bidders and the reasons for award of contract and is submitted to the project executing agency for approval.

6) In the event that all bidders cannot meet the criteria and conditions indicated in the tender documents, the procurement committee may terminate the bidding process and proceed with re-bidding in accordance with the implementing rules and regulations (Decree No.03/PM).

Notification/invitation

Notification or invitation to bid is published through the mass media and may be sent to individuals or firms interested to participate in the procurement process (Ministry of Finance 2004, Article 4 d). Domestic public bidding is announced in a Lao Language newspaper and notices are sent to each ministry, province or district depending on the value of the procurement. International public tenders are announced in Lao language and English language newspapers published in Lao PDR, or in case of large-scale projects, in an international English language newspaper such as the UN Publication Development Business (Ministry of Finance 2004, Article 14).

Notification shall include:

1) Identity of the procuring entity,
2) A summary of the works, goods or services sought,
3) Address to obtain tender documents and further information related to the submission of bids,
4) Bid security, if required,
5) Cost of tender documents[1],
6) Procedural requirements,
7) Deadline and address for submission of bids (Ministry of Finance 2004, Article 14 (3)).

Bidders must be provided with adequate time for preparation and submission of their bids. The time limit shall include, if required, the time for site visits and pre-bid meeting necessary to prepare bids (Ministry of Finance 2004, Article 4 f). Minimum time limit is 45 days for normal procedure and 20 days for accelerated procedure (Ministry of Finance 2004, Article 14 (2). Where a bidder requires clarification, request must be made in writing and the procuring entity must expeditiously give a written response.

Eligibility Criteria

Individuals, entities and organizations legally constituted in Lao PDR, that have fulfilled their obligations (especially the payment of duties and taxes), and that are capable of supplying materials and construction services are given an equal opportunity of submitting bids (Ministry

[1] Tender documents are sold at a reasonable price covering the costs of printing, delivering and other necessary expenses (Article 4 a).

of Finance 2004, Article 4). State enterprises are also eligible to bid if they are legally and financially autonomous from the procuring entity. International enterprises registered outside Lao PDR are eligible if they have been established in conformity with the provisions of the law of their countries of origins and have fulfilled their obligations with regard to the payment of duties and taxes. If they are awarded with a contract, they will be required to implement the contact in accordance with the Rule of Tax Registration and Management of Tax Payers of the Ministry of Finance No. 2349/MOF, dated 30 December 2003.

In case of Joint Ventures, all parties shall be jointly and severally liable. A joint venture shall nominate a representative who shall have the authority to conduct all on behalf of any and all parties of the joint venture during the bidding process and, in the event that the joint venture is awarded the contract, during the contract execution (Ministry of Finance, 2004, Article 17).

A bidder shall not have a conflict of interest with the scope of the proposed contract. A bidder shall be disqualified if:

- The company is in a bankruptcy,
- It has been found guilty of professional misconduct by a tribunal,
- It has not fulfilled its obligations with regard to the payment of duties, taxes, social security or other payment,
- It is guilty of misrepresentation in supplying required information,
- It has been determined to be involved in any fraudulent or corrupt practice.

The bidder may be required to furnish evidence of their financial capacity to fulfill the requirements of the contract. Evidence maybe furnished by (1) certified statements from banks, (2) presentation of the bidder's balance sheet, and (3) overall turnover and the turnover in respect with civil work, supply of goods or services similar to those required in the contract for the three-year period.

Evidence of technical ability maybe furnished by means of:

a) Professional and educational qualifications of the bidder and/or its managerial and supervisory staff and, in particular, of persons responsible for carrying out the particular works or services for the proposed contract.
b) In case of work: a list of work carried out over the last 3 years, with certificates of satisfactory execution for similar works, issued b previous clients.
c) In case of goods and services: a list of supplied goods and services in the last 2 years with sums, dates and purchases.
d) A list of bidder machinery, namely tools, plants and technical equipment.
e) In the case of goods: detailed description and/or types of goods supplied.

In the case of goods incorporated into works: certificates drawn up by official quality control institutes or agencies of recognized competence attesting conformity to specifications or standards of products (Ministry of Finance, 2004, Article 17).

Tender Documents

Tender documents include:

1) Invitation to submit proposals

2) Instruction to bidders
3) Bid evaluation and selection criteria
4) Bid forms
5) Contract sample
6) General and specific conditions of contract
7) Specifications and drawings
8) List of goods or bill of quantities
9) Time of delivery or of completion and other necessary attachments such as samples of required bid security.

Tender documents are sold at a reasonable price, including the costs of printing, delivery and other necessary expenses (Ministry of Finance 2004, Article 4 a).

Bid Submission, Opening and Examination

Bids must be submitted within the stated time frame and in the manner specified in the tender documents. Any bid received after the deadline is rejected and returned immediately unopened (Ministry of Finance 2004, Article 4 h).

All bids must be opened in public immediately at the deadline set for the bid submission at the date, time and place indicated in the tender documents. Bidders or their representatives or members of the public may attend the bid opening. The Tender Committee shall announce the names of the bidders and price offered by each bidder. The process of the bid opening will be recorded, including names of the bidders, bid price, discounts and names of people in attendance and institutions they represent (Ministry of Finance 2004, Article 4 i). After bid opening, any negotiations with bidders on fundamental aspects of the bids, affecting the principal of equal treatment, in particular on price, are prohibited (Ministry of Finance 2004, Article 4 k).

Bids are examined individually to determined:

1. Eligibility of the bidders,
2. Compliance with the bids with the terms and conditions set out in the tender documents,
3. Responsiveness of the bids to the technical specifications, and
4. Where the tender documents require the existence of a business license, the furnishing of a bid security, the Tender Committee are to verify whether the requirements are fully met (Ministry of Finance 2004, Article 4 j).

Any information related to the examination and evaluation of bids and proposals, deliberations related to the evaluation and the award decision shall be kept confidential by the Tender Committee and may not be disclose to bidders or unrelated persons until the award decision has been approved and the contract accepted (Ministry of Finance, Article 26).

Bid Validity and Security

Bidders are required to submit bids valid for a period specified in the tender documents, which shall be sufficient to enable the comparison and evaluation of bids and obtain the necessary approvals so that the contact can be awarded within that period (Ministry of Finance 2004, Article 4e).

The procuring entity may require bidders to furnish a bid security in a lump sum of not less than 2% of the estimated contract cost or as stipulated in the bid documents. The bid security is refunded to unsuccessful bidders within 7 days after the contract is signed or not later than 7 days after expiration of the bid security, whichever is earlier. The providing entity or project owner will return the bid security to the successful bidder at the time of the signing of the contract. If the successful bidder fails to sign the contract and submit the required performance security, the procuring entity may call the bid security and proceed to the second lowest evaluated and qualified bidder to conclude a contract (Ministry of Finance 2004, Article 4 b).

Two-stage Bidding

For large, complex and high value projects such as hydropower projects, the project executing agency (Ministry of Energy and Mines) may find that it is not desirable or practical to prepare complete technical specifications in advance. In such cases, a two-stage bidding process is used. (Decree No.03/PM, Ministry of Finance 2004, Article 11).

In the two-stage bidding process, bidders may submit offers in the first stage without specifying the price. The second stage is limited to competitive price bids by selected bidders and may be preceded by negotiations between the procuring entity and potential bidders. The technical and quality requirements set forth in the initial specifications and criteria may be modified as a result of these negotiations (Ministry of Finance 2004, Article 11).

Contract Award

The bidder with lowest responsive bid, that meets the qualification requirements specified in the tender documents, shall be awarded the contract. Following the award of the contract and acceptance by the successful bidder, the procuring entity shall notify the unsuccessful bidders within 7 days (Ministry of Finance 2004, Article 4 m).

In the absence of any responsive bid in accordance with the determination of the examination as described earlier or any suitable bid, any or all bids maybe rejected. Where all bids are rejected, the procuring entity must review the contract's terms and conditions, designs and technical specifications, and make revision before re-bidding. If there is only one bid and if such bid exceeds and allocated budget, the Tender Committee shall identify the cause of the excess and make a new proposal for the re-bidding. If substantial changes in the scope or modification to the contact documents is needed before re-bidding, then prior review and approval of the Ministry of Finance (MoF) is required (Ministry of Finance 2004, Article 4 n).

Role and Responsibilities of the Tender Committee

A Tender Committee is appointed by the procuring entity at the central or local level, ensuring strict compliance with the Implementing Rule and Regulations of the Decree No. 03/PM (Article 20). At the central level, the Committee Members are appointed by the Minister of the line agency or his/her authorized representative, while at the provincial level, the members are appointed by the Provincial Governor or his/her representative. In case of public bidding, the Committee consists of 5-9 members: 1-3 members from the procuring agency, and then each of the rest from the Ministry of Finance, MPI, relevant technical department and Ministry of Foreign Affair (External Economic Cooperation Department) in case of loan and grant funded procurement (Article 21).

The Tender Committee has the right and duty to prepare tender documents, carry out and evaluate bids and submit the award decision for approval. The Tender Committee must notify the unsuccessful bidders the contract award information and return securities within 7 days after approval of award decision by the Procuring Entity and the signing of the contract by the successful bidder. All records of procurement proceeding and documentation shall be maintained in a procurement file. The records shall be made available on request to the Ministry of Finance, Procurement Monitoring Office. The contract award information must be posted in the offices of the procuring entity for view by the public.