The Effectiveness of the Laotian EIA system in the Context of Sustainability and Hydropower Development

By

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Statement of Originality

I hereby certify that the work embodied in the thesis is my own work, conducted under normal supervision.

The thesis contains no material which has been accepted for the award of any other degree or diploma in any university or other tertiary institution and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text. I give consent to the final version of my thesis being made available worldwide when deposited in the University's Digital Repository, subject to the provisions of the Copyright Act 1968.

Signed:

Aengphone Phaengsuwan

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Aengphone Phaengsuwan

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Abbreviations

ADB	Asian Development Bank
CA	Concession Agreements
DCR	Decree on Compensation and Resettlement of People Affected by Development Projects
DEB	Department of Energy Business
DEM	Department of Energy Management
DEPP	Department of Energy Policy and Planning
DESIA	Department of Environmental and Social Impact Assessment
DIP	Department of Investment Promotion
DoNRE	District of Natural Resources and Environment
DoP	Department of Planning
DPRA	Development Project Responsible Agency
DSEA	Decision on Strategic Environmental Assessment
ECC	Environmental Compliance Certificate
EIA	Environmental Impact Assessment
EMMP	Environmental Management and Monitoring Plans
EMP	Environmental Management Plan
EMU	Environmental Management Unit
EMSP	Environmental Management Support Programs
EPL	Environmental Protection Law
ESIA	Environmental and Social Impact Assessment
GEM	Guideline for Environmental Monitoring
GoL	Government of Laos

GPP	Guideline for Public Participation
IDA	International Development Agency
IEE	Initial Environmental Examination
IPD	Investment Promotion Department
LEP	Law on Environmental Protection
LMB	Lower Mekong Basin
LPRP	Lao People's Revolutionary Party
MEM	Ministry of Energy and Mines
MENA	Middle East and North Africa
MoNRE	Ministry of Natural Resources and Environment
MPI	Ministry of Planning and Investment
MRC	Mekong River Commission
NDF	Nordic Development Fund
NEAP	National Environmental Action Plan
NEM	New Economic Mechanism
NES	National Environmental Standards
NPCA	National Protected and Conservation Areas
NSEDP	National Socio-Economic Development Plan
NT2HP	Nam Theun 2 Hydropower Project
OECD	Organization for Economic Co-operation and Development
OIA	Office of Investment Affairs
PDA	Project Development Agreements
PMO	Prime Minister's Office
PoNRE	Province of Natural Resources and Environment
RMU	Resettlement Management Units

SEA	Strategic Environmental Assessment
SESO	Standard for Environmental and Social Obligations
SMMP	Social Management and Monitoring Plans
STEA	Science, Technology and Environment Agency
STENO	Science, Technology and Environment Organization
VoNRE	Village of Natural Resources and Environment
WREA	Water Resources and Environment Administration

Abstract

Economic development is recognized generally as a measure of progress. In developing countries, this form of development is often given priority over other concerns such as environmental health and social welfare. Following recommendations from intergovernmental agencies such as the World Bank and the International Monetary Fund, many developing countries have embraced foreign direct investment as a means to quickly grow their economies. One such country is Laos. Over the past two decades, Laos has been at the centre of a major extractive boom and as a result, significant impacts from large-scale development projects such as hydropower, mining and rubber plantations have threatened local communities and the long term viability of the natural environment. Managing the impacts of projects therefore, is essential if development is to be recognized as 'sustainable'.

One of the key tools for addressing the negative environmental and social impacts of development projects is Environmental Impact Assessment (EIA). Initially formulated in the developed world in the late 1960s, EIA has gradually been introduced into the developing world. This has given rise to research into the effectiveness of EIA in very different contexts from that in which EIA was originally conceived. This thesis contributes to this body of work by examining the design and operation of the EIA system in Laos, a country that has had an EIA system in place only since 2000. In so doing, this thesis also contributes to a nascent body of research on EIA effectiveness in Laos and the LMB more broadly (e.g. Wayakone & Makoto, 2012; Campbell et al., 2015; Wells-Dang et al., 2016). The research proceeds by drawing on the seminal work of Ahmad and Wood (2002), which outlines a framework for assessing EIA effectiveness in developing countries. The framework is applied to the EIA system in Laos in the context of

hydropower development, a timely focus given that the Government of Laos aims to use the energy generated from hydropower to be the 'Battery of ASEAN'. Currently there are hundreds of hydropower dams at various stages of planning, construction and in operation throughout the country.

The research focuses on three major components of the EIA system, its legal context, institutional arrangements, the procedural elements within the contextual setting of Laos. As suggested by Ahmad and Wood (2002) these components are essential for an effective and transparent EIA system. Consistent with many other studies of EIA in developing countries, the research reviews legal documents directly related to the laws, guidelines and decrees made by the government to implement EIA. This desk-top research is complemented by qualitative research. Semi-structured interviews were conducted with 52 key stakeholders including government officials at the national, provincial and district levels, and representatives from non-government organizations, environmental consulting firms, developers, international organizations and villagers. Observations of EIA practice were also conducted during field site visits with a focus on the activities associated with the monitoring of the impacts of hydropower development and public participation events.

The findings of this research acknowledge, as Ahmad and Wood (2002) suggest, that the most effective EIA systems should include strong legal, institutional and procedural arrangements. In Laos, However, the effectiveness of the EIA system is not solely reliant on strict procedural and legal measures, but also on the capacity of the institutions that are enacting the EIA system 'on the ground' and the political will of the government for not just development but for *sustainable* development. This research finds that 'on paper'

the EIA system in Laos has the potential to contribute to more sustainable hydropower projects. However, the effectiveness of the system falls down at the institutional and procedural levels where those applying the laws, practicing EIA and implementing critical stages of the EIA process (such as monitoring of impacts and public participation) are severely hampered in their work. Unlike EIA processes in developed countries (often held up as models of 'best-practice'), in Laos insufficient financial resources, under-resourced departments, unqualified or inexperienced staff and a system that essentially relies on the good-will and financial support of developers has allowed national economic development priorities to take precedence over rigorous and transparent EIA implementation. Thus, this research argues that while it is possible to regulate for more sustainable hydropower outcomes, little meaningful change will occur until there is national recognition that long-lasting sustainable development cannot be achieved without addressing the short-comings that exist in the current EIA system.

CHAPTER ONE: INTRODUCTION

1.1 Setting the Scene

With the formation of the World Commission on Environment and Development (WCED) in 1983 and the subsequent publication of *Our Common Future* in 1987, the idea of 'sustainable development' has become a familiar principle. However, the attainment of sustainable development is less familiar perhaps. Countries around the world have grappled with the challenge of how to achieve "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (WCED, 1987:43). This challenge is particularly pointed in a country such as Laos, which although defined by the United Nations (UN) as one of the world's Least Developed Countries, is rich in so-called 'natural resources'. These resources feature as an important part of the government's agenda to reduce poverty and improve the country's status. Most recently, a new socio-economic development policy called the *New Economic Mechanism* (NEM) has shifted Laos from a centrally planned economy to a more market-oriented economy which welcomes foreign direct investment (this will be discussed in more detail in Chapter 4). As a result, the number of large-scale development projects, especially in the natural resource sector, have grown significantly in recent years. The Ministry of Planning and Investment reported that from January 1st 2011 to December 31st 2015, the Government of Laos (GoL) had approved 944 investment projects with a total of more than US$8.5 billion (Investment Promotion Department, 2016). Almost 45 percent of this was invested in the energy sector. This figure is also consistent with the information reported by the Ministry of Energy and Mines, which reported that by the end of 2016, there had been investment in more than 100 large-scale

hydropower projects, including 61 projects that were in the early planning stages (see also Table 4.2 in Chapter 4) (Department of Energy Business, 2017).

The increase in large-scale development projects in Laos provides important opportunities for the country's economic development overall. However, these development activities have generated enormous environmental and social impacts. Studies have demonstrated that the environmental and social costs caused by large-scale development projects in Laos are substantial compared to the economic benefits (e.g. Howe & Sims, 2011; Hirsch & Scurrah, 2015; Friis & Nielsen, 2016; Baird & Barney, 2017). Particularly in the energy sector, large-scale hydropower projects are associated with extensive impacts on the livelihoods of rural people, and the health of ecological systems in Laos (e.g. Shoemaker, 1998; Lawrence, 2007; Jonsson, 2008; Molle et al., 2009; Foran et al., 2010; Delang & Toro, 2011; Grumbine et al., 2012). Despite this, the approval of hydropower projects continues unabated as the GoL seeks to position itself as the 'battery of ASEAN' and *the* place to invest in power generation. Laos' location on the Mekong River, situates it "at the forefront of [hydropower] development" (Sayatham & Suhardiman, 2015:17) (see Map 1.1).

The balance to meet economic development goals, and still ensure environmental protection and social wellbeing is difficult and an ongoing challenge for all countries. There are tools that can help governments, such as the GoL, to achieve more sustainable forms of development such as Environmental Impact Assessment (EIA) and Strategic Environmental Assessment (SEA) systems. These two systems complement each other well. Where, EIA is applied at a project level, SEA extends the application of EIA to the policy, plan and program levels (Therivel, 2010; Glasson et al., 2012; Elliott, 2014).

However, SEA had yet to be officially established in Laos when the fieldwork of this research project was being conducted in 2015. Thus, this research has mainly focused on evaluating the existing EIA system in the country and where possible, general discussions of SEA are made where it might be incorporated into the roles of the EIA system in assisting sustainable hydropower development.

While there is no agreed definition of EIA (Ahamad & Sammy, 1985; Palesaw, 1994; Glasson et al., 2005), some scholars refer to EIA only in terms of biophysical environmental impacts while others include both social and economic impacts. Overall, however, its common definition is defined as "the process of identifying, predicting, evaluating and mitigating the biophysical, social and other relevant effects of development proposals prior to major decisions being taken and commitments made" (IAIA, 1999: p.2). This thesis applies this given definition to examine the roles of the Laotian EIA system and discusses its effective performance.

An EIA system was first introduced in the United States through the National Environmental Policy Act (NEPA) of 1969 but is today widely used by many governments to help identify and mitigate the negative environmental and social impacts of development. From its initial use in the United States (US) it was quickly adopted in the 1970s in developed countries such as Canada, many European countries, Australia and New Zealand. Over the next two decades it was introduced into other counties, including a number of Asian countries, chiefly Japan, South Korea, China, the Philippines and Thailand (Gilpin, 1995; Wood, 1995; Modak & Biswas 1999; Jooijen, 2004; Elliott & Thomas, 2009). Lao People's Democratic Republic (PDR) was a relative latecomer to EIA, only properly establishing an EIA system in 2000.

Map 1.1 Laos and its neighbours

Source: Drawn by Olivier Rey-Lescure (Cartographer at the University of Newcastle).

The relationship between sustainable development and EIA has been widely recognized since the 1992 Conference on the Environment and Development in Rio de Janeiro. The relationship between these two systems is clearly reflected in Principle 17 of the Rio Declaration which states that:

> Environmental impact assessment, as a national instrument, shall be undertaken for proposed activities that are likely to have a significant adverse impact on the environment and are subject to a decision of a competent national authority. (United Nations, 1997:4)

The Rio Declaration called for signatory countries to adopt an EIA system into their legal frameworks in order to help generate sustainable outcomes that are economically viable, socially acceptable and environmentally sound.

'On paper' the GoL is committed to sustainable development. For example, it has stated that "socio-economic development of the country must be balanced between economic growth, socio-cultural development and environmental preservation" (Ministry of Planning and Investment, 2006:2). 'On paper' the country also has an EIA system in place to help achieve these sustainable development outcomes. What is under question, however, is whether the current EIA system in Laos is effective enough to achieve the government's stated commitment to sustainable development as well as meeting international standards for EIA best-practice asidentified by the International Association for Impact Assessment (IAIA) (see Figure 1.1 and Figure 1.2 below).

Figure 1.1 Basic Principles of EIA

Copyright material removed

Note: These basic principles of EIA are taken from the IAIA Principles of Environmental Impact Assessment Best Practice document.

Source: International Association for Impact Assessment (IAIA), 1999:3.

Studies conducted in different parts of the world have indicated that the design of EIA systems in developing countries falls behind many of the basic principles of international best-practice in EIA and that the operation of these systems also ‘falls short’ (e.g. Ahmad & Wood, 2002; Clausen et al., 2011; Momtaz & Kabir, 2013). These studies have found

that some common problems associated with the EIA systems in developing countries include a shortage of human and financial resources; inadequate EIA legislation; limited public participation; poor quality EIA documents; a lack of enforcement of EIA monitoring; and a lack of political will to enforce the EIA system overall (e.g. Wood, 1995; Sadler, 1996; Kakonge, 1999; Ahmad & Wood, 2002; Wang et al., 2003; Nadeem & Hameed, 2008; Clausen et al., 2011; Momtaz & Kabir, 2013). This thesis contributes to this body of work by investigating effectiveness of the EIA system in Laos.

Figure 1.2 Operating Principles of EIA

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Note: These operating principles of EIA are taken from the IAIA Principles of Environmental Impact Assessment Best Practice document.

Source: International Association for Impact Assessment (IAIA), 1999:4.

1.2 Research Questions and Approach

This research addresses two overarching research questions:

- To what extent is the existing EIA system in Laos effective?
- What improvements are needed to ensure that the design and operation of the EIA system meets the standards of best-practice and, as a result, how can this help Laos achieve its overall goal of sustainable development?

This research addresses these questions by focusing on hydropower development in Laos. As highlighted above, hydropower is an important focus for development in Laos, and a development pathway that has extensive impacts on livelihoods of rural people and the environment. If Laos is to achieve more sustainable forms of development, then mitigating the negative effects of development in the energy sector (including hydropower) will be an important contribution.

To investigate effectiveness of the Laotian EIA system in the context of hydropower development, this research critically assesses three important components of the EIA system—the legal context, institutional arrangements and procedural elements. This assessment is informed by a series of criteria designed by Ahmad and Wood (2002) as well as a focus on the actual practice of EIA in Laos. This combination of a criteria-based approach *and* a practice-based approach distinguishes this research from other studies on EIA effectiveness in Laos and the Lower Mekong Basin (LMB).[1] Studies currently available tend to take either a criteria-based approach or a practice-based approach;

[1] In this thesis, the "Lower Mekong Basin" refers to the four countries that form the Mekong River Commission (MRC), Cambodia, Lao PDR, Thailand and Vietnam. Myanmar and China are dialogue partners of the MRC and are described by the MRC as "the upstream countries of the Mekong River Basin" (http://www.mrcmekong.org/about-mrc/).

whereas this research incorporates both approaches (and this will be discussed in more detail in Chapters 2 and 3).

1.3 Personal Statement

The challenge that Laos faces in achieving more sustainable development, particularly in the energy sector (including hydropower), is one that I have witnessed throughout my personal and working life. I was born in Houaphan province in the Northeast of Laos during the secret 'American War' in Laos (1964-1973). I grew up in a community where access to electricity was very limited, and this made even the most mundane and everyday activities difficult. Candlelight was the accompaniment for my homework and dinnertime; and a torch became my best friend helping guide me as I walked from one place in our community to another. It is not too difficult to imagine that few people objected when they were told by developers and authorities that their quality of life would be improved by the electricity that would come from damming the river.

The village where I grew up was remote, and the livelihoods of people in the community were closely connected with and dependent upon nature and the riverine ecosystems. My childhood home was adjacent to a major river that flowed gently from the valleys above and snaked down to our community and then into the paddy fields at the edge of our community. This river offered so many precious things to the community and therefore, people described the river as an essential asset of the community. I still remember some of my favourite outdoor activities were associated with that river such as helping my family water our river bank garden which was like an organic supermarket to us. I often left multiple handline fishing hooks along the river overnight to catch fish in the morning, and generally was able to catch enough fish for my family's breakfast. In addition, I had

a lot of fun activities such as jumping and swimming in that river with my friends; to me, the river was like my own five-star swimming pool!

When, I finished high school, I had to leave my family and community to study at the National University of Laos in Vientiane capital, about 700 kilometres away. After five years of studying and two years working in the city, I returned to my hometown for a short visit. When I arrived home, I noticed that things had changed significantly. The river where I used to fish and swim had disappeared completely and my family had lost the river bank garden as there was now not enough water to support vegetables. I asked myself what had happened to this river? How could the people in the community maintain their livelihoods without the river as it had been part of their daily lives for many, many years? The answer was hydropower. A series of dams had been built up and down stream and as a result, the water to our village, simply ceased to flow. The vanishing of the river near my backyard really shocked me and it set me on my journey to study the relationship between humans and nature, and to question what was needed to ensure that future development was sustainable so that the natural environment and communities could be protected.

In 1998, I received my first AusAID scholarship to study a Diploma in Environmental Management at the Chisholm Institute in Victoria, Australia. When I finished my study in 2000, I returned to Laos and worked with the Lao Youth Organization. My main responsibility was to carry out various public awareness programs on the rights of the child, including the right to an education and the right to a good environment. I was actively involved in promoting an activity called *'a green and clean future'* which aimed to educate children and young people about environmental protection and the crucial role

of the environment in supporting life on the planet. The program included outdoor camping activities to learn more about nature, living creatures and tree planting. After working with young people for a few years, my passion for protecting the natural environment had grown stronger as I had seen how natural resources throughout the country were being used unsustainably and how environmental problems were having a direct impact on human health in some areas. This realisation pushed me to think beyond the work I was carrying out to consider what else I could do to make a difference to the country and globally.

In 2005, I applied for another AusAID scholarship and was awarded a scholarship to study a Master degree in Environmental Management at the University of Newcastle, Australia. This time, when I had finished my study and returned to Laos, I joined the Water Resources and Environment Administration which has since become the Ministry of Natural Resources and Environment (MoNRE). Within MoNRE, I worked in the Department of Environmental and Social Impact Assessment (DESIA). In my position, I had many opportunities to get involved in various environmental assessment activities such as negotiating Concession Agreements, reviewing EIA documents and carrying out impact monitoring. There were numerous development projects based on the natural resource sector of Laos, such as rubber and eucalyptus plantation projects; gold, copper and potash mining projects; and hydropower dam projects. These development projects were mainly operated through Concession Agreements with foreign direct investment coming from many countries in Asia and Europe. Most of these hydropower projects had been evaluated, approved and processed quickly through the EIA system, a system that was supposed to improve the quality of development projects and generate sustainable outcomes. It seemed to me, However, that most development projects in Laos including

hydropower projects were not really working towards sustainable development goals, despite the existence of an EIA system and the GoL stating that sustainable development was a top priority.

Having grown up in a remote community and experienced the associated disadvantages, I accept that some form of development is needed. But a central question for political leaders, policy makers and decision makers is: what type of development is needed in order to achieve sustainable outcomes for both the short and long-term benefits of a nation?

In this research, I position myself as a researcher who is not opposed to the construction and operation of hydropower dams; some good dams do exist in different parts of the world (Ledec & Quintero, 2003). As a researcher, I am, However, concerned about whether the continued approval, construction and operation of hydropower dams in Laos is economically viable, socially acceptable and environmentally sound. I am interested in the potential of an effective EIA system as a tool for managing the sustainability of development projects. I believe that an effective EIA system can help development projects to avoid or reduce negative impacts and overall, achieve long-term sustainable development outcomes (Wahaab, 2003). It is my wish that in time, such a system will be operating throughout Laos at all scales of development, and I hope that this thesis will help contribute to this future.

1.4 Thesis Overview

The thesis is presented in eight chapters (see Figure 1.3).

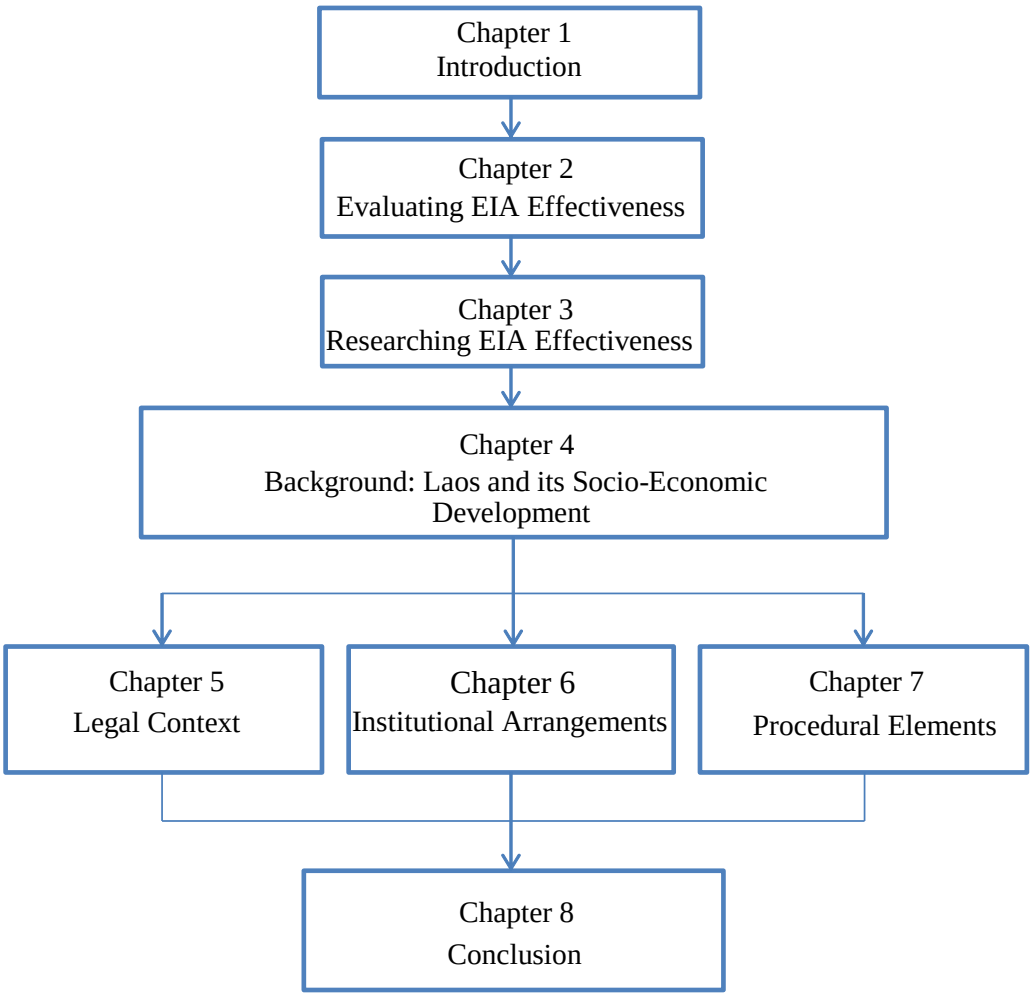

Figure 1.3 The structure of thesis

Chapter 2: contains the literature review and foregrounds the central argument of the research. It establishes the various ways EIA has been used by different scholars and outlines in particular how this plays out in developing nations. Most importantly, it introduces Ahmed and Wood's (2002) criteria-based evaluation which provides the overall framework for evaluating EIA in Laos. The chapter also introduces the distinction

between a criteria-based evaluation and a practical based evaluation. The chapter further establishes how the aims of the thesis will be met.

Chapter 3: describes the methods used in the thesis and outlines the methodological arguments for their use. Given that these involve fieldwork interviews, participant observation and the study of documents, qualitative methods were deemed most appropriate for this research.

Chapter 4: provides background information on Laos beginning with a brief overview of its modern history to its present day economic concerns. The chapter also outlines the changes introduced by the GoL to bring it in line with other developing nations trying to establish an EIA system to help it develop in a sustainable manner. The chapter also discusses the choice of hydropower as a major means of development and provides a critique of the impacts associated with it as identified by other scholars.

Chapter 5: investigates the effectiveness of the legal frameworks established for the EIA system in Laos. It traces the evolution of legislation to support EIA and using the criteria based framework introduced in Chapter 2, evaluates how effective it is in supporting practitioners in their application of EIA on the ground. The findings from the evaluation are discussed and compared with the principles of international EIA best-practice.

Chapter 6: assesses the adequacy of the institutional arrangements for enforcing the EIA system in Laos. It also provides an overview of the administrative structures of the government in Laos. Using the criteria based framework, the chapter evaluates 4 aspects

considered essential for the effective functioning of the EIA system in Laos both ‘on paper’ and on the ground.

Chapter 7: examines the procedural components of the EIA system that have been practiced in Laos. It assesses these elements in terms of the criteria based framework. As there are many components involved in the EIA system, this chapter focuses only on an examination of the reviewing of ESIA reports, impact monitoring and public consultation meetings on the ground. It compares the ‘on paper’ elements against the practice-based scenario. Much of this critique draws on the fieldwork observations of the researcher and interviews with participants.

Chapter 8: provides an overall conclusion to this research and makes recommendations for how the GoL might address some of the more serious flaws that exist in the implementation of its EIA system ‘on the ground’. It also discusses the contributions this research makes to furthering our understanding of the relationship between EIA and sustainable development and also, the value gained by combining a criteria and practice-based approach to the study of EIA.

CHAPTER TWO: EVALUATING EIA EFFECTIVENESS

2.1 Introduction

This thesis is essentially concerned with the effectiveness of EIA system in Laos (and in developing countries more generally). However, as Loomis and Dziedzic (2018:29) highlighted in a recent review, effectiveness is a "manifold" and "multidimensional" term (see also Jay et al., 2007; Cashmore et al., 2007). One of the earliest and most comprehensive discussions of EIA effectiveness was Sadler's (1996) *International Study of the Effectiveness of Environmental Assessment*. This work continues to set the terms for studies of EIA effectiveness. In this seminal work, Sadler (1996:39 & 65) identified three "basic yardsticks" for judging effectiveness: *procedural* (did the process follow established and accepted provisions and principles?); *substantive* (were the objectives of EIA achieved, and specifically were negative environmental and social outcomes avoided?); and *transactive* (were the outcomes achieved in a cost-effective and timely way?). Of the three yardsticks, by far the most commonly used is procedural effectiveness (Loomis & Dziedzic, 2018:30). This thesis also uses procedural effectiveness as the principal yardstick for investigating the EIA system in Laos.

This chapter begins by discussing Sadler's yardsticks, including a discussion of why procedural effectiveness is the most commonly used, and why this is an appropriate focus for this thesis, even though there is an overarching concern for the substantive contribution that EIA might make to more sustainable forms of development in Laos. The chapter then introduces an overall framework for evaluating procedural effectiveness, based on the framework developed by Wood (1995), in the context of EIA in North America (US and Canada), Europe (United Kingdom and the Netherlands) and

Commonwealth countries (Australia, New Zealand and South Africa), and later modified by Ahmad and Wood (2002) in their comparative study of EIA systems in Egypt, Turkey and Tunisia. This is followed by a discussion of the criteria that researchers have used to operationalize this framework, including how researchers have adapted Ahmad and Wood's framework and criteria for studying EIA effectiveness in various developing countries. The chapter then identifies the main findings from these studies, including the recurring issues that have arisen in studies of EIA in developing countries. The next section focuses on studies of EIA in the Lower Mekong Basin (LMB), including Laos. This section discusses the frameworks that have been used as well as the main findings. This is followed by an elaboration of the framework and criteria used in this thesis, drawing both on studies of EIA in the LMB and in other developing countries.

2.2 Evaluating EIA effectiveness

In their 2018 paper, Loomis and Dziedzic presented an analysis of 64 studies of EIA effectiveness published over a twenty-year period between 1996 and 2016. Using Sadler's three basic yardsticks introduced above, Loomis and Dziedzic (2018:31) found that the majority of studies focused on the 'procedural dimension', and that within this category Wood's original 1995 criteria and other modified versions are "the single most popular method for this effectiveness dimension". Less common are studies that focus on the 'substantive dimension' and even rarer are studies that focus on the 'transactive dimension' (indeed, Loomis and Dziedzic found that this dimension was only mentioned in passing). Loomis and Dziedzic also considered a fourth dimension: the 'normative dimension', an addition to Sadler's yardsticks made by Baker and McLelland (2003). This dimension focuses on whether EIA contributes to the overall achievement of sustainable development, and Loomis and Dziedzic identify that there are some studies

on this topic. There can be overlap between the substantive and normative dimensions depending on whether studies are based on Sadler's original three yardsticks or whether they incorporate Baker and McLelland's addition. Some studies even describe the substantive dimension in terms of EIA's contribution to the achievement of sustainable development, for example, Cashmore et al. (2007). Nevertheless, what is important to detail here is why the procedural dimension is the most commonly used; and why, even though this thesis overall is concerned with the contribution of EIA to sustainable development in Laos, it focuses on the procedural dimension (and not the substantive, or normative dimensions).

Cashmore et al. (2004:296) identify that the focus on the procedural dimension is because of how EIA was originally formulated. As they outline, EIA was formulated in the US (through the National Environmental Policy Act of 1969) as a legislative procedure, albeit one with overarching but "vague aspirations" for environmental protection (see also Jay et al., 2007). The result was that agencies in the US were required to follow a prescribed series of steps but it was never mandated what these agencies were meant to achieve in terms of environmental outcomes. As EIA has spread from the US to other countries, this has meant that "procedural forms of EIA dominate global practices because of difficulties (legal, technical and consensual) in defining and implementing its substantive goals" (Cashmore et al., 2004:296). Thus, studies of EIA effectiveness have also tended to follow, focusing on the procedural rather than the substantive (or normative) dimension.

A second reason for the focus on the procedural dimension is the challenge of unravelling the contribution of EIA to sustainable development. Jay et al. (2007) have identified that there are various difficulties associated with this challenge. One difficulty is defining

what is meant by sustainable development. As a result, the term is “too indeterminate to allow a meaningful consideration to be given to EIA’s effectiveness in this regard” (Jay et al., 2007:290). They also argue that even if the definition was clearer it would still be difficult to establish what difference EIA makes and how it impacts on sustainability outcomes. Furthermore, Jay et al. (2007:293) contend that even though decision-makers have to take into account the information provided through an EIA “it is probable that other perspectives will, in the final analysis, hold greater sway”. They even say that the potential for EIA to actually contribute to more sustainable forms of development “seems remote” (Jay et al., 2007:293). As a result of these difficulties, they propose that rather than trying to make a direct causal connection between EIA and sustainability outcomes, it is more appropriate to think of EIA as having indirect, subtle and long-term impacts. For example, they note that several other studies have identified how involvement in EIA has increased environmental awareness and learning among participants, and that as qualities become more embedded in practice they shape how future development proposals are assessed and even contribute to “societal debate about the broader direction of development” (Jay et al., 2007:294).

Others have also identified the challenge of researching the substantive (or normative) dimension of EIA effectiveness because of the difficulty of ascertaining the causal relationship between EIA and sustainability outcomes. Similar to Jay et al., they have explored the less immediate and more indirect outcomes. In one study, Jones and Morrison-Saunders (2016) examined the long-term influence of EIA on organizational learning within the Water Corporation in Western Australia. They found that over time EIA values influenced the organization and were taken-up in a “subversive” or “worm in the brain” way (Bartlett, 1990:82). In a second study, Cashmore et al. (2007) researched

three development projects in the United Kingdom (UK) to determine the practical outcomes of the EIA process. Likewise, they found that EIA contributed most strongly to stakeholders learning more about sustainability issues and environmental impacts, and developing more pro-environmental to attitudes and values.

Paradoxically, these studies—which investigate the substantive dimension of EIA effectiveness by focusing on the indirect outcomes and impacts—highlight the importance of attending to the procedural dimension. For without the procedural dimension in place—i.e. without established and accepted processes, provisions and principles in place—then the types of outcomes and impacts discussed above are unlikely to be achieved. The procedural dimension provides the foundation on which substantive outcomes build. Attending to the effectiveness of the procedural dimensions is perhaps even more important in a developing country such as Laos, where EIA is relatively new and the country is still in the process of developing its EIA system. It is also where relatively few studies of EIA effectiveness have been carried out. Having a firm EIA foundation in place in Laos is a prerequisite for ultimately achieving more substantive and sustainable outcomes.

2.3 Overall Framework for Evaluating EIA Effectiveness

This section provides an overview of the overall framework that will be used in this research to evaluate the EIA system in Laos. The evaluation framework is aligned with Sadler's procedural dimension for it focuses on the various processes, provisions and principles that are in place in Laos. Consistent with many other studies of the procedural dimension, this research draws on the framework developed by Ahmad and Wood (2002) (which is built on Wood's earlier 1995 work). Ahmad and Wood's framework has been

used to evaluate the effectiveness of the EIA systems in a number of developing countries, including 21 countries in the Middle East and North Africa (MENA) (El-Fadl & El-Fadel, 2004); Pakistan (Nadeem & Hameed, 2008); Colombia (Toro et al., 2010); Kenya, Rwanda and Tanzania (Marara et al., 2011); Bahrain (Naser, 2012); India (Panigrahi & Amirapu, 2012); and Bangladesh (Momtaz & Kabir, 2013). As will be detailed later in this chapter, it has also been used to evaluate the effectiveness of EIA systems in the LMB (including Laos).

Ahmad and Wood (2002) identified three main components for evaluating overall EIA procedural effectiveness: the legal context, the institutional (or administrative) arrangement, and the procedural (or process) elements. They also take into account what they call foundation measures. In this framework, Ahmad and Wood use the term 'procedural elements' to refer to the specific steps in the EIA process; nevertheless, the components that they identify comprise the *overall* procedural dimension identified by Sadler. In what follows the three main components and the foundation measures are discussed.

The legal context refers to relevant policies, legislation and provisions that structure the EIA system and establish how it is to be operationalized. It is recognized as one of the most important constituents of an EIA system; as Glasson et al. (2005:36-37) outline, the legal framework serves as the basis for each EIA system in a country. As EIA has become more widespread over the past two decades, the legal means for enacting EIA has continued to develop. The United Nations Environment Programme (UNEP) has identified that these legal means can be through legislation, an administrative order or a

directive policy (UNEP, 2002) (see also Bhatt & Khanal, 2010; Naser, 2012; Betey & Godfred, 2013).

The institutional (or administrative) arrangement refers to the governing bodies in charge of operating the EIA systems. In general, EIA is either administered through a government department or through a stand-alone authority, such as an Environmental Protection Authority (as in Pakistan and Tunisia, see Ahmad & Wood, 2002; Nadeem & Hameed, 2008). When administered through a government department, there can be issues with the effectiveness of the EIA system depending on which department has responsibility.

The procedural (or process) elements refer to stages or steps of an EIA system. These EIA procedural elements include: screening, scoping, assessing impacts, reporting impact assessment, reviewing EIA report, making decisions and monitoring impacts (Gilpin, 1995; Elliott & Thomas, 2009; Glasson et al., 2012). In addition to these specific EIA procedures, it is recommended that public participation should be incorporated into all EIA procedures from the initial screening to the ongoing monitoring of impacts (e.g. Hanna, 2005; Elliott & Thomas, 2009; Glasson et al., 2012; Noble, 2015). The incorporation of public participation is said to result in transparent and robust steps that help increase the effective performance of the EIA system as a whole (Hanna, 2005; IAIA, 2006; Elliott & Thomas, 2009; Glasson et al., 2012; Noble, 2015).

Finally, Ahmad and Wood take into account what they describe as the “foundation measures” of an effective EIA system (2002:216). This measures help to promote good practice and underpin the successful application and implementation of the EIA system.

Ahmad and Wood developed this component by incorporating the work of Fuller (1999) who included in foundation measures aspects of EIA such as guidelines, training and professional recognition. In the period since Ahmad and Wood's framework was published, researchers (particularly those working in the developing world) have tended to use the term context rather than foundation, and they have expanded the range of factors that are included. For example, Marara et al. (2011:286) use the term "contextual set-up" and they include "the socio-economic and political situation", which they claim "plays an important role in the performance of an EIA system". Similarly, Momtaz and Kabir (2013:14) use the term "broader context" and they include "political will, environmental awareness, and favourable socioeconomic conditions". Following the examples of these studies, this PhD research uses the term 'contextual setting' and includes in this setting socio-economic and political features.

Figure 2.1 presents the overall framework used in this thesis, including showing how the contextual setting is considered a feature of each of the three main components identified by Ahmad and Wood (2002).

2.4 Operationalizing the Framework

In order to investigate each part of the framework for evaluating the effectiveness of EIA system, a series of criteria have been developed. Building on Wood's (1995) initial study, Ahmad and Wood (2002) identified 20 criteria that are related to the legislative, institutional and procedural components (see Table 2.1). As shown in this table, Ahmad and Wood describe these three components as "systemic measures" (i.e. measures related to the nature of the EIA system). They also identify four criteria for the "foundation measures". According to Wood (2003:13) all twenty-four criteria are important for

"judg[ing] the effectiveness of any EIA system to enable an international comparison to be made between systems".

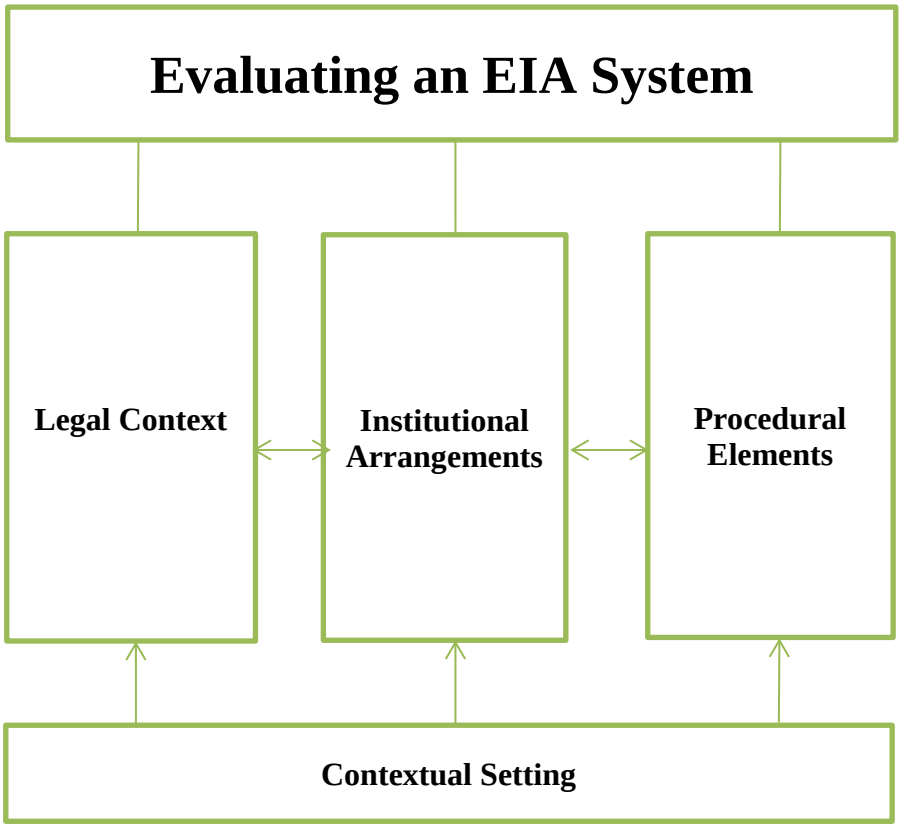

Figure 2.1 Framework for evaluating the EIA system in Laos

Source: Adapted from Ahmad and Wood, 2002:216

In the studies that have since used Ahmad and Wood's framework, the criteria for evaluating EIA effectiveness have been adapted in various ways. For example, in their study of the EIA system in Pakistan, Nadeem and Hameed (2008) use the systemic measures only and the same set of 20 criteria that Ahmad and Wood developed for these areas (see Table 2.2).

Table 2.1 Ahmad and Wood's evaluation criteria

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Source: Ahmad and Wood, 2002:216

By contrast, Marara et al. (2011) use the same four areas as Ahmad and Wood (i.e. the legal, administrative and procedural frameworks, and what they call the "contextual set-up"); However, they modify the actual criteria (see Table 2.3). They do not state why they have modified the criteria but their objective is different from Wood's. Where Wood (2003) is interested in the potential for international comparisons, Marara et al. (2011:287) are interested in a more local comparison between three neighbouring countries that share "similar environmental challenges … in the context of poverty". In so doing, Marara et al. (2011:287) draw attention to the way that "environmental impact assessment systems, as with any public policy, operate within a specific context".

Table 2.2 Nadeem and Hameed's evaluation criteria

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Source: Nadeem and Hameed, 2008:563

In another study, Toro at al. (2010) use the same three systemic measures as Ahmad and Wood, but they group them differently (see Table 2.4). They specifically note that the original criteria "were revised to take into account the local organizational and jurisdictional cultural issues in Colombia" (Toro et al., 2010:253). Rather than an international comparison, Toro et al. are only concerned with identifying the strengths and weaknesses of the Colombian EIA system in order to develop recommendations for reform.

Table 2.3 Marara et al.'s evaluation criteria

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Source: Marara et al., 2011:288

From these examples, it is clear that researchers do modify Ahmad and Wood's criteria to suit the contexts of particular countries. Given the context of Laos, this research similarly will adapt Ahmad and Wood's criteria to be relevant to the EIA system in Laos. Before setting out these criteria, it is important to understand more about the main findings from evaluations of EIA effectiveness in developing countries. It is also important to understand more about how EIA effectiveness has been evaluated in countries in the LMB, and the main findings from these studies. This material will be drawn on later in this chapter to set out the criteria that will be used in this research on EIA effectiveness in Laos.

Table 2.4 Toro et al.'s evaluation criteria

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Source: Toro et al., 2010:255

2.5 Common findings of previous studies

This section discusses the main findings from previous studies on EIA effectiveness in developing countries. Although the degree of effectiveness differs from country to country, there are some shortcomings that are consistently found by researchers. These shortcomings are summarized in Table 2.5, and are discussed below (and Appendix 1 contains more detailed information about the findings from each study).

Table 2.5 Summary of shortcomings consistently identified by other studies

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Based on the following studies: Ahmad & Wood, 2002; El-Fadl & El-Fadel, 2004; Nadeem & Hameed, 2008; Toro et al., 2010; Marara et al., 2011; Naser, 2012; Panigrahi & Amirapu, 2012; Betey & Godfred, 2013.

In terms of the legal context, all studies mentioned above found that legal frameworks for EIA have been established in almost all countries, except for some countries in the MENA which were in the process of drafting EIA regulations (El-Fadl & El-Fadel, 2004). Many of these countries operate their EIA systems via two legislative provisions: a framework enabling law, and more detailed and specific EIA legislation or regulations. The studies found that most EIA legislation and regulations are not comprehensive when compared to internationally accepted EIA standards (Ahmad & Wood, 2002; El-Fadl & El-Fadel, 2004; Naser, 2012). For example, the EIA legislation and regulations in some countries excludes a provision for appealing against decisions made by the responsible authority (Ahmad & Wood, 2002). In some countries, public participation is not legally required in a number of key EIA stages (El-Fadl & El-Fadel, 2004; Naser, 2012). Although the EIA legislation and regulations were sound overall (including comprehensive guidelines for EIA), some countries lacked a mechanism for enforcement so the legislation and regulations were not implemented in a comprehensive or consistent way (Ahmad & Wood, 2002; El-Fadl & El-Fadel, 2004; Nadeem & Hameed, 2008; Panigrahi & Amirapu, 2012; Betey & Godfred, 2013). In Pakistan and India, for instance, the EIA legislation was generally good (including with comprehensive technical guidelines for supporting

the implementation of EIA), but enforcement was extremely weak (Nadeem & Hameed, 2008; Panigrahi & Amirapu, 2012).

Similar to the legal context, institutional arrangements for operating an EIA system have been established in all the countries mentioned above, but there are issues with the arrangements for implementing legislation and regulations. One of the most common problems is weak coordination among the relevant agencies (Ahmad & Wood, 2002; El-Fadl & El-Fadel, 2004; Nadeem & Hameed, 2008; Marara et al., 2011; Panigrahi & Amirapu, 2012). For example, the evaluation of the EIA systems in 21 countries in the MENA found that the level of coordination between the EIA authority and other agencies such as the planning and pollution control bodies remains generally weak (El-Fadl & El-Fadel, 2004). Ahmad and Wood (2002) assessed the EIA systems of Egypt, Turkey and Tunisia and found that inter-agency coordination, especially between the environmental agency and the relevant sectoral agencies, required strengthening in order to improve EIA effectiveness. Another common problem is that the EIA authority has a low level of autonomy (Marara et al., 2011; Betey & Godfred, 2013). The EIA authority is usually placed under the arms of the Ministry of Environment rather than being an independent authority (Marara et al., 2011). This institutional arrangement has limited the ability of EIA authorities to act independently.

In the area of specific procedural elements, the main shortcomings are in relation to screening and/or scoping processes; public participation; and impact monitoring. Many developing countries do not have an adequate and appropriate screening and/or scoping process (Ahmad & Wood, 2002; El-Fadl & El-Fadel, 2004; Nadeem & Hameed, 2008; Toro et al., 2010; Panigrahi & Amirapu, 2012). Screening is generally based on a list of

development projects that are subject to EIA based on the scale or size of the project (Ahmad & Wood, 2002; El-Fadl & El-Fadel, 2004; Nadeem & Hameed, 2008; Toro et al., 2010; Panigrahi & Amirapu, 2012). This type of screening provides very limited information on potentially significant impacts that may be caused by a development project. The screening process of the Indian EIA system, for example, does not define the level of impacts, type of pollutants or the types of technologies (Panigrahi & Amirapu, 2012). In this system, a development proposal with significant impacts could be excluded from an EIA because it is not on the list. This is particularly an issue in Pakistan where some oil and gas extraction development projects only undergo a low-level Initial Environmental Examination (IEE) whereas their impacts would have been more appropriately and comprehensively assessed through a full EIA (Nadeem & Hameed, 2008).

One consistent problem of scoping in EIA systems is that public participation is often excluded from the process (Ahmad & Wood, 2002; El-Fadl & El-Fadel, 2004; Nadeem & Hameed, 2008; Toro et al., 2010; Panigrahi & Amirapu, 2012). A common practice in many developing countries is that the project developers or consultants prepare the Terms of Reference (ToR) for the EIA of a specific development proposal. The ToR is then reviewed and approved by the responsible environmental authority. Without public participation, However, public concerns over adverse environmental and social impacts of a development proposal are not necessarily reflected in the EIA reports (Nadeem & Hameed, 2008). This can result in the loss of valuable information for decision-making, especially information related to environmental and social management. Another concern the researchers raise in relation to this scoping approach is that it largely relies on the competence, expertise and skills of the staff of the EIA authority (El-Fadl & El-Fadel,

2004). It places a great burden on the EIA authority to review the ToR, and can absolve developers of their responsibility to identify all the potentially significant impacts of their development proposals (Ahmad & Wood, 2002; see also Chapter 7).

In terms of public participation, overall it is obvious that the EIA systems in developing countries have been practised with low levels of public participation. Most studies on EIA effectiveness in developing countries have raised the issue of limited and ineffective public participation in EIA procedures (Ahmad & Wood, 2002; Nadeem & Hameed, 2008; Toro et al., 2010; Marara et al., 2011; Naser, 2012; Panigrahi & Amirapu, 2012). Many studies found that public participation only occurs at the stage of reviewing EIA reports, and even then it is extremely ineffective (Panigrahi & Amirapu, 2012). In Rwanda, for instance, Marara et al., (2011) found that more than 85 percent of correspondents said that the quality of public participation in the EIA system was either low or very low. In Pakistan, public consultation with affected local communities is mainly a process to collect socio-economic baseline data (Nadeem & Hameed, 2008). Moreover, the EIA systems in some developing countries do not even need public involvement at all. Naser (2012) examined the EIA system of Bahrain and found that there was no legal requirement for public participation in the EIA procedures. A similar problem was also noted by El-Fadl and El-Fadel (2004) who found that 13 out of 21 countries did not require public participation in their EIA systems.

The third procedural element which studies consistently identify as having shortcomings is impact monitoring. This element is criticized by almost all studies on EIA effectiveness in developing countries (Ahmad & Wood, 2002; El-Fadl and El-Fadel, 2004; Nadeem & Hameed, 2008; Toro et al., 2010; Marara et al., 2011; Naser, 2012; Panigrahi & Amirapu, 2012; Betey & Godfred, 2013). Various problems with impact monitoring are identified

in the literature. Some EIA systems only require monitoring in response to local community complaints or when major disasters occur in the project sites (Nadeem & Hameed, 2008; Betey & Godfred, 2013). Some EIA systems use a form of self-monitoring, particularly in relation to Environmental Management Plans (EMPs) which may form part of the conditions for EIA approval. However, studies found that project developers rarely undertake the self-monitoring that is required (e.g. Nadeem & Hameed, 2008). Some EIA systems only require monitoring of certain features and certain types of developments. For example, in Bahrain, monitoring only looks at air emissions and wastewater effluents of major industrial projects (Naser, 2012). These weaknesses in impact monitoring suggest that in some countries EIA is designed to be used only as an approval tool rather than an environmental management instrument that has an important and ongoing role beyond the approval stage.

As would be expected, the main findings related to the contextual setting differ from country to country. Yet, there are some major themes that emerge that have contributed to the weak performance of EIA in developing countries, namely insufficient EIA staffing numbers and expertise, a shortage of funding and the lack of political. Many studies raise the issue of staffing (Ahmad & Wood, 2002; El-Fadl & El-Fadel, 2004; Marara et al., 2011; Nadeem & Hameed, 2008; Toro et al., 2010; Panigrahi & Amirapu, 2012).[2] In Pakistan, for example, the EIA authorities at provincial and district levels face a severe shortage of staff with only one or two environmental inspectors are employed at a district level (Nadeem & Hameed, 2008). This is particularly problematic in the countries that are relatively new to EIA. In Rwanda, for instance, the country is new to the EIA system

[2] Depending on how the criteria are organized, some studies consider staffing in their discussions of institutional arrangements (e.g. Toro et al., 2010).

when compared with Kenya and Tanzania; therefore, qualified local expertise in conducting EIA is extremely limited (Marara et al., 2011).

A shortage of funding has created a substantial barrier to effectively operate the EIA systems in most developing countries (Nadeem & Hameed, 2008; Marara et al., 2011; Betey & Godfred, 2013). For example, in the MENA, El-Fadl and El-Fadel (2004) found that a lack of funding is a major limitation to effectively implementing. In Kenya, Tanzania and Rwanda, Marara et al. (2011) found that a lack of funding has hampered the capacity of EIA authorities to carry out impact monitoring and inspection of on-going development projects.

Finally, the lack of political will is another significant barrier that has affected effective performance of the EIA systems in many developing countries (Nadeem & Hameed, 2008; Marara et al., 2011; Panigrahi & Amirapu, 2012). This is due to the fact that political factors have been the driving forces behind the introduction and practice of the EIA systems (Thomas, 2001). Some studies have revealed that there is a connection between political conditions and EIA performance; the EIA systems seem to perform poorly when political support is low such as in Kenya and Tanzania (Marara et al., 2011). In contrast, the EIA systems seem to work quite effectively in the countries where political support is considerably high such as in India (Panigrahi & Amirapu, 2012).

In order to develop appropriate criteria for operationalizing the overall framework for evaluating EIA effectiveness in Laos, this thesis takes into account two bodies of work. First, there is the body of work that builds on Ahmad and Wood's framework and criteria to examine EIA effectiveness in developing countries across the globe (as discussed in

this section). Second, there is the body of work that specifically addresses EIA effectiveness in countries in the LMB. This is the focus of the next section of the chapter.

2.6 EIA Effectiveness in the Lower Mekong Basin

The earliest study of EIA effectiveness in the Lower Mekong Basin (LMB) was by the World Bank and was published in 2006. The four countries in the LMB (Cambodia, Lao PDR, Thailand and Vietnam) were included as part of a larger 12-country study of East and Southeast Asia. This study was in response to what at the time the World Bank (2006:iii) identified as "unprecedented levels of economic growth, exposing the region to a wide range of development opportunities and challenges". A second study conducted by Li on behalf of USAID and Foundation for Environmental Security and Sustainability (FESS) was published in 2008 and it included a focus on five countries in the greater Mekong region, China, Laos, Cambodia, Thailand and Vietnam. This study was in response to concerns that projects in this region were being built but that the "environmental and socioeconomic impacts of many projects have not been assessed adequately despite the use of EIAs" (2008:1). Since that time, there has been a growing number of studies published in academic and grey literatures on EIA effectiveness in the LMB. Indeed, when the research proposal for this PhD was presented for confirmation in October 2014, there had only been one study published which specifically addressed EIA effectiveness in Laos, Wayakone and Makoto (2012). A series of studies have since been published, and these studies have been largely concerned with EIA effectiveness in the LMB in the context of hydropower development (Baird & Frankel, 2015; Campbell et al., 2015; Wells-Dang et al., 2016). It is not just in Laos but across the basin that a plethora of hydropower developments have been completed, or are being built or are being proposed (see Map 4.1 in Chapter 4 for a map of these developments in Laos alone).

Whilst the previous studies (as mentioned above) were mainly based on a desk-top review of relevant documents and focused on procedural elements of EIA, this study, however, examines the EIA system more comprehensively and explores broader insights regarding the EIA system's effectiveness and its roles in assisting sustainable hydropower projects through a criteria-based review and practical performance evaluation in Laos. The focus in this section is on how the previous studies have researched EIA effectiveness and the main findings from these studies. Overall, these studies have tended to focus on the procedural dimension. To do this, some studies have used variations of Wood's (and Ahmad and Wood's) criteria (in much the same way as the studies discussed above) while other studies have taken a different pathway to assess EIA effectiveness by focusing on the actual implementation of EIA systems.

The Procedural Dimension: criteria-based studies

In terms of the first set of studies, the most substantial is that by Wayakone and Makato (2012). The authors evaluated the EIA system in Laos by used seven criteria proposed by Leu et al. (1996) (which drew on Wood's 1995 work), and the original fourteen criteria proposed by Wood (see Tables 2.6 and 2.7). The researchers assessed these criteria by reviewing relevant documents related to EIA in Laos, including the EIA legislation, administrative procedures and guidelines. They also incorporated their own experiences of EIA in Laos and what the authors simply describe as "the professional views of stakeholders revealed during informal talks and unstructured discussions" (Wayakone & Makato, 2012:1662). In terms of Leu et al.,'s seven criteria, the researchers found that the EIA system reached a medium standard in two areas, a fair standard in three areas, but was deficient in two important areas, monitoring and enforcement compliance, and availability of resources (see Table 2.6). Based on Wood's fourteen criteria, they found

that the EIA system in Laos was generally poor with eleven out of fourteen criteria only partially meeting the minimum requirements of EIA good practice, and criteria being non-existent (see Table 2.7).

From these two assessments, the authors overall identified a number of major areas of weakness, and in the following discussion these have been grouped into the four elements of the framework for evaluating EIA introduced above (see Figure 2.1). In terms of the legal context, Wayakone and Makoto (2012) found that the Laotian EIA system lacks detailed procedures and legislation. In terms of the institutional arrangements, Wayakone and Makoto (2012) found that coordination among relevant ministries, between central and local authorities, and between consultants, planners and decision-makers is generally weak leading to construction beginning on some development projects before EIA clearance has been secured. In addition, they found that the department in charged with responsibility for EIA, the Ministry of Natural Resources and Environment or MoNRE, has limited institutional capacity as a result of insufficient qualified personnel and a lack of equipment and resources to carry out monitoring activities. In terms of procedural elements, Wayakone and Makoto (2012) found that the EIA reports were marred by inadequate scoping, weak assessment of impacts and a lack of consideration of diverse views. Public participation was limited, particularly because local and international NGOs were excluded from the process. Monitoring programs were also inadequate and ineffective. Finally, in terms of the contextual setting, Wayakone and Makoto (2012) identify that there are the challenges of human resource constraints (as identified above) as well as the economic and political pressure for development.

Table 2.6 Evaluation of EIA in Laos based on Leu et al.'s criteria

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Source: Wayakone and Makoto, 2012:1661

Table 2.7 Evaluation of EIA in Laos based on Wood's Criteria

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Note: Level of effectiveness: [+] fully/always; [*] partially/sometimes; [-] not/non-existent
Source: Wayakone and Makoto, 2012:1662

A second study in the LMB that incorporates Wood's criteria is the study by Clausen et al. (2011) that evaluates EIA effectiveness in Vietnam. These authors developed a list of nine criteria by drawing on several studies that adapt Wood's (1995) and Ahmad and Wood's (2002) criteria, as well as their own experiences of EIA in Vietnam (see Table 2.8). Among these evaluation criteria, the authors were interested in exploring whether a major revision of the Law on Environmental Protection (LEP) 1993 which took place in 2005 has made the Vietnamese EIA system more effective. The study found that the

adoption of the LEP 2005 has brought the Vietnamese EIA legislation into line with international best-practice requirements. However, despite a sound legal context, weaknesses and limitations still exist.

Table 2.8 Evaluation criteria used by Clausen et al.

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Source: Clausen et al, 2011:139

The first main issue is associated with the contextual setting. Like many developing countries, Vietnam faces the problem of insufficient human resources and a lack of political will (Clausen et al., 2011). The study suggested that strengthening the skills of EIA professionals and increasing the available resources for preparing, assessing and enforcing EIA would have significant benefits and bolster the effectiveness of the EIA legal context and institutional arrangements. The authors also found that Vietnam was lacking the strong political commitments needed as a foundation for a strong EIA system and for effective practices. Given that the contextual setting is considered as a major limitation to the EIA effectiveness in Vietnam, the authors concluded that the main deficiencies of the Vietnamese EIA system are not so much about the legal context and

even the institutional arrangements, but the capacity available for effective implementation.

A second, though less significant, issue relates to the procedural elements, and here the authors identified three concerns. First, although the scoping stage is now quite comprehensive and in keeping with expectations of EIA reports, there are no guidelines to assist in the EIA scoping and preparation process. Second, public consultation is now included in the LEP 2005 and is a legal requirement for the EIA system in Vietnam. Yet, there is no requirement for open public involvement and no specific guideline on how to carry out effective public consultation. Third, implementation of mitigation measures and monitoring of impacts are legally required by law, but they are limited to the construction phase and prior to the commencement of project operation; there is no requirement for ongoing monitoring.

Wood's criteria have also been used as the basis for a recent study in nearby Myanmar (a country that is adjacent to Laos and the LMB). This study was conducted by Aung (2017) who evaluated the current status of the EIA system in Myanmar based on the newly published 2016 EIA legislation, with a focus on the developing oil and gas industries. The author applied a set of criteria that was formulated by Annandale (2001) who in turn had slightly modified Wood's criteria by grouping the fourteen criteria into seven categories, namely legal/administrative backing, preliminary assessment, detailed assessment, EIA study review, decision-making, follow-up and administrative support (Annandale, 2001). The study largely relied on a review of documents relevant to the EIA system in Myanmar and the oil and gas industries, supplemented with some semi-structured interviews (Aung, 2017).

The study found that Myanmar had already introduced EIA legislation as other countries in the region had, but it had yet to prove its effectiveness. Despite the newly established of the EIA system, however, Aung found that there were several major weaknesses (see Table 2.9). Similar to Wayakone and Makoto's (2012) and Clausen et al.'s (2011) findings, Aung (2017) found that there were issues with the contextual setting, and that insufficient financial capital, limited human resources and lack of political will were creating major challenges for operations of the EIA system (even though the legislation had only recently been introduced). At the present time, the Government of Myanmar is making an effort to revise its environmental protection laws and relevant policies, and this may improve the contextual setting overall. Aung's study also recommended that capacity building for EIA professionals was urgently needed and it should be ranked as a top priority on the government's agenda. In terms of the institutional arrangements, Aung (2017) found there was also a need for a more effective means of coordinating and collaborating between relevant ministries and departments.

In terms of the procedural elements, there were also several limitations. EIA screening was based on limited information, mainly the type and size of the proposed project, to determine if the proposal should be subject to EIA (Aung, 2017). There was also no specific process or guideline for scoping of the EIA report and public participation was not required in the scoping stage. Public participation was only required at the stage of reviewing EIA reports but its effectiveness (at that stage) was questionable. Guidelines for public participation and information disclosure are yet to be introduced in Myanmar (Aung, 2017). In the past, Myanmar's laws did not even require public participation in the EIA process of large-scale development projects, and when consultation took place,

only a few members of affected communities were invited to participate in meetings. This remains a contested area.

Table 2.9 Key weaknesses of the EIA system in Myanmar

Copyright material removed

Source: Aung, 2017:29

The Procedural Dimension: practice-based studies

As discussed above, the first set of studies evaluating the procedural dimension of EIA effectiveness in the LMB use variations of Wood's criteria. These studies address the criteria by reviewing documents related to EIA legislation, policies and procedures, and they supplement these desk-top reviews with personal experience of conducting EIA or with informal interviews and discussions with stakeholders. The second set of studies also focus on the procedural dimension of EIA effectiveness but rather than evaluating this

dimension through a series of criteria they are more interested in how this dimension is practised 'on the ground'. These studies therefore, tend to rely principally on interviews with a wide range of stakeholders supplemented with reviews of the relevant documents. An example of this type of study is the work of Campbell et al. (2015). As these authors explain, they were interested in the "actual application of EIA in Laos" (Campbell et al., 2015:97), and particularly in how EIA implementation was "shaped and reshaped by various stakeholders" (Campbell et al., 2015:102). To do this they used a grounded theory approach to analyse interviews conducted with 38 government officials, 15 representatives from civil society groups, 14 staff from the key hydropower companies in Laos, and 11 staff from donor agencies (including the World Bank, Asian Development Bank and AusAID).[3] Campbell et al. (2015) identified three major themes that emerged from the interviews, with the first two themes related to the contextual setting and the third related to a procedural element. First, they identified that a major impediment was the lack of EIA capacity within the government. There were both too few staff and too few staff with sufficient technical knowledge (especially at the provincial and district levels). As a result, the EIA materials prepared by private developers and consultants were not able to be sufficiently scrutinized. Underpinning this theme was a second and deeper problem, namely "the political importance of hydropower development in the country" (Campbell et al., 2015:105). This has meant that EIA is treated by some areas of government "merely as a procedural requirement for project approval" (Campbell et al., 2015:106). As a result, negative effects tend to be downplayed; and the effectiveness of mitigation measures, overestimated. Third, Campbell et al. (2015:107) found that public involvement is "severely lacking" and when it does occur it is in the form of

[3] This study was part of a much larger body of work that examined hydropower decision-making structures and processes in the Lower Mekong Basin.

information dissemination rather than part of an attempt to listen and respond to public concerns.

Another example of this second type of study is the work of Wells-Dang et al. (2016) who used a political economy analysis (PEA) to examine EIA practices in five countries in the Mekong region (Cambodia, Lao PDR, Myanmar, Thailand, Vietnam). The research team interviewed 127 people from these five countries, of which 73 were government officials and 54 were NGO staff, academic experts, retired officials, representatives from international organizations and business representatives (Wells-Dang et al., 2016:34). Consistent with their political economy approach they focused on two main aspects of EIA practice: the role and influence of the various actors involved in implementing EIA; and the institutional processes involved, by which they mean the implicit norms and 'rules of the game' that set the context in which EIA is carried out.

With regard to the role and influence of the various actors, Wells-Dang et al. (2016:37) found that the environment ministries which are responsible for EIA in these countries are "universally the weakest relevant government agency in terms of power and influence". They reported that in Laos department staff were essentially directed by government officials to focus on the most basic aspects of the EIA reports (such as the grammar and format). As a result, no EIA report had ever been rejected in Laos, and the most that staff could hope to achieve was the mitigation of the some of the impacts of project development—a situation not helped by the lack of staff and expertise. Wells-Dang et al., also found that the role and influence of civil society (including the general public) in these Mekong region countries was limited because of the poor quality of public participation. Public participation took the form of information dissemination and the

information that was shared was considered to be incomplete and biased, as it was the developers and their consultants who provided the information. The role and influence of EIA consultants was a third area of concern identified by Wells-Dang et al. (2016). They found that consulting firms were generally selected by developers because of their capacity to quickly secure EIA approval. This could mean that the consulting firm was close to the project developer (and would therefore downplay negative impacts and overstate the effectiveness of mitigation efforts) or that the consulting firm would contract with government staff who are responsible for approving EIA to work on the EIA report. In either case, Wells-Dang et al. (2016:46) report that is "a clear conflict of interest" associated with the role and influence of consulting firms. In terms of the EIA institutional processes, Wells-Dang et al. (2016:52) found that the day-to-day practice of EIA was underpinned by a strong development agenda, and particularly a development agenda for large-scale hydropower and mine development. Uniformly, this "predetermined development agenda" was prioritized over environmental and social concerns.

There is a strong similarity between the findings of Campbell et al. (2015) and Wells-Dang et al. (2016). Both studies find that there are issues with the contextual setting; the pro-development agenda of governments means that EIA does not have strong political backing, as well there is a lack of staff with appropriate knowledge and expertise to effectively implement EIA systems. Public participation is also a shared area of concern.

The Procedural Dimension: other studies

Along with the two sets of studies discussed above (criteria-based studies and practice-based studies), there is a third set of studies of EIA in the LMB. These studies are presented in the form of reports and are either undertaken by government agencies or with

government agency funding (e.g. World Bank, 2006; Li, 2008; Baird & Frankel, 2015; Sano, et al., 2016). These studies tend to provide descriptions of the EIA systems and procedures in the various countries in the basin and make comparisons between the countries (and sometimes with what is recognized internationally as 'best-practice'). They do this by reviewing relevant EIA documents from the various countries; although, the report by Sano et al. (2016:3) draws on information provided by what are described as "experts and/or government officials in charge of EIA" as well as information provided at workshops and conferences. This set of studies differs from those already discussed as they do not explicitly explain the basis on which claims about EIA effectiveness are made. For this PhD research, these studies provided useful background information; and while they are not discussed in detail, where relevant their findings are noted.

2.7 Discussion and Conclusion

The research in this thesis is unique in that it combines the distinguishing features of the criteria-based *and* practice-based studies of EIA effectiveness that have been undertaken in the LMB. First, it uses a criteria-based approach, an approach that characterizes many studies that focus on the overall procedural dimension of EIA effectiveness (as identified by Loomis & Dziedzic, 2018). But where these studies in the LMB and elsewhere have tended to rely on desktop reviews of various documents related to EIA legislation, procedures, guidelines and the like (sometimes supplemented by personal experience of EIA or informal discussions), this research complements a desktop review of the most recent EIA policy documents in Laos with comprehensive fieldwork consisting of interviews with 52 EIA stakeholders and observations of six public participation events and four field trips associated with impact monitoring programs (this fieldwork will be discussed more in the next chapter). This approach means that this study is aligned with

the practice-based studies that also use comprehensive fieldwork. The intention in this thesis is to use the combination of document review and comprehensive fieldwork in order to explore deeper and broader understanding of EIA effectiveness in Laos, with a focus on the overall procedural dimension. As discussed earlier in this chapter, although the thesis is ultimately concerned with the substantive outcomes of EIA, other studies have found that not only is this difficult to research explicitly but that it may be the subtle and longer-term embedding of EIA into a country's 'psyche' that leads to more sustainable outcomes. However, this process of embedding relies on the strong procedural basis for the EIA system which provides the relevance for this PhD research.

To evaluate each of the components of the Laotian EIA system as presented in Figure 2.1, a series of criteria are needed as a guide to determine how well each component performs. The criteria applied in this study are based on the evaluation criteria proposed by Ahmad and Wood (2002) (see Table 2.1). However, some criteria are adapted to suit the context of Laos and the objectives of this study (see Table 2.10). As discussed in Section 2.4 above, other studies of EIA effectiveness have also adapted Ahmad and Wood's criteria to suit the context and their study objectives. Overall, the criteria that are proposed for this study are very similar to Ahmad and Wood's criteria. In the evaluation of the legal context, this study includes evaluation of whether or not there is a legal provision for a penalty. As will be discussed in Section 5.3.3, the issue of law enforcement in Laos is an issue; thus it is important to specifically examine what legal requirements there are for penalties to ensure that 'the rule of the law' is followed. The study uses the same criteria as Ahmad and Wood for evaluating the institutional arrangements. In terms of the procedural elements, Ahmad and Wood (2002) identify two separate criteria for scoping; this study combines these into one criteria. Ahmad and Wood also include a criterion

related to the experience of Strategic Environmental Assessment (SEA); in this study, there is a criterion for SEA in the legal context and given that SEA has only just been introduced in Laos, this criterion was not included in the procedural elements. The biggest difference with Ahmad and Wood's criteria is that this PhD study does not include specific criteria for the contextual setting (or what Ahmad and Wood refer to as foundation measures). This is because this study uses a combined criteria and practice-based approach; based on the findings from other studies in the LMB that have used a practice-based approach, it is anticipated that rich information on the context will emerge from the interviews and field observations.

Table 2.10 The criteria for evaluating EIA effectiveness in Laos

Component	Evaluation criteria
Legal Context	1. Legal provisions for EIA 2. Legal provisions for appeal 3. Legal provision for penalty 4. Legal specification of time limits for each EIA stage 5. Legal provisions for SEA
Institutional Arrangements	1. Competent authority for EIA and determination of environmental acceptability 2. Review body for EIA 3. Specification of sectoral authorities' responsibilities in the EIA process 4. Coordination between EIA authority and relevant agencies
Procedural Elements	1. Screening approach 2. Scoping approach 3. Requirement to consider alternatives 4. Specification of EIA report contents 5. Systematic review of EIA documents 6. Systematic decision-making and approval 7. Requirement for Environmental Management and Monitoring Plan (EMMP) 8. Requirement for mitigation of impacts 9. Requirement for monitoring 10. Requirement for public participation

Before applying these criteria to examine the EIA system in Laos, this thesis discusses the methodological approach in more detail (Chapter 3), and also discusses the background for hydropower development and sustainability in Laos (Chapter 4).

CHAPTER THREE: RESEARCHING EIA EFFECTIVENESS IN LAOS

3.1 Introduction

This chapter contains information on how the research to examine EIA effectiveness in Laos was conducted. As discussed in the previous chapter, this thesis uses two approaches to appraise this, a criteria-based approach and a practice-based approach. To allow for a thorough examination of the EIA system in Laos based on these two approaches, the research employs a mix of three methods: a desk-top review of relevant EIA documents; interviews with key stakeholders; and field observations of impact monitoring of hydropower projects; public participation events and the process of reviewing EIA reports. This chapter discusses each of the methods used, including information on how the data were collected and analysed. The chapter also identifies the main challenges that the researcher experienced during the fieldwork interviews and field observations.

3.2 Research Approach

Within the social sciences, research generally uses either a quantitative or qualitative methodological approach.[4] The selection of the research approach depends on the nature of the research problem, the researcher's personal experiences and the audience (Creswell, 2014:3). A quantitative approach works well when the research questions require numerical data; a qualitative approach is commonly used to respond to the

[4] This is not to say that research cannot combine quantitative and qualitative approaches. Useful discussions of combining quantitative and qualitative methodological approaches are given by Wright (2014), and McGuirk and O'Neill (2016).

research questions requiring textual information and a combined approach can be adopted for research questions requiring both numerical and textual data.

Given this study's focus on the effectiveness of the EIA system in Laos, including its practical operation, a qualitative approach is most appropriate. As Creswell (2014:4) states, qualitative research involves inquiry and exploration in order to understand a social or human problem. Lee et al. (1999:164) claim that a qualitative research approach is "well suited for the purposes of description, interpretation and explanation" of a phenomenon. Certainly, several authors, including Burns and Grove (2003), Delyser et al. (2010), Holloway and Wheeler (2010), Ritchie et al. (2013) and Creswell (2014) have endorsed this claim. Burns and Grove (2003:19) for example, stated that qualitative research is a subjective approach which is used to describe life experiences and situations in order to give them meanings. Holloway and Wheeler (2010:3) likewise describe qualitative research as "a form of social enquiry that focuses on the way people interpret and make sense of their experiences and the world in which they live". Ritchie et al. (2013:4) have said that qualitative research provides an in-depth and interpreted understanding of the social world of research participants by learning about the sense they make of their social and material circumstances, their experience, perspectives and histories.

Qualitative research therefore, is associated with methods for exploring, in an open-ended way, the phenomenon that is being studied. Patton (2001) and Ritchie et al. (2013:3) argue that qualitative methods are able to answer questions about the 'what', 'how' and 'why' of a phenomenon rather than questions about 'how many' or 'how much' which are

favoured by quantitative methods. Further, Denzin and Lincoln (2011:3) describe qualitative research methods as:

> a set of interpretive, material practices that make the world visible. These practices transform the world. They turn the world into a series of representations, including field notes, interviews, conversations, photographs, recordings and memos to self.

In this thesis, the qualitative methods used to collect data about the phenomenon of EIA in Laos are document analysis, interviews and field observations. Each of these methods is discussed below, followed by a discussion of how the data generated through these methods was analysed.

3.3 Data Collection

3.3.1 Documents

Documents are an important source of data that can provide insights into social phenomenon. Within the social sciences, documents cover a range of materials including various kinds of official records (such as legislation, policies and reports) and everyday documents (including notes, memoranda, diaries and letters) (Marotzki et al., 2014). This research collected a variety of documents related to the EIA system in Laos, chiefly official records in the form of legislative documents, policies and reports. Where relevant, news items from local newspapers and television programs were also collected. As well as being analysed for information on the design and operation of the EIA system in Laos, these documents provided important background and contextual information that could be drawn on in interviews. The documents were sourced from the library of the Laotian National University, the library of the Laotian National Parliament as well as various websites. In addition, the researcher visited the relevant ministries (the Ministry of Natural Resources and Environment, the Ministry of Energy and Mines, and the Ministry

of Planning and Investment) and asked for copies of documents that were not readily available through public sources. Table 3.1 lists the documents that were collected and analysed, and organizes the documents into the three components of the framework that is being used in this thesis to investigate EIA effectiveness in Laos (the legal context, institutional arrangements and procedural elements).

Table 3.1 Main documents

Component from Research Framework	**Main documents collected and analyzed**
Legal Context	- Law on Environmental Protection. - Law on Investment Promotion. - Law on Electricity. - National Socio-Economic Development Plan 2006-2010 and 2011-2015. - Strategic Framework for National Sustainable Development Strategy for Lao PDR. - Strategy for Natural Resources Management - Policy for Sustainable Hydropower Development
Institutional Arrangements	- Decree on Mandates of the Ministry of Natural Resources and Environment. - Decision on Mandates of the Department of Environmental and Social Impact Assessment. - Decision on Mandates of the Department of Land Management. - Decision on Mandates of the Department of Water Resources - Decision on Mandates of the Department of Forest Resources - Decree on Mandates of the Ministry of Planning and Investment. - Decision on Mandates of the Department of Planning. - Decision on Mandates of the Department of Investment Promotion. - Decree on Mandates of the Ministry of Energy and Mines. - Decision on Mandates of the Department of Energy Planning and Policy. - Decision on Mandates of the Department of Energy Business. - Decision on Mandates of the Department of Energy Management
Procedural Elements	- Instruction for Environmental and Social Impact Assessment in Lao PDR. - Decision on Checklist of Development Projects and Activities Requiring IEE and ESIA. - Guideline for Environmental Impact Assessment (EIA). - Guideline and Checklist for Reviewing Environmental and Social Impact Assessment Reports. - Guideline for Environmental Monitoring of Development Projects. - Guideline for Public Involvement in the EIA Process.

Note: These documents are available only in Laotian.

3.3.2 Interviews

Interviews are widely used in qualitative studies. Boeije (2010:62) argues that interviews enable researchers "to learn about social life through the perspective, experience and language of those living it". They assist in gaining a deeper understanding of social phenomena than would be obtained from questionnaires (Gill et al., 2008). In addition, Mason (2018:110) claims that the role of interviewing is to ensure that "relevant contexts are brought into focus so that situated knowledge can be produced". Therefore, interviews are most appropriate when little information is already known about the study phenomenon or when detailed insights are required from participants (Gill et al., 2008:292).

There are different kinds of interviews in qualitative research ranging from those that are highly structured with the same questions being asked of interviewees in the same order to those that are unstructured and in which an interviewee largely shapes the direction of the interview. This thesis used a semi-structured interview method in which there were similar questions for all interviewees but questions were added or modified if appropriate (chiefly to explore some topics in more detail in response to information provided by interviewees, or to clarify interviewees' responses to more fully understand what they were saying). Sometimes this involved using a 'reflecting back' technique that permits the "interviewees not only to elaborate, but also to correct and/or modify their account" (May, 2011:146). According to Britten (1999), this type of approach allows the interviewer or interviewee to diverge from the list of questions in order to pursue an idea or respond in more detail. This interview method also provides flexibility and active engagement between the interviewer and interviewees. One of the advantages of this semi-structured interview approach is that it allows the researcher to "explore

incompletely articulated aspects of experience, encouraging respondents to develop topics in ways relevant to their own experience" (Gubrium & Holstein, 2001:89).

This research interviewed key informants from seven different categories: government sectors; EIA consulting firms; hydropower companies; international development agencies; non-government organizations; universities/institutes and local parliamentarians (see Table 3.2). Interviewees were selected based on their knowledge and experiences in the areas of EIA, natural resource management and environmental protection, and hydropower development and operation. The interviews with the key informants were mainly carried out in Vientiane Capital where the governmental institutions and offices of international development partners were located and also most policy makers are primarily based in the capital city. Some interviews were also conducted at the district (e.g. Feung district and Borlikhan district) and provincial levels (e.g. Vientiane province and Bolikhamxay province) (see Map 3.1 and Table 3.2). The interviews included these districts and provinces because a number of hydropower dams were built and are being built there and they are situated near Vientiane Capital which saved time and reduced the costs of travelling associated with carrying out the interviews with key informants located there.

The interviews with key informants were conducted over two different periods: from January to May 2015 and from January to May 2016. These interview programs were arranged and carried out over two specific periods to fit in with the researcher's scheduled return home family visits which is part of the scholarship policy and protocol. These interviewees were able to offer insights into the Laotian EIA system and how it operates

in the hydropower sector. These insights complement the analysis of the documents and are important, therefore, in understanding how EIA is actually practised in Laos.

Table 3.2 Details of interviewees

No.	Stakeholder category	Number	ID Code
1	Government Sectors:		
	Central (Ministerial) level	16	GC
	Provincial level	6	GP
	District level	5	GD
2	EIA Consulting Firms:		
	Local EIA consulting firm	6	EL
	International EIA Consulting Firm	2	EI
3	Hydropower Companies	3	H
4	International Development Agencies	7	I
5	Non-Government Organizations	2	N
6	Universities/Institutes	2	U
7	Local Parliamentarians	2	L
Total participants		**52**	

Note: the identity (ID) code is used for each individual interview. For example, if an interviewee marks as a number 44 and if he or she is from a hydropower company, the interviewee is labelled by (H-44).

The process of recruiting interviewees followed the steps approved by the University of Newcastle's Human Research Ethics Committee (HREC).[5] The researcher first approached targeted entities from the categories in Table 3.2 (e.g. government departments, EIA consulting firms) to seek permission to invite staff to be interviewed. Email is not widely used in professional practice in Laos, therefore a package of ethics materials was mainly submitted in-person to the entity or their proxy (e.g. the company receptionist). The exception was for International Development Agencies (IDAs) and Non-Government Organizations (NGOs) who do use email. The researcher then contacted the entities by telephone (or email) to follow-up the ethics materials provided. When permission was given by a responsible officer, the researcher invited individual

[5] The HREC approval number was H-2014-0332. Appendix 3 contains a copy of relevant sections of the ethics materials that were provided to the various entities and to interviewees.

staff to participate in the interviews. Again, this was generally by telephone.[6] Where email was available (i.e. in the IDA and NGO sectors), this was used to contact potential participants. On the whole, all entities who were contacted, gave permission for their staff to be interviewed. However, in the NGO sector several NGOs either responded that they were not interested in the research project, or they did not reply at all to the initial and follow-up emails. As a result, only two interviews were conducted with staff from NGOs. Interviews with several individual government participants were also cancelled because they would not consent for the interview to be audio-recorded. As they were time poor and the researcher was interviewing a lot of government stakeholders, it was believed that the information gained from other participants in similar positions was sufficient.

The interviews started with several general questions relating to socio-economic development, natural resource management and environmental protection in Laos. Then the questions moved on to address specific issues concerning the implication of hydropower projects, the principles of sustainable development, the EIA legal frameworks and procedures, and their practical implementation (the indicative questions are provided in the ethics materials in Appendix 3).

Most interviews lasted for approximately 60 minutes, though some interviews with participants from the district level were less than 40 minutes. Conversely, some interviews with participants from the central level of government went for approximately 90 minutes. Interviewees at the district level tended to have less experience and

[6] It is interesting to note that the HREC did not wish the researcher to use his own mobile phone as a means for communicating with participants, instructing him instead to use telephones in the Ministry of Natural Resources and Environment (MoNRE), where he was located during some of the initial fieldwork (see Section 3.3.3). Ironically, in Laos telephones are still in short supply and at MoNRE, there is only one central telephone for nearly 700 staff!

knowledge of EIA whereas those at the central level of government, tended to have more experience and knowledge. The duration of the interviews was also dependent on the interviewee's available time, willingness to talk and their personal interest in the project. All interviews were digitally recorded and then transcribed verbatim by the researcher with their names replaced by 'ID Codes'[7] (see Table 3.2). Four interviews were conducted in English, so did not need translation. Forty-eight interviews were conducted in Laotian and they were initially transcribed in Laotian and then relevant parts were translated into English by the researcher.

3.3.3. Field Observations

Observation undertaken 'in the field' is another research method for collecting data in qualitative studies. One advantage of gathering data through field observations is that it allows the researcher to directly observe nuances of human behaviour as they occur in a natural (rather than laboratory) setting (Marvasti, 2004). It is generally assumed that 'the observer' enters the field with an open mind to see what life is like but as Katz (1993:66) states, 'the field' can sometimes be that "blurry space of everyday life", as well a place where work is done "to deploy and confront power" (1993:69). In Laos, this is very much the case when observing who has power in the EIA system and how this is manifested.

Kearns (2010) notes that there are various roles that observers can play ranging from being a passive observer to being a proactive participant observer. Kearns describes these more specifically as complete observer, observer-as-participant, participant-as-observer or complete participant. In this project, the researcher was generally in the role of

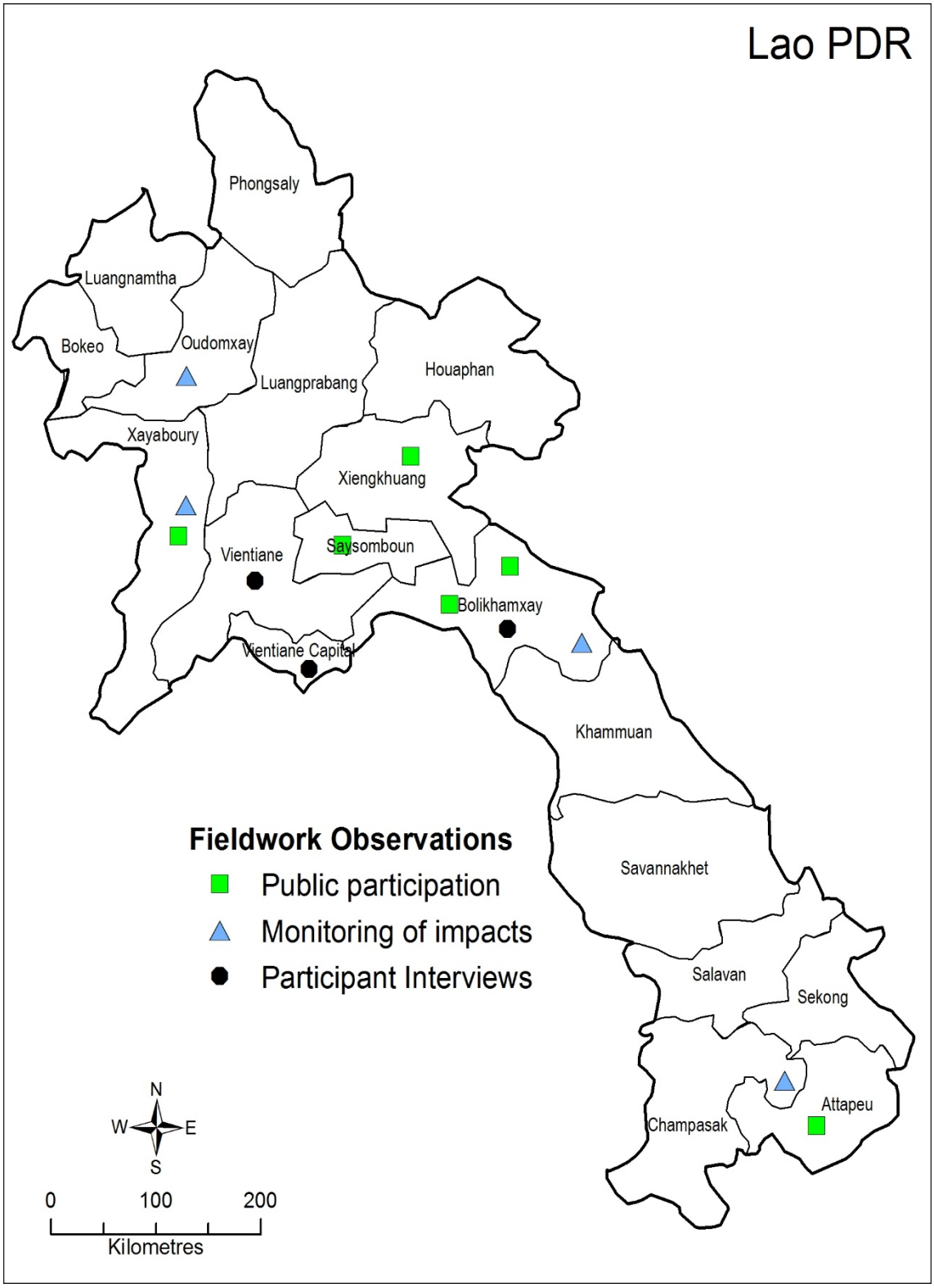
[7] 'ID Code' refers to an identity code given to label each individual so that the interviewee's real name is protected to remain anonymous.

observer-as-participant. Although, field observations could be undertaken throughout the entire EIA process from screening and scoping and to the impact monitoring stage, this would be time consuming. Thus, given the time and funding constraints of this PhD research, the researcher only observed two important stages of the EIA process: the monitoring of the impacts of hydropower projects and the process of public participation. These two stages were selected because they have been identified as areas of weakness in other studies of EIA. As discussed in Chapter 2 (Section 2.5), studies of EIA effectiveness in developing countries consistently identify issues with monitoring and public participation as (see Ahmad & Wood, 2002; El-Fadl and El-Fadel, 2004; Nadeem & Hameed, 2008; Toro et al., 2010; Marara et al., 2011; Naser, 2012; Panigrahi & Amirapu, 2012; Betey & Godfred, 2013). Similarly (and as discussed in Section 2.6), studies in the LMB identify issues with monitoring and public participation (e.g. Clausen et al., 2011; Wayakone & Makoto, 2012; Campbell et al., 2015; Wells-Dang et al., 2016).

As well, the researcher had the opportunity to be located in the offices of the Department of Environmental and Social Impact Assessment (DESIA) and could unobtrusively and coincidentally observe the practice of reviewing reports. As this opportunity was not apparent when the ethics application was submitted, formal ethics approval was not given for this. Therefore, only the most general observations are drawn on in Chapter 7 (Section 7.4.1) in relation to the reviewing of reports.

To conduct the field observations of monitoring and public participation, the researcher had to seek permission from the Department of Environmental and Social Impact Assessment (DESIA) which is located in the umbrella Ministry of Natural Resources and Environment (MoNRE). The researcher was allowed to share office spaces with the staff

at DESIA and to travel with staff when they conducted public participation events and monitored the impacts of hydropower developments. The locations for the field observations are shown on Map 3.1 and are detailed further in Table 3.3. During the field observations, the researcher paid attention to what was happening and to what people were saying (including DESIA staff and others such as local villagers, and staff from hydropower companies and construction firms). The researcher took notes during the public participation workshops and during impact monitoring (so long as the note-taking was unobtrusive). Field notes were also written-up in private at the end of the day's events.



Map 3.1 Location of field observations and interviews

Source: Drawn by Olivier Rey-Lescure, Cartographer, Faculty of Science, University of Newcastle.

Table 3.3 List of field observations

Date	Name of event/project	Location
Public Participation		
January 2015	A Consultation Workshop on improving an early Draft of the Decree on Compensation and Resettlement of People Affected by Development Projects	Keoudom District and Vientiane Province.
February 2015	A National Consultation Workshop on the ESIA of the Nambark Hydropower Development Project.	Anouvong District and Xaysomboun Province
March 2015	A Technical Consultation Workshop on the ESIA of the Xesu Hydropower Development Project.	Phouvong District, Attapeu Province.
December 2015	A Public Disclosure Meeting on the ESIA of Transmission Lines associated with the Nam Thuen Hinboun Hydropower Development Project.	Paksan District and Bolikhamxay Province.
March 2016	A Public Disclosure Meeting on the ESIA of a Copper Mining Project.	Borlikhan District and Bolikhamxay Province.
April 2016	Public Consultation Meeting	Champasack Province
Monitoring		
February 2015	Monitoring of Environmental and Social Impacts of the Nam Thuen Hinboun Hydropower Development Project.	Khounkham District and Khammuan Province
April 2015	Monitoring of Environmental and Social Impacts of the Pakbang Hydropower Development Project.	Pakbang District and Udomxay Province.
March 2016	Monitoring of Environmental and Social Impacts of the Xayaboury Hydropower Development Project.	Xayaboury District and Xayaboury Province
April 2016	Monitoring of Environmental and Social Impacts of the Xepein-Xenamnoy Hydropower Development Project.	Parksong District and Champasack Province

3.4 Data Analysis

According to Punch (2013:169), the process of data analysis involves “transforming, interpreting and making sense” of the qualitative data collected. Researchers have described how this involves reducing the volume of collected data by sifting through the mass of material to identify significant patterns and themes, and then transforming these significant patterns and themes into the research findings (Richards, 2005; Saldaña, 2009; Creswell, 2014). The process of identifying significant patterns and themes can be both inductive and deductive as the researcher is both guided by the existing literature to find important patterns and themes while also attending to those that emerge from the data itself. Finding these patterns and themes involves a process of “breaking up, separating

or disassembling … research materials into pieces, parts, elements or units" (Jorgensen, 1989:107), but then reassembling or recomposing these pieces into coherent patterns and themes. This is neither a neat nor linear process but an interactive and iterative process in which patterns and themes are posed and tested as the researcher sifts through the data (Creswell, 2014).

As well as identifying patterns and themes, the researcher has to come up with conclusions about these patterns and themes. The classic characterisation of this process is by Miles and Huberman (1994), as shown in Figure 3.1.

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Figure 3.1 Qualitative data analysis

Source: Miles and Huberman, 1994:12

Drawing from Miles and Huberman (1994), Punch (2013:171-172) describes the main features of the three activities associated with data analysis in the following way:

(i) *Data reduction*: Data reduction occurs continually and this process involves finding themes and patterns through activities such as coding and memoing.

(ii) *Data display*: Data display takes qualitative data which is "typically voluminous, bulky and dispersed" and helps to "organise, compress and assemble" the data (2013:172). There are various ways of displaying data such as using graphs, charts, networks, and different types of diagrams.

(iii) *Drawing and verifying conclusions*: This process is crucial because "the reasons for reducing and displaying data are to assist in drawing conclusions" (2013:172). Early in the process of analysis, the researcher will tend to pose "vague and ill-formed" (2013:172) conclusions but through the iterative process of data collection and analysis, these conclusions will be refined and sharpened with final verification taking place once all the data is collected and analysed.

Reducing data through coding is extremely important to the process of data analysis in qualitative research (Liamputtong & Ezzy, 2005; Rossman & Rallis, 2012; Punch, 2013; Creswell, 2014). As Strauss (1987, cited in Saldaña, 2009:1) stated, "any researcher who wishes to become proficient at doing qualitative analysis must learn to code well and easily. The excellence of the research rests in large part on the excellence of the coding". Generally, coding is defined as the "process of organising a large amount of data into smaller segments that, when needed, can be retrieved easily" (Bailey, 2007:127). These smaller segments reflect the patterns or themes around which conclusions are drawn. In this research, the process of identifying patterns and themes through coding and memoing

was an iterative process of reading and rereading the collected documents as well as the interview transcripts and the field notes from the observations. Patterns and themes that emerged from the data or that were connected to the literature were initially identified and these were refined as more data was read and reread.

Analysing documents

In reading and rereading the collected documents, the focus was on the *'what'*, *'how'* and *'why'* of the EIA system in Laos with a focus on how the system had changed and developed over time. As Bowen (2009:30) suggests, "documents provide a means of tracking change and development. Where various drafts of a particular document are accessible, the researcher can compare them to identify the changes". Drawing on Yin (1994), Bowen suggests that even seemingly simple changes in different versions of documents can reflect more substantive shifts. As there have been different versions of EIA legislation and policy over the years, this research has paid attention to the changes that had taken place. For example, when analysing the current *Law on Environmental Protection* and the *Instruction for Environmental and Social Impact Assessment in Lao PDR*, the researcher looked for the changes that had been made from the previous law and instruction. A highlighter pen was used to highlight these changes on hard copies and memos (notes) were handwritten in the margin.

Analysing interviews

Initially, the plan was to use *NVivo 10* software to assist with coding but after several months of attempting to use the software, the researcher found it too cumbersome so switched to using *Microsoft Word*. Three main functions in Word were used. First, the text highlighter function was used to code the main patterns and key themes that emerged.

For example, comments made by participants on the theme of 'GoL development priorities' or 'monitoring of impacts' or 'public participation' were highlighted in different colours. Second, the comments function was used to write memos (notes) about important features of text that had been highlighted. Third, the copy and paste function was used to assemble together material on the same pattern or theme from the different interviews. Although *Microsoft Word* is considered a 'general purpose software tool', authors such La Pelle (2004:85) suggest that for many qualitative research projects "the native functions of full-featured word-processing programs can be used, with a little creativity, to perform many of the [same] functions provided by dedicated qualitative data analysis (QDA) software".

Analysing field observations

The field notes from the observations were coded in the same way as the interview transcripts, using the highlighter, comments, and copy and paste functions. Photos that had been taken during the observations were also used to help the researcher recall features of the events that had been observed.

3.5 Human Ethics

As this research used interviews and field observations, human ethics approval was required from the Human Research Ethics Committee (HREC) of the University of Newcastle. Approval was granted on the 27 October 2014 (Reference Number H-2014-0332). Both English and Laotian language versions were provided to the HREC, and the researcher translated the English language versions into Laotian. Appendix 3 contains a package of ethics materials consisting of:

(a) **Materials for Government Agencies,** consisting of a Letter of Invitation, Information Statement, Interview Schedule and Consent Form. Similar packs of information were made up for the other stakeholder groups.

(b) **Materials for Individual Interviewees,** consisting of a Letter of Invitation, Information Statement, and Consent Form. The Interview Schedule was the same as the one included above in the materials for government agencies.

(c) **Materials for Participant Observation,** consisting of a Letter of Invitation and Consent Form.

(d) **Sample of an Information Statement Translated into Laotian.**

3.6 Advantages and Challenges

This section is divided into two, dealing firstly with the advantages and then the challenges of undertaking this research in Laos.

The advantages

The first major advantage in terms of undertaking research in Laos, is obviously that the research is a native speaker. This meant that documents that were only available in Laotian could be understood by the researcher (see Table 3.1 above for a list of the main documents used in this research, and which are only available in Laotian). This also meant that interviews could be conducted in the language in which most participants were most proficient, and that conversations and discussions during field observations could be understood by the researcher. Another advantage for interviews and field observations is that speaking Laotian also potentially helped put local participants at ease. This may not have been the case if the researcher was an English-speaking Westerner (which also

would have meant the interviews with some people were not possible or that a translator was required). The result was that most local interviewees seemed to enjoy sharing their experiences and information with the research and some seemed grateful to be listened to. As well, the researcher was able to easily interact with participants during field observations, and to informally ask questions and clarify information about what was being observed.

The second advantage was, having worked in the EIA area for more than four years, the researcher had a good understanding of the context and could empathise with many of the frustrations that interviewees felt comfortable enough to express during the interviews and field observations.

The challenges

Along with the advantages to conducting this research in Laos, there were also several challenges. First, as the research was largely conducted in Laotian, this meant that all the ethics materials had to be translated from English to Laotian before the field work could commence. It also meant that some documents and most interview transcripts had to be translated from Laotian back into English. All the translations were done by the researcher, and this proved to be a very time-consuming process.

The second challenge was that because the researcher has worked in the EIA area for more than four years, it was necessary to ensure that personal experiences and views did not overly influence or shape the data analysis and interpretation (including in the translation process). For example, during the writing of the thesis, the researcher had to be careful that the interpretation and translation of comments was an accurate

representation of what participants intended to say. Here the supervisors played an important role, sometimes asking for clarification about participants' comments and the use of quotes.

The third challenge, related to the above, is the fact that some interviewees in the hydropower sector may have known that the researcher had previously been employed by MoNRE and as such, they may have been less likely to open up or share their dissatisfaction of EIA processes in case the comments were relayed back to the authority. Obviously, their anonymity was assured as part of the ethics for this project but this can sometimes be difficult to convey to potential participants.

Finally, as this research is intended to be applied post-thesis, there was pressure (self-imposed) on the researcher to make sure that all the information and data in the thesis was accurate (e.g. names of departments, organizations, districts, provinces). Likewise, there was pressure to accurately translate and interpret the documents. This was sometimes difficult as the EIA system in Laos is complicated and subject to change; as a result there are overlapping and contradictory documents associated with the EIA system (and this is further revealed in Chapters 5 to 7).

Overall, however, it is hoped that these challenges have made for a more nuanced and richer thesis that not only provides a thorough and accurate examination of the current EIA system in Laos but ultimately, provides a useful template for where and how to begin to reform the system in the future.

3.7 Conclusion

This research explores EIA effectiveness in Laos through the use of two approaches, a criteria-based approach and a practice-based approach. As discussed throughout this chapter, the choice of a mixed method approach that combined document analysis, interviews with stakeholders and observations of field events was therefore considered appropriate. This chapter has provided details of how the data was collected and analyzed. In Chapters 5 to 7, discussion of the findings from the research are discussed in terms of the framework for analyzing EIA effectiveness (which focuses on the legal context, institutional arrangements and procedural elements). Before applying this framework, However, Chapter 4 provides background to Laos and its socio-economic development. This sets the scene for the research and introduces some of the features of Laos that are important for examining effectiveness of the EIA system in this country.

CHAPTER FOUR: BACKGROUND: LAOS AND ITS SOCIO-ECONOMIC DEVELOPMENT

4.1 Introduction

As identified in the conclusion of the previous chapter, this chapter sets the scene by providing background on Laos, and particularly its socio-economic development. This material is important for understanding the setting in which EIA is practiced in Lao PDR.

Laos has a long history stretching back to the 14th century. As one of the largest kingdoms in South-East Asia, the Lan Xang Hom Khao (Kingdom of a Million Elephants under the White Parasol) existed for four centuries and was known for its extensive wealth and trade (Stuart-Fox, 1998:49). Despite being a land-locked country (with Myanmar and China to the northwest, Vietnam to the east and Cambodia and Thailand to west and southwest) Laos today, as it did in the past, plays an important role in the burgeoning Lower Mekong Basin (LMB) which has been transformed over time into a "corridor of commerce" (Bakker, 1999:209; See Map 1.1). It is only since the early Cold War period (1953-1991), However, that Lao PDR has been free to pursue economic growth and development through its geographic position as a watershed of the LMB (Bakker, 1999; Kubiszewski et al., 2013).

The modern history of Laos can be defined by a series of occupations. The French occupied Laos in 1893 (declaring Laos a French Protectorate), then during World War II there was a period of Japanese occupation. Following the war, the French recolonized Laos until it gained its autonomy in 1949 with independence declared in 1953. This independence was short lived, however. Although a Geneva Accord was signed in 1962

making Laos and Cambodia “officially neutral” countries, such was the concern about the spread of Communism (seen to be emanating from neighbouring Vietnam) that the US returned and waged what became known as the ‘Secret War in Laos’ between 1964 and 1973 (Baird, 2015:2). This campaign was finally brought to a close when the US signed the ‘Vientiane Treaty’ in the capital of Laos on February 21, 1973 (Baird, 2015:2). This treaty, however, still did not bring lasting peace to Laos, as a civil war broke out between those factions still loyal to the US and those determined to make Laos into a communist country. The transition to Socialism, with military support, occurred immediately after the Lao People’s Democratic Republic (Lao PDR) was declared on December 2nd 1975. Essentially, the new Lao government aligned itself with Vietnam and the Soviet Union, implementing one-party rule and a command economy (Rathie, 2017). The Socialist declaration was to mark a historical milestone for Lao PDR and ultimately to forge a new, yet untested politico-economic regime for the nation after decades of occupation and war.

Sections 4.2 and 4.3 of this chapter briefly document the important governmental changes and economic planning stages that took place after the 1975 Declaration and sections 4.4 and 4.5 outline the current economic push to develop hydropower as one means for achieving sustainable development.

4.2 Socio-Economic Development during the 1970s through to the 1990s

Immediately on achieving Independence in 1975, the political and economic discourse of Laos changed to reflect the aim of promoting solidarity and unity among the different factions as well as remedying the devastation left behind as a legacy of the various wars. Beginning in the north and east of the country, the new State structure sought to transform

and “educate” the rural masses (furthest from the capital) by trying “to achieve social and cultural homogeneity that would transcend individual ethnic religious identities” (Bouté & Pholsena, 2017:7). In the capital Vientiane, the Government of Laos (GoL) (with its State President, the Lao People’s Revolutionary Party (LPRP) and seven-member Politburo) began to nationalize the economy and declared its first centrally planned policy to lead the country towards Soviet-styled Socialism (Rathie, 2017).

Two key priorities were laid out by the GoL: (1) to normalize people’s lives in terms of food, clothing and housing security; and (2) to start to build the country’s socio-economic infrastructure to promote growth of the economy (Phomvihane, 1981). With an abundance of untapped forestry resources and the majority of the population being dependent on agricultural-based livelihoods, the GoL believed that it could focus on its natural resources to quickly enhance its economic transformation (Phomvihane, 1981; Barney, 2009).

The economic transformation during this first period, however, was to have very little success due to a number of factors, including heavy sanctions imposed by Western nations such as the United States (US) and capitalist neighbours like Thailand (Stuart-Fox, 1998). This was due to the fact that although, the American War in Laos had ended, the US and its ally Thailand continued to back various ethnic groups in Laos who were still fighting an ideological war against the government during the late 1970s and into the1980s. In addition, Thailand imposed a heavy trade embargo on Laos which effectively strangled the fledgling economy, with inflation reached 80 percent by 1977 (Pholsena, 2017:129).

During this time, there were a series of natural disasters—drought in 1976, and severe floods in 1977 and 1978—which destroyed much of the country's agricultural production. This proved extremely problematic, given that the GoL had introduced an ambitious programme of accelerated agricultural collectivization (mainly through rice) which used around 85 percent of all tillable land (Masuhara & Suzuki, 1996; St John, 2006). There was also a lack of qualified staff to manage the small but growing revenues being gained through logging industry tariffs (Zasloff, 1991) and insufficiently trained government officials to translate policies and strategies from the central government down to the provincial and district levels. These personnel issues meant that the centrally planned policy could only ever be partially implemented (Phomvihane, 1981). As a result, the government faced huge budget deficits and there was unrest throughout the country. There were also suggestions by outsiders that Laos' policy direction, and indeed Socialism itself, was a failure (Evans, 1991; St John, 2006).

For much of the early 1980s, Lao PDR remained heavily dependent on external assistance. Foreign aid in 1982 was estimated to be approximately 80 percent of annual revenue with the Soviet Union remaining the principal benefactor (St John, 2006:180). During this time, other Western nations such as Australia, Japan, France, and Sweden also offered donor assistance as did the International Monetary Fund (IMF) which was to become Laos' most important multilateral donors in the first half of the 1980s, providing direct support as well as economic guidance (Brown & Zasloff, 1986).

Acknowledging its poor performance and the shortcomings of the first central plan, during the 4th Lao People's Revolutionary Party (LPRP) Congress in 1986, the government adopted its 2nd Five-Year National Socio-Economic Development Plan

(1986-1990) which was to represent a significant change in the country's socio-economic development. This plan essentially moved the country from a centrally planned economy towards a more market-oriented economy or "state capitalism" as Party General Secretary Kaysone Phomvihan described it (Zasloff, 1991:33).

The introduction of this novel economic system called the *New Economic Mechanism* (NEM) recognized that there was "little scope for building Socialism in a subsistence economy" (St John, 2006:181). As such, the collectivization scheme was scrapped and land was given back to families for legitimate "private exploitation"; this was to make a marked difference to many located along the Mekong River (Zasloff, 1991:34). Overall, the core aims of the NEM were to: decentralize economic decision-making; to provide more accountability for public and private enterprise; to reform the fiscal and financial sectors; to remove trade barriers; and to improve and promote a new investment climate in order to attract more foreign direct investments (FDI) (Than & Tan, 1997; Stuart-Fox, 1998).

To complement this new economic mechanism, the GoL also recognized that a revamped legal system would be necessary not only to attract and secure foreign investments but also to effectively manage and keep investment projects in Laos (Ivarsson et al., 1995). Within a decade or so, massive legislative developments took place in Laos which included the approval of the first Constitution of the Lao PDR in 1991, a Foreign Investment Law in 1994, separate Electricity, Forest and Land Laws in 1997, and an Environmental Protection Law in 1999. More recently, these laws have been amended and approved by the National Assembly to ensure that economic development activities

taking place in the country follow the principles of sustainable development. This aspect is further elaborated in Section 4.4 of this chapter.

4.3 Socio-Economic Development in the 2000s

With the introduction and adoption of the new laws as indicated above, and through the country's strengthened relations with other nations globally, FDI slowly began to arrive in Laos. This was also accompanied in the early 2000s with large volumes of foreign aid in the form of both technical and financial support from developed nations and international development agencies (IDAs). This assistance was mainly allocated to strengthening socio-economic development, fighting poverty and improving the governance of central administrative institutions (Stuart-Fox, 1998). During the period 1999 to 2004, the government of Japan, for example, (which had taken over the position of principal bilateral donor after the collapse of the Soviet Union), provided huge amounts of aid to Laos, reaching 20.4 billion yen in total (Robert & Marcussen, 2008). The government of Australia also provided a total of $19.6 million between 2005 and 2006 (Commonwealth of Australia, 2005). Likewise, other international organisations, including the ADB, the International Development Association (IDA), the IMF, the UNDP and the World Bank also played significant roles in fighting poverty eradication (IMF, 2004) and supporting economic reforms such as the long-term vision for socio-economic development to the year 2020 (UNDP, 2007). During this time, Laos expanded its commercial and diplomatic ties with China and there was a flow of aid, arms, and trade; though as St John (2006:183) suggests, the most important role played by this relationship was to "validate the path followed by the LPRP". For China, Laos was attractive both for its natural resources, rich hardwood forests and mineral deposits, but also for its strategic location on the Mekong River and as a land bridge and gateway to

Southeast Asia (St John, 2006:183). In 2004, as bilateral trade and investment expanded with China, a visit by Chinese Vice Premier Wu Yi ended with the signing of 11 separate agreements in agriculture, chemical production, and hydropower exploration (St John, 2006:185).

Within the 2020 vision, more wide-reaching five-year National Socio-Economic Development Plans (NSEDPs) were instigated to work towards achieving the nation's long-term goals. The key objectives of the 5th NSEDP (2000 – 2005) for example, focused on moving Laos away from its less developed country status by 2020 (Committee for Planning and Investment (CPI), 2000; Somphanith, 2008). Additionally, the 6th NSEDP (2006 – 2010) aimed to stimulate economic growth at an average of 8.0 percent per annum, reduce the proportion of poverty by one third of the population and promote development in line with the principles of environmental and social sustainability (CPI, 2006; OECD, 2013). Likewise, the 7th NSEDP (2011 – 2015) was designed to help speed up socio-economic development of the country in a more competitive fashion which allowed all public and private sectors to make use of the country's natural resources as much as possible to increase economic growth above 8.0 percent per annum (Ministry of Planning and Investment, 2011).

To achieve the specific short-term goals and the longer-term vision of sustained socio-economic development throughout the country, the GoL also made commitments to bring about greater transparency, responsiveness and stricter enforcement of the rule of law (UNDP, 2007). These reforms were not merely aimed at advancing public sector governance, but also in strengthening the mechanisms to increase and attract large-scale development projects and provide more confidence for foreign investors. Part of this

focus was also to liberalize policies to stimulate investments in the mining and hydropower sectors specially. As of 2016, these industries account for 80 percent of FDI in Laos with China, Vietnam, Thailand, Korea, France and Japan being the leading sources of foreign investment (Office of Investment Affairs, 2017). Section 4.5 of the chapter further discusses this aspect of development.

Over the past decade, through the implementation of the 5th, 6th and 7th NSEDPs, socio-economic development in Laos has improved significantly. The Laotian economy has grown faster than any of its Southeast Asian neighbours with poverty declining sharply and the general standard of living markedly improving (Asian Development Bank, 2012; OECD, 2013). According to the World Bank (2015a), poverty in Lao PDR declined to 33.5 percent in 2008 and further to 23.2 percent by 2012, successfully lifting half a million people out of poverty. Improved skills and knowledge, coupled with non-farm job creation, were major drivers of this poverty reduction (World Bank, 2016b). Other examples of improvement include that real GDP grew at an average of 6.6 percent per annum from 2000 to 2007 and reached 8.5 percent in 2010, and inflation dropped from 27 percent in 2000 to 10.5 percent in 2004 and further to 6.0 percent in 2010 (Phannalangsi, 2011; World Bank, 2015a). As a result of these significant changes, the GoL has achieved one of its goals, lifting Laos away from its lower-income country status to now be considered a middle-income country (OECD, 2013).

Despite these very positive signs of progress, Laos still remains "the most aid dependent country in Southeast Asia" (Robert & Marcussen, 2008:65). The World Bank in 2016 warned that many people escaping poverty in Laos still remain close to the poverty line—indeed, around half of those in poverty in 2013, were not in poverty in 2008 (World Bank,

2016a). It suggested further that agricultural changes, uneven development and health shocks were the main drivers of household vulnerability, particularly in rural areas (where 70 percent of the population still live). This, along with recent land policy reforms and land and forestry allocations (designed to promote medium-large scale investment and development projects), has triggered major shifts in land use rights and tenure (Boutthavong et al., 2016). Processes aimed at normalizing land access, promoting development, consolidating territorial control, and land ownership have seen many rural communities displaced and their land use move from customary to temporary status, as land is confiscated for development projects throughout the country (Barney, 2009; Hall et al., 2011; Boutthavong et al., 2016). These actions serve to increase the risk of rural populations falling back into poverty.

Given this, the Organisation for Economic Co-operation and Development (OECD, 2013:2) suggested that the GoL needed to adopt a more inclusive, sustainable growth model to address the issues above. Other international development agencies (IDA) such as the UNDP, the ADB, and the World Bank as well as donor nations such as Sweden and Finland have also increased their pressure on the GoL to adopt a more sustainable socio-economic model that addresses the needs of the population and ensures that the country's economic growth is environmentally sound as well as socially acceptable. This is considered essential if sustainable development is to be successfully achieved throughout the country as many believe Laos to be a potential hotspot for a "poverty-environment nexus" where poverty is linked to environmental damages in "a mutually reinforcing relationship" (Lestrelin et al., 2012:582; see also Barney, 2009; Molle et al., 2009; Baird & Barney, 2017). It is into this setting that an EIA system potentially plays

an important role in helping investments projects to achieve sustainable development outcomes.

4.4 Sustainable Development and its Implementation in Laos

The idea of sustainability was initially raised in Laos for the first time by Secretary General Kaysone Phomvihane during his opening remarks at the 1st National Forestry Conference held in Vientiane Capital, in 1989 (MAF, 1989). At this conference, Phomvihane announced that forest destruction in Laos had reached an alarming rate and that it was "time to change from uncontrolled logging and destruction of forests to focus mainly on tree planting and forest protection" (Sononty, 2002:72). The concept of sustainability was therefore advanced with an aim to tackle problems related to the rapid depletion of forestry resources, resulting from massive logging operations throughout the 1980s, including 'slash and burn operations', and destruction caused by decades of cross-border military skirmishes taking place in the forested border regions of the country (Dwyer et al., 2016). Impeding this important transition, however, was the announcement later that same year by the new Thai Prime Minister that a change in foreign policy was to occur and that Thailand was going to improve regional diplomatic and economic ties with its near neighbours by "turning battlefields to market places" (Innes-Brown & Valencia, 1993; Dwyer et al., 2016:210). This announcement was to have significant ramifications for Laos. Due to the fact that there was a ban on logging in Thailand, new demand for Laotian timber was suddenly created (Dwyer et al., 2016). Given that Laos was desperate to attract FDI (particularly from neighbouring countries), the issue of sustainability was suppressed until it became more of a global phenomenon in the 1990s.

After the UN Conference on Environment and Development in 1992 and following the global trend toward greater commitments to protect environmental health, in 1993 the GoL established the 'Science, Technology and Environment Organization' (STENO). The STENO became the first governing body in Laos to focus on environmental management and protection. Its core mandate in relation to environmental protection was to provide 'cross-sectoral' co-ordination within the framework of the over-arching 'National Environmental Action Plan' (NEAP) (Chantirath & Xayabouth, 1998). The STENO was established in response to the drafting of the first NEAP as required by the United Nations as a part of the Lao PDR's commitment to enforce Agenda 21(UN, 1992b). With a better understanding of what was required to ensure that the principles of sustainable development were operationalized, the STENO was later reformed and its name changed to the 'Science, Technology and Environment Agency' (STEA) after approval of the nation's first 'Environmental Protection Law' (EPL) in 1999. The Agency became the key institution responsible for development and implementation of environmental protection policy and the associated legislation for environmental management and protection throughout the country (including EIA Regulation, which was officially introduced in 2000).

Over time, in keeping with its top-down management approach, the GoL continued to reform STEA and redefine its roles in response to changes occurring in EIA practice globally. By 2007, STEA had become the 'Water Resources and Environment Administration' (WREA) and in 2011, it was transformed again to become the 'Ministry of Natural Resources and Environment' (MoNRE); it remains in this guise today (see Chapter 6). What these structural and organizational changes reflect is the GoL's efforts to improve the agency's ability to better meet the competing demands of resource

management and environmental protection in the face of wide-scale promotion of projects using the country's natural resources. For example, to better reflect the increasing concerns over environmental and social impacts associated with large-scale development projects, the WREA established the 'Department of Environmental and Social Impact Assessment' (DESIA) to take responsibility for reviewing and assessing EIA documents (WREA, 2008) (and today, DESIA remains a department in the MoNRE). Additionally, the mandate of the MoNRE has also been enlarged to include natural resource management, environmental protection, climate change mitigation and environmental and social impact assessment (Prime Minister's Office, 2017a).

The refinements of mechanisms for environmental and resource management in Laos have been influenced by other governments and 'outside' agencies. Laos is still hugely dependent on foreign aid to progress many of its objectives, and 'donor partnerships' are often required to promote large-scale policy reform. Laos receives grants and loans from domestic and foreign entities such as the World Bank, ADB, AusAID, the Nordic Development Fund (NDF), SIDA, DANIDA, United Nations Educational, Scientific and Cultural Organization (UNESCO) and contributions from businesses, developers and elites (Vichit, 2012; Suhardiman & Giordano, 2014). These international donors set requirements that align with international standards and help promote sustainable development, particularly in the hydropower sector. For example, the World Bank contributed to the Laotian Environmental and Social Project (LENS) which is designed to help the GoL address the need to mainstream environmental and social safeguards in infrastructure development (e.g. hydropower development), strengthen biodiversity conservation and increase the public's knowledge of and support for environmental management initiatives (Vichit, 2012; Suhardiman & Giordano, 2014). In an effort to link

these initiatives to specific projects, the World Bank guaranteed a USD $1.45 billion loan for the building of 'Nam Theun 2 Hydropower Project' (NT2HP),[8] the 3rd largest hydropower plant in Laos. This commitment resulted in the GoL introducing a number of new laws, policies and regulations including the 'Decree on Compensation and Resettlement of People Affected by Development Projects' in 2005, the 'National Policy for Environmental and Social Sustainability of Hydropower Sector' in 2006 and the 'Decree on Environmental Impact Assessment' in 2010 (PMO, 2005; STEA, 2006; PMO 2010; Smits, 2015).

The National Policy for Environmental and Social Sustainability of the Hydropower Sector states that if a hydropower project is working toward sustainability and delivers lasting benefits to Lao PDR, "it must meet three fundamental principles: (a) economic sustainability; (b) social sustainability; and (c) ecological sustainability" (STEA, 2006:p.2). In addition, this National Policy acknowledges that sustainable hydropower development requires full assessment of environmental and social impacts and effective implementation of the projects' Environmental Management and Monitoring Plans (EMMP) (STEA, 2006). More recently, MEM has just improved the National Policy aiming to ensure development of hydropower projects in Laos are operated in a more sustainable manner. This new National Policy of Sustainable Hydropower additionally requires "hydropower development to meet four important principles of sustainability—environmental, social, economic and technical aspects" (MEM, 2015:2). These requirements are indeed linked to the principles of sustainable development recognised globally as well as the national legal frameworks for environmental and social

[8] NT2HP is a hydroelectric dam located on the Nam Theun River in Laos. It is located on the border between Bolikhamsai and Khammouane Provinces and it started operation in 2010. It is the third largest dam in Lao PDR. See Table 4.1.

safeguards—the Decree on Environmental Impact Assessment and the Decree on Compensation and Resettlement of People Affected by Development Projects. For example, the objectives of the 2010 Decree on Environmental Impact Assessment state that it is intended to:

> 1) ensure that all public and private investment projects, both domestic and foreign, operating in Lao PDR which create or may create adverse environmental and social impacts, are designed with the correct and appropriate environmental and social impact prevention and mitigation measures or Environmental Management and Monitoring Plans (EMMP) and Social Management and Monitoring Plans (SMMP); and
>
> 2) to effectively prevent, minimize and resolve adverse environmental and social impacts derived from investment projects; and 3) to contribute to and make national socio-economic development sustainable. (PMO, 2010:4)

Remarkably, this Decree acknowledges that the GoL does recognize that environmental and social impacts are associated with development, but also, that with appropriate EIA mechanisms in place, adverse impacts can be prevented, minimized or resolved so that development can proceed in a more sustainable fashion. While this is indeed the overall aim of EIA processes globally, what makes achieving this more difficult in Laos, is the current open-door policy of the government towards FDI and the rapid commodification of natural resources. Critics such as Barney (2009:146) have called the overt promotion of investment in Laos, as nothing short of "frontier neoliberalism", where the last remaining pristine landscapes are slowing becoming "enclosed, extracted, and incorporated into circuits of production and consumption". Indeed, the 'Law on Investment Promotion' introduced in 2009 offers tax incentives to both domestic and international investors, which would seem to compromise the potential for the EIA Decree to achieve more sustainable forms of development (National Assembly, 2009a; Office of International Affairs, 2017) (see also Section 4.5.1). The opening up of the LMB to extensive hydropower development is further evidence of this challenge.

4.5 Economic Development through Hydropower

The Lower Mekong Basin (LMB) has been the subject of transformation for many years, though this increased significantly in the post-Cold War period. The hydropower sector, for example, had been developing rapidly to respond to growing regional demand for electricity, export-led economic growth and expanding domestic consumer markets. As Molle et al. (2009:2) suggest, rapid "economic growth rates combined with high fossil fuel prices have spurred a rush towards hydropower generation that has the potential to completely remodel regional waterscapes". Although, large hydropower dams are fast losing favour in developed countries, they still find official support in developing countries where sufficient water resources make them commercially viable (Cronin & Hamlin, 2010:3). In the LMB, the electricity development pathway has long been fundamentally shaped by private-sector actors and external supporters, with the ADB, World Bank, the Mekong River Commission (MRC) and bilateral donors heavily supporting this pathway through advice and financing (Hirsch, 1995; Bakker, 1999; Molle et al., 2009; Suhardiman & Giordano, 2014; Campbell et al., 2015). As a result, hundreds of dams are planned, under construction, or already completed in the Basin (MRC, 2010:8; Cronin & Hamlin, 2010:3) (and Table 4.1 identifies the situation in Laos alone). Consequently, as Bakker (1999:211) suggests, this has created a market dominated by "international consultants, engineering firms and capital providers (whether public or private) in hydrodevelopment".

There is no doubt that the expansion of development and the operation of hydropower projects in Laos primarily depends on international financial institutions and private-sector actors or foreigner investors. This should not be a surprise though as the Law on Investment Promotion and the Law on Electricity prioritise foreign investments in the

hydropower sector. For example, Article 5 of the Law on Electricity states that the government promotes ‘foreign entities’ to invest in hydro-electricity activities such as production, transmission, distribution and services (National Assembly, 2012). In addition, the study conducted by Suhardiman and Giordano (2014) reveals that hydropower decision-making in Laos is influenced by private-sector actors and decisions made in neighbouring countries. This is due to the fact that around 85 percent of hydropower development and operation in Laos is owned by independent power producers (IPPs) or private investors; and hydropower generation is mainly for export to neighbouring countries (Suhardiman & Giordano (2014). However, due to the nature and scale of such industries, the potential for social and environmental impacts are constantly juxtaposed against the perceived benefits of economic progress and development. Thus, balancing development and the growing demand for energy against sustainability, remains as important issue for all nations in this region, especially poorer nations like Laos.

4.5.1 The choice of Hydropower in Laos

In Laos, there are a number of key factors that have influenced the GoL to support and prioritize the development of hydropower across the country. The first is due to the nation’s topography. Although landlocked, Laos is a mountainous country and has many rivers flowing down from steep terrains into the Mekong Basin. Almost all of the ten major rivers within the territory of Laos are tributaries of the Mekong River. These rivers contribute to more than 60 percent of the Mekong River flow which is discharged into the South China Sea (Wayakone et al., 2013:2082). In addition, the country receives substantial annual monsoonal rainfall, averaged at approximately 3,000 millimetres per year (Mekong River Commission, 2010). Thus, a unique physical geography, together

with high volumes of annual rainfall, has created a suitable topography for hydropower development.

Second, Laos is located in the centre of what the ADB calls “the Greater Mekong Sub-region” (GMS), an area it suggests represents a “new frontier of Asian economic growth” (ADB, 2017). Emphasising the physical interconnectivity of the region, the ADB, and other multilateral donors, have for years visualized and promoted this area as “a new regional space” for economic integration “through new water and electricity systems” (Baird & Quastel, 2015:4). The creation of these new infrastructures on the Mekong River, therefore, are recognized as a way to “engineer new relations among places” but also represent “the triumph of national and regional level interests over local basin interests” (Lebel et al., 2005:9). In Laos, this is particularly the case as local interests are often stifled in favour of accommodating investment from “energy hungry neighbours” including Thailand, Vietnam, Cambodia and China (World Bank, 2010; also see Hirsch, 2001).

Third, hydropower is seen by many as a reliable, flexible and affordable source of electricity (Adams, 2000; Altinbilek, 2002; Jager & Smith, 2008; Smits & Bush, 2010; IHA, 2016). The water reservoirs store water that can be drawn on by the hydropower plants to meet peaks in demand. Essentially, the plants serve as large batteries quickly producing electricity to cope with fluctuations in electricity system loading (IEA, 2010; Vattenfall, 2011). As such, electricity derived from hydropower is preferable over other forms of energy derived from finite sources such as fossil fuels and coal (Osborne, 2009; Kaunda & Mtalo, 2013; Allouche et al., 2014).

Fourth, as part of the process of readying itself to be the “Battery of ASEAN” (the stated goal of the GoL), the government has initially developed and expanded its own domestic supply of electricity (Hunt, 2012). Back in 1980, for example, there were only 5 out of 15 provinces that had public electricity and about 95 percent of the population in Laos did not have access to any electricity at all (World Bank, 1981). By the end of 2015, However, the GoL reported that more than 89 percent of population in Laos had access to electricity and that by 2020, it is anticipated that this would be closer to 99 percent (Ministry of Energy and Mines, 2016).

This swift increase in energy supply was facilitated by rapid expansion of small to medium-scale hydropower projects which had started to be developed nationwide. The earliest of which was the 155 megawatt (MW) Nam Ngum 1 Dam (in Vientiane province), Laos’ first hydropower dam, financed, and built by Japanese construction firm Hitashi (MEM, 2014). Although Laos did officially begin exporting small amounts of power from the Nam Ngum 1 Dam to Thailand as early as 1971, it was not until the late 1980s, however, that extensive hydropower exploitation appeared politically realistic (International Rivers Network, 2008).

While Lao PDR is a resource-based economy driven by forestry, agriculture, mining and hydropower, since the late 1980s, representatives from the ADB, World Bank, UNDP and bilateral Western donors have consistently advised the GoL that developing the country’s hydropower potential was one of its few plausible development options (IRN, 1998; Bakker, 1999; Molle et al., 2009; Cronin & Hamlin, 2010). These IDAs recommended two strategies for development. One, “that smaller projects for domestic power sales should be developed using concessional loans and bilateral aid (owned and

operated by the Laotian state-owned electricity utility, Electricité du Laos-EdL)"; and two, that larger hydropower projects, (mainly for power export), should be developed by the private sector under build–operate–transfer (BOT) contractual arrangements, with the government taking an equity share in the project" (Molle et al., 2009:31). BOT arrangements also allow governments to benefit from concession royalties, taxes and revenues from power sales (World Bank, 2016c).

Having followed this advice for the past 30 years, by 2010, there were 10 hydropower plants in operation (Smits, 2015). Currently, there are 22 plants in operation, 18 under construction, and another 61 large-scale[9] hydropower projects are planned (see Table 4.1). By only 2020, it is expected that Laos will have up to 60 hydropower plants in operation generating revenues of over USD $ 1 billion per year (MEM, 2016; see Table 4.1 and Map 4.1). As a result, hydropower now accounts for more than 90 percent of the country's total installed electricity capacity (Susanto & Stamp, 2012) and has allowed Laos to become one of the largest suppliers of power to its near neighbours. It has also allowed Laos, as suggested in section 4.3 of this chapter to increase its GDP, with government revenues from hydropower expected to grow by more than 20 percent between 2014 and 2020 (OECD, 2013:8).

[9] According to the Law on Electricity amended in 2012, a large-scale hydropower project in Laos is identified as a project that has capacity to generate hydro-electricity of 15 Megawatts (MWs) or above.

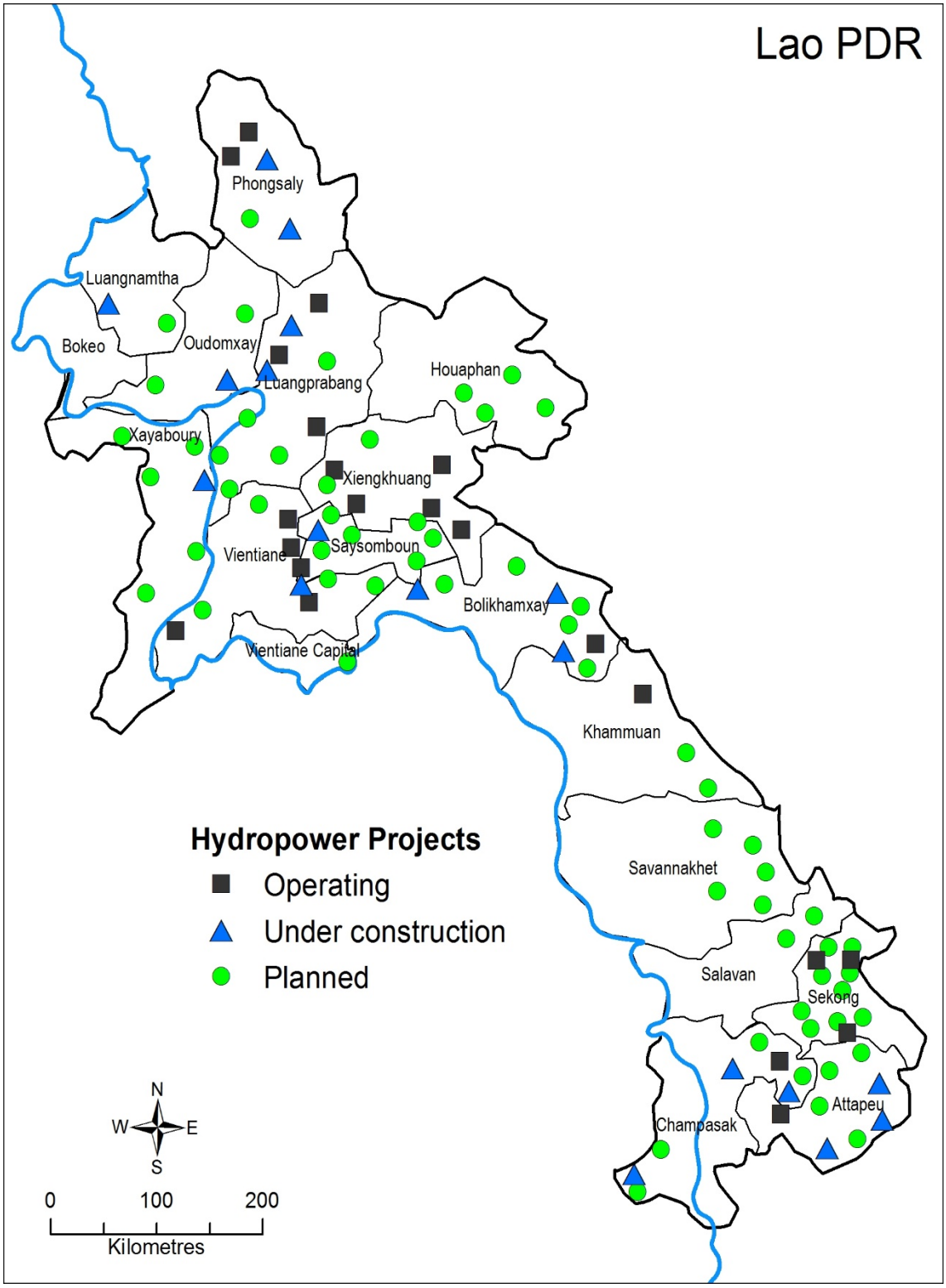
Table 4.1 List of hydropower projects in Laos

Operating				
No	**Name of hydropower project**	**Capacity (MW)**	**Location (Province)**	**Project developer**
1	Nam Ngum 1	155	Vientiane	EDL (Laos)
2	Xe Set 1	45	Xekong	EDL
3	Xe Set 2	76	Xekong	EDL
4	Nam Mang 3	40	Vientiane	EDL
5	Nam Leuk	60	Vientiane	EDL
6	Houay Lamphan Gnai	88	Attapeu	EDL
7	Nam Khan 2	130	Louangprabang	EDL
8	Nam Khan 3	60	Loungprabang	EDL
9	Nam Theun Hinboun	500	Bolikhamxay & Khammoun	EGAT (Thailand) EDL
10	Houay Hor	152	Champasack & Attapeu	EGAT, EDL
11	Nam Theun 2	1,075	Khammoun & Bolikhamxay	EGAT, EDL
12	Nam Ngum 2	615	Vientiane	EGAT
13	Nam Ngum 5	120	Xiengkhoung & Louangprabang	EDL
14	Nam Lik 1-2	100	Vientiane	EDL
15	Xe Kaman 3	250	Xekong	EVN (Viet-Laos Power Co.) EDL
16	Nam San 3A	69	Xiengkhoung	EDL
17	Nam San 3B	45	Xiengkhoung	EDL
18	Nam Ngiep 2	180	Xiengkhoung	EDL
19	Nam Ngiep 3A	44	Xiengkhoung	EDL
20	Nam Ou 2	120	Louangprabang	EDL
21	Nam Ou 5	240	Phongsaly	EDL
22	Nam Ou 6	180	Phongsaly	EDL
Under construction				
No	**Name of hydropower project**	**Capacity (MW)**	**Location (Province)**	**Project developer**
1	Nam Kong 2	66	Attapeu	EDL
2	Xe Kaman 1	322	Attapeu	EDL
3	Nam Mang 1	64	Bolikhamxay	EDL
4	Nam Bang	36	Udomxay	EDL
5	Nam Phay	86	Xamsomboun	EDL
6	Nam Tha 1	168	Louangnamtha & Bokeo	EDL
7	Nam Lik 1	61	Vientiane	EDL, CIW (China)
8	Mekong-Sayaboury	1,285	Sayaboury & Louangprabang	EDL
9	Xepien-Xenamnoy	410	Attapeu & Champasack	EGAT, EDL
10	Nam Ngiep 1	290	Bolikhamxay	EGAT, EDL
11	Mekong-Donsahong	240	Champasack	EDL
12	Nam Park	150	Champasack	EDL
13	Nam Ou 1	180	Louangprabang	EDL
14	Nam Ou 3	210	Louangprabang	EDL
15	Nam Ou 4	132	Phongsaly	EDL
16	Nam Ou 7	210	Phongsaly	EDL
17	Nam Kong 1	160	Attapeu	EVN
18	Nam Theun 1	650	Bolikhamxay	EGAT, EDL

Planned				
No	**Name of hydropower project**	**Capacity (MW)**	**Location (Province)**	**Project developer**
1	Nam Xam 1 & 3	290	Houaphan	EDL
2	Nam Kong 3	45	Attapeu	EDL
3	Nam Far	130	Louangnamtha	EDL
4	Nam Phoun	50	Xayaboury	EDL
5	Nam Mo 2	120	Xiengkhoung	EVN, EDL
6	Xelanong 1	71	Savannakhet	EDL
7	Mekong-Pakbang	885	Udomxay	EGAT, EDL
8	Mekong-Sanakham	660	Xayaboury	EGAT, EDL
9	Mekong-Phu Ngoy	651	Champasack	EGAT, EDL
10	Xe Katam	61	Champasack	EDL
11	Xe Kaman 4	80	Xekong	EVN
12	Nam Bark 1	163	Xaysomboun	EDL
13	Nam Lang	50	Phongsaly	EVN, EDL
14	Nam Ang-Tatbang	40	Savannakhet	EDL
15	Nam Phuon	52	Xaysomboun	EDL
16	Nam Neun 1 & 3	184	Houaphan	EVN, EDL
17	Nam Park 1,2 & 3	96	Udomxay	EDL
18	Nam Mo 1 (Nam Gun)	60	Xiengkhoung	EDL
19	Nam Emoon 3, 4 & 5	148	Xekong	EDL
20	Xe Pone 3	47	Saravan	EDL
21	Xe Kong downstream A	76	Attapeu	EDL
22	Nam Pui 1	60	Xayaboury	EDL
23	Nam Seuang	138	Louangprabang	EDL
24	Xe Lanong 2	50	Saravan	EDL
25	Nam Xam 4	150	Houaphan	EDL
26	Tat Sakhouy	30	Savannakhet	EDL
27	Nam Nga	110	Louangprabang	EDL
28	Xe Nuea	53	Khammoun	EDL
29	Nam Bark 2	45	Vientiane	EDL
30	Mekong-Paklay	1,320	Xayaboury	EGAT, EDL
31	Mekong-Louangprabang	1,410	Louangprabang	EVN, EDL
32	Mekong-Ban Koum	1,872	Champasack	EGAT, EDL
33	Nam Ngiep-Meangmai	38	Bolokhamxay	EDL
34	Xe Kong downstream B	50	Attapeu	EVN, EDL
35	Xe Tanuon	30	Savannakhet	EDL
36	Xe Lanong 3	100	Savannakhet	EDL
37	Nam Emoon	70	Sekong	EDL
38	Nam Muon (Ban Vangdeua)	60	Bolikhamxay	EDL
39	Nam Feung	28	Vientiane	EDL
40	Nam Khan 4	47	Louangprabang	EDL
41	Xepien-Houaysoy	100	Attapeu	EDL
42	Nam Mo 1 (Nam Maylee)	55	Xiengkhoung	EDL
43	Nam Ngum 4	220	Xiengkhoung	EVN, EDL
44	Nam Muon	124	Bolikhamxay	EDL
45	Xe Kong 5	330	Xekong	EGAT, EDL
46	Xe Kong 3A & 3B	205	Xekong	-
47	Houay La Ngae	60	Xekong	EDL
48	Nam Ngum (Xayaboury)	70	Xayaboury	EDL
49	Nam Ma 1, 2 & 3	149	Houaphan	China
50	Xe Kong 4	300	Xekong	-
51	Houay Palay	26	Champasack	EDL
52	Nam Tha 2	41	Louangprabang	EDL
53	Nam Mang upstream	50	Xaysomboun	EDL
54	Pak Ngum	84	Vientiane Capital	EDL

55	Nam Chae 2	50	Xaysomboun	EDL
56	Nam Bee 1, 2 & 3	135	Xekong	EDL
57	Nam Thuen 4	41	Bolikhamxay	EDL
58	Xe Kong 4A & 4B	332	Xekong	EDL
59	Nam Ngon 1 & 2	50	Bolikhamxay	EDL
60	Nam Hong	30	Bolikhamxay	EDL
61	Xe Bangfai 1	50	Savannakhet & Khammoun	EDL

Source: the data are taken from annual report of the Department of Energy Business in 2017 (DEB, 2017)



Map 4.1 Location of Hydropower Projects in Laos

Source: Drawn by Olivier Rey-Lescure, Cartographer, Faculty of Science, University of Newcastle.

Currently, the GoL has a series of Memorandums of Understanding (MOU) with the Governments of Vietnam, Thailand and Cambodia respectively, to supply 7,000 megawatts[10] (MW) of electricity to Thailand, 5,000 (MW) to Vietnam and 1,500 (MW) to Cambodia by 2020 (Phomsoupha, 2009; Smits, 2015). Contracts of this nature have seen the volume of investment projects in Laos increase significantly with the OECD suggesting that the volume of hydropower generated by Laos is "close to the international average" (OECD, 2013:8). In 2012, Lao PDR's hydropower output increased by 29 percent which represented the equivalent of 13.8 billion kilowatt hours or its ability to supply 30 percent of its own domestic needs and 70 percent of demand from its neighbours Thailand, Vietnam and China (OECD, 2013:10).

Furthermore, Laos is seeking to expand its hydroelectricity markets beyond Cambodia, Thailand and Vietnam in the near future. At a conference on 'Initiatives for the Future of Great Rivers' held in France in July 2016, the Laotian Vice Minister of the Ministry of Energy and Mines announced that Laos would be able to generate a total of 20,000 MW of electricity by 2030 and of this amount, more than two-thirds of the electricity (or about 75 percent), would be exported to other countries in Southeast Asia including the existing markets of Vietnam and Thailand and to new markets in the region such as Myanmar, Malaysia and Singapore (Viravong, 2016). It was also reported at the 34th ASEAN Ministers of Energy Meeting (AMEM) held in Myanmar in 2016, that the ministers all agreed to strengthen cooperation to integrate energy infrastructure and markets, with the

[10] Megawatts (MWs) are used to measure the output of a power plant or the amount of electricity required by an electrical appliance. One Megawatt = 1,000 kilowatts = 1,000,000 watts. A typical American home uses about 7,200 kilowatt-hour of electricity a year.

aim of sharing the benefits from the region's renewable energy richness (Vaenkeo, 2016; Vientiane Times, 2016).[11]

One of the means through which Lao PDR has been able to attract increased FDI for its hydropower operations is via overly generous benefits associated with the 'Law on Investment Promotion'. Under this policy, foreign investors in Laos receive benefits through shortened approval processes for investment projects, longer periods of income tax exemption, and negotiable incentives for land and project concessions on a case-by-case basis (Gunawardana & Sisombat, 2008; National Assembly, 2009a; Perera, 2011; Singhalath, 2012).

As illustrated in Articles 49 to 55 of the existing 'Law on Investment Promotion' in Laos, the GoL offers income tax exemptions of up to 10 years and land concession exemptions of up to 15 years as per investment type and location (National Assembly, 2009a). In the case of hydropower projects specifically, as Perera (2011:1) notes:

> the GoL offers free access to land (including reservoir areas); a waiver on land conversion fees (USD $15,000 per hectare); a reasonable tax holiday; a waiver on withholding taxes on net profit repatriated; a waiver or reduced rates on import duty for materials, equipment and supplies; unlimited employ of skilled and unskilled foreign labour; extended concession periods between 25 - 30 years.

Such is the appetite for investment in export-driven hydropower in Laos (especially in light of the above mentioned benefits), that the ten largest dams in Lao PDR are all being

[11] Many believe hydropower is a renewable energy source as it is part of the Earth's natural water cycle and is a non-carbon source of energy. This is a contested debate though with many environmentalists believing otherwise.

developed by foreign companies where the majority of shareholders are either located in neighbouring countries or in other foreign entities (See Table 4.2). While this might bode well in terms of the GoL meeting targets related to strong, stable macroeconomic growth and decreased the nation's poverty rate, improving issues such as food security and environmental sustainability remain of concern (OECD, 2013:6).

Critics of hydropower development suggest that "there is often a lack of political will to seriously consider the impacts" of continued industrial-scale development and that as such, the cumulative effects of transformations occurring in rural communities in particular, are overlooked in favour of the more palatable economic outcomes (Baird & Barney, 2017:2; see also Beck et al., 2012). These concerns are outlined further below in section 4.5.2.

4.5.2 Challenges, criticisms and consequences of Hydropower

As mentioned above, the rapid expansion of hydropower projects throughout Laos is seen by the government and those financing and building these mega-structures, as a great achievement in terms of economic development and progress. The impacts of such structures on the physical and ecological environment, and on the livelihoods of rural communities, however, are often destructive, long-lasting and frequently met with resistance; as a result, they have been extensively critiqued over time (e.g. World Commission on Dams, 2000; Lessard & Hayes, 2003; Molle et al., 2009; Hall et al., 2011; Beck et al., 2012; Sayatham & Suhardiman, 2015; Baird & Barney, 2017).

Table 4.2 Top 10 largest hydropower projects in Laos

No	Name of project	Capacity (MW)	Location	Cost/Financers	Shareholders
1	Mekong-Sayaboury	1,285	Sayaboury Louangprabang	US $ 3.8 billion Siam Commercial Bank Kasikorn Bank Bangkok Bank Krungthai Bank TISCO EXIM Bank of Thailand	EGAT (Thailand) **80%** EDL (Laos) **20%**
2	Nam Ou 1 2 3 4 5 6 7	180 120 210 132 240 180 210 1,373	Phongsaly Louangprabang	US $ 2.8 billion	Sinohydro (China) **85%** EDL (Laos) **15%**
3	Nam Theun 2	1,075	Khammoun Bolikhamxay	US $ 1.45 billion World Bank Group ADB European Investment Bank Nordic Investment Bank	EDF (France) **40%** EGCO (Thailand) **30%** GoL **25%**
4	Nam Ngum 2	615	Vientiane	US $ 832 million Krungthai Bank TMB Bank Siam City Bank International Banks	EDL (Laos) **25%** Ch. Kangchang (Thailand) **28.5%** Rachaburi (Thailand) **25%** Bangkok Expressway PCL **12.5%** Others **9%**
5	Nam Theun-Hinboun	500	Bolikhamxay Khammoun	US $ 270 million ADB provided a loan of $ 60 million to GoL	EDL (Laos) **60%** MDX Lao Public Company Ltd **20%** Nordic Hydropower AB **20%**
6	Xepien-Xenamnoy	410	Attapeu Champasack	US $ 1.02 billion	SK Engineering & Construction (Sth Korea) **24%** Korea Western Power **25%** REGH (Thailand) **25%** LHSE (Laos) **26%**
7	Xe Kaman 1	322	Attapeu	US $ 441 million	LVJSC (Vietnam) **85%** EDL (Laos) **15%**
8	Nam Ngiep 1	290	Bolikhamxay	US $ 0.9 billion ADB provided loans	KPIC Netherlands BV **45%** EGAT (Thailand) **30%** LHSE (Laos) **25%**
9	Xe Kaman 3	250	Xekong	US $ 273 million State Bank of Vietnam	Viet-Laos Power Company **85%** EDL (Laos) **15%**
10	Mekong-Don Sahong	240	Champasack	US $ 500 million Mega First Corporation Berhad (Malaysia)	Ground Roses Ltd (Cambodia) **79%** EDL (Laos) **20%** Silver Acreage Ltd (Cambodia) **1%**

Source: Compiled by the author.
Note: Highlighted projects are specifically mentioned in this and subsequent chapters.

Impacts can obviously occur at all stages of the development process, during the construction and operation phases of hydropower projects and in upstream (i.e. reservoirs) and downstream areas. They are most obvious when communities need to be resettled (much of which is involuntary) as this can often mean a change to livelihood and livelihood assets such as a loss of agricultural and/or residential land, and a loss of cultural, aesthetic and recreational values often associated with the rivers along which many people live (Sayatham & Suhardiman, 2015). Some of the social and environmental impacts associated with hydropower development are discussed below as well as their economic implications. It is important to note, however, that these impacts are inter-related rather than stand-alone and as such, are perhaps better thought of as consequences or associated outcomes of hydropower development.

The first environmental consequence concerns forests and logging. In Laos, 70 percent of the population are still rurally based, and as such, are heavily reliant on forest land and fisheries resources. It is important to note, therefore, that it is estimated that approximately 13,100 hectares of forests per year are lost to the development of hydropower projects (Thomas, 2015). For example, in the construction of the Nam Theun 2 Hydropower Project's reservoirs, more than 4,500 hectares of land and forests were directly destroyed (NTPC, 2005; see Table 4.2). Likewise, the construction and operation of the Xekaman 1 Hydropower Project in Attapeu province also required the clearing of native forests (valuable standing timber) which covered in total 2,220,000 cubic metres of land (IRN, 2008; see Table 4.2). Usually, the forests to be inundated by hydropower reservoirs are logged by the government through use of contractors and the timber is made commercially available to local and international markets to generate revenue. Lately, However, there are suggestions that logging operations at most hydropower reservoirs in

Laos have been associated with illegal logging, often by foreign hydropower investors/developers themselves (IRN, 2008; Smirnov, 2015). Facilitating this, is the fact that logging in some regions where hydropower projects are to be located, is started even before the feasibility studies and EIA of a project have been completed and the areas and levels to be inundated identified (Smirnov, 2015; Thomas, 2015).

These activities have raised serious questions regarding the hidden purposes of investments by some hydropower companies in Laos, i.e. are these foreign investors seeking lucrative profits from hydropower exploitation or logging activities, or both (UNDP, 2007; IRN, 2008; Smirnov, 2015; Thomas, 2015). The answer to these questions is important as there are different laws and approvals needed depending on whether a company is undertaking a hydropower project or a plantation/logging project. Often when logging is operated by hydropower investors, instead of it only taking place in designated and approved reservoir areas, it can also occur inside the prohibited watershed areas of their proposed hydropower projects (IRN, 2008). Forests, and in many cases, the National Protected and Conservation Areas (NPCA) in Laos, are not merely affected by the building of dam reservoirs, but also by the other associated activities of hydropower development such as the building of access roads and the placement of power transmission lines (IRN 2008; Thomas 2015).

In an effort to bring a halt to illegal activities of this nature, in May 2016, the Prime Minister issued Order No: 15 on ‘Enhancing Strictness on the Management and Inspection of Timber Exploitation, Timber Movement and Timber Business’ (PMO, 2016). This Order was designed to empower relevant agencies and local authorities at all levels to increase attention and accountability by taking actions according to the law and

regulations in regard to timber management, timber exploitation, and timber movement across the country. In addition, the Order also bars the transit of illegal timbers and forestry products from overseas to transit through Lao PDR territory to a third country (PMO, 2016).

A second environmental consequence also associated with the construction and operation of hydropower is the significant negative impacts on the physical and biological environment. Apart from the massive destruction of forests as discussed above, hydropower projects can have adverse impacts on aquatic biodiversity, riverine eco-systems and water quality both upstream and downstream (Lebel et al., 2005; Pearse-Smith, 2012). Problems occurring upstream can include: water pollution (resulting from a lack of oxygen and decomposition of death animals in the water); dead or dying vegetation (often left over from logging); and agricultural land loss and/or degradation due to inundation and salination (Molle et al., 2009; Beck et al., 2012; Hening et al., 2013). This can obviously also have significant flow-on effects to human health. In addition, poor water quality in reservoirs and rapid change in river flow can destroy instream ecosystems and fish species. Shoemaker (1998) for example, reported that fish catch in rivers downstream of the Nam Theun 2 Dam would decrease by between 30 to 90 percent after the dam started operation. Globally, it is suggested that hydropower dams lead to extinction of fish species in their vicinity by up to 60 percent (Baran & Myschowoda, 2009).

One of the main reasons for this is that hydropower plants always have dams built across rivers which become physical barriers stopping upstream fish migration and altering breeding cycles (Bakker, 1999; Lebel et al., 2005; Kondolf et al., 2014). The presence of

hydropower dams in the Amazon Basin, for example, blocked migration of several species of catfish, which resulted in a decline in downstream catches by up to 70 percent (Bergkamp et al., 2000). It is well documented that hydropower dams also prevent natural flows of nutrient-rich sediments downstream which have significant effects on aquatic species, declines in fish population and erosion of riverine ecosystems (Molle et al., 2009; Kondolf et al., 2014). Overall, considering that a third of the human population in the Mekong Basin more generally are involved in fishing, (i.e. with fish comprising 40–80% of people's daily protein intake, and non-fish aquatic organisms such as crabs, shrimp, clams, and snails contributing an additional five percent), the loss of or damage to fisheries can lead not only to food insecurity but also to large economic losses to household incomes (Cronin & Hamlin, 2010; Beck et al., 2012).

A third consequence of the construction of hydropower is the direct effect it has on people who live upstream in the reservoirs of projects. It is usually, these people who are often required to be resettled away from their traditional villages. For example, the Nam Thuen 2 Hydropower Project displaced more than 6,000 people who lived in the project's reservoir areas (Molle et al., 2009). The Nam Ngum 2 Hydropower Project (located in Vientiane province; see Table 4.2) also resettled 17 villages comprising of more than 6,000 affected people from one district to another which was situated 100kms away from their customary homelands (Sengkham, 2007).

Furthermore, hydropower plants also create adverse consequences for rural villagers who are dependent on river systems downstream for their livelihoods. A recent study conducted by a group of eminent global freshwater experts showed that about 472 million people worldwide have been negatively affected by the downstream impacts of large

dams (Richter et al., 2010). These people are often exposed to difficult changes to their livelihoods as a result of the rapid alteration of natural hydrologic regimes as well as the water quantity and quality released from the dams. For example in Laos, the Nam Ngiep 1 Hydropower Project (located in Bolikhamxay province see Table 4.2) had to relocate 6 villages in the project's reservoir area and also indirectly affected more than 20 villages downstream as well as the nearby rivers (Nam Ngiep 1 Power Company, 2014). Problems experienced by communities downstream can include insufficient water for paddy fields and river bank gardens during dry seasons, but also frequent flooding during wet seasons. In many cases, during the wet season, the rivers downstream have too much water and their strong currents lead to soil erosion which can wash away river bank gardens (IRN, 2004; Jonsson, 2008; Molle et al., 2009; Foran et al., 2010).

In summary, while hydropower dams can contribute to national development with "some benefits reaching cities and industrial zones far away from a hydropower project", in general, rural communities in the vicinity of a dam very rarely gain from its construction (Sparkes, 2014:55). The World Commission on Dams in 2000 highlighted this, reporting that the global population displaced by dams was estimated at about 40 million people (WCD, 2000). It is worth noting that this estimation was before construction of the Three Gorges Dam in China (the world's largest dam) which resettled almost two million people (Morimoto & Hope, 2004). Since that time, the Swiss-based 'Internal Displacement Monitoring Centre' (IDMC) suggested in 2017 that globally, an estimated 80 million people had been further displaced by hydropower dam projects worldwide.

Socially, the problem, that exists, is not just that large numbers of people have been displaced, but that they have been further impoverished by their displacement. As Cernea

(2004) poignantly remarks, the vast majority of people affected by hydropower development were poor even before their displacement, but after it, in many cases, they were newly impoverished by the resettlement process. As the IDMC (2017) suggests, if development is to be truly people-centred rather than just focused on growth and 'trade offs', it must ensure that the displaced people livelihoods are not left behind in the pursuit of its goals. In Laos, this remains a very important message as it is "dams that tend to displace more people than any other type of development project" (IDCM, 2017:3).

4.6 Conclusion

As indicated throughout this background chapter, the government of Laos, on the advice of many external donors, IDAs and associated stakeholders, has worked hard to grow its economy and address issues such as poverty reduction. For over four decades, it has been establishing itself as a regional power house in terms of its willingness to embrace market mechanisms and allow foreign direct investment in its abundant natural resources. It has heavily promoted its position on the Mekong River as ideal for hydropower development and this strategy has been met with enthusiasm. So much so that today Laos finds itself inundated by hydropower projects in every province of the country with 22 dams already in operation, 18 under construction and another 61 at the financial and planning stages (Department of Energy Business, 2017). The question that remains though, can development at this scale ever be truly sustainable and if so, how is this to be achieved?

In 1999, Lao PDR introduced an Environmental Protection Law as a framework for the sustainable management of its natural resources and in 2000, it introduced an EIA Regulation to help facilitate this and to work towards sustainable development goals. These have been further upgraded over time (as will be discussed in Chapter 5). While

the establishment of an EIA system is essential for the reduction and mitigation of anticipated impacts from development projects, the degree to which it can effectively be used to promote sustainability is under increased scrutiny (Morgan, 2012; Loomis & Dziedzic, 2018). As Wayakone and Makoto (2012:1655) suggest "the challenges of EIA are political rather than technical" and if EIAs are to become more than just a ritual "changes in the attitudes and behaviour of political leaders and public officials will be necessary". This is particularly the case in Laos in regards to its hydropower operations and associated EIAs which Campbell et al. (2015:105) suggest currently resemble "merely a donor-funded environmental management exercise".

In terms of achieving sustainable outcomes from development projects, it is essential that the GoL establishes effective legal, institutional and procedural processes that support the EIA system in place because as the UNDP (2007) notes, "it is absolutely impossible to construct and operate a hydropower project without adverse environmental impacts". To ensure these adverse environmental and social impacts are minimized as much as they can be, the EIA system in Laos must be robust and efficient. Chapter 5 begins an examination of the legal frameworks in place to support EIA in Laos today. Without an effective legal system in place, then not only is operationalizing an EIA system and managing impacts from hydropower development impossible, but so too, achieving the goal of sustainable development. Chapter 6 then addresses the institutional arrangements for supporting EIA implementation on the ground and Chapter 7 investigates the procedures related to the operation of EIA in Laos.

CHAPTER FIVE: LEGAL CONTEXT

5.1 Introduction

As noted in Chapter 2, the effectiveness of an EIA system depends initially on its legal framework, including the laws, regulations, instructions and guidelines by which it is operationalized. This chapter thus begins with an overview of the current legislative arrangements for the EIA system in Laos. It then moves on to analyse and discuss the strengths and weaknesses of the existing EIA legal framework. The first part of this discussion is based on the main findings obtained from the criteria-based evaluation, which was carried out via a desktop investigation of the policies, laws, decrees, regulations, instructions and guidelines related to the implementation of EIA in Laos. The second part of the discussion then focuses on the practice-based evaluation by drawing on the insights gained from the interviews with research participants who work in the EIA arena. This section of the chapter examines how the overall EIA legal framework works in practice (with subsequent chapters considering how the institutional arrangements and then the EIA procedures work in practice).

5.2 Legal Frameworks for EIA in Laos

In Laos, a legal framework for protecting the environment was initiated when the first Constitution of the Lao PDR was approved by the National Assembly in August 1991. Article 17 of the 1991 Constitution states that “all organizations and citizens must protect the environment and natural resources, including land, underground, forests, fauna, water resources and atmosphere” (National Assembly, 1991). However, this commitment was not acted upon until April 1999 when the Environmental Protection Law (EPL) was passed by the National Assembly. Article 8 of the 1999 EPL required that all development

projects and activities across the nation that may have significant impacts on the environment needed to be approved through an EIA system, which at that time did not exist (National Assembly, 1999). As such, in 2000, an EIA Regulation was introduced which represented a milestone in the history of Lao PDR. In the subsequent years, this framework has been updated in response to the fast-paced development occurring in the country and to address the increasingly complicated problems associated with development activities. The current legal framework for the EIA system in Laos is outlined in Figure 5.1 and each element of this framework is briefly discussed below.

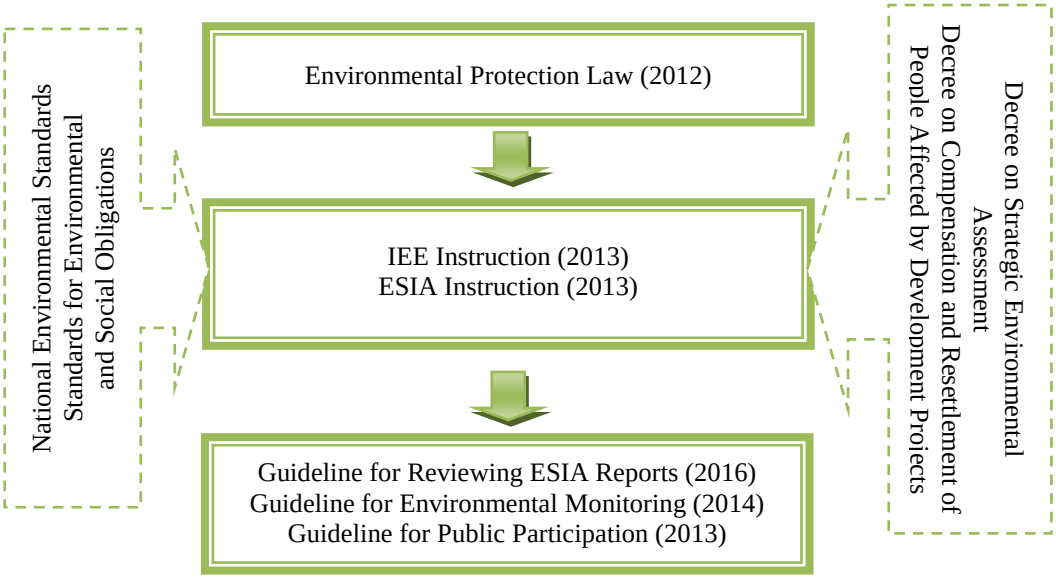


Figure 5.1 Current legal framework for EIA in Laos

Source: Compiled by the researcher.
Note: The Guideline for Reviewing ESIA Reports (2016) was preceded by the Guideline for Reviewing EIA Reports (2011).

The Environmental Protection Law (EPL): The first Environmental Protection Law (EPL) was approved by the National Assembly in 1999. Its key objectives were to conserve and facilitate the sustainable use of natural resources. The original 1999 EPL

was revised in 2012. Thirty-six of the existing forty-one articles were improved by clarifying terms and meanings, and an additional forty-eight articles were added, including those that clarified the roles and responsibilities of those assessing and applying EIA. This was seen as a way to strengthen environmental protection in the face of increased development particularly in the areas of mining and hydropower.

The principles adopted for the 2012 EPL state that all individuals and organizations residing in Lao PDR have an obligation to protect the environment. Article 6 for example, stipulates that natural resources, raw materials and energy shall be used in a prudent manner to ensure sustainable development and to avoid or minimize impacts (National Assembly, 2012a & 2012b). Under the new EPL it is stated that all parties or people who cause environmental and social impacts must be responsible for that damage. Realistically, however, this aspect of the EPL remains under-utilized as there is currently no enforcement regime in place to ensure that those who cause damage are penalized. What this glaring omission suggests in fact is that the EPL provides very little by way of environmental 'protection' and essentially relies on developer's good will and ethical convictions to achieve its goals.

IEE and ESIA Instructions: The 2012 EPL also requires that all development projects and activities that may have potential effects on communities and the environment are subject to an Initial Environmental Examination (IEE) (Article 21) or an Environmental and Social Impact Assessment (ESIA) (Article 22). The IEE and ESIA Instructions were both introduced in December 2013. They are the most recent legal provisions for the EIA system in Laos. The IEE Instruction is applied to small development projects or the projects that are likely to have few impacts on communities and the environment

(Ministry of Natural Resources and Environment, 2013a). The ESIA Instruction is used with large development projects or with projects that have the potential to create substantial impacts on communities and the environment (MoNRE, 2013b). Like many developing countries, the operational procedures of the Laotian EIA system as stated in the IEE and ESIA Instructions consist of five main stages:

- Screening and scoping;
- Assessment of impacts and preparation of EIA documents;
- Review and approval of EIA documents;
- Implementation of mitigation measures and management plans; and
- Monitoring and reporting (MoNRE, 2013a; 2013b).

The screening step plays an important role, for at this initial stage in the EIA process, a checklist is used to determine whether a project is subject to an IEE or ESIA (see Chapter 7). The checklist comprises of five major types of development projects and sectors, namely: energy; agriculture and forestry; processing industries; infrastructure and service; and mineral resource extraction (see Appendix 2). These five major sectors together cover 88 different types of development projects that are subject to either an IEE or ESIA (MoNRE, 2013a; 2013b; 2013c). Table 5.1 indicates how the checklist determines whether projects in the energy sector are subject to IEE (Category 1) or ESIA (Category 2). This thesis focuses only on large-scale hydropower developments, and is therefore concerned with Category 2 projects, which are subject to ESIA. However, where relevant, reference is also made to IEE.

Table 5.1 Checklist for investment projects in the energy sector

Copyright material removed

Source: MoNRE, 2013d

Note: the data and information are translated from a Laotian version

The Guideline for Reviewing ESIA Reports:[12] Associated with the IEE and ESIA Instructions are a series of Guidelines. The first Guideline provides assistance for reviewing ESIA reports and ensuring that the reviews are of high quality. There are three main stages to reviewing ESIA reports, and each stage involves sub-procedures and checklists to help determine the quality of the ESIA report (MoNRE, 2011b). The first stage is called the 'Administrative Review' which aims to verify whether an ESIA report is complete, clearly presented, and whether it complies with administrative requirements

[12] The Guideline for Reviewing ESIA Reports (2016) was preceded by the Guideline for Reviewing EIA Reports (2011). In the interviews conducted in 2015 and 2016 participants variously referred to EIA Reports and/or ESIA Reports.

before proceeding to the next step of the review process (MoNRE, 2011b). At this stage, an incomplete ESIA report needs to be returned to the project developer for revision and is then resubmitted for reviewing.

The second stage is called the 'Technical Content Review' which aims to assess whether the technical information provided in the ESIA report and other sub-plans is appropriate, sufficient and adequate to support decision-making to approve or reject the development proposal (MoNRE, 2011b). Any deficiencies must be addressed before the final submission of the report to the review stage of the process. Again, at this stage, if the technical content of the ESIA report is inadequate, the report is returned to the project developer for revision and then resubmitted for additional review. The technical content review is the longest step in the review procedure as it requires careful consideration and summarizes the review outcomes from the evaluation criteria. It also involves gathering comments from relevant experts and stakeholders through various public consultation workshops (MoNRE, 2011b).

The third stage of the review is called the 'Project-Decision Review', and it focuses on the potential impacts of the development and whether it is economically, socially and environmentally sustainable. The Project-Decision Review considers more thoroughly both the ESIA report and any other sub-plan and views of stakeholders. More specifically, this stage of review focuses on:

- Whether sufficient environmental protection measures are in place for all identified significant impacts;
- Whether the environmental mitigation measures are likely to be implemented and if so, whether they are likely to be effective;

- Whether the implementation and effectiveness of the environmental management measures put in place will be monitored adequately;
- Whether there is a contingency plan for unanticipated impacts or an emergency response plan, in case of accidents (MoNRE, 2011b).

Overall, this review stage has to consider the sustainability of the development project. Projects that are deemed to be sustainable are given approval and issued with an 'Environmental Compliance Certificate' (ECC) (MoNRE, 2011b). The ECC is like a 'passport' for a developer. With this passport in hand, the developer can secure finance for the project. For large hydropower projects, finance usually comes from international banks (e.g. World Bank; ADB); and national level banks often located in neighbouring countries (e.g. EXIM Bank of Thailand; China Development Bank). The second important aspect of the ECC is that developers are then able to submit their proposals to the Ministry of Planning and Investment for final approval.

The Guideline for Environmental Monitoring (GEM): This second Guideline provides advice for monitoring environmental impacts of on-going development projects. It consists of three key steps: 1) preparation and planning for the instalment of a monitoring program; 2) implementation of the monitoring program (including site visits by government officials); and 3) reporting outcomes from official monitoring inspections and recommended actions to take place post-inspection (MoNRE, 2014). The monitoring program on the ground includes discussion and meetings with relevant local authorities before and after conducting onsite monitoring. These meetings determine what issues require inspection and any other problems found during the official monitoring. These are included in a written record of the event and also provide recommendations and advice

on how a project developer should address any concerns. For example, if a development project has caused or may cause serious impacts on the environment and local villages, the project developer will be informed that the problems need to be addressed within 90 days. If the problems have not been eradicated or at least diminished by the project developer within the first period of 90 days, a second warning will be issued which allows the project developer an additional 60 days to fix the problem (MoNRE, 2014). There is no advice or mechanism in the Guideline for authorities to use if the developer simply ignores the recommendations or fails to carry them out in an expedient manner. It is hoped that this will be rectified with the introduction in 2016 of the Standard for Environmental and Social Obligations (SESO) (see Table 5.2 and Section 5.3.4 for further discussion on this).

The Guideline for Public Participation: The third Guideline provides advice on the arrangements for and implementation of public participation in the EIA system. It defines public participation as a process of consultation and information dissemination about a specific development proposal in order to seek comments concerning benefits and perceived effects of the development proposal (MoNRE, 2013a; 2013b; 2013c). The Guideline lays out a table of contents that consists of six major sections and several sub-sections. Section two of the Guideline provides instructions on procedures and stages for public participation in the EIA system and section four details how public participation should be implemented during the information dissemination and consultation processes (MoNRE, 2013a; 2013b; 2013c). This is discussed further in Chapter 7.

Apart from the key EIA legal provisions mentioned above, there are also some other smaller policy documents that are associated with implementation of the EIA system. These policy documents are briefly summarized in Table 5.2.

Table 5.2 Other policy documents related to the EIA legal framework

Policy documents associated with EIA legal framework	Brief description of the policy documents
Decision on Strategic Environmental Assessment (DSEA) 2017	The DSEA is established to determine the principles and procedures for implementing Strategic Environmental Assessment (SEA). It aims to create a platform for all sectoral agencies (both at the central and local levels) to take account of environmental concerns in their policies, strategies and plans in order to avoid environmental impacts and to support sustainable socio-economic development (MoNRE, 2017).
Decree on Compensation and Resettlement of People Affected by Development Projects (DCR) 2016	The DCR defines the principles, rules and measures to compensate communities for impacts resulting from development projects or activities. It aims to provide a legal means to assure that project affected people are compensated and assisted to improve or maintain their pre-project incomes and living standards, and are not worse off than they would have been without the existence of the development project (Prime Minister's Office [PMO], 2016).
National Environmental Standards (NES) 2009	The NES establishes the standards for protecting the environment and controlling pollution sources in water, soil, air and in regards to noise. It determines the parameters and the amount or volume allowed in terms of the concentration, toxicity and/or vibration that are safe to human health, animals, biodiversity and other parts of the natural environment (Water Resources and Environment Agency [WREA], 2009).
Standard for Environmental and Social Obligations (SESO) 2016	SESO establishes specific environmental and social obligations for project developers to comply with in areas that are vaguely stated or excluded from the laws and regulations associated with EIA and environmental protection. It consists of four parts. First, the general application section covers several key aspects including commitments of the project developer and government, compliance with standards, the mandatory permit regime, impact monitoring and penalties. Second, the SESO contains some core measures such as water management, requirements for pre-construction, construction and operational phases, environmental monitoring and funding mechanisms. Third, the compensation and resettlement obligations (also related to the DCR, 2016) include social measures, a compensation and resettlement process, a detailed livelihood and income restoration plan and a detailed ethnic development plan. Finally, the Annexes provide detailed explanations, procedures and mechanisms to help enforce environmental and social obligations. The Annexes comprise of 8 Appendixes namely: definition, standards, budgets, penalties, government organizations on social matters, resettlement and compensation activities, budgets and timelines, an entitlement matrix and grievance redress mechanisms (MoNRE, 2016).

5.3 Criteria-based Evaluation

Although there are a set of common EIA procedures (e.g. screening, scoping and reporting), the way that an EIA system operates in a specific country is dependent upon its legal context. To operate effectively, an EIA system requires a robust and comprehensive legal framework. This section therefore evaluates five key elements of the legal framework established for the implementation of EIA in Laos by using the criteria adopted from Ahmad and Wood (2002) (see Table 5.3; also see Chapter 2). Each criteria in Table 5.3 is evaluated below in terms of its strengths and weaknesses.

Table 5.3 Evaluation criteria for EIA legal framework

Component	**Evaluation criteria**
Legal Context	1. Legal provisions for EIA 2. Legal provisions for appeal 3. Legal provisions for penalty 4. Legal specification of time limits for each EIA stage 5. Legal provisions for SEA

5.3.1 The legal provisions for EIA

As established earlier in this research, Laos is a relative newcomer to EIA in the Southeast Asia region. As discussed above, the country adopted its first EIA Regulation in 2000 which was formulated under Article 8 of the 1999 EPL. In early 2010, the EIA Regulation was updated to become the 'EIA Decree'. There were two important differences between the EIA Regulation and the EIA Decree. First, the Regulation was signed-off by the Minister of Environment; while the Decree was signed-off by the Prime Minister of Laos. The fact that the Decree was signed-off by the Prime Minister meant that the Decree was located at the highest level of decision-making and therefore sectoral ministries had to abide by the provisions of this Prime Ministerial Decree. The Decree was also more

comprehensive than the Regulation. The EIA procedures were specified in more detail (e.g. what had previously been referred to as ‘reviewing’ was broken down into the three stages discussed above in Section 5.2) and specific stages were added to the public participation component. Roles and responsibilities which had previously been spread across different sectoral ministries were all transferred to one responsible ministry, the Ministry of Natural Resources and Environment (MoNRE). These changes reflected a tightening of the EIA process in order to address the more complex environmental and social problems associated with an expansion in large-scale development activities in Laos. These changes also brought the EIA system into stronger alignment with international EIA ‘best-practice’.

For all the merits of the shift from a relatively weak EIA Regulation to a stronger EIA Decree, the Decree only lasted for a short period of time and in 2013, it was replaced by the IEE and ESIA Instructions (introduced above). Although this represented a ‘downgrading’ of the EIA legal framework from being a Prime Ministerial level Decree to being a Ministerial level Instruction, there are some promising elements associated with the change in the legal framework.

First, decision-making for Category 1 and Category 2 projects (see Table 5.1 above) has been separated so that provincial level authorities are responsible for IEE (Category 1), and MoNRE at the national scale is responsible for ESIA (Category 2). This separation has given the provincial level authorities an increased role in EIA decision-making, at a scale that is appropriate to their mandate and well-matched to the matters for which they have oversight. In the past, the EIA Decree only gave power to the Minister of Environment to make decisions on accepting and approving EIA documents (PMO,

2010). EIA authorities in provinces and districts played a subsidiary role, responding only to the requests of national level authorities and providing support to them (PMO, 2010). This unbalanced level of decision-making caused conflicts between the different EIA authorities at the national and provincial levels (and was the main reason why the IEE and ESIA Instructions were allocated to specific levels of government). In short, the new Instructions were developed to replace the previous EIA Decree because the EIA Decree had some limitations in this area and was seen as very difficult to implement on the ground.

In interviews, key informants commented on the renewed clarity that this shift from the Decree to the Instructions brought about. One interviewee, a senior official from the Department of Environmental and Social Impact Assessment (DESIA within MoNRE), said:

> The existing EIA legal framework provides much clearer roles and responsibilities for the stakeholders who are reviewing and making decisions on the IEE or ESIA documents. Also, the IEE and ESIA Instructions identify the roles and responsibilities of project developers and EIA authorities at the central, provincial and district levels, which is a very good thing. (Interviewee # GC-28)

Another respondent, a project coordinator from an international development agency also maintained the position that the IEE and ESIA Instructions are clearer than the previous EIA Decree. The interviewee said that:

> The IEE and ESIA Instructions are more advanced than the previous EIA Decree as they clearly separate and define the roles and responsibilities of MoNRE, the Province of Natural Resources and Environment (PoNRE), and the District of Natural Resources and Environment (DoNRE) - the main authorities that work on EIA. The previous system under the Decree was virtually unworkable. (Interview # I-14)

Overall, these more distinctly defined roles and responsibilities are seen as essential for the EIA system to operate effectively.

Second, the ESIA Instruction has been expanded to include Social Impact Assessment. The previous EIA Decree focused mainly on environmental impacts, although Social Management and Monitoring Plans (SMMP) were required for projects in which affected people had to be resettled. In contrast, the ESIA Instruction defines environmental and social impacts as fundamental elements of the EIA system. It is noteworthy that the very title was changed to an Environmental *and* Social Impact Assessment (ESIA) Instruction. Furthermore, throughout the ESIA Instruction, the term 'environmental and social impacts' is used repeatedly, reinforcing its level of importance (MoNRE, 2013b). This change also reflects a change in the law: the original 1999 EPL mentioned nothing about social impacts as a part of the EIA system, whereas the newer 2012 EPL defines environmental impacts as including the effects of human activities on the natural environment (Article 11) *and* communities (Article 10) (National Assembly, 2012a).

The third promising element is the change in language. In the previous EIA Decree, any written materials had to be in English, a language which was used by very few people in Laos, including those in government with responsibility for overseeing and implementing EIA. Under the present IEE and ESIA Instructions, the Laotian language is the 'currency'. This change has been appreciated by most local (i.e. Laotian) EIA practitioners and EIA officers at the different levels of government. As one interviewee from the EIA authority in Borlikhamxay province commented:

> In the past, the IEE and ESIA reports and other sub-plans were all written in the English language. We did not fully understand even the table of contents of the reports or the Environmental or Social Management and Monitoring Plans

> because we do not speak English. Although, we had a few young staff who could speak a little English, their English skills were not at the level that they could review or analyse the IEE or ESIA reports. (Interviewee # GP-03)

Another respondent from the EIA authority in Vientiane province directly involved in reviewing ESIA reports also said that:

> Before, we had big problems when it came to reviewing the EIA documents in English. But today, since the new IEE and ESIA Instructions were introduced, we have rejected all the EIA reports written in a foreign language. Now we only work on EIA documents that are written in Lao language. (Interview # GP-06)[13]

As these statements highlight, EIA officers previously had to review or read EIA reports and other EIA documents written in English—a language that they do not speak, nor understand well. Respondents noted that although this was an issue in the capital city for national-level officers, it was even more problematic at the provincial and district levels, particularly in the more remote areas. This shift from English to Laotian suggests that the quality of reviewing ESIA reports should have improved since the IEE and ESIA Instructions came into force, and as such, on this element alone, the current Instructions are recognized as more effective than the previous EIA Decree.

5.3.2 The legal provisions for appeal

The EIA legal framework in Laos excludes legal provisions for appeal by project developers and other stakeholders against final assessment decisions made. The exclusion of this legal provision is of concern with international scholars suggesting that a legal provision for appeal against final decisions should be included in a country's EIA legislation to increase acceptance of the decision by the general public and other

[13] In this quote, the participant refers to ESIA reports as EIA reports. This commonly occurred during interview when participants used the general term 'EIA report' to refer to what in the Laotian context are now strictly-speaking 'ESIA reports'.

stakeholders (El-Fadl & El-Fadel, 2004). In Laos, it could also help build trust in the role of authorities and increase the overall level of transparency.

Laos, however, is not the only country to not have a provision for appeal. Previous studies have found that a legal provision for appeal was not included in the EIA legal frameworks of many developing countries (Ahmad & Wood, 2002; El-Fadl & El-Fadel, 2004). For example, El-Fadl and El-Fadel (2004) assessed the EIA systems of 21 countries in the MENA and found that only four countries (Egypt, Jordan, Morocco and Qatar) have established the legal provision for appeal within their EIA systems. There are even issues in more developed countries. For example, Harvey and Clarke (2012:214) state that "mechanisms for appeal are generally weak in Australia". In Laos, it remains uncertain as to whether this aspect will be revised in the future or not.

5.3.3 The legal provisions for penalty

A number of authors, including Abracosa and Ortolano (1987), Norberry (1993), Briffett (1999), and Gunningham and Holley (2010) have argued that an EIA system works well when there is strong support of control mechanisms such as the legal provision for a penalty or penalty regime. The bottom line of a legal provision for penalty is to regulate and ensure that developers comply with the recommendations made in the EIA documents and are committed to implementing mitigation measures. In general, there is broad consensus amongst policy makers globally that higher penalties are necessary ingredients in "the regulatory mix" (Norberry, 1993:34). Wood and Coppell (1999) claim that a legal provision for penalty is an essential component for any EIA system as it substantially strengthens the power to enforce mitigation measures (i.e. environmental conditions) imposed by government on development projects. In Australia, the Victorian

Environmental Protection Authority acknowledged that a penalty mechanism or prosecution is a "very valuable tool" to ensure compliance (Norberry, 1993:32). Internationally, Momtaz and Kabir (2013) found that under stringent judicial control, for example, project developers tended to prepare better quality reports and comply more readily with the requirements of the EIA system as they were fearful of public litigation. In Laos, however, the legal provision for litigation or any such penalties does not exist within the current ESIA Instruction. However, the EPL does establish 'soft' penalty mechanisms which are very general provisions. Article 92 states that if an individual person, company or organization violates the EPL, the following penalty mechanisms are taken into consideration in respective order: informing, warning, recording, or fines, compensation or punishment (National Assembly, 2012a). Even though, the ESIA Instruction does not cover the legal provision for penalty, the GEM does provide some guidance for the first three mechanisms. First, if a developer or a development project causes serious impacts on the environment and communities, MoNRE will inform the project developer to address the impacts within 90 days (MoNRE, 2014). If the impacts have not been addressed within the first 90 days, MoNRE will issue a warning letter and allow the project developer to fix the problems within another additional 60 days (MoNRE, 2014). If the developer does not respond adequately to the warning then a 'recording' mechanism is used. This mechanism does not have a direct impact on the developer, but it will be taken into account when the government carries out project evaluations (either annually or every five years, depending on the size of the project).

For the last set of mechanisms (i.e. fines, compensation or punishment) there is no guidance (for example, there is no direction given about levels of fines that could be

applied or the types of punishment available). This limitation was also highlighted by interviewees. One said:

> I think the relevant government sectors are afraid of penalising the developers. For example, when you find out that something has not been carried out accordingly (and this is often the case), fines are not in place. So, it is very difficult for the government officials to fine developers or to fine the companies that are not following the policy and the rule of law in Laos. (Interview # I-29)

Another interviewee from an international firm that has been working with MoNRE to improve its legal frameworks and build its capacity also replied that:

> The EPL and the EIA Instruction do state that if project developers do not follow the law or do not enforce their commitments or obligations that they will be warned and fined. But, so far, MoNRE has not enforced any fines on developers who have violated the rule of law because no detailed mechanism is yet in place that provides details on: who plays a role to fine the wrong doers and how will the government fine those people? So, to be able to enforce the penalty scheme, MoNRE needs to have at its disposal a detailed mechanism, guideline, tools and human resources to ensure that the full penalty scheme can be enforced effectively, fairly and transparently. (Interview # EI-13)

This is discussed further in Chapter 7.

One point to note here though as some international interviewees did, is that Laos only had its very first Constitution in 1991 and as such, it is still very 'young' to the rule and enforcement of law. Given this, it is really not possible to compare it to developed countries that have been governed by the rule of law for over 200 years or more. As one respondent noted:

> At this moment in time, Laos is just at the stage of encouraging people to follow the laws rather than enforcing penalties or punishing wrong doers. Laos still uses an administrative mechanism to address problems or conflicts and therefore, we have seen many negotiations and exemptions occurring around project developments and developers. As a nation it wants to progress, so it

> does not want to turn away current or potential developers by being too strident. (Interview # GP-15)

One possibility for improvement in law enforcement more generally though, lies in Lao PDR's new membership to Association of Southeast Asian Nations (ASEAN) in 2015 and to the World Trade Organization (WTO) in 2016. According to these agreements, Laos will have to comply with the conditions and standards set by the ASEAN and the WTO, and this may have the spill over effect of increasing law enforcement in other areas, including EIA legislation and regulations.

5.3.4 Legal specification of time limits for each EIA stage

Many EIA scholars including Ahmad and Wood (2002) and El-Fadl & El-Fadel (2004) suggest that it is not only necessary to specify a time limit for completion of the different stages of the EIA process, but vital. In Laos, there are time limits for the two main stages of the EIA process and they apply differently for complex development projects such as hydropower. These time limits are shown in Table 5.4 (and this Table includes a comparison with time limits in other countries in the region).

First, the scoping process requires that the EIA authority (DESIA) reviews the Terms of Reference (ToR) for an ESIA and approves or rejects the ToR within 15 working days. In the case of a complex development proposal (i.e. one where relocation and compensation may be required or where the development is to cross the borders of different provinces), the period of review and approval of the ToR are extended to 20 working days (MoNRE, 2013b). Once the EIA authority has completed the scoping process, the developer conducts the assessment of environmental and social impacts and prepares the ESIA report. There is no time limit for this stage of the process (presumably

the assumption is that the developer is motivated to complete this step as quickly as possible in order to advance the project and avoid unnecessary administrative delays). Second, there is time limit for the process of reviewing ESIA reports and other sub-plans. As outlined in Section 5.2, this process involves three steps: the Administrative Review; the Technical Content Review; and the Project-Decision Review. Each of these steps requires a different amount of time as shown in Table 5.4.

Table 5.4 Time limit requirement for EIA stages in different countries

EIA stages	Laos		Vietnam	Thailand	Indonesia
	Normal	Complex			
Scoping (review of ToR)	15 WD*	20 WD	None	None	30 WD
EIA reviewing: (1) Administrative review (2) Technical review	10 WD 95 WD	20 WD 120 WD	45 days	15 days a) 15 days b) 45 days	75 WD for both
Decision-making	40 WD	65 WD	20 days	30 days	5 WD
Appeal against decision-making	None	None	None	90 days	None
Public comment: (1) Scoping process (2) EIA review process	None	None	None	None	 10WD 10 WD

Source: Compiled by researcher from MoNRE, 2013b; Sudijant, 2012; Wangwongwatan et al., 2015; Nghiem, 2015.

Note: WD = working days

As shown in Table 5.4, the Technical Content Review is the longest of all the three review stages as it requires detailed evaluation and gathers comments from other relevant sectoral agencies. The time spent gathering this information is meant to hasten the final Project-Decision Review, though as Table 5.4 indicates, in the case of Laos, final decision-making is still a lengthy process when compared to other countries.

Despite time limits being set within Laotian legal frameworks, some interviewees believed that the EIA scoping and reviewing EIA documents of projects had not be

conducted within the specified time limits. Two interviewees from an EIA consulting firm commented that:

> The EIA Instruction looks good on paper and has detailed information, but I am concerned that DESIA does not properly follow the EIA Instruction. As happened before under the old Decree, DESIA still does not review the EIA reports in a timely manner. Also, DESIA does not often provide feedback or responses to developers judiciously. Even when the developers propose the organization of a public consultation meeting or other discussion with DESIA, they do not get well-timed responses. (Interview # EL-37)

> I do understand that some projects have significant impacts. The EIA authority needs more time to review, discuss and find appropriate mitigation measures. But, if the project proposal has only minor impacts and it will create benefits to local people and the country, the EIA authority should not waste so much time working on tiny issues. From personal experience, I can say that we have had too many meetings that were not really needed and the meetings often provided useless outcomes. They were a waste of time and money. Sometimes, even after a consultation meeting finished two months ago, the developer and the EIA consultant still have not received the minutes from the meeting or comments from the responsible authority. This really is not good enough. (Interview # EL-40)

The reason for this is hinted at by another interviewee who is an employee of a hydropower company. He responded that:

> The capacity of the staff who review the EIA reports is lacking as they have too many EIA reports to review at the same time and not enough qualified staff. This often delays the final decision-making process to approve the EIA documents by many months. (Interview # H-44)

The issue of staffing will be discussed in more detail in Chapters 6 and 7.

5.3.5 The legal provision for SEA

Strategic Environmental Assessment (SEA) is a system that was introduced in the 1990s to extend the application of the EIA system (Sadler & Verheem, 1996; Modak & Biswas,

1999; Eccleston, 2011). As mentioned earlier in Chapter 1, whereas, EIA is applied at a project level, the SEA system officially takes environmental issues into account at the policy, plan and program levels (Therivel, 2010; Glasson et al., 2012; Elliott, 2014). As Elliott (2014) suggests, the intention of an EIA system is to assess impacts of a specific project whereas a SEA system focuses on evaluating broader picture impacts associated with strategic planning.

By its nature, working at the strategic level, SEA systems are seen to play a significant role in addressing concerns about cumulative impacts of several development projects at a time, some authors suggesting that long-term, SEA is a better system than the EIA system, but currently in many countries its use remains limited (see Therivel, 2010; Glasson et al., 2012; Harvey & Clarke, 2012; Elliott, 2014). The main reason for interest in SEA, however, is because as the World Bank (2013) notes "if sustainability goals are to be reached, efforts need to go beyond [mere] compliance with standards and mitigation of adverse impacts". What is required, is a "focus on policies that promote integration of environmental, sustainability, and climate change considerations into development strategies and sector reform"; thus, SEA is being promoted by the World Bank (2013) as a key tool for achieving sustainable development.

In Laos, this research found that a legal provision for SEA has been recently established. It is governed by the revised EPL (National Assembly, 2012a), and there is both a specific Decision for SEA and a final draft of Technical Guideline for Implementation of SEA (MoNRE, 2017; MoNRE, 2018). Article 19 of the 2012 EPL defines SEA as essential for ensuring sustainable development of six key development sectors (i.e. energy and mines; agriculture and forestry; industry and commerce; public work and transportation; post,

telecom and communication; and information, culture and tourism) (National Assembly, 2012a). The legal framework for SEA requires not only taking the policies, strategies, plans and programs of the six key development sectors into account, but also including the impacts associated with climate change. More importantly, the legal provision for SEA stresses a necessary requirement of public participation to be included in the system (National Assembly, 2012a; MoNRE, 2017). Despite, the existence of SEA in the legal framework of Laos, like many countries elsewhere, it has yet to be implemented, so whether it remains a legal instrument on paper or is to become operationalized over time, remains unknown at this time.

5.3.6 Concluding remarks on criteria evaluation

As discussed throughout this Chapter, 'on paper' the EIA legal framework in the context of Laos is quite sound and meets some of the major criteria established by other researchers in Chapter 2. A summary of how the EIA legal framework in Laos performs is shown in Table 5.5 below.

Table 5.5 Level of effectiveness of the legal context

Component	Evaluation criteria	Level of effectiveness	
		Evaluation	Comment
Legal Context	1. Legal provisions for EIA	√√	Existence of a framework enabling law and EIA Instruction and specific guidelines
	2. Legal provisions for appeal	--	Non-existent
	3. Legal provisions for penalty	√	Soft penalty regime only through administrative mechanism
	4. Legal provisions for time limit	√	Existing but does not cover all EIA procedures
	5. Legal provisions for SEA	?	Existing but newly established and yet to be implemented

Note: Legend for level of effectiveness: [√√] Good; [√] Fair; [x] Deficient; [--] Non-existent; [?] Unsure.

While Laos is obviously still working towards a more robust EIA system, the fact that it has tried to improve on some of the more glaring flaws in its policies and procedures is a

good start. Criticism of Laos, however, often suggests that there are marked gaps between its policy performance and the practice on the ground (see also Wayakone & Makoto, 2012; Campbell et al., 2015). As such, Section 5.4 of this chapter evaluates the practical performance of the EIA legal framework by drawing principally on the interviews.

5.4 Practical Performance Evaluation

The effectiveness of an EIA system is determined by a number factors, including its practical performance. As Fuller (1999) has suggested, the existence of legislation and regulations for EIA does not always mean they are effectively implemented or followed through in practice. This section, therefore, explores how effective the practical performance of the EIA legal framework is on the ground. This is particularly important given the fast pace at which hydropower development is occurring throughout Laos. This evaluation of the legal framework's effectiveness also takes into account the perceptions of key stakeholders gained through interviews. Overall, the evaluation highlights how EIA can become more than a technical tool once its functions become politicized.

5.4.1 The EIA system: as an approval tool

As highlighted above, on paper the EIA legal framework in Laos generally provides a sound tool for decision-makers to take into account environmental and social implications of hydropower development. In practice, however, this research finds that the legal framework has not been used to assist decision makers with making better decisions in regards to hydropower projects. Rather, it is being used as a technical, almost 'tick the box' exercise, to speed up the approvals process. As such, a genuine engagement with the fundamental purposes of EIA is missing. As one interviewee from an international development agency commented:

> The EIA legal framework in Laos is being applied in practice as an approval tool to pursue political interests and to facilitate the fast-tracking of development rather than to assist development projects in achieving sustainability. (Interviewee # I-29)

Another respondent, a senior government official working in the energy sector also acknowledged that the legal framework in Laos has not played its role as intended to inform decision makers about making better decisions on proposed developments. The respondent noted that:

> I have observed that we do not carefully consider both the benefits and impacts of hydropower development projects. Sometimes, decision-making to accept EIA reports or approve development projects is made too quickly and without considering all dimensional impacts and benefits. In many cases, the government will sign off on the concession agreements with the project developers without considering anything, except the fact that Laos will have more hydropower plants. (Interview # GC-31)

Indeed, the GoL has raised few concerns over the environmental and social impacts that may be caused by rapidly approved development projects. The government's intention is to speed up the approval process as much as possible so as to appear attractive to investors. Some participants in this research described this approval process as a process for 'investment competition' and 'securing development projects from foreign investors'. They suggest that once foreign investors have landed in the country, the GoL does not want the investors to walk away, so from the government's point of view, the *quality* of development projects is not a major concern, rather, the *quantity* of development projects is the priority. As noted by one respondent from a large international development agency:

> The government of Laos does not currently consider the quality of development projects. They mainly focus on the number of development projects that have been invested in throughout the country or the number of approvals given in a year as their major achievements. It' s the statistics that matter here. (Interview # I-35)

Furthermore, some interviewees candidly suggested that the Laotian EIA system is merely being practiced as a regulatory requirement for funding approval. As suggested in Chapter 4, approval through an EIA system is a requirement of a number of international financial institutions such as the World Bank and the ADB. Thus, any development projects in Laos that seek financial loans or funding from these banks need approval of their EIA reports and an Environmental Certificate of Compliance (ECC) (World Bank, 1999; ADB, 2009). Respondents in this research indicated that many project developers in Laos view the EIA legal framework as important only because it provides them with the essential ECC (the 'passport') that they need to meet the minimum environmental condition required by lenders. One respondent who works with a hydropower development company commented that:

> Many political leaders and project developers in Laos think that EIA documents are not important. They only need the ECC to meet the conditions required by the banks. As such, we have seen that both the government and developers often work together to speed up the process of EIA approval to ensure that the project developers can have access to financial loans from financial institutions as soon as possible. (Interview # H-44)

One interviewee who has been involved in assessing and preparing the EIA reports for project developers for more than a decade said that:

> In Laos, relevant sectors of the government do not really care about the impacts of projects. They only care about how they can support the development proposals to go forward and ensure that the project developers can build and operate their projects as planned. In fact, the staff of relevant sectors think that good EIA documents are useless if the project developers cannot get the loans or financial support from the banks they need to build and operate their projects. (Interview # EL-45)

Another respondent from MoNRE said:

> Some development projects are seen as particular priorities of the government. We have to consider them as special ones and approve the EIA documents as recommended by high ranking political leaders because some project

> developers need the ECC to get loans from the financial institutions to begin work. (Interview # GC-19)

Further, interviews with participants from international development agencies who have been involved with working with MoNRE and MEM to promote best-practice in EIA and greater sustainable hydropower development in Laos also shared similar perceptions of the situation in Laos. These participants observed that the EIA legal framework has not been applied to support decision-makers to make better decisions. As one respondent replied:

> Recently MoNRE made a statement about EIA being a tool to support decision-making to ensure development projects are constructed and operated in an environmentally sound and social manner, but the current actions on the ground do not match the statement and suggest otherwise. As far as, I know, no EIA report has very been rejected by MoNRE. It does not matter if the EIA consultants produce bad EIA reports, they can be rewritten, but MoNRE must not close its eyes to this or be pressured to approve these bad EIA reports. (Interview # I-29)

The problem of the EIA system merely being practiced as an approvals tool has also been discussed by previous studies on EIA effectiveness in Laos and other countries in the LMB. These studies, like the comments noted above from interviewees, suggest that the Laotian EIA system is not being applied to assess potential environmental and social impacts of development proposals, rather, it is being used as a technical exercise to fast-track the approval of hydropower and other development projects (e.g. Wayakone & Makoto, 2012; Campbell et al., 2015; Wells-Dang et al., 2016). This clearly suggests that the EIA system in Laos is highly politicized and can be subject to political interference.

5.4.2 Prioritizing Hydropower

Like many less developed countries, Laos is obviously preoccupied with short-term economic growth over long-term natural resource management and environmental protection. As suggested in Chapter 4, the GoL aims to increasingly exploit its natural resource riches, especially in the hydropower sector, to drive the country's economic growth (Ministry of Planning and Investment [MPI], 2011; 2016). Fundamentally, however, it is this same economic development priority that has undermined the effective performance of the EIA system. Many government officials interviewed in this research clearly recognized that the GoL is prioritising investments in the hydropower sector as one of the main drivers for strengthening economic growth of the country. As one respondent from the Ministry of Planning and Investment (MPI) noted:

> Laos is a poor country. We still need more development projects and investments in different sectors to support the country' s socio-economic development. The development of hydropower projects has become the top priority of the government of Laos as it aims to become known as the country that is the battery for the ASEAN. (Interview # GC-38)

Other interviewees from the Ministry of Energy and Mines (MEM) agreed with the above comment and suggested that Laos still needed more hydropower plants to support national socio-economic development. Two interviewees commented:

> Yes, it is correct that Laos has built many hydropower plants. But, I think the government has made the right decision or policy to encourage more investments in the hydropower sector because Laos does not have many other options to generate revenue and to develop the country. (Interview # GC-31)

> The Government of Laos has one to a lot of effort to promote more investments for hydro-electricity in the country, but we still have not reached the target that we want to achieve. Laos has the potential in hydropower development of about 25,000 - 26,000 MW, and if we ever achieve 50 percent of it, the government may stop building hydropower dams. The rest will be left over to other

> generations to make the decisions about whether they need to build more hydropower dams or not, but we are not there yet. (Interview # GC-34)

Interestingly, even the officials working in the areas of environmental protection and natural resource management also stated their support for more hydropower projects. Staff from the DESIA and other departments within the Ministry of Natural Resource and Environment (MoNRE) claimed that hydropower projects would improve conditions in the country. As one interviewee responded:

> If Laos does not build hydropower plants, Laos does not have any other better options to develop the country. In the past, the government promoted protection of natural resources for quite some time, but we were not able to graduate from poverty. In fact, even if we did not build hydropower plants, our forests and natural resources have gradually been destroyed by illegal logging carried out by illegal companies and/or individual villagers, so basically, the government does not have enough in its budget or the capacity to manage without them. (Interview # GC-20)

As this quote suggests, the hydropower industry has been positioned as *the* vehicle to drive Laos away from its status as a less-developed country. The GoL aims to increasingly build more hydropower plants to export hydro-electricity to the countries in the Mekong region (see Chapter 4). The expansion of hydropower development is projected to create jobs, generate revenues and eliminate poverty in the country. Thus, the government has urged all relevant sectors to actively support the policy and facilitate the fast development of hydropower projects. This policy has given more power to the sectoral ministries that are directly responsible for economic development of the country. However, it has also placed limits on EIA authorities (e.g. DESIA and MoNRE) encouraging them, as stated above, to effectively play their part in quickly reviewing and approving EIA reports for proposed hydropower projects. Essentially, this means that despite there being an EPL and an ESIA, the environment and some parts of society are being ‘traded off’ to support

short-term economic gain. As some interviewees from International Development Agencies (IDAs) note:

> I have observed that the Government of Laos seems to prioritise or listen to the people from the economic development sectors more than the people working in environmental protection or the natural resource management sector. (Interview # I-30)

> Currently in Laos, the Ministry of Environment is at a much weaker level of political clout than the other lead and sectoral ministries. It is very difficult for MoNRE as it has to manage different competing interests. MEM wants to build more hydropower plants as soon as possible, MPI wants to increase national economic growth at 7 or 8 percent per year and MoNRE has to coordinate all of that and somehow try to ensure environmental and social protection. (Interview # I-29)

Interviews with some key officials from DESIA revealed that they were aware that their role as the environmental protection authority had been heavily influenced by the government policy on economic development. As one interviewee pointed out:

> It is very difficult for us to operate the EIA system effectively because the government values economic development as the first priority and environmental protection as the second. The DESIA is a government organizational body and we have to support development projects while still trying to protect the environment. We cannot stand still in our primary role, but we have to take economic development of the country into consideration. We review and approve EIA reports of proposed projects on a case-by-case basis, but sometimes, hydropower projects are invested and operated by for example, the Electricite du Laos [the State Enterprise Company] and so we are pressured not to delay approval of those projects. (Interview # GC-11)

Operating in this environment is obviously difficult if you are charged with protecting the environment and society, if you’re responsible for managing foreign investment though, the government’s priority for hydropower development can be easily justified. For example, as one interviewee from MPI noted:

> Hydropower projects have generated huge benefits to Laos. If we look at the Nam Theun-Hinboun and the Nam Theun 2 Hydropower Projects, they have played an important role in strengthening socio-economic development in Laos. The GoL has used revenues received from hydropower projects to construct or improve roads, schools, hospitals in rural communities, and villagers have benefited from these facilities. (Interview # GC-38)

Another respondent, a senior government official from MEM also pointed out that:

> Overall, villagers or Laotian people have received a lot of benefits from hydropower projects. I have observed that where there is a hydropower project, there is development. Project developers have helped develop infrastructures such as access roads to rural communities in the project areas. Villagers living nearby the projects have opportunities to work with the projects, learn new skills and gain new knowledge from the projects. Also, project developers have helped improve schools and health centres for rural villages in the project' s areas. (Interview # GC-31)

Another interviewee, a local parliamentary member also responded that:

> There is no doubt that hydropower projects have brought benefits to Laos. The GoL receives revenues from hydropower projects several ways such as concession fees, taxes, and royalties as a shareholder. The GoL has allocated these revenues to fund projects of local governments to build or improve infrastructures that create direct benefits to local communities. If we compare the villagers' livelihoods living near the hydropower projects now and before, their quality of life has been improved, they have access to electricity and use it for family businesses to generate incomes. So now, almost all households in Vientiane province has electricity. (Interview # L-51)

An entirely different view is expressed, however, by some local staff of IDAs working in Laos. They argue that the high economic growth spoken about above does not actually benefit the poor. Instead, this high economic growth has come with enormous environmental and social costs to local people as the economic growth in Laos is mainly based on exploitation of natural resources. Yet, the political leaders in Laos seem to

ignore these impacts, preferring to concentrate instead on national growth rates as suggested in Chapter 4. As an international NGOs commented:

> Where many hydropower projects have been built and operated, we have seen the forests destroyed. The water quantity in many rivers has also decreased sharply to the point that some rural communities do not have enough water for their daily activities. We are also concerned about the livelihoods of rural villagers affected by hydropower projects because most affected villagers are poor with low level of education. So, if the government does not carefully take all of these impacts into account, affected villagers will lose all their benefits and receive no compensation for them. No one really knows how much money the government receives from hydropower projects in a given year, but it is definitely not flowing down to the poor. (Interview # N-50)

In summary, the implications of the government's policy to expand hydropower developments as a means for economic growth and progress has implications not only for the practical application of EIA, but also for those most impacted upon by the approved developments. This situation is problematized further by the levels of compromise that are obviously occurring in the expedient approval of EIA reports. This is of great concern as it suggests a lack of political will and commitment to try to truly develop sustainably and without this, the effectiveness of the whole EIA system in Laos is brought into question.

5.4.3 The Lack of political commitment

A number of scholars have suggested that an EIA system is a political instrument, and as such, it requires strong political support and commitment if it is to be implemented effectively (Thomas, 2001; Cashmore et al., 2004; Elling, 2009; Jalava et al., 2010; Morgan, 2012). In Laos, as this chapter has shown, the EIA legal framework that exists on paper is relatively sound, but it is in the operationalisation of it on the ground where

the system falls down. As indicated above in Section 5.4.2, the system is severely hampered by a lack of political will and commitment to the EIA process as a whole. Most interviewees in this research commented that on paper the legal framework (the Instructions and Technical Guidelines for EIA in Laos) are "not bad" (#39) when compared with other countries in the Lower Mekong Basin (LMB), but in practice the enactment of EIA legal provisions remains weak as a result of inadequate political support and commitment at many levels of government. One interviewee, a senior government official suggested that:

> Most laws and regulations in Laos, including the EPL and EIA Instructions are not too bad and they are enforceable. But, the main problems are that people do not enforce them. They do not take responsibility for what they do every day and they just simply ignore following the rule of law. (Interview # GC-39)

Another respondent from an NGO noted that:

> It is impossible to implement the EIA system effectively unless the political leaders in Laos change their perceptions and acknowledge the vital role of the EIA system for development projects. The political leaders are the people who have power to make things work or make decisions to approve or reject development proposals, but many do not seem to care. (Interview # N-50)

Indeed, 48 of the 52 participants interviewed as part of this research from across different stakeholder groups agreed that it was a lack of political will and commitment has caused substantial weaknesses in effective implementation of the EIA system in Laos.

This is recognized further in examples of some developers receiving 'special treatment', including those from neighbouring countries. As one interviewee noted:

> The Nam Kong 2 hydropower project was built and is operated by investors from Vietnam. This project, is one of several that were approved without the EIA. As you can imagine, the project has created many technical problems and environmental and social impacts, but the GoL has not taken any action to

> punish the project owners or to investigate how of why this happened. (Interview # GC-10)

In another example, some hydropower project proposals located in nationally protected forest areas (as noted in Chapter 4) have been approved with special exemptions to the law. As such, one interviewee from an international NGO suggested that:

> Political leaders must make strong commitments to strictly enforce the rule of law. So far, we have seen that governments at different levels in Laos lack a willingness to enforce the law. They often consider exemptions of conditions or obligations from the laws for specific project developers. The government seems to prefer working with developers on a case-by-case basis which can offer them a range of flexibilities. As imagined, this has caused so many problems with trying to implement the EIA system effectively in Laos. (Interview # GP-06)

Another interviewee, a project developer involved in hydropower, confirmed the government's use of flexibility when it came to applying the law. She suggested:

> The company that I am working for is an experienced international company. We follow the requirements of international laws and the international standards for constructing and operating hydropower projects in Laos. But, in regards to the environmental protection policy here, our company has had to adapt to the context of Laos. If the government wants stringent environmental protection, we will certainly follow that, but I think most developers observe and follow the actions taken by the government itself. So if the government is flexible and relaxed about environmental protection, then the developers will only follow those requirements. (Interview # H-48)

An interviewee, who is an EIA consultant commented further that the lack of political will and commitment to fully enforce the EIA system had essentially weakened law enforcement in all sectors in Laos. He suggested that from his experience and observations, some government officials were even searching for loopholes in the laws or the EIA system, not to avoid or prevent adverse impacts occurring, but to gain personal benefits from project developers. He commented:

> I have noticed that some government staff have not worked responsibly. They do not care about breaking the rule of law. I have seen that some technical officers in particular play a role as a broker to secretly coordinate with developers and bargain or negotiate with their bosses to gain personal benefits. (Interview # EI-41)

It is a comment like the one above that brings into focus why it is essential that the government fully support and commit to implementing not only EIA, but the rule of law in all its entirety. As the comment from an IDA interviewee below suggests, if the political leaders in Laos are willing to fully commit to thoroughly enacting and supporting the EPL and EIA regulations that already exist in Laos, this will make a huge difference in the fight to protect the environment and ensure more sustainable socio-economic development in the country. As the interviewee noted:

> I think there is a need for high level political commitments to enact the EIA regulations here because Laos is a country that when the political leaders make decisions, the people follow. It is good in that respect. If there is a strong signal from high level political leaders that we have a robust EIA system and we have laws that must be implemented effectively, then the relevant sectors will find the way to follow them. (Interview # I-08)

If the Lao leadership fails to commit, however, then communities and the environment located near and downstream from these developments will continue not only to suffer, but in effect, be sacrificed as a cost associated with the ongoing race to see Lao PDR develops economically.

5.5 Conclusion

In this chapter, the legal framework for the EIA system in Lao PDR is reviewed and its strengths and weaknesses or limitations are identified. The Laotian EIA system is bound by the existing Environmental Protection Law (EPL) and operationalised by the ESIA

Instructions with support of some technical guidelines and this is indeed a good start. The review reveals that the EIA legal provisions in Laos meet several criteria recommended by Ahmad and Wood (2002) but there are still significant weaknesses and limitations. A legal provision for appeal against unfair decisions made does not exist within the current EIA legal frameworks in Laos and such an omission discredits the principles of EIA best-practice which suggest that the EIA system is to be carried out with professionalism, rigor and fairness. The legal provision for penalty is also missing from the ESIA Instruction, though is stated in the EPL. Yet, it is only a soft penalty regime through an administrative mechanism. As such, the mechanism does not have direct impacts on project developers. The legal provision for SEA exists but it is freshly established and has yet to be practically implemented in the country.

Furthermore, in Laos more specifically, MoNRE is obviously still working to improve a more robust EIA system, but there are marked gaps between the EIA policies and practical performance on the ground. In theory, it seems that the GoL realizes the importance of environmental and social safeguards in regards to development projects in Laos as EIA is incorporated into the EPL and other sectoral laws. In practice, however, the GoL's lack of willingness to commit to strictly enact EIA regulations, suggests that it lacks interest in seeing the process work effectively (see also Campbell et al., 2015). The fact is that the GoL is prioritising hydropower development as its primary means to achieve economic growth targets. This has given the sectoral ministries a position (e.g. MEM) to become the sole decision maker in hydropower development which takes away the authority of MoNRE who technically should make the decision on whether or not a hydropower project proposal should go ahead (see also Suhardiman & Giordano, 2014). If this is the case, it needs to be considered whether Laos has only introduced EIA because

the World Bank, ADB and other international agencies insisted upon it. If so, then this might go part way to explaining the lack of political will and commitment towards fully implementing a sound EIA system (Baird, 2014; Wells-Dang et al., 2016). A lack of political will and commitment does not merely impact on the effective enforcement of the EIA legal provisions, but also on the institutional arrangements which are discussed in Chapter 6.

CHAPTER SIX: INSTITUTIONAL ARRANGEMENTS

6.1 Introduction

The effective performance of any EIA system relies on the institutional arrangements. As always, this is highly dependent on country specificity and context. As such, this chapter focuses on the four criteria, based on Ahmad and Wood (2002), for evaluating the effectiveness of the institutional arrangements concerning implementation of the EIA system. The chapter also considers the practical performance of the institutional arrangements, chiefly drawing on insights from the interviews. Before presenting this criteria-based and practice-based evaluation, the chapter begins by providing an overview of the administrative structures of the government in Laos, and then describing the various roles of the key stakeholders and regulators involved in and responsible for operationalizing EIA procedures in Laos.

6.2 Administration of the Government in Laos

Lao PDR has adopted two parallel political systems of power since its independence in December 1975. These two political systems comprise of the Central Party Committee (CPC) which includes the Secretary General of the Politburo and other Socialist or Lao People Revolutionary Party (LPRP) members, and the National Assembly, which includes the President, Prime Minister, the different Ministries at the national, provincial, district and village levels, and the judiciary system (see Figure 6.1) (UN, 2005; National Assembly, 2003a; 2003b; 2003c). The CPC controls the LPRP at all levels, makes decisions on fundamental policy changes affecting the nation, and it also supervises the government and directs mass organizations (Central Party Committee [CPC], 2011). The President and the Prime Minister of the State are elected by at least two-third of the

members of parliament and approved by the National Assembly. The Prime Minister appoints the Deputy Prime Ministers and the cabinet members who are then also approved by the National Assembly, as are the judiciary (National Assembly, 2003a; 2003b).

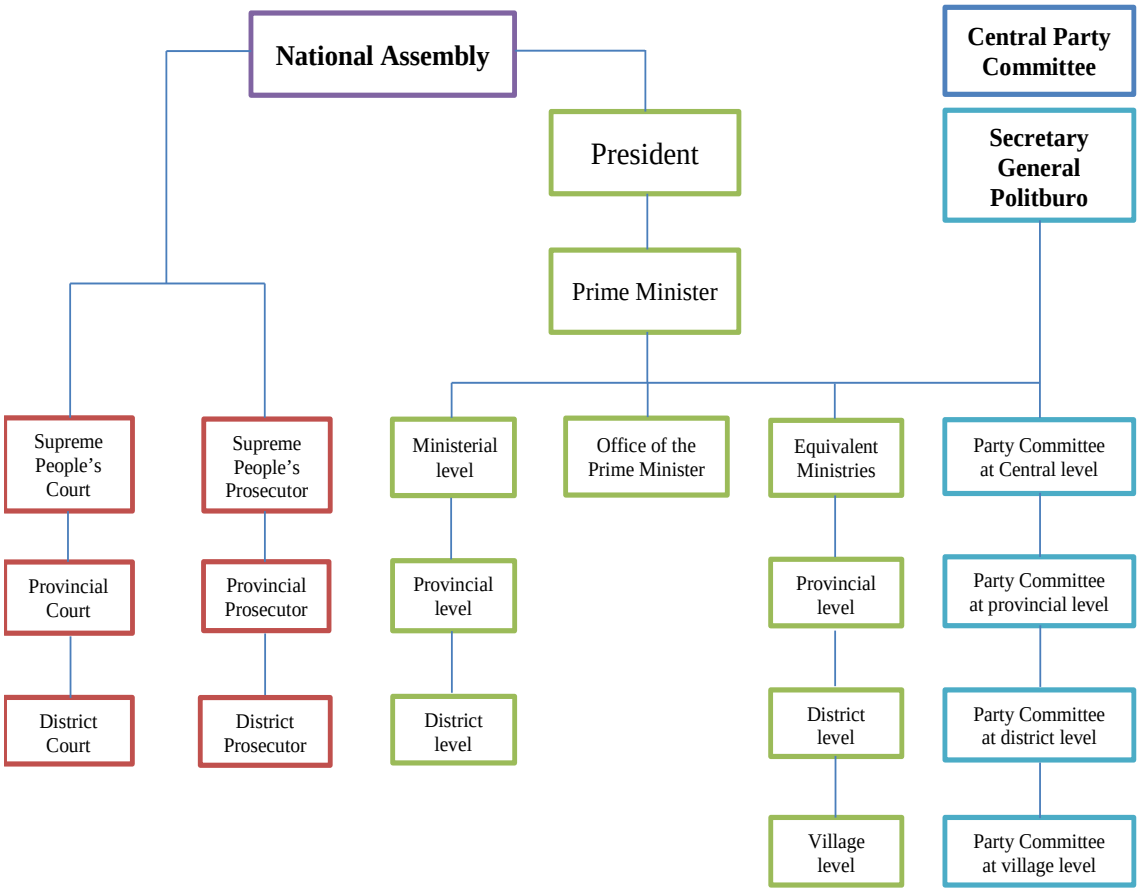


Figure 6.1 Administrative structures of the Lao PDR

Source: Based on the Constitution of Laos (2003a); Law on Government (2003b); Law on Local Administration (2003c); United Nations (2005)

As illustrated in Figure 6.1, the administrative structure of Lao PDR is very complicated to describe in detail because of the inter-related ministerial and multi-level governmental arrangements. Therefore, this research only gives an overview of the key organizations that have their roles and responsibilities associated with the implementation of EIA such as the National Assembly, ministerial levels and equivalent ministries.

According to the Constitution of Lao PDR, the National Assembly is the organization of people's representatives. It makes decisions on fundamental issues affecting the nation-state, monitors the major national development projects and recommends relevant sectors of the government to address concerns raised by individual residents (National Assembly, 2003a; 2003b). With regards to development proposals, the National Assembly shares the responsibility for the approval of large-scale development proposals between different ministries (see Table 6.1.). For example, if a hydropower development proposal has the capacity to generate electricity greater than 100 Megawatts (MW), it is approved by the National Assembly (National Assembly, 2012b), anything less than this, is approved either at a ministerial level or provincial level.

Table 6.1 Approval authorities

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Source: Electricity Law 2012 (National Assembly, 2012b)

In total, there are 18 ministries and several equivalent ministries in Laos which often makes for clashes between ministries and duplication of responsibilities. Whereas, the functions of most ministries are straight forward (i.e. they are similar to ministries in most other countries), the roles of the equivalent ministries are quite unique to the political context of Laos. Some of these equivalent ministries are identified as political and/or mass organizations such as the 'Lao Front for National Construction' (LFNC), the 'Lao Women Union' (LWU) and the 'Lao Youth Union' (LYU). Although, several sectoral ministries are involved in implementing the EIA system in Laos (depending on the

different types of development projects), this research only concentrates on three key ministries namely those of the 'Ministry of Natural Resources and Environment' (MoNRE), the 'Ministry of Energy and Mines' (MEM) and the 'Ministry of Planning and Investment' (MPI). These ministries are directly involved in reviewing and approving EIA reports and other important documents associated with hydropower projects; they also play a role in monitoring on-going hydropower projects.

Mass organizations such as the LFNC, the LWU and the LYU are also included in this research because in the legal provision for public participation, they are included under the banner of 'government'. For example, the *Guideline for Public Participation* (GPP) requires that project developers consult with affected villagers, including different groups of people (i.e. senior people, women, youths, ethnic groups and vulnerable people) (MoNRE, 2013c). Thus, these mass organizations could play a vital role in improving the effective performance of the EIA system in Laos, especially in the area of public participation.

6.3 EIA Stakeholders

In general, the successful implementation of an EIA system involves a number of stakeholders from both the public and private sectors. Hughes (1998) classifies EIA stakeholders into six groups. In addition, the United Nations University (UNU), the Royal Melbourne Institute of Technology (RMIT) in Australia and the United Nations Environment Program (UNEP) (2017) identify at least eight stakeholders who they suggest should be involved at different stages of the EIA process. These are: relevant government sectors, project developers, EIA consultants, donors/lenders, academics, affected villagers, NGOs, and interested members of the public. These stakeholders,

however, play different roles depending on the political and socio-cultural contexts of a specific country (UNU et al., 2017).

In Laos, as identified in Chapter 5, the EIA legal framework and the ESIA Instruction do not clearly identify stakeholders, bar government officials and affected villagers. Based on information obtained from reviewing various EIA policy documents, interviews with various stakeholders and the researcher's own fieldwork observations, EIA stakeholders in Laos can be organized into four major groups: regulators and implementers; project proponents; affected parties; and facilitators (see Figure 6.2). Some of these EIA stakeholders have broader responsibilities than others, and they also play active and multiple roles in operating the EIA procedures in practice (National Assembly, 2012a; MoNRE, 2013c). Each of these major groups is discussed in greater detail below.

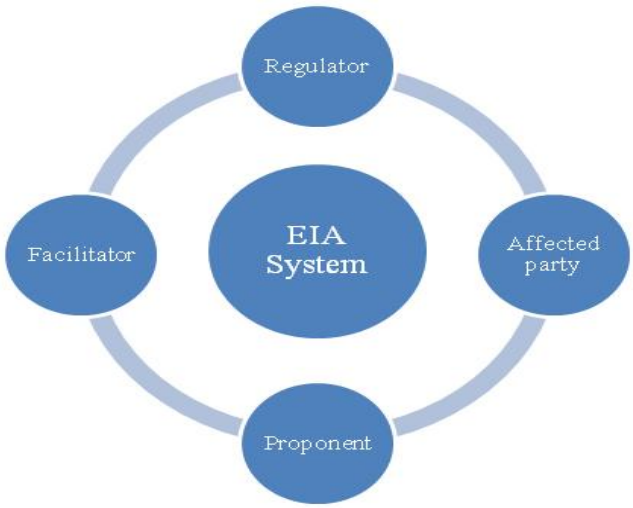

Figure 6.2 Key stakeholders within the EIA system in Laos.

Source: Developed by the researcher

6.3.1 EIA regulators and implementers

In Laos, the Ministry of Natural Resources and Environment (MoNRE) is responsible for managing natural resources and protecting the environment across the country. Its main responsibilities include develop or improve legislation, regulations, strategies, policies and plans concerned natural resources and environmental sectors (PMO, 2017a). Within MoNRE, the Department of Environmental and Social Impact Assessment (DESIA) is the EIA authority. The department plays dual roles both as the EIA regulator and the EIA implementer. As the EIA regulator, DESIA is given the authority to develop the legislation, regulations, technical guidelines and policies concerning the operation of the EIA system in the country (MoNRE, 2012a). As the EIA implementer, DESIA plays a central role in reviewing EIA reports, negotiating environmental and social obligations, and monitoring impacts of development projects nationwide (MoNRE, 2012a; 2013b).

The way the system of government operates in Laos, though, requires that different ministries carry out their tasks through a process of vertical and horizontal coordination which involves cooperation between ministries and with other relevant sectors at the central and provincial and district (or local) levels. In the area of EIA, MoNRE (usually via DESIA) is required to coordinate and cooperate with relevant sectoral ministries, or what are called Development Project Responsible Agencies (DPRAs), chiefly MEM and MPI in the case of hydropower development. MoNRE is also required to work with local government. Within MoNRE, there has to be coordination between various units, including Province of Natural Resources and Environment (PoNRE) at the provincial level and District of Natural Resources and Environment (DoNRE) at the district level. Figure 6.3 shows the coordination framework between MoNRE and other ministries (or DPRAs) and local government, and also within MoNRE.

DESIA is headed by a director general which is equivalent to the position of head of department within MoNRE and in other sectoral ministries. The main responsibilities of the director general are limited to the divisions within DESIA. At the present, DESIA consists of six divisions (see Figure 6.4) with a total staff of around 120 people (MoNRE, 2012a; DESIA, 2016a).

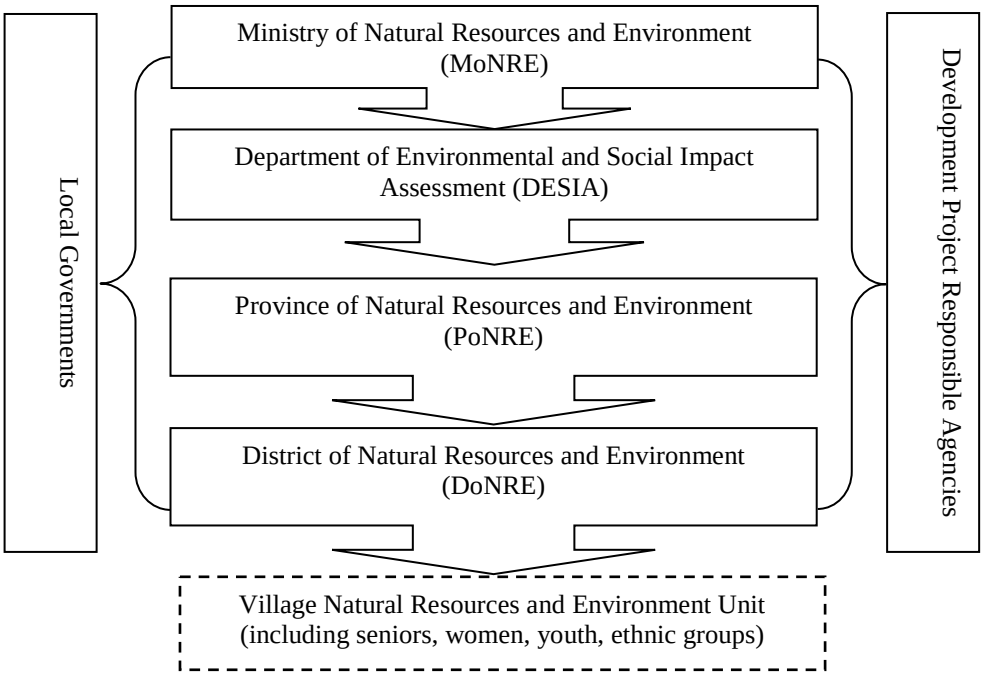

Figure 6.3 The government administrative bodies for the EIA system

Source: Developed by the researcher

At the village and project levels, MoNRE has also established units to assist in monitoring and reporting problems that occur at the project sites and/or within local villages. The revised EPL gives MoNRE the authority to establish 'Village of Natural Resources and Environment' (VoNRE) at a village level (National Assembly, 2012b). At the time this research was conducted (in 2015 and 2016), only a few villages had established VoNREs, this was usually only for larger hydropower and mining projects.

In addition to the above, MoNRE has also established 'Environmental Management Units' (EMUs) which are based at or near the actual project sites (MoNRE, 2013b). The EMU of each project consists of between 5 to 7 technical officers who are usually representatives from DoNRE, PoNRE and DESIA (which all come under the auspices of MoNRE). The main responsibilities of the EMUs include: inspection and enforcement of the project mitigation measures; and monitoring environmental impacts in accordance with the project's Environmental Management and Monitoring Plan (EMMP) (MoNRE, 2013b). If a project requires resettlement of more than 10 families, MoNRE will request through PoNRE that the provincial governor establish a 'Resettlement Management Unit' (RMU) (PMO, 2016).

Figure 6.4 Organizational structure of DESIA

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Source: Decision on mandates of the Department of Environmental and Social Impact Assessment (MoNRE, 2012a)

6.3.2 Project proponents

The project proponents refer to the lead agencies (i.e. the DPRAs, mainly MEM and MPI); project developers and financial institutions or lenders involved in progressing a project. The specific roles of each of these groups is discussed below.

The lead agencies

The Ministry of Planning and Investment (MPI) has a key role in guiding the country's socio-economic development strategy and in supervising the implementation of development projects formulated under the National Socio-Economic Development Plans (NSEDP) and the special economic zone development plans (PMO, 2017b).[14] The MPI is also the highest level decision-making body to approve the documents for development projects such as the Memorandum of Understanding (MoU), the Project Development Agreements (PDAs) and the Concession Agreements (CAs) (National Assembly, 2009a). Having played the role of approval body, the MPI coordinates and cooperates with sectoral ministries to assure that the proposed development projects are not only financially and economically feasible, but also environmentally and socially sustainable (National Assembly, 2009a).

Under the MPI, the Department of Planning (DoP) and the Department of Investment and Promotion (DIP) share some responsibilities to promote sustainable development and effective implementation of the EIA system. Whereas, the DoP recognizes the importance of the sustainable use of natural resources and environmental protection within the framework of the National Socio-Economic Development Plan (NSEDP) more generally,

[14] The GoL over the next 10 years plans to identify and introduce special and specific economic development zones in up to 41 different areas in a bid to attract foreign direct investment to boost development in rural areas. It has thus far established 10 (MPI, 2014a).

(MPI, 2014b), it is the DIP which recognizes the EIA system as an essential requirement for sustainable development in individual projects (MPI, 2012). The Law on Investment Promotion (LIP) also requires that all development proposals submitted to the DIP for approval, need to comply with the EIA requirements (National Assembly, 2009a). Without an EIA approval or an approved ECC, a final development project approval is likely to be rejected by the DIP. Although, the DIP does not have direct involvement in reviewing the EIA reports, the department is sometimes invited by DESIA to participate in public consultation meetings and to join the impact monitoring programs.

The Ministry of Energy and Mines (MEM) is responsible for energy policy and overall strategy guidance and management of the energy sector across the country. It develops policy and implements formulation, planning and development of all forms of energy (PMO 2017c). Given that most of the energy supply in Laos and energy export to neighbouring countries is derived from hydropower, MEM also promotes good management of watershed areas, sustainable utilization of water resources and the efficient use of all forms of energy (National Assembly, 2012a; 2012b). More specifically, the core institutional mandates of MEM that are associated with areas of hydropower development and EIA include:

- reviewing project proposal documents and providing comments to relevant agencies that make decisions on approval, rejection or cancellation of hydropower development projects;
- approving, cancelling or withdrawal of legal entitlement documents or stoppage of construction and/or operation of hydropower projects;
- monitoring, inspecting and investigating project developers' compliance in regard to construction and/or operation of hydropower projects.

Within MEM, the most relevant departments that have responsibilities in implementing the EIA system for hydropower projects are the 'Department of Energy Policy and Planning' (DEPP), the 'Department of Energy Management' (DEM) and the 'Department of Energy Business' (DEB). The roles and responsibilities of these departments are presented in Section 6.4.3 of this chapter.

Project Developers

Project developers are the investors (both local and international), operators and shareholders (public and private) of the development projects. As discussed in Chapter 4, most of large hydropower development projects in Laos are backed by private foreign investors which operate under the concept of Build-Operate-Transfer (BOT) with a Concession Agreement period between 25 to 30 years (National Assembly, 2012b). Often, the development and operation of a hydropower project involves a number of shareholders. The large Nam Theun 2 hydropower project, for example, involved a multi-national consortium of four major shareholders—the Electricite de France International (35%), Lao Holding State Enterprise (25%), Electricity Generating Public Company (25%) and Italian-Thai Development Public Company (15%) (Nam Thuen 2 Power Company, 2015).

The financial institutions

The financial institutions or lenders are also considered as project proponents because they provide loans to the project developers and therefore, support hydropower development projects going forwards. In Laos, most large hydropower development projects are partnered with or funded by large International Financial Institutions such as

the Asian Development Bank, the World Bank, the China Development Bank, the China Export-Import Bank, and the Commercial Banks of Thailand (Middleton, 2009; Moller et al., 2009; Hirsch, 2011; International Rivers, 2012).

In addition to their role in facilitating hydropower development, sometimes these large institutions can also be promoters of EIA best-practice. For example, the World Bank requires that any development project proposed to the Bank for financing, has to comply with the host country's EIA requirements. This is to ensure that the development projects they support are seen to be environmentally and socially sound (see also Suhardiman & Giordano, 2014). Thus, any development project funded by the World Bank is required to follow the Bank's 'Operational Policies'[15] (World Bank, 2014). Likewise, the ADB has its own environmental and social safeguards such as the '1995 Involuntary Resettlement Policy', the '1998 Policy on Indigenous Peoples' and the '2002 Environment Policy' (ADB, 2009). These policies and safeguards acknowledge that development should occur sustainably but essentially put the onus squarely on the shoulders of developers and host country institutions to ensure that they are met.

6.3.3 Project affected parties

Project affected parties refer to direct and/or indirect persons or groups of people or organizations that are affected by development projects (MoNRE, 2013b). They may require compensation, resettlement and/or restoration programs due to the impacts on agricultural land, water resources, residential land, houses, businesses, and/or

[15] The World Bank has a series of operational instructions/policies (OP) and requirements which are applied to all borrowers or recipients of loans for development projects. These cover a vast array of issues but usually refer to fiduciary duties of the borrower and host country as well and environmental and social requirements which are set out in the terms of the loan.

infrastructures. Often once a project begins, affected villagers will have limited access to natural resources, and may also lose links to their traditional culture and livelihoods (as noted in Chapter 4). Therefore, it is fundamentally vital that they are appropriately informed and fully consulted with about development projects, including any benefits and impacts of a project together with impact mitigation plans or known in Laos as Social Management and Monitoring Plans (SMMP). According to the ESIA Instruction, project developers are required to inform and consult both directly and indirectly with affected people (MoNRE, 2013b).

Where the current requirements of local governments (i.e. provincial and district administrative authorities) become a little problematic is in the fact that they play dual roles as both the project proponents (i.e. playing their role in the EIA system as required) *and* as the representatives of project affected parties (National Assembly 2012a; MoNRE, 2013b; MoNRE, 2013c). On the one hand, the local governments are responsible for improving the livelihoods of their people, and protecting cultural assets and the natural environment that will be affected by the development projects, thus they would want to see that EIA is appropriately applied. On the other hand, local governments also support development projects going forward as they see them as important investments that can improve the socio-economic development of their local communities. This complicated dual stance suggests that the concerns of villagers may not be represented as thoroughly or appropriately as they might be. This has often been an area of concern that NGOs and critics of Laos have targeted (Molle et al., 2009; Cronin & Hamlin, 2010; Sayatham & Suhardiman, 2015; Baird & Barney, 2017).

6.3.4 External EIA facilitators

The external EIA facilitators in this process are the consulting firms and the mass organizations that contribute to various stages of the EIA process. The consultants, are hired by the project developers to assess the likely impacts of their projects and to help prepare the required EIA reports and other sub-plans. In theory, the consultants are supposed to do their jobs fairly and professionally, evaluating and identifying potential impacts of development projects and then recommending mitigation measures for prevention or avoidance of impacts (Campbell et al., 2015). In practice, however, any specific impact identification and/or recommendation of mitigation measures provided in the EIA reports, is usually associated with extra costs to the project developers. Thus, some consultants see the preparation of EIA reports and sub-plans as a money-making opportunity. To reduce costs, project developers will often exaggerate potential benefits and downplay adverse impacts of their development projects, thereby attempting to bias the outcomes of the assessment of impacts in their favour (O'Faircheaallaigh, 2010; Campbell et al., 2015; also see Chapter 7). Recognizing the ongoing problem of bias, the revised EPL in Laos states that consulting firms or consultants are required to work within their profession's ethical code of conduct (National Assembly, 2012). This of course, relies on there being a code in the first place and that it is well-known and applied by company employees.

The mass organizations (including the LNFC, LWU, LYU etc.) referred to previously, have strong networks from the central level down to the village level. They are also considered as EIA facilitators because they are responsible for educating, empowering, assisting and protecting the benefits of individual people across the country (National Assembly, 2009b; Lao Women Union, 2009; Lao Youth Union, 2014). Generally

speaking, they are the equivalent of a locally-based non-government organization because they support vulnerable people in local communities. The representatives of these mass organizations at the village level are very active. They often represent different groups of people in the village by participating in consultation meetings, voicing concerns, discussing and/or consulting with relevant sectors of the government at a district level (MoNRE, 2013c). What is unusual about this participation, however, is that while these mass organisations at the district, provincial and central levels are included in the current EIA system, but they are not invited to attend EIA consultation workshops.

Overall, the responsibilities for operationalizing and implementing EIA system throughout Laos are extremely complicated. With 18 ministries and several equivalent ministries involved in the administration of the government in Laos and four major groups involved in the different components of EIA implementation, the system is obviously overly-bureaucratic and in many areas unworkable. This is reviewed further below through an application of the four criteria based on Ahmad and Wood (2002).

6.4 Criteria-based Evaluation

As implied in Chapters 2 and 5, EIA legislation, regulations and guidelines do not work or perform by themselves. They require good support from competent agencies and the government at all levels to apply them to achieve maximum efficiency and effectiveness. This section assesses four main elements of the institutional arrangements for the EIA system in Laos. These elements are assessed through the criteria used by Ahmad and Wood (2002) (see Table 6.2, see also Chapter 2). The assessment of each criteria helps identify the weaknesses and strengths of the existing institutional arrangements in Laos. It should be noted, however, that the criteria overlap; given the complicated government

system in Laos, it is sometimes difficult to unravel how the institutional arrangements operate. This section of the chapter is based largely on a review of EIA documents, while the next section is based largely on what interviewees had to say about the institutional arrangements.

Table 6.2 Criteria-based evaluation of the institutional arrangements

Component	Evaluation criteria
Institutional Arrangements	1. Competent authority for EIA and determination of environmental acceptability 2. Review body for EIA 3. Specification of sectoral authorities' responsibilities in the EIA process 4. Coordination between the EIA authority and relevant agencies

6.4.1 Competent authority for EIA

As discussed in sections 5.3.1 and 6.3.1 above, MoNRE is the competent authority for EIA in Laos for development proposals that are deemed to fall into Category 2 (see also Table 5.1). Smaller projects, or those that are likely to have few impacts on communities and the environment are deemed to fall into Category 1 and are subject to an Initial Environmental Examination (IEE), which is the responsibility of provincial level authorities or PoNRE. As also discussed in Section 5.3.1 (above), interviewees commented that this distinction between Category 1 and 2 projects (under the IEE and ESIA Instructions of 2013) has helped to clarify the role of various levels of government in the EIA process. Although this establishment of MoNRE as the competent authority for Category 2 projects is generally recognised as an 'on paper' strength of the IEE and ESIA Instruction, there are other aspects of the institutional arrangements which create complications (as will be discussed shortly).

6.4.2 Review body for EIA

As indicated in Chapter 5, ESIA reports and other sub-plans associated with project proposals are reviewed by multiple government bodies. Although the ESIA Instruction does not clearly define which authority should be in charge of reviewing the ESIA reports, it does suggest that there are in fact three EIA review bodies: the EIA authority (MoNRE and DESIA), the local authority (PoNRE and DoNRE) and the DPRA (sectoral ministries).

Within MoNRE, apart from the DESIA, the Department of Water Resources (DWR), the Department of Land Management (DLM) and the Department Forest Resources (DFR) are also often involved in the process of reviewing ESIA reports, depending on the type of development. These departments review the ESIA reports and other sub-plans and then provide comments to DESIA. Surprisingly, a review of these departments' mandates, however, found that none of these institutions state that they play a role in the reviewing of ESIA reports, even though they clearly do (MoNRE, 2012b; 2012c; 2012d). In addition, the ESIA reports and other sub-plans are also reviewed by local government authorities. PoNRE in the provinces and DoNRE in the districts are responsible for reviewing the ESIA reports of the development proposals that will be built and operated in their provincial and district territories. DESIA sends the ESIA reports and other sub-plans to PoNRE and DoRNE for reviewing and commenting (MoNRE, 2013b).

In the case of large and complex hydropower development proposals such as those associated with the Nam Thuen 2 and the Mekong-Sayaboury Hydropower Projects (see Table 4.2), MoNRE establishes a specific *ad-hoc* expert committee to review the project's EIA documents. This expert committee usually consists of local and/or international

consultants that are selected by MoNRE, but the project developers are expected to cover the costs for the work done by the committee (MoNRE, 2013b).

Unlike other countries in the LMB, Laos does not currently have its own independent EIA review body or an established panel committee for reviewing EIA reports (Clausen et al., 2011; Campbell et al., 2015; Sano et al., 2016). In Thailand, for instance, there is an independent review body that is comprised of experts from different fields of knowledge. This independent review body comprehensively reviews all EIA reports and other sub-plans and provides recommendations to the EIA authority about whether to accept or reject an EIA report (Sano et al., 2016). Similarly, there is a panel committee for reviewing EIA reports in Vietnam which has the same functions (Clausen et al., 2011). There are currently no plans, however, to introduce a similar system to Laos. As will be discussed in more detail in Chapter 7, this lack of an external review body potentially results in weaker EIA reports and a weaker review process.

6.4.3 Specification of sectoral authorities' responsibilities

In Laos, the specification of sectoral authorities' responsibilities varies according to the type of development project. In relation to hydropower development projects for example, the Ministry of Energy and Mines (MEM) takes part in the process of reviewing the ESIA reports, and there are three departments in MEM that have institutional mandate for reviewing ESIA reports for hydropower development proposals (as detailed in Table 6.3) (MEM, 2012a; 2012b; 2012c). Furthermore, if a hydropower project proposal is expected to create significant impacts on fish species and/or tourism or historical sites, DESIA also is required to provide the project's ESIA report and sub-plans to other relevant ministries for further review and comments (MoNRE. 2013b).

Table 6.3 Responsibilities of departments in MEM related to ESIA

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Note: summary of mandates of three relevant departments in MEM.

Source: MEM, 2012a; 2012b; 2012c.

Although, the sectoral responsibilities for EIAs are identified in the EIA legal provisions and sometimes in the institutional mandates of relevant departments, they are often only stated in very general terms. For example, the ESIA Instruction just states that sectoral agencies review the ESIA reports and monitor impacts of development projects (MoNRE, 2013b). There are no explanations about how specifically each department should undertake this. This is important because the Instructions are still only a few years old and staff in departments associated with ESIA review remain quite inexperienced (see also Section 6.5.3). Overall, however, as stated in Chapter 5, it is MoNRE who is responsible for issuing the Environmental Certificate of Compliances (ECC) to officially

accept or approve the final ESIA reports and other sub-plans of the development proposals (MoNRE, 2013b).

6.4.4 Coordination between the EIA authority and relevant agencies

As suggested throughout this chapter, there are multiple levels of government and many different sectoral agencies involved in the EIA system in Laos. Ensuring that they all play their part so that a coordinated response is achieved is perhaps more of a desired goal rather than an achievable reality. This is a concern for as Saeed et al., (2012:1917) state, inter-departmental coordination is an imperative for an EIA system to operate effectively, particularly at the institutional level.

In Laos, there are two overarching bodies responsible for overseeing the coordination and cooperation between the different sections of government involved in the EIA system: the Environmental Protection Authority (EPA); and the Development Project Responsible Agencies (DPRAs). These agencies came into being through the work of the National Environmental Committee (NEC) which established a platform for environmental protection. The Committee is chaired by the Deputy Prime Minister and comprises of members from all the relevant ministries. Overall, the NEC is the highest multi-agency government body to provide advice on environmental management and protection, and to address environmental and social implications resulting from development projects nationwide (MoNRE, 2011a). As it meets only twice a year though, it devolves its power to the EPA and DPRAs for the day-to-day decision-making that needs to occur (MoNRE, 2011a).

In theory, the two overarching bodies - the EPA and DPRAs are supposed to work together, but as this research found, the coordination mechanisms amongst these bodies and between the other relevant departments do not exist nor function well. A review of the institutional mandates/directives of the six associated departments (e.g. the DESIA, DEPP, DEM, DEB, DIP and DoP) within the three ministries (MoNRE, MEM and MPI) found that the mandates of these departments do not recognize that coordination and cooperation with one another should be an important aspect of their daily routines. None of these departments specifically identified their need to coordinate with other departments to review ESIA reports or to approve project documents (MoNRE, 2012a; 2012b; 2012c; 2012d; MPI, 2012; 2014b; MEM, 2012a; 2012b; 2012c). On many occasions, each one saw itself a stand-alone decision-maker even though it is apparent that the development and operation of hydropower plants is directly associated with the extraction of natural resources, which other departments also have responsibility for. In the mandates of DEPP, DEM and DEB in MEM, however, there is no mention of any connection with or to other relevant decision-makers located in departments such as DESIA, DWR, DFR and DLM in MoNRE (MEM, 2012a; 2012b; 2012c; MoNRE, 2012a; 2012b; 2012c; 2012d). As such, decision-making on watershed areas or land concession agreements of hydropower projects is sometimes made by MEM which takes way the authority from MoNRE (Suhardiman & Giordano, 2014:982). Similarly, with the two departments responsible for the planning and promotion of the sustainable use of resources for national economic development (the DIP and DoP) within MPI, there is no recognition in their mandates of the need to coordinate with the relevant departments in MoNRE (MPI, 2012; MPI, 2014b).

Despite this, in practice, there is no denying that these departments need to cooperate and coordinate between themselves if the EIA system is to function properly. Without an appropriate and working coordination mechanism, however, the dream of achieving sustainable hydropower development remains questionable. Likewise, in relation to different interpretations of what environmental protection and resource management looks like today. This is exemplified by the disconnect between DEB in MEM and DESIA in MoNRE which is very problematic.

These two Ministries and their departments (DEB and DESIA) have diverse perceptions of what environmental protection and natural resource management really represent. For example, MoNRE wants more stringent obligations imposed on project developers to ensure that they actually protect the environment and/or compensate for the loss of the natural resources as a result of their projects. In fact, it was reported in the *Vientiane Times* in October 2014 that MoNRE officials were considering cancelling contracts on 10 projects "due to failure in following national resource and environmental regulations" (Vientiane Times, 2014). In contrast, MEM wants more flexible and fewer obligations for project developers in order to reduce a project's costs and to allow the project documents to be approved as soon as possible. It sees costs, delays and strictly imposed obligations as significant barriers to negotiating a project's concession agreements, especially the Annex of Environmental and Social Obligations (DEB, 2017; see also Suhardiman & Giordano, 2014).

A second issue that exists in terms of overall coordination and cooperation is in the role of *ad-hoc* steering committees for large hydropower (and mining) projects recently established by the GoL. While on the surface this appears to be a positive step forward,

the problem lies in the fact that the steering committees are established per each individual project which is time consuming and not the most effective way to ensure that appropriate expertise exists within the make-up of each committee. Also, if certain representatives need to be on all of the steering committees, logistically this can make for delays in decision-making especially if travel is required. Given that hydropower projects are scattered across every province in Laos, this is likely to be the case on many occasions especially when the steering committees are chaired by the Minister of MEM and for example, the Deputy Minister of MoNRE and the head of DESIA also sit on most of the *ad-hoc* steering committees.

The Department of Energy Business (DEB) in MEM plays a role as the secretariat of the committees to coordinate with the relevant government agencies from the central through to the local levels (MEM, 2012c). At the provincial and district levels, members of each *ad-hoc* steering committee frequently change as a result of the projects occurring in different provinces and districts. Each *ad-hoc* steering committee meets quarterly to discuss significant obstacles in the project's implementation and to address environmental and social problems created by the projects (DEB, 2014). As suggested above, however, as there are so many hydropower projects, the chairperson and the committee members at the ministerial level (particularly nationally) do not always have the time to meet quarterly. So in practice, as the research has observed both professionally and through the fieldwork for this research, if local villagers do not seriously complain about a project's impacts, then often no committee meeting was required. It is for these reasons that the World Bank (2010:3) suggests that the current project-by-project approach in Laos "has outlived its usefulness" as it fails to take into account the cumulative impacts of all these projects combined.

6.4.5 Concluding remarks on criteria evaluation

As Table 6.4 below suggests, whilst an institutional framework for EIA exists in Laos and some areas meet minimal standards, overall, it remains deficient in several key areas thereby lagging behind international best-practice. There is no external review body for ESIA reports and this potentially compromises the quality of the reports and the review process. There are also issues with the lack of clarity of the role of sectorial agencies and the poor quality of the level of coordination between different agencies. Underpinning this is the fundamental issue of environmental protection versus natural resource exploitation and how these two elements fit together into a sound regulatory regime. This is further examined in Section 6.5.

Table 6.4 The level of effectiveness of the institutional arrangement

Component	Evaluation criteria	Level of effectiveness	
		Legend	Comment
Institutional Arrangements	1. Competent authority for EIA and determination of environmental acceptability	√√	Clearly specified in ESIA Instruction
	2. Review body for EIA	√	Specified in ESIA Instruction but no independent review body
	3. Specification of sectoral authorities' responsibilities in the EIA process	√	Identified in ESIA Instruction and mandates, but not explicitly detailed.
	4. Coordination between EIA authority and relevant agencies	x	Some coordination at a high level, but not at the department level.

Note: Legend for level of EIA effectiveness: [√√] Good; [√] Fair; [x] Deficient; [-] None existent.

6.5 Practical Performance Evaluation

The institutional arrangement for EIA is one of the fundamental components that helps determine the effectiveness of the EIA system as a whole (Sadler, 1996:78). The mere existence of institutional bodies to operationalize an EIA system, however, does not necessarily mean that they are functioning effectively as suggested above. This section of

the chapter therefore considers the effectiveness of the EIA institutions in practice as perceived by key stakeholders through research interviews and from fieldwork observations. Overall, while interviewees suggested that some improvements had been made to institutional structures and arrangements over time, there were still weaknesses and limitations in three main areas. These are discussed below.

6.5.1 Overlapping roles and responsibilities

As discussed in Sections 6.3 and 6.4 of this Chapter, the implementation of the EIA system in Laos requires involvement of several key stakeholders, but many share the same or overlapping responsibilities such as MEM and MoNRE (DESIA) who are all charged with implementing EIA. Effective implementation is therefore hindered by a lack of clarity beginning with unclear institutional mandates/descriptions of the distinct roles of each department in MoNRE, MEM and MPI should play. The World Bank (2010:30) has stated that continued overlapping mandates among government agencies will actually "result in under-protection of the environment". It can also lead to infighting due to the duplication of roles. This is borne out by staff at MoNRE with one interviewee stating:

> Some departments within MoNRE such as DESIA, the Department of Pollution Control and the Institute of Natural Resources and Environment all have their own institutional mandates for how monitoring of impacts of development projects should occur. Today, they are still fighting each other with regards to who monitors what. It wastes a lot of time. (Interview # GC-19)

In regards to monitoring, (as an important component of the EIA process), this was found to be overly complicated by further duplication of roles and responsibilities. For example, the ministries of MoNRE and MEM and their associated departments (e.g. DESIA, DEPP, DEM and DEB) are all given the role of monitoring on-going hydropower project development. A review of the different institutional mandates revealed that DEPP is to monitor environmental safety of technical engineers, whilst DEM is to monitor technical

safety in accordance with the standards for construction and operation of hydropower plants (MEM, 2012a; 2012b), and DESIA is to monitor environmental and social impacts of development projects more generally (MoNRE, 2012a). In practice, these roles and responsibilities are almost identical. Several participants of this research commented that the departments above carried out very similar monitoring programs. One respondent from an EIA consulting firm stated that:

> I have noticed that MEM and MoNRE play the same roles in monitoring of development projects. The monitoring teams from these two ministries conduct very general and similar monitoring activities. They both separately visit the project's construction sites and resettlement villages and observe physical environmental conditions in local communities that are located nearby the projects. I don't think this kind of monitoring activity is really effective or efficient. (Interview # EI-41)

A few interviewees from international development agencies (IDAs) in Laos such as the World Bank, ADB and German Development Agency (GIZ) also observed that the overlapping responsibilities between MEM and MoNRE are substantial, especially in the area of monitoring. As one interviewee said:

> There is a problem between MEM and MoNRE regardless of who is responsible for monitoring which compliance. If you talk to MEM, they will say "Yes! Yes! we know who monitors what", and if you talk to MoNRE, they also say "Yes! Yes! we know who monitors what" but, in practice, it is very difficult for them to carry out monitoring of a project's compliance effectively due to their overlapping roles There is a lot of 'stepping on toes' occurring. (Interview # I-08)

Interviews with some senior officials from within MEM, MoNRE and MPI also acknowledged that they recognized that there were problems with overlapping roles and responsibilities between some departments in their ministries. As one interviewee noted:

> The mandates of DEB, DEPP, DEM (in MEM), DIP (in MPI) and DESIA (in MoNRE) all need improvement to ensure they speak the same language and work in the same direction if the EIA system is to perform effectively, and if current and future hydropower projects are going to be required to work towards sustainability. This is not only my personal opinion, a study conducted by the World Bank in 2010 also reported that the mandates of some departments in MEM are overlapping with each other and with relevant departments in other ministries. (Interview # GC-31)

The vast number of government agencies involved in monitoring hydropower projects is obviously due to the multi-sectoral nature of projects and the overall complexity of impacts associated with hydropower projects. In some respects, the involvement of several departments in monitoring may be seen as essential, but it also creates a risk of gaps in implementation because of the continued unclear and overlapping institutional mandates (World Bank, 2010).

Authors such as Wayakone and Makoto (2012) in their study of Laos also found that different departments within MoNRE were unclear on their roles and responsibilities in regard to their daily duties, and that the mandates of these department were still in the process of being refined. Five years later, they still remain so. Indeed, some interviewees of this research who are staff of MoNRE commented that some departments within MoNRE are still fighting each other for what they should be responsible for monitoring impacts of development projects. As one interviewee responded:

> Yes! some departments within MoNRE want to take away DESIA’s roles and responsibilities. For example, the Department of Pollution Control and the Institute for Natural Resources and Environment all want to carry out their own monitoring programs on impacts of the on-going development projects. We sometimes asked these departments to investigate the water quality at project

> sites as they control a laboratory, but they never share the investigating results with us. This is very problematic. (Interview # GC-19)

A second issue associated with this duplication, lies in the area of compensation and resettlement of affected villagers (see Section 6.3.1). Some participants in this research noted that there has been a prolonged conflict over which government agency should take the lead in managing the Resettlement and Management Units (RMU). Both DEB (MEM) and DESIA (MoNRE) are claiming that they are responsible for managing the operation of RMUs. This conflict is highlighted in the comment below:

> The idea of RMUs was initially established and implemented by MEM and many RMUs across the country have performed well under MEM's management. Today, the management of RMUs has been transferred to MoNRE and there are many problems. I think MoNRE should only focus on managing the Environmental Management Units (EMUs) as they did in the past. I think that is already a big enough job for MoNRE. I think MoNRE cannot manage the RMUs as well as MEM did because I have heard that many EMUs in the country have not been functioning effectively. (Interview # GC-32)

In contrast, some interviewees from within MoNRE, PoNRE and DoNRE claimed that they are most appropriate agencies to manage the operation of RMUs because they also review and approve the Social Impact Assessment (SIA) reports and the Resettlement Action Plans (RAP) of development projects. As one interviewee from DESIA suggested:

> RMUs are now operated under MoNRE and DoNRE. In the past, the RMUs were traditionally operated and controlled by MEM without having any legal framework guiding the implementation. The revised EPL and Decree on Compensation and Resettlement state that the environmental sector now takes the lead in managing the RMUs through coordination with other relevant sectors from the central down to the local levels. I think this makes sense because MoNRE is the organization that actually carries out the tasks associated with the RMUs. We review and approve the projects' RAPs and we allocate land to compensate affected people. (Interview # GC-24)

During a National Consultation Workshop (November 2014) on re-drafting the Decree on Compensation and Resettlement (DCR), at which the researcher was present, it was observed that the problem of overlapping roles and responsibilities between MEM and MoNRE in the area of RMUs was raised by some participants seeking clarification. In response, the director general of DESIA who chaired the workshop, addressed the concern by simply saying in Laotian (which the researcher has translated):

> The conflict between MEM and MoNRE over the issue of RMUs has already been solved through a dialogue between the relevant departments of the two ministries. It is now agreed that the previous RMUs established and operated before 2013 shall continue to be controlled by MEM. MoNRE will be responsible for managing the new RMUs that are established and operated under the current Environmental Protection Law from 2013 onwards.

In other words, MEM manages RMUs before 2013 and MoNRE any after 2013. This was not the answer many participants seemed to want to hear and neither is it as clear-cut as the DG's response implies. For example, some RMUs are negotiated before project development begins (so this could be before 2013) but should the project be delayed for any reason, financial or otherwise and begin post- 2013, then both MEM and MoNRE could have a claim to management of the RMU. Also, under the current situation, provincial governors and district administrations are responsible for social issues, including the compensation and resettlement of local people affected by the development projects in their province or district, so this further complicates the facilitation of the process. Echoing this concern, the World Bank (2010) has also acknowledged that accountability and responsibility for social issues in Laos is exceedingly complicated. As the roles and responsibilities of the government agencies tasked with implementing these aspects in practice are not clearly defined, it is little wonder that this also impacts upon the outcomes of the EIA system overall.

6.5.2 Poor coordination and cooperation

As discussed in Section 6.4 and above, coordination and cooperation between relevant sectors and other stakeholders needs to be urgently improved if the performance of the EIA system in Laos is to be effective. As this research has already established that the ministries and departments within MoNRE, MEM and MPI do not have effective coordination or cooperation, this section of the chapter only considers what interviewees on the ground say about how this directly effects EIA implementation.

As a government official from MoNRE stated:

> Poor coordination between DESIA and relevant departments in MEM is the main barrier to the effective implementation of the EIA system. MEM reviews and approves a projects' Feasibility Study report (FS) and MoNRE reviews and approves the projects' EIA reports, but they hardly talk to each other. Often, MEM approves the FS reports without discussing it with MoNRE first or sometimes, we approve the EIA reports before MEM has even received the FS reports. (Interview # GC-19)

Interestingly, while acknowledging that this was occurring, the MoNRE official did not suggest that this was something that should be fixed nor did he seem overly concerned with the part MoNRE was playing in facilitating this.

The problem of weak coordination and cooperation between these two sectoral agencies does not only occur at the ministerial level; it has also spread to their counterparts at PoNRE and Province of Energy and Mines (PEM) at the provincial level. Some interviewees, who are EIA consultants working closely with PoNRE and PEM in the provinces noted that the coordination of these two organizations, is as bad as any seen between MoNRE and MEM. For example, one interviewee commented that:

> The coordination and information sharing among relevant sectors of the government at the provincial level is very problematic. If PoNRE needs to work

> with PEM, they require a lot of paper work and then it takes a very long and drawn-out process before they will even consider working together. (Interview # EL-45)

What this suggests is that poor relations between staff at different levels of government have been and continue to prevent the EIA system in Laos from working effectively. A further legacy of this, due to poor coordination and lack of cooperation between DESIA and the Department of Investment and Promotion (DIP) in the past, was the approval of development projects by the DIP (under the investment promotion law that was revised in 2009) without the approval of DESIA and other relevant departments. These project proposals were judged purely against their economic feasibility rather than whether or not they were environmentally and socially sound. As a senior government official from the Ministry of Justice noted:

> We have found many investment projects approved in the past that did not follow EIA procedures or have EIA certificates. While the projects' EIAs were being carried out, the projects had already started construction. This problem occurred because the investment promotion sector and the environmental protection sector did not coordinate each other. (Interview # GC-39)

The DIP is not, however, the only department accountable for this, in the past, DESIA itself has also approved projects without properly investigating where they were to be located. Given that many of these previous development projects were approved without proper EIAs or FS reports in place, some projects were not able to sign land concession agreements (which is now a mandatory part of private development in Laos). At the time of this research, the government was still having problems addressing this issue due to incorrect data from previous land surveys. As two interviewees from the land management sector commented:

> In the past, DESIA has approved EIA reports and DPRA approved FS reports of development projects without knowing the exact locations of the projects.

> They didn’t coordinate and cooperate with us. Yet, after the projects’ approval, we were asked to issue land entitlement certificates to the projects which were part of their land concession agreements. This created many problems as the whole process it was done in opposite direction. Today, that process has been changed, it begins with land surveys, followed by the FS, EIA and then final approval of the projects. (Interview # GC-23)

> Some development projects have aleady been in operation for almost 10 years, but the government has not been able to sign the land concession agreements with the project developers because the project areas overlap with other types of land use such as National Protected Areas. If we have not been able to sign the land concession agreements, the government cannot collect fees from the projects. So, I don’t know who actually benefits from the projects while the projects continue to operate as usual. This is a bad situation and a consequence of poor coordination between the relevant sectors. (Interview #GC-26)

What this also highlights is that timing and sequencing of EIA processes is crucial not only for efficiency’s sake, but also for sustainability. As Campbell et al., (2015:100) note, without this, EIA only “serves as a post hoc rationalization for a decision that has already been made”.

Poor coordination and a lack of accountability is not only limited to ministerial level decision-making, it also occurs at the provincial scale. As another interviewee, a local member of parliament in Vientiane province suggested:

> In general, the coordination and cooperation among relevant sectors of the government as well as between the central and local governments in Laos remains ineffective. Thus, we have seen that some development projects, especially rubber plantation projects have no EIA at all and there was no consultation process with affected communities, but still the local government approved them. In some cases, the central government has not even received the project proposal, yet the local government has already made the decision to accept the development project. (Interview # L-51)

While it is obvious from these examples that there are some very serious governance flaws that exist in Laos around EIA approval and practice on the ground, Laos is not alone in this. Authors such as Li (2008) for example, who assessed the EIA systems of other countries in the Mekong region also found that a lack of coordination among government agencies implementing EIA was common across all Mekong countries. Other studies by Ahmad and Wood (2002) and Marara (2011), also identified poor coordination and cooperation of relevant agencies as having a significant impact on the effective performance of EIA systems.

6.5.3 Inadequate capacity and resources

While lack of coordination, cooperation and governance issues are all apparent within the institutions responsible for the implementation of EIA in Laos, other major barriers to better execution of duties include the issues of inadequate human capacity and limited financial resources. Almost all participants in this research recognized this. For example, one interviewee from a large IDA in Laos commented that:

> On the MoNRE side of things, they have a tremendous amount of responsibilities, but they have very limited capacity and human resources. On the MEM side of things, they seem to have a slightly greater level of capacity than MoNRE, but overall, they also have limited human resources. (Interview # I-29)

One interviewee, a senior government official from the planning and investment sector also responded that:

> Most government sectors in Laos have faced the problem of human resource shortages, especially in the environmental protection sector because of its relatively new establishment. The government really needs to develop human resources in this field as more complex environmental problems are occurring. So far, most staff working in the environmental protection sector, including the area of EIA do not have any qualification in the field of environmental

> management. If they have a degree, they usually have graduated from other fields. (Interview # GP-15)

Another respondent, a consultant who has been directly involved in preparing ESIA reports as well as working with officials in the EIA authorities at different levels also commented that:

> The EIA system in Laos is quite similar to the EIA systems in other developing countries. Here, we do have the EIA decree, Instructions and Guidelines, but the actual implementation of them has not been effective. I have observed that the lack of human resources in the EIA arena is the main barrier to the effective operation of the EIA system at all levels. (Interview # EL-37)

There is substance to these observations about a lack of human resources. While at the ministerial level, the number of the staff in MoNRE and DESIA has significantly improved since the organization was separated from STEA to become WREA in 2007 (see Chapter 4), what remains obvious from this researcher's observations and also prior work experience is that the amount of staff with EIA knowledge and experience is still lacking. In 2010, for example, DESIA had 82 staff, but more than 50 of them worked as volunteers (DESIA, 2010). In other words, there were only around 30 paid staff members. The volunteers are generally recently graduated university students who have studied in the areas of environmental and resource management and are doing volunteer work in the hope of securing full-time employment at a later date. Some of these volunteers work for up to three or four years before either securing a job with MoNRE or leaving and finding employment elsewhere. In some cases, volunteers receive an allowance when they participate in monitoring operations (an allowance that comes via the project developers' contribution to monitoring, and this allowance is paid to both volunteers and MoNRE staff, as will be discussed in Chapter 7). As well, a small number of volunteers sometimes receive sponsorship from the World Bank as part of the bank's capacity building program. As discussed in Chapter 4, through the World Bank's LENS projects in Laos, it seeks to

"support capacity building for national, provincial and district institutions which implement environmental and social impact legislation" (World Bank, 2015b:1). Thus far, this program has assisted 1,000 people from universities and government departments at all levels to obtain further training as well as provided training and livelihood support to 150 villages (directly benefiting around 15,000 people, many being ethnic minorities living in and around forested watershed areas) (World Bank, 2015b:2).

Although, the human resources in DESIA have been considerably strengthened in recent years, the number of qualified staff overall remains deficient. It was reported that in the first quarter of 2016, DESIA staffing increased to 123 people, but volunteer staff numbers still remain high at 50 people (DESIA, 2016a). In other words, paid staff have only increased from approximately 30 in 2010 to around 70 in 2016, but these are mainly junior staff without experience. In addition, other authors have also commented on this problem. Author such as Campbell et al., (2015:104) for example, have also noted that many of these staff are newly graduated from university in Laos and as such, they lack solid work experience and the "technical knowledge to critically review EIAs [which] is most evident in the way sub-standard EIAs were often approved without further regard to more thorough and comprehensive reports on potential socio-environmental impacts and additional measures that need to be taken to minimize such impacts".

This lack of experience and level of staffing is also evident at the provincial and district levels. As one respondent from PoNRE in Bolikhamxay province noted:

> Currently, we have a total of 140 staff, but more than 70 percent of our staff are newly graduated students who work as volunteers. In the area of environmental protection, we have 23 staff, but 13 of them are graduates. Similarly, in the area of forest resource management, we have 54 staff, but 40 of them are newly graduated students who work as volunteers. This is because we have not

> received the quotas from the central government to fully employ them. (Interview # GP-03)

At the district level, the problem of human resource shortages is even worse than the provincial level. As one senior EIA consultant commented:

> I have experienced many problems and difficulties when working with PoNRE in the provinces and DoNRE in the districts because they do not have the capacity or the human resources to work with me and my staff. I think it is fair to say that some rural districts are extremely deficient, in that they have nothing, except their offices. (Interview # EI-45)

In addition, this research found that even among the staff employed to implement EIA, the level of understanding of EIA procedures was very limited. The researcher interviewed five participants from three sectors (i.e. in environmental protection, planning and investment, and in energy and mines) in two different districts namely Feung district and Borlikhan district (see Chapter 3), but only one interviewee claimed to know a little bit about the previous EIA Decree. As a senior government official working in the planning and investment sector in Feung district (Vientiane province), he responded that:

> I know that the EIA Decree is associated with investment projects such as the Nam Lik 1-2 Hydropower Project. But, it is also applied to large investment projects which are under the responsibilities of the central and provincial authorities. When they come to implement EIA here, there will be relevant sectors in our district who work with them, but in our sector, we are not really given a chance to participate in the implementation of it. (Interview # GD-01)

Another respondent, a technical officer working in the environmental protection sector in Feung district, when asked whether he had any knowledge about the EIA system, the previous EIA Decree or the current IEE and ESIA Instructions replied that:

> I think I have heard about the EIA Decree. Oh! Yes, I have seen it on my boss's desk. It has a cover in green, but I have not gotten a chance to read it. (Interview # GD-07)

Similarly, when asking the same question of participants in Borlikhan district (Bolikhamxay province), they also had no idea about the EIA system or EIA Decree or IEE and ESIA Instructions. One interviewee from Borlikhan district responded that:

> Oh! I do not know anything about it. I am a new staff member here. I have just worked here for about three years! Personally, I have not heard or seen any regulation about the EIA. I have not even gotten an opportunity to participate in a workshop or seen anything about dissemination of the EIA system or EIA regulations at this level. (Interview # GD-16)

One of the issues contributing to this lack of knowledge is associated with insufficient budgets in Laos to support the implementation of EIA. Like many developing countries, the GoL does not really have sufficient budgets to operate its EIA system, thus most of the financial resources allocated to implement EIA are reliant on support from IDAs like the World Bank or project developers themselves. A number of government officials from the central level of government who participated in this research, noted that the constant lack of funding has been one of the major obstacles to the successful operation of the EIA system in Laos. As one senior government official from DESIA said:

> MoNRE has just updated the IEE and ESIA Instructions, but we do not have enough budget to make copies and distribute them to all the offices in the provinces and districts. Currently, only about 20% of the staff working as EIA authorities in the provinces and districts nationwide have received copies of the new IEE and ESIA Instructions. So about 80% of them have had no information about the updated IEE and ESIA Instructions. This has created many difficulties for us to effectively implement the EIA system on the ground. (Interview # GC-20)

Interviews with several participants from two provinces also told a similar story about financial deficiency being an acute problem at the provincial and district levels. Staff from PoNRE in both Bolikhamxay and Vientiane provinces all responded that their work has been hindered by budget shortages. One respondent from Bolikhamxay province commented that:

> We have already received some copies of the revised EPL and the new IEE and ESIA Instructions from MoNRE, But, we have not been able to disseminate them to the districts and relevant sectors of the government within the province because we do not have budgets. We are seeking financial support from international organizations and hopefully, we may receive some budgets to do our job better next year. Without the budgets, we just cannot do anything. I think you know that. (Interview # GP-03)

Speaking about implementation of the EIA system as a whole, another interviewee from PoNRE in Vientiane province stressed that overall, the EIA legal framework and the EIA procedures in Laos were fine, but in practice they could not be fully operationalized because there were insufficient budgets to implement them properly. The interviewee noted that:

> The policies, laws and regulations are only valuable when public awareness is high and people follow them. Unfortunately, we have had limited opportunities to tell the public about the IEE and ESIA Instructions and how individual people and organizations can get involved in helping us implement the EIA system. We do not have the budget to mobilize the information. I think this is a big problem to the effective implementation of the EIA system in Laos, particularly in Vientiane province. Many project developers in Laos do not have information about EIA. If they do not recognize the important role of the EIA for their development projects, they are unlikely to implement it effectively. (Interview # GP-06)

This problem of financial resource deficiency was also recognized by participants from international development agencies in Laos. At the ministerial level, MoNRE obviously has a better chance of getting financial support from various international cooperation programs, at the provincial and district levels, however, PoNRE and DoNRE rarely receive direct support from international organizations. While some interviewees said that inadequate budgets were a significant problem for all government sectors in Laos, others emphasized that insufficient funding was especially problematic in the provinces and districts. As a respondent from a large international financial institution in Laos commented:

> Inadequate budgets are the key barriers to enforcing stricter laws and regulations in Laos. I have noted that most sectors of the government do not enough money to even print the copies of their laws and regulations and disseminate them! MoNRE does not only face the problem of budget deficiency, but it also has a serious lack of human resources, particularly knowledgeable staff, which greatly limits its capacity as an effective implementer of EIA. (Interview # I-35)

Interestingly, most of the studies on Laos as discussed in Chapter 2, rarely mentioned lack of funding as an issue that might impact upon EIA effectiveness in Laos. Perhaps, this is because the problem of insufficient financial resources is very obvious in developing countries like Laos? Irrespective of this, it remains a substantial impediment that may account for some of the obstacles to successful implementation of EIA.

6.6 Conclusion

As has been documented throughout this chapter, Laos has an extremely complicated government structure. While it has tried to implement an EIA system across the country by sharing the work load across institutions, on the whole it has been largely unsuccessful

in its attempt to streamline the EIA process. This is due to a number of factors including the duplication of roles and responsibilities, an overly complex decision-making structure and a lack of capacity both financial and human. In theory, the GoL recognizes what is required to implement the EIA system, and the necessity for it given the enormous amount of development occurring across the country, but in practice as highlighted above, the system remains convoluted and subject to organizational bias and petty jealousies between staff employed to implement EIA processes on the ground. One assumes that this can be improved upon over time, given that the EIA system in Laos is still relatively new, but much of this may require a larger investment from external nations and IDAs than already is occurring. Likewise, it may well be the case that because of the contextually specific nature of the EIA procedures in Laos that quite particular strategies are needed to make the EIA system function effectively. This is discussed further in Chapter 7.

CHAPTER SEVEN: PROCEDURAL ELEMENTS

7.1 Introduction

This chapter investigates the procedural elements of the EIA system in Laos. It begins with an overview of the procedural elements that are generally included in most EIA systems, including the EIA system in Laos. Then it assesses the procedural elements of EIA in Laos in terms of the criteria introduced in Chapter 2. The assessment mainly looks at what procedures exist in Laos and how these procedures are incorporated into the Laotian EIA system. The chapter then evaluates how the procedural elements are practiced in Laos, drawing from the interviews and field observations to focus on procedures related to reviewing ESIA reports, monitoring of impacts and public participation. Given the scope of the PhD project and the time available to conduct fieldwork, it was not possible to evaluate how all procedural elements are practiced. Monitoring and public participation were selected as these have been identified as areas of weakness in other studies of EIA.

As discussed in Chapter 2 (Section 2.5), studies of the EIA system's effectiveness in developing countries consistently identify issues concerned with monitoring and public participation as significant barriers to EIA effectiveness (see Ahmad & Wood, 2002; El-Fadl and El-Fadel, 2004; Nadeem & Hameed, 2008; Toro et al., 2010; Marara et al., 2011; Naser, 2012; Panigrahi & Amirapu, 2012; Betey & Godfred, 2013). Similarly (and as discussed in Section 2.6), studies in the LMB identify issues with monitoring and public participation (e.g. Clausen et al., 2011; Wayakone & Makoto, 2012; Campbell et al., 2015; Wells-Dang et al., 2016). The practice of reviewing ESIA reports was selected because during the period of fieldwork the researcher was located in the offices of the

Department of Environmental and Social Impact Assessment (DESIA) and could unobtrusively observe the practice of reviewing reports.

7.2 Overview of the Procedural Elements of EIA

An EIA system consists of a series of procedural elements or stages from the initial screening of projects to the follow-up and monitoring of projects as they are implemented (Barrow, 1997; Wood, 2003; Glasson et al., 2012; Noble, 2015; Mareddy, 2017). Figure 7.1 depicts the main elements of the EIA process, highlighting some of the crucial decision-making points. Morrison-Saunders and Arts (2008) suggest that it is useful to divide the EIA process into two main stages: an initial 'pre-decision' stage which includes screening, scoping, predicting impacts and decision-making; and a later 'post-decision' stage which includes the monitoring and auditing that takes place after the decision has made to approve a development proposal.

Figure 7.1 Main Procedural Elements of an EIA Process

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Source: UNEP, 2002; Online at https://unep.ch/etu/publications/EIA_2ed/EIA_E_top1_chart.PDF

As discussed in Chapter 4, in Laos the legal context for EIA has shifted from an EIA Regulation to an EIA Decree and to the current Initial Environmental Examination (IEE) Instruction and the Environmental and Social Impact Assessment (ESIA) Instruction, which were introduced in December 2013. At the screening stage, the determination is made as to whether a project proposal will be subject to IEE or ESIA. IEE is for small development projects and implemented by the Province of Natural Resources and Environment (PoNRE) at the provincial level (MoNRE, 2013a; 2013d). ESIA is for large development projects and operated by the Department of Environmental and Social Impact Assessment (DESIA) at the ministerial level (MoNRE, 2013b; 2013d). In addition, projects that are not subject to IEE or ESIA require an Environmental Management Plan (EMP); this is usually for small family businesses such as a pig farm, fish farm or garage (National Assembly, 2012a). EMPs are reviewed and approved by the District of Natural Resources and Environment (DoNRE) at the district level. This research is about the effectiveness of the EIA system in the context of large-scale hydropower projects, and therefore it focuses on procedural elements of ESIA (see Figure 7.2).

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Figure 7.2 Procedural Elements of EIA System in Laos

Source: MoNRE, 2013b
Note: ToR = Terms of Reference; ESMMP = Environmental and Social Management and Monitoring Plan; ECC = Environmental Certificate of Compliance

7.3 Criteria-based Evaluation

The criteria for evaluating the effectiveness of the procedural elements of EIA in Laos are in Table 7.1. As discussed in Chapter 2, these criteria are based on those developed by Ahmad and Wood (2002). In what follows, each of the criteria are discussed in terms

of the key points from the literature and what emerged from the review of the documents associated with the EIA system in Laos (supplemented in some places with insights provided by interviewees).

Table 7.1 Criteria-based evaluation

Component	**Evaluation criteria**
Procedural Elements	1. Screening approach 2. Scoping approach 3. Requirement to consider alternatives 4. Specification of EIA report contents 5. Systematic review of EIA documents 6. Systematic decision-making and approval 7. Requirement for EMMP 8. Requirement for mitigation of impacts 9. Requirement for monitoring 10. Requirement for public participation

7.3.1 Screening

Screening is designed to determine whether a development proposal requires EIA. In general, there are two common approaches to EIA screening, a project list screening approach or a case-by-case screening approach. The project list screening approach involves placing development projects into categories based on the project characteristics (e.g. size of project), project impacts (e.g. scale of impact) and/or project locations (e.g. sensitive areas) (Glasson et al., 2012; Noble, 2015). In this approach, larger projects or those with potentially large impacts or those located in sensitive areas are usually subject to EIA. The case-by-case screening approach is used when the potential impacts of a development proposal is unclear or uncertain (Tromans, 2012; Noble, 2015). This screening approach is also applied to development proposals that are not covered in the project list approach. There are advantages and disadvantages to both approaches. Project lists are quick and simple, but there is has less room for using discretion when there are

variable environments (Glasson et al., 2012). On the other hand, the case-by-case approach allows more discretion and flexibility but it can be a more complex and costly process (Glasson et al., 2012).

In Laos, a project list screening approach is used and there is a checklist of development projects which determines whether a proposal will be subject to an IEE or ESIA. As discussed in Chapter 5, the checklist covers five major areas of development (energy; agriculture and forestry; processing industries; infrastructure and service; and mineral resource extraction), and 88 different types of development projects are identified. Under this screening process, project developers determine whether their development proposal requires ESIA or IEE (MoNRE, 2013d). If a development proposal is not included in the checklist, MoNRE will make a decision about whether ESIA or IEE is required (MoNRE, 2013b). If the decision is that a proposal does not require either ESIA or IEE, then the project developer will need to produce an Environmental Management Plan (EMP) which is reviewed and approved by DoNRE in a district level (National Assembly, 2012a).

In terms of hydropower developments, projects that are large (i.e. with a capacity to produce more than 15 MW or power or with a storage capacity of over 200 cubic metres) are subject to ESIA, while projects that are much smaller (i.e. with the capacity to produce only 1 to 15 MWs and with a storage capacity of less than 200 cubic metres) are subject to IEE (see also Table 5.1). As this research is only concerned with large hydropower developments, it focuses on those that are examined under the ESIA system.

The checklist screening approach that is used in Laos is convenient and efficient for project developers. However, the approach has several limitations. Screening is based

only on the type rather than the overall scale of projects. It does not take into account the potential scale of project impacts (even from smaller projects) nor whether projects are located in sensitive areas, as suggested by Glasson et al. (2012) and Noble (2015). By comparison, in Cambodia, site visits by the EIA authority are part of the screening process (Sano et al., 2016). In addition, international experience shows that in all countries where a project list screening approach is used, developers will use strategies to avoid having to conduct an EIA such as downplaying the size of the proposed development (Sano et al., 2016:3). This is likely to be a serious problem in Laos given that there is such strong political support for hydropower development (as discussed in Chapters 4 and 5). It would seem there is potential to strengthen the screening process in Laos by introducing a case-by-case approach; however, implementing such an approach may be difficult given the lack of resources and availability of skilled staff (as highlighted in Chapter 6).

7.3.2 Scoping

Scoping is used to determine a framework for assessing impacts of a development proposal, including identifying potentially significant impacts that require attention and eliminating issues that are of little concern (Glasson et al., 2012; Noble, 2015). Typically, scoping is part of the process of establishing the Term of References (ToR) for the EIA. The ToR guides the EIA consultants and/or the project developers about the issues and parameters that need to be assessed and how the impacts are to be examined and analysed, including what baseline data is required (Glasson et al., 2012; Elliott, 2014). The ToR also provides a benchmark for the authorities that are responsible for reviewing the project's EIA report and other sub-plans (Wood, 2003; UNU et al., 2017). As such, scoping plays an important role in ensuring that the assessment focuses on the potentially

significant impacts, and time and money are not wasted on unnecessary investigations or on issues that are of little concern.

There are two broad scoping approaches that have been established: the "closed scoping" approach and the "open scoping" approach (Noble, 2015:95). In a closed scoping approach, the content and scope for preparation of the ToR are predetermined by law, and any modification usually occurs through closed consultations between a project developer, lead agency and EIA authority (Noble, 2015). In an open scoping approach, the content and scope for preparation of the ToR are determined by a transparent process which includes the involvement of various interest groups and the public (Noble, 2015). This latter process is more interactive in seeking inputs and comments from the public to determine their concerns and the major issues that need to be assessed and addressed in an EIA report (Glasson et al., 2012). The open scoping approach helps build confidence and trust in the EIA system as stakeholders (including interest groups and the general public) are involved in the EIA procedures from an early stage (UNU et al., 2017).

In Laos, a closed scoping approach is adopted. The project developers or the consultants hired by the developers prepare the ToR and submit them to DESIA for review and approval (MoNRE, 2013b). DESIA has fifteen days to approve the ToR or to request revisions to the ToR (MoNRE, 2013b). However, Laos does not have a specific guideline for preparing and reviewing the ToR. The current ESIA Instruction and the *Guideline for Reviewing ESIA Reports* (DESIA, 2016b)[16] contain very little information about what types of information and issues the ToR should address. This lack of specification seems

[16] As discussed in Chapter 5 this document replaced the earlier 2011 version

to move away from good EIA practice. As Noble (2015:96) states, although the requirements will vary in different EIA systems, scoping should at least cover the following:

- Scoping of project alternatives;
- Identifying valuable environmental components;
- Delineating the assessment's spatial and temporal boundaries;
- Establishing the environmental baseline conditions and trends; and
- Identifying potential impacts and issues of concerns.

The problem of a poor scoping process was identified in previous studies on EIA effectiveness in the Lower Mekong Basin (LMB), including Laos. Campbell et al., (2015:104) highlight how the scope of EIAs in Laos are overly general and do not take into account the full area that a project may impact. They note further (2015:97) that this is of particular importance in hydropower developments where the downstream impacts (e.g. to fisheries) may extend well beyond the immediate area of the development. Baird and Barney (2017) discuss how in Southeast Asia, including in Laos and Cambodia, inadequate attention is given not just to the cumulative impacts of multiple hydropower developments but to the cumulative impacts of multiple cross-sectoral projects such as large-scale dams and large-scale plantations. They argue further that the impacts are "significantly and variously overlapping and producing complex, cascading and frequently unanticipated socio-ecological changes" (Baird & Barney, 2017:2). Providing stronger guidance on the ToR would be one way of strengthening the scope of EIAs conducted in Laos, particularly so that downstream effects and cumulative impacts are considered.

7.3.3 Requirement for consideration of alternatives

The consideration of alternatives of a development proposal is a compulsory requirement in many EIA systems worldwide (Wood, 2003; Glasson et al., 2012; Elliott, 2014; Noble, 2015). The United States Council on Environmental Quality describes the consideration of alternative options as being at "the heart of the environmental impact statement" (cited in Glasson et al., 2012:90). This is due to the fact considering alternative options ensures that a project developer has considered other options to the project itself, as well as various means of avoiding and preventing environmental and social impacts. The alternatives to be considered can include the 'no action' option, alternative locations, alternative scales of the project, alternative processes or equipment, alternative site layouts, alternative operating conditions and alternative ways of dealing with environmental impacts (Glasson et al., 2012:91; see also Elliott, 2014; Noble, 2015).

In Laos, the consideration of alternative options has been applied inconsistently. The earlier EIA Regulation introduced in 2000 required that a project's EIA ToR and an EIA report discussed the alternative options and their main impacts. For example, it required that an EIA report must identify, evaluate and compare mitigation measures for preventing and/or reducing the impacts of all alternative options of a project proposal (STEA, 2000). When the Regulation was upgraded to the EIA Decree in 2010, the requirement for consideration of alternative options was removed (PMO, 2010). Similarly, the current ESIA Instruction which replaced the EIA Decree in 2013 does not require a project developer to consider a development project's alternatives and potential impacts of these alternatives (MoNRE, 2013b). However, the supporting *Environmental Impact Assessment Guidelines* developed by a team of technical experts who worked with MoNRE under the Environmental Management and Support Programs (EMSP) to help

develop or improve necessary legal provisions for EIA (EMSP, 2011) and *Guideline for Reviewing ESIA Reports* (DESIA, 2016b) require an ESIA report to compare and discuss the impacts of alternative options. For example, the *Environmental Impact Assessment Guidelines* requires that the consideration of alternative options should include the 'no-project' alternative, project's location, design and choice of technology (EMSP, 2011). This inconsistency between the current Instruction and the Guidelines (developed under the EIA Decree) is an ongoing issue.

7.3.4 Specification of EIA report contents

An EIA report contains information about a project's potential impacts and recommendations for measures to mitigate these impacts. It aims to present the information to stakeholders (including the general public) and decision-makers so that the adverse impacts are known before a decision is made (Elliott, 2014). According to Carroll and Turpin (2009:158), a good EIA report contains the following:

- A non-technical summary;
- An introduction which includes details of the consulting team and the project developers;
- A description of the project which includes details of the project itself, as well as the alternatives that have been considered;
- Assessment of environmental (and social and economic effects) (including methodology used, baseline conditions, potential effects and significance; mitigation measures);
- Management of the project's impacts during construction, operation and/or decommissioning; and
- Appendices (including bibliography or references used in the EIA report).

In Laos, the previous EIA Regulation and Decree established the requirements for the contents of an EIA report (and the associated Environmental and Social Management and Monitoring Plan, ESMMP); however, the current ESIA Instruction does not mention what key information is required in an EIA report (and an ESMMP). The ESIA Instruction merely requires that an ESIA report must be written in the Laotian language (MoNRE, 2013b:9).

Nevertheless, the *Environmental Impact Assessment Guidelines* (EMSP, 2011) (established under the previous EIA Decree) provides detailed guidance for EIA reports and ESMMPs (see Figure 7.3). This guidance is quite detailed and consistent with good practice internationally; However, because this information is not included in the ESIA Instruction it is not legally required. This inconsistency has created confusion for developers, and this was evident in the interviews. For example, one consultant who prepared ESIA reports for developers was not aware that the *Guidelines* mentioned above which was established under the previous EIA Decree was still relevant under the ESIA Instruction:

> When we talk about quality of the EIA reports, the government always blames the EIA consultants for producing low quality of the EIA reports. I want to ask the government where is the guideline that tell us how to prepare and write the EIA reports, where is a format for the EIA report? (Interview # EL-40)

Clearly, the EIA process would be more effective in Laos if the ESIA Instruction incorporated the material from the *Environmental Impact Assessment Guidelines* thereby providing developers and consultants with clear guidelines on what is required in an EIA report.

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Figure 7.3 Structure of EIA Reports and ESMMPs

Source: Guidelines for Conducting Environmental Impact Assessment (EMSP, 2011:3)

7.3.5 Systematic review of EIA reports

The purpose of reviewing EIA reports and other sub-plans is to ensure that the assessment is comprehensive and that the information is of a high quality. It acts as a final check on the EIA report (and any associated plans)[17] before approval by decision-makers (Lee & George, 2000; Wood, 2003; Glasson et al., 2012). It is also widely accepted that the process of reviewing EIA reports should include stakeholder consultation and allow for public comments (Wood, 2003; Glasson et al., 2012). Overall it has suggested that the key objectives of reviewing the EIA reports must aim to:

- assess the adequacy and quality of the report;
- take account of public comments;
- determine if the information is sufficient for a final decision to be made; and
- identify, as necessary, any deficiencies that must be addressed before the EIA report can be accepted (UNU et al., 2017).

EIA review is one the most important ways to ensure that the EIA process is effective. As Fuller (1999:349) suggests:

> the review of the quality of an EIA report is one of the main 'checks and balances' built into the EIA process. It helps to ensure the information submitted is credible and sufficient for decision-making purposes. Often, the quality of EIA reports can be significantly improved by review, resulting in more informed approvals and better environmental outcomes.

As such, as Ahmed and Wood (2002:223) suggest "it is particularly important that this stage is carried out as effectively and efficiently as possible".

[17] As will be discussed in Section 7.4.7 in Laos these associated plans include an Environmental Management and Monitoring Plan (EMMP) as can also include other plans such as a Biodiversity Management Plan.

There are different approaches to the process of reviewing EIA reports. Reviews can be undertaken by internal or external review bodies. Internal reviews are carried out by the relevant authority or the responsible government agency; whereas, external reviews are carried out by independent review panels or outside experts (Wood, 2003; Morgan, 1998; Glasson et al., 2012). Sometimes the internal and external approach is combined through the use of inter-agency panels. Generally, an external review process is considered to be more transparent and rigorous, and to result in a higher level of quality assurance (UNU et al., 2017, see also Harvey & Clarke, 2012:26). There are several methods that can be used by the internal or external bodies to review EIA reports. Reports can be reviewed by using general checklists or project specific checklists, or by seeking input from experts and accredited reviewers (Lee et al., 1999; Lee & George, 2000).

In Laos, review is largely an internal process that involves two steps: an administrative review and a technical content review (see Figure 7.2). The administrative review is undertaken solely by DESIA (the EIA authority) and it is based on a general checklist of 75 questions that identify whether the report is complete, clearly presented and complies with administrative requirements (DESIA, 2016b). This review process takes up to 15 working days (DESIA, 2016b). The technical content review assesses the information and data contained in the ESIA report (and associated plans). It evaluates whether the ESIA report (and associated plans) has adequate information to support the decision to accept or reject the ESIA documents (DESIA, 2016b). This technical content review process involves a multi-agency approach. DESIA coordinates with other Ministries, and well as coordinating with other departments and divisions within MoNRE, including with PoNRE in the province where a project proposal is located (MoNRE, 2013b). The Ministries that DESIA coordinates with will vary depending on the type of a project

proposal. For example, for large hydropower projects, DESIA coordinates with relevant departments in the Ministry of Energy and Mines (MEM) and Ministry of Planning and Investment (MPI).

Similar to the administrative review, the technical content review is guided by a general checklist consisting of 155 questions (DESIA, 2016b). Examples of items in the checklist include confirming whether the ESIA report clearly describes the project's operation and whether the ESIA report adequately identifies the potential impacts and their mitigation measures during construction phase of the development project (DESIA, 2016b). During a process of the technical content review, at least three public consultation workshops are to be arranged at the village, district and province or the capital city level (MoNRE, 2913b; MoNRE, 2013c; DESIA, 2016b). The technical content review can take up to 95 working days for a project proposal with general potential impacts and 120 working days for a project proposal with complex and highly significant impacts (MoNRE, 2013b; DESIA, 2016b). During the process, other Ministries and relevant departments and divisions within MoNRE have 50 working days to review the report and provide comments to DESIA (MoNRE, 2013b; DESIA, 2016b).

Overall, the process of reviewing ESIA reports (and associated plans) is sound with two levels of review using detailed checklists. However, the process only involves government departments and divisions contained within the relevant sectors of the government. Following best-practice, a stronger approach would be to include an external review body. The issue of whether in practice the review process is sound is further examined and discussed in Section 7.4.1. As well the process of public participation will be discussed in Section 7.4.3.

7.3.6 Systematic decision-making and approval

Wood (2003:183) notes how the original intention of EIA was that "environmental considerations be given greater weight in the design of proposals, and in the decisions taken upon them". As such, he states that a fundamental requirement of any EIA system is that no decision about a development proposal be taken until an EIA report has been prepared and considered (Wood, 2003:183). Yet the process of taking account of the EIA report and making a decision about a development proposal tends to operate as "basically a black box" (Glasson et al., 2012:160). Thus, there have been efforts to make the decision-making process more rigorous and transparent (Glasson et al., 2012:160). In his comparative review, Wood (2003) identifies the EIA systems in the Netherlands and the US as being the most advanced in terms of rigour and transparency. In the Netherlands, the relevant authority must explain in writing how the environmental impacts addressed in the EIA Report were considered in the decision. On this basis, Wood identifies that the Netherlands is one of the few countries in which the EIA system does have an impact on decisions about development proposals. In the US, federal authorities must make a Record of Decision (RoD), and this RoD has to include the following:

- a statement explaining the decision;
- an explanation of alternatives considered;
- the environmental, social and economic factors considered in making the decision;
- an explanation of the mitigation measures adopted; and
- a summary of the monitoring and enforcement program to ensure mitigation measures are implemented effectively (Wood, 2003:226).

Despite these two examples (or perhaps exceptions), Wood questions the influence that the EIA report has in the decisions that are made (2003:183). At least 'on paper' the role of the EIA report is that it helps decision-makers in their deliberations about development proposals, and in their final decision to either approve a development proposal (with or without conditions attached) or refuse a development proposal. However, in practice it seems that political factors play a far greater role in the final decision and "given the positive benefits that most proposals confer (e.g. employment) … the decision-makers will seek to approve that action, unless there are politically overwhelming reasons to refuse it" (2003:183).

In Laos, there are problems with the decision-making process. Essentially, the EIA system violates the fundamental requirement identified by Wood (2003:183) that no decision about a development proposal be taken until an EIA report has been prepared and considered. In Laos, the political decision about whether a development proposal is to proceed is taken effectively in advance of the EIA process; as Wayakone and Makoto point out this means that the EIA process is "a residual and marginal add-on to planning decisions already made on political and economic grounds and often with minimal consideration of environmental impacts" (2012:1665). Likewise, Suhardiman and Giordano (2014:983) found that in Laos, an EIA is conducted primarily to fulfil submission requirements for MoNRE's approval rather than to actually assess potential environmental and social impacts of a development proposal.

In the Laotian EIA system, there is a legal requirement that ESIA reports be accepted or rejected. Once the report is accepted then the ECC is issued and the development can commence (as discussed earlier in Chapter 5). The ESIA Instruction states that after

receiving a final ESIA report, MoNRE will make a decision to accept or reject an ESIA report (and associated plans) within 40 working days for a normal project and 65 working days for a complicated project (MoNRE, 2013b). However, there is no information about what activities or tasks are to take place during the period of 40 or 65 working days before a final decision is made. Some participants of this research commented that the decision to accept or reject the ESIA reports often takes place immediately after the final public consultation meeting. One interviewee, a senior staff member from DESIA, described the approval process in the following way:

> We have series of consultation meetings. When the developers complete the provincial consultation meeting and provide us a set of the final ESIA report, we will issue them a certificate, I mean the Environmental Certificate of Compliance. If the ESIA reports are not good enough, we will recommend the developers to improve them and then return to us for approval. (Interview # GC-28).

Thus the process is designed to ensure that ESIA reports (and by implication development proposals) are approved. If the report is not accepted initially then it will be accepted once revisions are made.

In the interviews, respondents highlighted how decisions are influenced not so much by the quality of the ESIA report but by the economic development priorities of the GoL. This is clearly evident in the observations made by two interviewees, the first from DESIA and the second from an EIA consultancy firm:

> Some EIA reports are good quality and some are not, but it is our job to consider if the hydropower project proposals are priorities of the government or if they urgently need strong ECCs. We have to issue the ECCs for them to support the development proposals going forward. We understand that some problems will occur during the projects' construction and operation, but all we can do is place the environmental conditions on their proposals and then hope that the developers take the responsibility to address them. (Interview # GC-33)

> I have noted that the top priority of the government is to facilitate quick approval of development proposals and to ensure that the development projects can start construction and operation as planned as swiftly as possible. The government thinks that if an EIA report of a proposed project meets or satisfies 50 - 60 percent of its targets, then it is already good enough to approve. (Interview # EI-45)

These observations are consistent with what Campbell et al. (2015:106) found in their study. They found that no EIA report had ever been rejected in Laos partly because of pressure from project developers and government officials (particularly from the MEM and MPI) who "view EIA merely as a procedural requirement for project approval" (see also Chapter 6). What this means is that a genuine decision-making step in the EIA process is missing, and has been substituted with the step of reviewing and approving the ESIA report—with an assumption that all reports will be approved.

7.3.7 Requirement for an Environmental Management Plan

The requirement for an Environmental Management Plan (EMP) is based on the idea that it is not enough to merely assess and identify *potential* impacts of a development proposal, it is equally important to manage and monitor the *actual* impacts once the project commences (DIPNR, 2004; Noble, 2015). As Noble (2015:149) argues, the usefulness of an EIA system lies not so much in anticipating impacts, but in effectively managing and mitigating the impacts. In addition, a criticism of an EIA system is that once a proposal has been approved, there may be less scrutiny during the project's construction and operation, and the impacts may be greater than that predicted in the EIA report (DIPNR, 2004:2)

An EMP is usually prepared as part of an EIA report (ADB, 2003; UNU et al., 2017). The plan translates the intended management activities into specific actions by detailing the

‘who’, ‘what’, ‘where’ and ‘when’ of environmental management (including the mitigation and monitoring measures) (DIPNR, 2004; UNU et al., 2017). This plan is not a static document; making changes to an EMP is necessary to ensure its environmental and social safeguard compliance and effective implementation. The DIPNR (2004:5) describes the EMP as a “living” document that requires reviewing and updating throughout the entire life of a project. Although, there is no standard format for a project’s EMP, the World Bank (1999) and the Asian Development Bank (2003) suggest that its main contents should include the following:

- Summary of potential impacts;
- Proposed mitigation measures;
- Monitoring programs and parameters or compliance with relevant standards; and
- Allocation of resources and responsibilities for implementing mitigation measures and monitoring activities.

In Laos, the ‘Environmental Management Plan’ for a large-scale development project is referred to as an ‘Environmental Management and Monitoring Plan’ (EMMP). The ESIA Instruction requires that an EMMP is part of a project’s ESIA report, but it should be produced separately from the ESIA report (MoNRE, 2013b). Also, the EMMP requires updating and approving by the EIA authority six months prior to the project’s commercial operation (MoNRE, 2013b). While the Environmental Certificate of Compliance (ECC) for an ESIA report lasts until the end of a project, the ECC for an EMMP only lasts for 2 to 5 years before it needs to be updated, depending on the anticipated levels of adverse impacts (MoNRE, 2013b). These requirements for the EMMP is one of the strengths of the EIA system in Laos.

In a hydropower project, a proposal requires more than the EMMP. As shown in Figure 7.3, hydropower projects may require a Watershed Management Plan and a Biomass Removal Plan. Other plans that may be required that are not shown in this Figure include a Biodiversity Management Plan and an Environmental Flow Management Plan (MoNRE, 2013b). In some cases, development proposals that may have significant social impacts require a separate Social Management and Monitoring Plan (SMMP). Just as the EMMP only lasts for between 2 to 5 years before it need to be updated, so too the SMMP needs updating. The SMMP can also come with specific development plans such as a Resettlement and Compensation Plan, a Community Development Plan, and an Ethnic Development Plan (MoNRE, 2013b).

Although, the ESIA Instruction does not define what information is needed for the EMMP and SMMP, the *Environmental Impact Assessment Guidelines* (EMSP, 2011) states that the EMMP and SMMP are important documents and should include the following:

- Introduction;
- Context of the development project;
- Project developer's environmental and social policies and commitments;
- Organization structure, roles and responsibilities;
- Legal requirements;
- Overview of impacts and mitigation measures;
- Management and monitoring plan;
- Public consultation and disclosure; and
- Implementation programs (EMSP, 2011; DESIA, 2016b).

In theory, the requirement for an EMMP (and SMMP) in the current EIA system in Laos is consistent with good EIA procedures as suggested by a number of scholars (e.g. Noble, 2015). In practice, however, as suggested in Chapter 5, law enforcement in Laos is weak and there is no mechanism to guarantee that project developers implement or update the EMMP (or SMMP). It is also arguable if project developers have taken any mitigation measures into account at all as MoNRE lacks the financial resources and expertise to monitor implementation of the EMMP carried by the project developers.

7.3.8 Requirement for mitigation of impacts

One of the core objectives of EIA is to manage adverse impacts of development projects. Thus, mitigation of impacts is a critical element of EIA as it is used to identify measures that will help safeguard the environment and the community affected by a development proposal (UNEP, 2002). Mitigation is defined as "measures which are incorporated into the design or implementation of a development project for the purpose of avoiding, reducing, remedying or compensating for its adverse environmental impacts" (Carroll & Turpin, 2009:30). There is some overlap between the EMP (or EMMP in the case of Laos), as the EMP manages and monitors what happens once construction begins. However, as the quote by Carroll and Turpin suggests mitigation should also occur early in the life of a project, including in the initial design phase. Wood (2003) characterises mitigation as occurring throughout the EIA process (as shown in Figure 7.4) (see also Carroll & Turpin, 2009; Glasson et al., 2012; Noble, 2015). The implication of including mitigation throughout the EIA process is that negative impacts are more likely to be avoided. In his comparative review of EIA systems in North America, Europe and Commonwealth countries, Wood found that when mitigation measures were actively incorporated throughout the EIA process then it was more likely that the development

proposal was approved. This is because those proposals had been “substantially modified to mitigate impacts during the successive stages of the EIA process” (2003:261). This approach to mitigation of impacts also has the advantage for a developer of helping to identify early on whether the cost of the mitigation measures can be incorporated into the project budgets, and even whether a development proposal should be withdrawn because the costs are too high (Wood, 2003:213).

There is an enormous range of measures that can be used to mitigate the negative impacts of proposed projects, but generally mitigation can be classified into measures that will avoid negative impacts entirely; measures that will reduce and lessen the severity of a negative impacts; and measures that will remedy or offset any negative impacts (including compensation if there are impacts that cannot be mitigated) (Wood, 2003:261). As suggested above, these measures can be incorporated into the project design (e.g. in the site layout) but they may also need to be incorporated into the project construction (e.g. through waste management), operation (e.g. through restricting operating hours) and decommissioning (e.g. through rehabilitation programs). Thus, once a project is approved it is important to ensure that any planned mitigation measures associated with construction, operation and decommissioning are implemented. This is where there is overlap with the EMP discussed above in Section 7.3.7, and with the monitoring activities which will be discussed below in Section 7.3.9. Glasson et al. (2012:153) even state that the “incorporation of a clear monitoring program can be one of the most important mitigation measures”. Mitigation measures are more likely to be implemented if they are clearly described and if they include precise details such as the measurable standards that need to be achieved, the responsibilities of various agents and the schedules for various actions (Wood, 2003:260; see also Carroll & Turpin, 2009).

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Figure 7.4 An EIA process that incorporates mitigation of impacts

Source: Wood, 2003:7

In Laos, the current ESIA Instruction does not explicitly address mitigation of impacts, at least in the explicit way that scholars such as Wood recommends (see Figure 7.4 above). However, the *Environmental Impact Assessment Guidelines* recommends that mitigation measures should be incorporated into the project design (EMSP, 2011:51) and further that in the EIA report each project phase "should start with an overview of the identified impacts, their causes, significance, mitigation and residual impacts" (54). Even though the *Guidelines* provide the potential for mitigation measures to be incorporated early on, there is no requirement that this occurs because mitigation is absent from the current EIA legal framework—ESIA Instruction. It is therefore highly likely that the practice in Laos would follow the pattern that Wood (2003:17) identified as characterising developing countries:

> Mitigation … is generally considered during the EIA process but is not always implemented. Too often, there is little opportunity for changes to be made to previously designed projects: mitigation is frequently an after-thought.

The implementation of mitigation measures into the post-approval phases is potentially stronger because of the compulsory requirement in the ESIA Instruction for EMMPs (and SMMPs). However, as noted in Section 7.3.7 above, because law enforcement is weak in Laos there is no mechanism to guarantee that project developers do implement EMMPs (or SMMPs).

7.3.9 Requirement for monitoring of impacts

Monitoring includes a range of activities. Wood (1995) distinguishes between the monitoring of individual projects and monitoring of the EIA system as a whole. The first form of monitoring covers what is described as implementation monitoring, impact monitoring and impact auditing (Wood, 1995:197). In some contexts, including Laos, implementation monitoring is described as compliance monitoring, and impact

monitoring is described as effects monitoring (thus these terms are used in this thesis). The second form of monitoring involves understanding how well the EIA system as a whole is operating, including identifying weaknesses which might be addressed by amending the EIA system (Wood, 1995:241). Overall, this thesis could be characterised as a version of this second form of monitoring, for which the thesis aims to understand how well the EIA system in Laos is operating and identifying ways in which the system might be strengthened (and this will be addressed in Chapter 8). However, in order to investigate the system as a whole it is important to understand what happens at the project level, including how well individual projects are monitored; therefore, this is the focus of this section of the thesis.

As Wood (1995:198) discusses, compliance (or implementation) monitoring involves checking that a project proceeds in accordance with the EIA approval, especially in terms of any conditions that were required or any environmental or other management plans. This form of monitoring can be undertaken by a government authority or by the project developer or by a combination of the two. Effects (or impact) monitoring involves checking the actual impacts that occur as the development progresses (e.g. checking the quality of the water during construction and operation of a dam). Mitigation measures or management plans may need to be revised to address unexpected or unanticipated impacts. Effects monitoring can also help to reveal situations in which the mitigation measures and management plans have been breached (but these breaches have not been detected during compliance monitoring). Wood (1995:198) identifies that effects monitoring is generally carried out by a combination of government authority and project developer although responsibility is increasingly being given to the developer. Impact auditing involves comparing the predicted impacts with the actual impacts identified

during compliance and effects monitoring (Wood, 1995:199). The purpose of auditing is to learn more about the effectiveness of the methods used to predict impacts so that future practice can be improved. Auditing may be carried out by government authorities or by developers (as part of their own auditing processes) or by a third body, such as a research group. Wood (1995:203) notes that impact monitoring is seldom required and that this reflects "the orientation of most EIA systems to project authorisation, rather than to the management of impacts from projects".

In Laos, monitoring of impacts is required within the EIA system; however, the ESIA Instruction and *Guideline for Environmental Monitoring* (GEM) only require that effects monitoring take place. This is done through the requirement that DESIA and PoNRE carry out monitoring twice a year for large development projects and once a year for small development projects (MoNRE, 2013b; MoNRE, 2014a). In addition, at the district level, DoNRE monitors the activities of development projects four times a year for a large project and twice a year for a small project (MoNRE, 2013a; 2013b). At the project level, the Environmental Management Units (EMUs) carry out monitoring and inspection activities on a daily basis (MoNRE, 2014a). Compliance monitoring is not included in the EIA system in Laos. This is a shortcoming of the EIA system in Laos as it means that there are no checks to establish whether any projects conditions or whether EMMPs (and SMMPs and other management plans) are being followed. As will be discussed in Section 7.4.2, a second shortcoming is that monitoring is based mainly on limited observations and that detailed data based on measuring and recording is not collected. Thus, the current practice of monitoring of impacts in Laos falls short of the international standards for monitoring.

7.3.10 Requirement for public participation

It is well recognized that public participation is an integral part of EIA. Wood (2003:225) even states that "EIA is not EIA without consultation and public participation". Principle 10 of the 1992 Rio Declaration states that "environmental issues are best handled with the participation of all concerned citizens, at the relevant level" (United Nations, 1992a: 2). The 1998 United Nations Economic Commission for Europe (UNECE) Aarhus Convention calls up on all signatory states to "guarantee the rights of access to information, *public participation in decision-making* and access to justice in environmental matters" (UNECE, 1998:3, added emphasis). The Convention sets out minimum requirements for public participation at various stages of environmental decision-making including in relation to the mitigation of environmental impacts. As a result of this sort of recognition, almost all EIA systems require consultation and public participation during the EIA process.

It is generally agreed that the inclusion of public participation throughout the EIA process, including at an early stage, improves overall EIA effectiveness (e.g. Hanna, 2005; IAIA, 2006; Elliott & Thomas, 2009; Glasson et al., 2012; Noble, 2015). Just as Wood (2003) identifies that mitigation occurs throughout the entire EIA process, so too he identifies that public participation has a similar standing (as shown in Figure 7.4). Public participation provides people with an opportunity to learn about proposed developments (including potential impacts and measures to mitigate these impacts), to raise issues and concerns, and to propose options and alternatives. Public participation also benefits developers. Noble (2015:218) suggests that listening to the public and local community concerns as well as learning about local knowledge assists the project developers and consultants to identify ways to effectively avoid and/or mitigate potential impacts that

may be caused by a project. In order to achieve these types of outcomes, it is widely recognized that best-practice public participation uses multiple methods, including surveys, public displays, press releases, site visits, public comments, public consultation and public hearings (Wood, 2003; Hanna, 2005; IAIA, 2006; Glasson et al., 2012; Elliott, 2014). Public participation that relies solely on one method and on a one-way flow of information to the public is highly ineffective.

In Laos, the concept of public participation is relatively new, and has only really been discussed in Laotian society after the EIA system was introduced in 2000. This means that public participation in the Laotian EIA system is still in an early stage of development, and stakeholders are only just beginning to understand and practice public participation. Currently, there is a legal requirement for public participation in the EIA system under the Environmental Protection Law (EPL) which states that the EIA system must include public participation (National Assembly, 2012a). The ESIA Instruction identifies requirements for public participation (MoNRE, 2013b) and there is a *Guideline for Public Participation* (MoNRE, 2013c). However, there are inconsistencies within and between these documents. For example, the ESIA Instruction requires that public participation occur in four stages of the EIA system: during baseline data collection; preparation and review of ESIA reports; operation of the projects; and closure of a project (MoNRE, 2013b). Yet, the flowchart of the ESIA procedures in the ESIA Instruction (see Figure 7.2) shows that public participation is only required during the preparation of ESIA reports and the technical content review of the ESIA reports (MoNRE, 2013b). The ESIA Instruction only requires three consultation meetings during the process of reviewing the ESIA reports and it states that these meetings be coordinated between the EIA authority, the Development Project Responsible Agencies (DPRAs), the local administration and

the project developer (MoNRE, 2013b). The *Guideline for Public Participation* however, provides conflicting information suggesting that there should be at least four consultation meetings based around village consultation, district consultation, technical consultation and provincial/national consultation; and that these meetings should be implemented by the project developer (MoNRE, 2013c).

This contradictory information potentially creates confusion making it difficult for public participation to be effectively undertaken (and this issue will be taken up in Section 7.4.3). A further issue is the slippage that occurs between the terms public participation and consultation. In these documents, it is evident that public participation is being framed largely as a one-way flow of information from the project developer (and government authority) to various publics such as affected villagers. Even though the *Guideline* talks about multiple methods these methods are largely about information delivery via the use of platforms such as information centres, notice boards, press conferences and other forms of mass media (MoNRE, 2013c). Clearly, effective public participation is yet to be achieved in the EIA system in Laos.

7.3.11 Conclusion

The procedural elements of the EIA system in Laos are in place and they are established like EIA systems of other countries in the region and elsewhere in the world are. The Laotian EIA system also consists of the important stages of screening, scoping, assessing impacts, reporting the assessment of impacts, reviewing EIA documents etc... Yet, the design of how these EIA procedural elements should function, however, is problematic and many EIA procedures are established to work differently from the international principles of EIA best practice. On the whole, the procedural elements of the EIA system

in Laos could be best described as 'fair' with some deficiencies in the areas of: consideration of alternative options, content of EIA reports, mitigation of impacts, monitoring and public participation. A summary of the evaluation of each procedural element is presented below in Table 7.2.

Table 7.2 Summary of effective procedural elements

Component	Evaluation criteria	Level of effectiveness	
		Legend	Comment
Procedural Elements	1. Screening approach	√	Is legally required but inappropriate establishment
	2. Scoping approach	√	Exists but no requirement for public participation
	3. Requirement to consider alternatives	x	Excluded from the EIA legal framework but required in the technical guidelines
	4. Specification of EIA report contents	x	Excluded from the EIA legal framework but required in the technical guidelines
	5. Systematic review of EIA reports	√	Exists but only reviewed by the relevant sectors of the government. No independent review committee
	6. Systematic decision-making and approval	√	Is legally required but a lack of transparency and accountability.
	7. Requirement for EMMP	√	Is legally required with comprehensive instructions but implementation is effective because of weak law enforcement
	8. Requirement for mitigation of impacts	x	Excluded from the EIA legal framework but required in the technical guidelines
	9. Requirement for monitoring	x	Is legally required but still falls short behind good practice of monitoring. No compliance monitoring
	10. Requirement for public participation	x	Is legally required but still at an early stage. There are inconsistencies

Note: Legend for the level of effectiveness: [√√] Good; [√] Fair; [x] Deficient; [--] None existent.

7.4 Practical Performance Evaluation

The effectiveness of the procedural elements of an EIA system are not solely determined by their mere existence. Fuller (1999) reminds us the existence of an EIA legislation or regulatory framework does not always mean they are effectively implemented in practice. Other authors have identified this as an issue in developing countries. For example, Glasson and Salvador (2000) discuss what they identify as a procedures-practice gap in

the EIA system in Brazil, and more recently Wayakone and Makoto (2012:1656) refer to there being an "EIA procedures-practice gap" in Laos. This section extends Wayakone and Makoto's study of EIA in Laos in several important ways. First, this thesis examines what has happened in the period since the EIA Decree was changed to the IEE and ESIA Instructions (and being several years on from Wayakone and Makoto's study there has been an opportunity for the practice of EIA in Laos to become further embedded and potentially strengthened). Second, this thesis draws on extensive fieldwork (interviews and field observations), whereas Wayakone and Makoto's study was based on a desk-top review supplemented by their own experiences (as identified in Chapter 2). This study therefore provides a more comprehensive investigation of how EIA procedures are practiced of EIA in Laos. As already identified given the constraints of the PhD study, it was not feasible to focus on all EIA procedures, and three procedures were the focus: the review of ESIA reports, the monitoring of impacts and the implementation of public participation.

7.4.1 Review of ESIA reports

As discussed in Chapters 5 and 6 of this thesis, there is a process for reviewing ESIA reports in Laos and a number of sectoral agencies are involved. In theory, this mechanism involving multiple sectoral agencies seems sound but in practice, as revealed in Chapter 6, having multiple sectoral agencies reviewing reports, does not function well. As one interviewee from the Department of Land Management within MoNRE noted:

> Sometimes, when our department receives an ESIA report from DESIA, we are expected to respond immediately. Frankly, our staff do not really have the time to review or read these reports because they are big documents. So, when DESIA asks for comments from us, we usually only provide them with some general ones. (Interview # GC-26)

Another interviewee, a senior official from MEM also commented that:

> I have noticed that the current mechanism of reviewing EIA reports is ineffectual. I think DESIA must first review the EIA reports and other sub-plans themselves and then seek additional comments from the relevant sectors. If DESIA requires comments from the relevant sectors before consultation meetings, I am not sure if the comments they get will be appropriate because our staff do not really have time read the EIA documents. They are busy with other priority tasks that are given to them by their own departments. (Interview # GC-31)

In addition, several participants in this research commented that there are two major problems that have emerged which directly impinge upon the quality of reviewing carried out by DESIA; an overload of ESIA reports requiring reviewing and approval and also, few staff qualified enough to do this. As one interviewee from a hydropower development company said:

> The capacity to review EIA reports in DESIA is seriously lacking, as they have too many EIA reports to be reviewed all at the same time and not enough qualified staff. Thus, they do not have time to fully evaluate and analyze the potential impacts, or the cost benefits of different development projects. (Interview # H-44)

As identified in the quote above and in Chapter 6, the staff of DESIA are mainly junior and/or newly graduated from university with no experience in reviewing ESIA reports. This seriously hinders their ability to adequately do what they are tasked to do. All the local and international consultants interviewed for this research were of one mind on these issues and strongly criticized the quality of reviewing carried out by DESIA staff. As two interviewees commented:

> The EIA authorities at all levels lack qualified staff to review EIA reports and other EIA sub-plans. If the government really wants to improve the quality of EIA reporting in this country, it is simple, they must improve the capacity, knowledge and skills of the staff who are responsible for reviewing the EIA reports. I think at the very least, they must have the capacity to evaluate and

> analyze the EIA reports at the same level as the consultants who are producing them! (Interview # EL-37)

> I have noted that many staff in DESIA do not have the knowledge, skills or the capacity to review EIA reports. So, how can a review carried out by them be considered to be effective? In fact, I am suspicious of whether the DESIA staff actually review the EIA reports at all, as during the consultation meetings, they share nothing from their reviews with you. I think at the very least, the staff who review the EIA reports, must recognize that there is a problem here and that big improvements are needed. (Interview # EL-40)

During fieldwork in Laos, the researcher spent five days observing how the staff of DESIA review the ESIA reports. It was believed that these observations would help broaden and deepen the researcher's understanding about what was involved in the actual review process and how this took place within DESIA. The researcher found that the administrative reviews and technical content reviews were being conducted (in line with the requirements discussed in Section 7.3.5 above). However, it was observed that the reviews were undertaken without critical analysis of the potential adverse impacts. Although, the guideline and the checklist for reviewing ESIA reports exist, the staff did not apply them to support their review findings. This issue was explained away by a participant from within DESIA who said:

> We have the guideline and checklists for reviewing EIA reports that were developed by a team of experts hired by the UNDP a few years ago, but the guideline is big and also written in English. Also, MoNRE has not officially approved the guideline. So, there is a gap there, and therefore our staff only partially use the guideline. (Interview # GC-11)

It should be noted that the above statement was made when the interview took place in 2015. At that time, the 2016 *Guideline for Reviewing ESIA Reports* has not been released and the participant is referring to the earlier 2014 *Guideline for Reviewing EIA Reports*

(a document that was written in English). Even though the updated Guideline is now in Laotian, the researcher observed that there was a lack of critical analysis when staff reviewed the ESIA reports and that the review process largely functioned as a 'tick the box' exercise.

7.4.2 Monitoring of impacts

In Laos, the monitoring of impacts of on-going development projects, occurs after the approval of the EIA report and other sub-plans, and once construction begins. This is a legal requirement for both the project developers and EIA authorities alike. Despite this, this research found that monitoring programs have not been carried out effectively on the ground. In terms of the monitoring required of project developers, it seems that there are two different standards being practiced in Laos. Most participants in this research acknowledged that hydropower projects operated by investors from Japan and European countries or funded by the well-known financial institutions such as the World Bank and the ADB, have implemented fairly good impact monitoring programs. In fact, it was suggested that the monitoring approach by these entities was far more effective than the approach used by others. As one interviewee who is a consultant in the area of EIA suggested:

> If the Government of Laos had a mechanism to conduct monitoring activities like the ADB and the World Bank, the quality of monitoring impacts of development projects would be far more effective and reliable than it currently is. (Interview # EL-44)

For example, Nam Ngiep 1 Hydropower Project was financed through ADB (see Table 4.2) and the monitoring of impacts has strictly followed international standards such as the ADB's environmental and social safeguards. Although, there are some minor issues in relation to sub-contractors and ensuring that they follow the EMMP, the impact

monitoring of this project was found to be generally very good. As a technical officer involved in hydropower stated:

> We regularly monitor the impacts by our own schedules. MoNRE, PoNRE and EMU also conduct their own monitoring activities, and the ADB has its own monitoring team to monitor our project. The ADB hire an independent monitoring team to carry out inspection at least once year. So there is a lot of compliance going on here! (Interview # H-48)

In contrast, hydropower projects that are developed and operated by private investors, rarely view monitoring programs as essential for their development projects. Almost all 52 participants interviewed in this research suggested that private investors from neighbouring countries do not really care about monitoring the environmental and social impacts of their development projects in Laos. As two interviewees who are consultants observed:

> The small and medium hydropower projects or even the large projects operated by the investors from China, Vietnam and Thailand do not implement good environmental monitoring programs. They try to do as little as possible and make it very difficult for EIA authorities to inspect. (Interview # EL-47)

> Usually, investors from China, Vietnam, Thailand and other countries in Southeast Asia have bad records for implementing impact mitigation measures. The Government of Laos should not rely on or allow these groups of investors to monitor their own projects. The government must play a more active role in monitoring the projects operated by these group of investors and make sure it strictly enforces the regulations with them. (Interview # EL-40)

Another interviewee who is an academic in the Faculty of Environmental Science at the National University of Laos also noted that:

> The environmental monitoring of development projects in Laos is seriously weak. I have noticed that some development projects, including hydropower projects have not been monitored since their EIA reports were approved a few

> years ago. Some projects have already completed construction yet they have never been monitored once. (Interview # U-09)

This interviewee noted further that:

> I have heard that the reason some development projects have not been monitored by the EIA authorities since the projects ECC approval is because of financial constraints. DoNRE in the districts are waiting for PoNRE in the provinces and PoNRE in turn are waiting for DESIA or MoNRE, and MoNRE itself, is waiting for the project developers to fund the monitoring activities. (Interview # U-09)

The problems of a general lack of capacity, timing and financial constraints was confirmed by most government officials interviewed in this research. These problems appear to be ongoing. As two officers from DESIA responded:

> The monitoring of impacts has not been regularly and strictly carried out as stated in the IEE and ESIA Instructions, especially by small and medium sized hydropower projects. We have a monitoring unit in our department, but there are so many development projects going on, that this unit cannot monitor or afford to monitor all of them. (Interview # GC-33)

> Today, we have a division of monitoring to monitor all the different types of development projects, but the number of development projects has increased sharply, though the division of monitoring has not. So, we do not have the capacity to inspect all development projects due to limited human resources both in terms of the number of knowledgeable staff, and insufficient equipment to do the monitoring with. (Interview # GC-28)

As these comments suggest, the quality of these monitoring programs (if they occur at all) are seriously defective.

One of the most significant barriers to successful monitoring of privately invested hydropower projects is that the monitoring budgets of the EIA authorities (MoNRE, PoNRE and DoNRE) come from the project developers themselves. Therefore, if the

project developers do not choose to fund the EIA authorities, then they cannot carry out their monitoring programs. A number of participants in this research commented on this funding mechanism and suggested that not only was it a very inappropriate mechanism but essentially, that it had weakened the effectiveness of impact monitoring programs throughout Laos. As one interviewee from the EIA authority at the central level noted:

> Every time, we want to carry out monitoring of a development project, we have to propose a monitoring plan to the project owner to seek financial support. But, it has never been easy to negotiate the monitoring budgets with project investors. Sometimes, it can take six months or more to get a monitoring budget approved by a project owner. The negotiation and approval process often delays our monitoring plans and during that waiting time, real damage could be occurring. (Interview # GC-20)

Interviews with participants from PoNRE in Vientiane and Bolikhamxay provinces also told a similar story. For example, two interviewees commented:

> Oh! Never talk about monitoring! It is very problematic in our province. The law and the Decree say that MoNRE, PoNRE and DoNRE must carry out monitoring activities once a year, two times a year and four times a year, respectively. In practice due to money constraints, if MoNRE does not invite us to join in with their monitoring activities, we have no chance of monitoring the projects ourselves due to the fact there is no monitoring budget available to us. (Interview # GP-03)

> We just received complaints from some villagers who live nearby the Nam Ngum 5 Hydropower Project. We want to monitor the problems at the project's site, but we do not have the budget. We proposed a monitoring plan to the owner of Nam Ngum 5 Hydropower Project, but we were told that there is no monitoring budget available for this month, so what can we do? (Interview # GP-06)

It is impossible to carry out effective monitoring when project developers control monitoring budgets as they can ultimately choose whether to grant or withhold funds. They also control the timing of when they will allow governmental officials access to

their sites and when they will not. Even if finance for monitoring is granted, the problem that remains is that the EIA authorities do not have the power to penalize developers when and if they find they have breached the ECC (see Chapter 5). As two interviewees from IDAs suggested:

> Impact monitoring of development projects is problematic in Laos. The current funding mechanism can never hope to support effective monitoring. Even when the inspectors find that the projects do not comply with requirements or regulations, they cannot strictly take legal actions to penalize the project developers because they rely on the developers to fund their next monitoring activities. So, all the power is in the hands of the private owners. (Interview # I-12)

> The funding mechanism for impact monitoring in Laos requires a huge change. Under the current funding mechanism, a project developer pays for each monitoring activity. On a project-by-project basis this will never be a productive or reliable means through which to conduct impact monitoring throughout the country. This is because there is a serious conflict of interest between those funding impact monitoring and those responsible for undertaking it. It also contradicts the very principles of monitoring and inspection. Consequently, even if monitoring inspectors find serious impacts, they are unlikely to truly report the extent of the problems as they still need funding from the project developer for the next monitoring session. (Interview # I-35)

Another significant problem concerning the quality of impact monitoring is associated with the current monitoring approach that is conducted by the EIA authorities (DESIA, PoNRE and DoNRE). A number of authors, including Sadler (1996), Harvey (1998) and Morrison-Saunders and Arts (2008), have suggested that it is vital and necessary to monitor both compliance and effects of development projects. Unlike international best-practice for monitoring, the impact monitoring activities conducted in Laos only concentrate on effects monitoring. Some interviewees, particularly those familiar with

EIA systems elsewhere, raised concerns about the absence of compliance monitoring, for example:

> I think the DESIA needs an urgent update to include both compliance *and* effect monitoring. The compliance monitoring is quite straight forward as it does not require equipment to collect samples or anything to examine them with, but DESIA does not pay attention to this aspect at all. Instead, DESIA concentrates on monitoring effects such as water quality and air pollution. Obviously, the monitoring of these impacts is very complex but without appropriate equipment and knowledgeable technical staff, how does DESIA seriously expect to conduct these monitoring activities effectively? It is impossible. (Interview # GC-11)

> The monitoring of environmental and social impacts of on-going development projects in Laos has not been implemented effectively. I think urgent improvement is needed to include both compliance monitoring and effect monitoring. Compliance monitoring is a very important aspect of monitoring but it is not included in the current EIA system in Laos. Without a baseline, how can compatibility with regulations and Concessions Agreements be checked? (Interviewee # GC-11)

> We need to have an EIA monitoring mechanism that can identify which development projects have done a good job of complying and which have not. I think DESIA has not been able to tell which projects are achieving their commitments or obligations as per the projects' Environmental and Social Management and Monitoring Plans or as stated in the projects' Concession Agreements and which have not. (Interview # GC-31)

In addition, a number of participants in this research also commented on how the monitoring teams were carrying out the actual monitoring activities on the ground. These interviewees noted that while there are monitoring activities occurring in Laos to various degrees, often these involve only passive monitoring programs. This was evident during the field observations associated with monitoring. It was observed that when monitoring

teams visit a development site, they let the project developers decide what the team should examine and see during their visit (see Figures 7.5 and 7.6)

Figure 7.5 Monitoring team members inspecting a bridge.

Source: This photo was taken by the researcher while observing the monitoring team from DESIA & PoNRE in Oudomxay Province on April 2nd, 2015.

Figure 7.6 Monitoring team members inspecting a tunnel near dam construction.

Source: This photo was taken by the researcher while observing the monitoring team from DESIA, PoNRE and DoNRE in Pakbang district on April 2nd, 2015.

One interviewee from a hydropower development company commented that:

> I have noted that impact monitoring of development projects in Laos is like a group study tour visit as sometimes, a monitoring team can consist of about 40 members. Many of the monitoring team members go in the field without knowing what they are supposed to be monitoring or inspecting. Despite there being an ECC attached to a project or an EMMP, many of them either do not have the necessary information or if they do, they have no looked at it. Thus, they go to project sites like tourists for sightseeing. Often, they agree with everything reported by the project developers and you can't help wondering what the point of the whole exercise was. (Interview # H-44)

The researcher's experience on joining a monitoring team at one such event is described in (Figure 7.7) below.

Finally, impact monitoring of development projects is further hampered not only by the lack of human resources but also by insufficient equipment for monitoring. As discussed in Chapter 6 and above, it was common to hear participants in this research identify this as an ongoing issue. One interviewee, for example, who works on a capacity building project funded by the Finnish Government noted that:

> In Laos, impact monitoring of development projects has not been implemented effectively because the sheer number of development projects are increasing every day. Although DESIA established a division for environmental monitoring a year ago, that division still lacks skilled staff and the necessary tools and equipment. They need at the very least a monitoring checklist, a mobile water sampling toolkit, odour measuring equipment and other simple means to assist them with monitoring effectively. (Interview # I-21)

Figure 7.7 Example of one monitoring exercise

To monitor the Pakbang Hydropower Project in Oudomxay province, the monitoring team from DESIA had to travel for three days from the Vientiane Capital to get to the project site. The road surface and conditions were poor, especially from the province to the project site and as such, it was considered too risky to drive more than 50km/per hour. The project is located 120km away from the provincial capital.

On arrival, the team of 20 including the researcher (and 12 from DESIA, 4 from DoNRE and 4 from ONRE), first visited the site where a small bridge and a school were being built (as a part of the compensation program given to the communities that are affected by the project). The monitoring team spent approximately 20 minutes visiting the site and listening to the developers who updated them on the progress of the project. The next stop (further downstream) was the site where the dam itself was being constructed. The team spent about 10 minutes listening to the developers updating the progress of the construction and generally observed the employees going about their work. As the dam was sponsored by a Chinese firm, the workforce consisted of about 50 Chinese and 4 Laotian workers. After this, the team then travelled further downstream to visit the site where the power house was being constructed. The team spent about 30 minutes visiting the site and listening to an update on the construction's progress.

After this, it was time for lunch. When this was concluded, the monitoring team had a meeting in the office at the project camp where the developers briefly gave a presentation about the project, then, the team discussed any issues of concern that needed to be included in the minutes of the monitoring event. The minutes were then signed off by the monitoring team leader from DESIA. In all, the meeting lasted for 3 hours.

Overall, the monitoring team spent three days of travel for about four hours of work. Despite being there to monitor conditions of the river and so on, the monitoring team did not have any equipment to examine, measure or collect samples with, bar a camera. There were 20 monitoring team members present, but only a few members understood the project's background and played an active part in discussions.

Source: Summary of the researcher's field notes from the field observations

It is common for monitoring team members in Laos to often only carry out impact monitoring by using a 'best guess' scenario relying on the use of their own senses. As one interviewee from within DESIA noted:

> Currently, we have only simple mobile equipment for measuring water quality, but we still need equipment for measuring air quality, noise, odour and other impacts. So far, our impact monitoring is more like a field visit. We go to the project sites to see things with our own eyes and to make judgments based on

> our individual thoughts, but we never know if the level of impacts is dangerous or not as we cannot tell. (Interview # GC-20)

When the researcher joined four different monitoring teams going into the provinces to inspect, he observed that they did not have any monitoring equipment at all with them to examine e.g. water quality (see Figure 7.8). Taking photographs was used as the only mechanism for recording evidence for anything found at the project sites. Photographs, However, cannot conclusively tell whether a river is contaminated, nor what the level of contaminant is. Neither can they measure levels of air pollution or serious vibrations caused by a project's activities. In order to monitor impacts of development projects effectively, inspectors desperately need both knowledge and equipment to examine the likely impacts. They also need access to a reliable testing facility to obtain hard scientific evidence to prove when contamination is occurring.

In terms of the size of the monitoring team, the researcher noted that the monitoring teams were often too big (see Figure 7.9). Informal chats with some of the monitoring team members while travelling to monitor Pakbang Hydropower Project (Oudomxay province) and Xepien-Xenamnoy Hydropower Project (Champasack province) revealed that they had very limited knowledge about the monitoring plans and even the development projects they were going to monitor. For example, when asked by the researcher "What is our monitoring plan today?" and "What issues are we planning to examine?", two monitoring team members said things such as "Sorry, I don't know. But don't worry, we'll just follow the rest of the team" or "I don't know. But, we will first meet with the project developers and then, they will inform us where they want us to visit on the sites" (see Figure 7.10)

Figure 7.8 A river which was not tested for water quality

Source: This photo was taken by the researcher while observing the monitoring team members from DESIA & PoNRE in Oudomxay province and DoNRE in Pakbang district on April 2nd, 2015

Figure 7.9 Vehicles of the monitoring inspectors

Source: This photo was taken by the researcher while observing the monitoring teams from DESIA & PoNRE in Champasack and Attapeu provinces on April 5th, 2016.

Figure 7.10 Developers making a presentation to monitoring inspectors

Source: This photo was taken by the researcher while observing the monitoring team members from DESIA & PoNRE in Champasack and Attapeu provinces on April 5th, 2016.

As these quotes and the photographs suggest, often instead of playing the role of inspectors, the monitoring teams simply end up being observers because they do not have or know the information or equipment needed to adequately conduct the monitoring exercise. On occasions, if the relationship with a project developer is fractious, the monitoring team can also be cautious in their comments and behaviour as they do not want to upset the developer and find that the finance needed for future site visits is withheld. Overall, it is clear from the interviews and the field observations that monitoring of projects in Laos is sub-standard, except in those instances where international agencies and funders such as the ADB are involved.

7.4.3 Public participation

As discussed in Chapter 5 and in Section 7.3.10 (above), public participation is a legal requirement in Laos and is governed by the EPL and the ESIA Instruction. In addition,

MoNRE has introduced a guideline for conducting public participation (MoNRE, 2013c). This research found, however, that only a public consultation approach is being practiced in Laos, rather than true participation. Furthermore, public 'participation' is only required as part of the process for reviewing ESIA reports and giving final approval; it is not integrated into the entire EIA system as researchers such as Wood (2003) advocates (see Figure 7.4 above).

Whilst on fieldwork, the researcher participated in six public consultation meetings that took place at the different levels of government (see Map 3.1 above). These meetings were largely ineffective and unproductive for several reasons. One is to do with the attitude of some government departments involved in the consultation process. For example, an interviewee from the MPI described the process of consultation meetings with affected villagers in Laos by saying that:

> MoNRE has done a good job in organizing consultation meetings with affected villagers at all levels. Affected villagers are included in the process, and they are consulted many times before they finally agree with a development project. Usually, villagers are happy to accept a project as they need development in their villages too. Of course, some hydropower projects will have adverse impacts on the rural villagers themselves and they will have to relocate to new areas, but villagers will receive compensation and assistance from the developer and the government. (Interview # GC-22)

As this quote indicates, there is a general acceptance by government that resettlement is a commonly expected outcome. As this participant is from the MPI, it is obvious that they are more concerned with seeing hydropower projects progress quickly, rather than addressing any deeper issues such as rights of villagers etc. This is why 'consultation' is carried out rather than actual participation as 'participation' requires that people are

entitled to voice an opinion including a dissenting one. Another interviewee who is a local parliamentarian in Vientiane province also commented that:

> I have noted that we have a series of EIA consultation workshops at the district and provincial levels, and I think that is good. In fact, there are quite large and fancy consultation workshops in large hotels sometimes, but from what I hear, they are not really very productive. (Interview # L-51) (See Figure 7.11)

Figure 7.11 Hotel venue for a public consultation meeting

Source: This photo was taken by the researcher while observing a technical consultation meeting for the Xesu Hydropower Project in Attapeu province on March 4th, 2015.

Based on the key themes to emerge from research interviews and fieldwork observations of publication consultation meetings in action, this research finds that there are four major barriers or limitations to the effective operation of public consultation meetings in Laos.

First, the public consultation meetings are unproductive because they are usually organized behind closed doors and only limited groups of people are invited to the

meetings. Some participants of this research commented that it is inappropriate to call them 'public' consultation workshops as participants of these workshops are mainly representatives from different sectors of the government. As one interviewee, an EIA consultant, said:

> The quality of public consultation in Laos is still very low. While we do have laws and guidelines for public involvement in the EIA process, in practice, the public consultation meetings do not provide us with any useful feedback or comments at all. The problems are linked to the way the consultation meetings are organized. The organizer only invites staff from relevant government sectors and representatives from affected villages to participate in the meetings. There are no independent voices and no NGOs allowed. (Interview # EL-40)

A staff member from within MoNRE said:

> Usually, DESIA invites affected villagers and staff from the relevant sectors of government to discuss the impacts of development projects. But as the consultation meetings only occur for a short period of time, they really do not focus much on discussing or consulting with concerned people about impacts. (Interview # GC-23)

Another interviewee, an employee of a hydropower development company confirmed that:

> 'Yes', there are EIA consultation workshops and affected people and staff from the different sectors of government concerned from the central down to the local administration are invited to participate. But, they do not have good conversations nor is there a thorough consultation process as the affected people and their local representatives don't receive any information in advance to look over. Also, it seems to me that the government doesn't want to open up broad scale discussions with affected villagers as the government and developers don't want lots of villagers to oppose the project proposals. (Interview # H-52)

A number of participants from international development agencies and non-government organizations (NGO) also criticized the limited public consultation process as a

significant weakness of the EIA system in Laos. As one interviewee, a staff member from an international non-government organization (INGO) commented:

> One of the major weaknesses of the EIA system in Laos is that the government does not give NGOs and INGOs or the public a chance to participate in the public consultation workshops of a projects' EIA. MoNRE only invites representatives from government sectors to participate and currently legally, we do not have to be invited. (Interview # N-50)

Despite the limited invitations issued to public consultation meetings, the researcher observed during the fieldwork, that surprisingly, the consultation meetings were much larger than expected with the number of participants at some meetings being close to 100 people (see Figure 7.12)

Figure 7.12 Participants at the public consultation meeting

Source: This photo was taken by the researcher while observing a technical consultation meeting for the Xesu Hydropower Project in Attapeu province on March 4th, 2015.

Of these participants, however, the majority were governmental officials from the relevant sectors at the ministerial, provincial and district levels. Only four or five representatives from each affected village were included in the consultation meetings (see Figure 7.13). These village representatives were mainly senior people, women, or youths from a village and the village chief. No representatives from business, interest groups, academic institutions or NGOs were permitted to attend the consultation meetings. It was also common for people of authority such as DESIA or PoNRE representatives or the District Governor to be responsible for addressing local people at meetings when in the district (see Figure 7.14).

Figure 7.13 Affected villagers

Source: This photo was taken by the researcher while observing the teams from DESIA & PoNRE in Champasack province discussing concerns with affected villagers on April 6th, 2016. [Note that it has been pixelated to protect people's identity].

Figure 7.14 Government officials discuss concerns with affected villagers.

Source: This photo was also taken by the researcher while observing the teams from DESIA & PoNRE in Champasack province on April 6th, 2016. [Note that it has been pixelated to protect people's identity].

As Figures 7.13 and 7.14 clearly show, the power dynamics are obvious with the villagers on the floor below the government officials and the project developers seated or standing. Given that other key stakeholders are excluded from the consultation process, the responsible authorities and developers also miss out on an opportunity to take divergent comments and opinions into consideration. As some scholars suggest (and as discussed in Section 7.3.10 above), the exceptional benefits of a public consultation process in the EIA system is that the voices of concerned people are heard and the diverse opinions on avoidance and mitigation measures are shared and discussed before making any decision (Glasson et al., 2012; Elliott, 2014; Nobel, 2015). Some participants of this study also pointed out that MoNRE should include multiple key stakeholders in the process of EIA public consultation to improve better outcomes not only of public consultation but also

in terms of the project's outcomes overall. As two interviewees from within MoNRE suggested:

> I think we should invite representatives from the universities or relevant institutions to participate in the public consultation meetings to seek their diverse opinions and to improve the effectiveness of public consultation. This will definitely provide good outcomes for the government, developers and affected villagers in the long run. (Interview # GC-27)

> I think we need to reassess the core objectives of public consultation in the EIA system. We need to be asking for whom and for what is the consultation meeting being held? We need to redesign and employ appropriate methods to consult with various stakeholders. We need to target people to be included in the public consultation process and consider how they can get more involved. (Interview # GC-11)

Second, echoing many of the comments above, the consultation meetings in Laos are also ineffective because they are arranged and operated using inappropriate approaches and methods. A number of scholars such as Johnson and Cameron (2006), Nadeem and Fisher (2011) and Glucker et al. (2013) have suggested that effective public consultation workshops start with good planning and employ appropriate methods. For example, it is vital the authorities responsible for organizing a consultation workshop take into account the key questions such as the 'what', 'why', 'who', 'when' and 'how' of the event (Johnson & Cameron, 2006). More specifically, the 'how' is related to the approaches and techniques that should be employed to involve participants and the public and to the way the workshop is actually run.

In contrast, the consultation meetings in Laos are usually arranged without reflecting on these key questions and so they operate by using a one-way communication approach.

Some interviewees suggested that the current approach of consultation in Laos is not only ineffective because of the limited opportunity to truly discuss concerns or comment on the EIA reports but also, because of the setting for these events and the attitudes of those conducting them. As one interviewee at a workshop in Vientiane province noted:

> In Laos, a public consultation workshop is more like a showcase to convince interested parties that the consultation with affected people has been done properly and completed. The responsible authorities, developers and consultants do not really care about the public having input or the outcomes of the consultation meeting. It is just a process that has to occur. (Interview # L-51)

Another interviewee, a consultant who has been involved in organizing and facilitating EIA consultation workshops for more than a decade suggested that:

> I have noted that quality of public consultation in Laos is still very low. The problems are associated with the way we organize the consultation meetings. Participants do not have a chance to access the information in advance before attending the consultation meetings, so personally, I feel that public consultation meetings in Laos are just waste of time and money as participants do not share or provide us with any comments. We need comments from them if we are to improve the EIA reports. (Interview # EL-40)

An interviewee, an EIA consultant of many years standing, noted that:

> Public consultation meetings in Laos are still of a very low quality due to the fact that the techniques employed for organising the consultation meetings are inappropriate. At a technical consultation meeting, we present the same type of information as is presented at the general public meeting. Then, we repeat it again at the provincial level consultation meeting; so the same approach is arranged for all levels, no matter who the audience is. Often, only village chiefs ask questions or share concerns on behalf their villages. Sometimes nothing is said. The consultation meetings do not really provide us with good comments at all because no one feels they can speak and most of the time, they probably understand very little of what is said anyway. These meetings are just a waste of time and money. (Interview # EL-37)

These concerns were consistent with the practice of public participation that the researcher observed. Figure 7.15 offers insights into the workshops attended.

Figure 7.15 Observations of public consultation workshops

Typically workshops last for 3 hours, beginning at 9:00am and ending at around midday. A typical program is as follows:

08:30	Registration of participants
09:00	Introduction to the workshop and opening remarks
09:30	Power Point Presentation (PPP) of the development project
10:00	Coffee break
10:20	PPP of the ESIA report
11:00	PPP of the EMMP, SMMP and RMP (if required)
11:45	Question time
12:00	Closing remarks

On arrival, all participants need to register. This confirms who is present and facilitates a smooth process of paying the allowance (stipend) that all participants receive (including any accommodation and travelling costs). This payment is required by the IEE and ESIA Instructions and is part of the project investment cost covered by the project developer or sometimes the EIA consultants, depending on the agreement.

A workshop begins with an introduction to the workshop's objectives and the opening remarks of the chair and co-chairs. The opening remarks mainly stress the importance and necessity of the project proposal for socio-economic development of the nation and local communities in the project areas.

A Power Point Presentation (PPP) of the project development is presented by the project developer and PPPs of the ESIA report and other sub-plans are presented by the EIA consultants. The latter PPPs mainly show how the ESIA was carried out, what impacts were identified or may be caused by the project, and what mitigation measures were proposed. Then, 10 or 15 minutes of question time occurs, followed by closing remarks.

From the researcher's observation of six public consultation workshops, it was noted that the number of participants who participated in each workshop was quite large, but they were mainly government staff from the relevant sectors at the central, provincial and district levels. Only a few representatives from affected village were present and no representative from the public, interest groups or NGOs were present.

Workshops used a one-way communication approach to inform the participants about the development project and its impacts, and then the workshop was quickly closed. At the end of the meeting, the chair persons told the participants that Minutes of the meeting would be delivered to each relevant authority and if anyone still had comments or concerns, then they should provide them to DESIA in writing. Interestingly though, the Minutes of the meeting were never shared or read out aloud to the participants to double check if they agree or disagree with what had been recorded or if they still have anything extra to add or clarify.

Technical Consultation Meeting usually required travelling to the project areas such as dam sites and the villages that may be affected. Thus, for a 3 hour meeting non-local participants may need to allow two or three days travel time.

Source: Summary of the researcher's field notes from the field observations

A third issue was raised by a number of participants from IDAs, NGOs and the National University of Laos. They commented that consultation workshops in Laos are usually led by consultants and project developers. As such, the EIA authorities who are supposed to play a leading role in the consultation workshops (as per the ESIA Instruction), end up acting as silent observers. This is particularly prevalent in the districts and more remote provinces. As one interviewee said:

> Public consultation in the EIA system in Laos is totally based on the project developers' and consultants' preferences. They can arrange, organize and run the consultation workshops whichever way they feel comfortable. During the consultation workshops, consultants take a leading role in presenting the EIA documents and answering questions from the audience if there are any questions. The staff of MoNRE are only there observing. (Interview # I-29)

Despite the law requiring government officials to play a more active role in this process, interviews with seven local and international consulting firms in Laos suggested that they (as consultants) were automatically given the job of running the public consultation meetings. As one interviewee responded:

> Consultants in Laos do have broad skills and experiences, but MoNRE and the other EIA authorities should not really rely on them to do everything for them because consultants are hired by the project developers. So, it is unlikely that consultants will present all the environmental and social impacts of their projects nor raise any controversial issues that may disqualify their work (i.e. EIA reports and other sub-plans) during the consultation workshops. (Interview # EL-40)

During these meetings, the researcher also observed that there was no neutral organization or authority present to represent the affected villagers during the consultation meetings. The only person that affected villagers could put their faith in was their village chief. Sometimes, the head of villages responded and outlined concerns on behalf of their affected villages, other times they said nothing (see Figure 7.16). It is important to note

here, however, that with generally low levels of education and a lack of capacity to analyze environmental and social impacts, the village chief himself had little chance to fully understand contents of ESIA reports and as such, was unlikely to be provided with them. Thus, in order to encourage affected villagers to get involved in meaningful consultation, they need more knowledgeable and qualified representatives who understand the EIA and consultation processes and can provide sound and unbiased advice and counsel.

Figure 7.16 Village chief voicing concerns on behalf of affected villagers

Source: This photo was taken by the researcher in Champasack province while observing the DESIA and PoNRE meeting and discussion with affected villagers on April 6th, 2016.

As mentioned in Chapter 6 of this thesis, in principal, the role of EIA authorities is to protect the environment, and the role of local government is to prevent activities that may pose harmful impacts on villages and villagers' livelihoods. Yet, the actual actions taking

place on the ground tell a very a different story. Both the representatives from the EIA authorities and local governments usually strongly support development projects going forward, so public consultation meetings are almost a 'tick-the-box' affair.

An example of this can be seen at a consultation workshop for the Nam Theun 1 Hydropower Project in Bolikhamxay province, where the researcher observed how the leader of DESIA and the other district governors all encouraged the local participants to support the Nam Theun 1 Hydropower Project. The Opening remarks by DESIA said:

> The Nam Theun 1 Hydropower Project is a top priority development project for the Laotian government. It will enhance socio-economic development of our country, especially in Bolikhamxay province and the three affected districts. Of course, the project may create some impacts on assets and livelihoods of some villages, but in the longer term, the project will contribute huge benefits to local communities. The project developer will establish a community fund which will be used to invest or improve infrastructure in the affected villages such as roads, schools etc. but more importantly, the project will create jobs locally, generate income for local communities and help eliminate poverty.

The next speaker, a Governor in Pakson district then referred to the Nam Theun 2 Hydropower Project (already completed), and suggested that affected villagers and communities near that project have received many benefits. He said:

> Therefore, I urge all of you here to support the project so that it can be built as quickly as possible and we can get benefits from the project straightway. I understand that there are some impacts on paddy fields and gardens, but don't worry at this stage. The central government will coordinate with local governments to establish a unit to work on compensating villagers in each village for impacts in accordance with the laws and regulations.

What these remarks indicate is that local communities cannot rely on MoNRE to protect their local interests nor can they rely on local officials to step in to prevent impacts on their environment and livelihoods as those in authority are all supporting the development projects going ahead. In addition, these messages convey that there is no need for concern,

so it should not be surprising to know that at two out of the six consultation workshops observed by the researcher, no questions at all were asked despite there being some obviously unhappy villagers. During lunchtime, (when the researcher had an informal chat with a few villagers in each consultation workshop) it was then that they voiced their concerns. When asked why they did not speak up during the formal consultation workshop, they replied that they had already been listening to the different presenters for over three hours and by the time question time arrived, it was indicated by those running the workshop that it was the time for lunch and the session was formally closed.

Finally, as indicated throughout this section of the chapter, the standard of consultation workshops in Laos is also hampered by the low levels of education of the villagers, particularly those living in remote areas. As number of participants in this research acknowledged, it is a big challenge to carry out meaningful consultation with rural villagers because of their low education background. As two interviewees from EIA authorities noted:

> We have experienced limitations in effectively consulting with affected villagers who have low levels of education. They don’t understand the consultation process and they don’t provide us the reasons as to whether they agree or disagree with a development project. Some villagers do not even know how to tell us their concerns, so obviously, these are key barriers to holding effective EIA consultation meetings in Laos. (Interview # GC-20)

> The quality of public consultation in the EIA system in Laos is still low because rural villagers continue to have low levels of education. They have limited capacity to predict the types of impacts that development projects might make locally and they don’t know how to discuss the issues or make meaningful comments. We have tried to use different techniques that suit the local contexts, but that has not been an easy task for us as most of the information and data

> presented in the EIA reports uses mainly technical terms and it is hard to explain what this means. (Interview # GC-28)

Interviews with project developers, consultants and international development agencies also indicated that in the current context of Laos, it is hard to talk about best-practice of public participation and consultation. As although, improvements have recently been made in the area of public consultation, Laos still needs time to digest and learn from the process itself. As one interviewee who is an international environmental expert working for an IDA in Laos noted:

> The implementation of public consultation in Laos is still weak because it requires both skills and time to carry out public consultation effectively. The staff who arrange and organize the consultation workshops must fully understand what matters need to be consulted on. They need to know the key impacts and how to communicate with affected people, especially ethnic villagers. Also, the participants of the consultation workshops require ability to understand the impacts and skills to consult with developers or to make comments on the development proposal and EIA reports. If this level of understanding is not there, then the consultation process has very little hope of achieving its goals. (Interview # I-08)

Likewise, the traditional cultural norms that Laotian people have inherited from their long history of colonial occupation (see Chapter 4), can also essentially weaken what consultation meetings could achieve. In Laos, a top-down governing approach is the norm and as some participants commented in this research, both junior staff and villagers often pay respect to senior people such as the district governor, the village chief or a person in a higher position. Thus, if these people speak at a consultation meeting, they are seen as influential and important and consequently, other participants are likely to stay silent, even if they have different opinions on the topic. As one interviewee, a consultant discussed the conflicted nature of these events:

> The good point is that affected villagers will attend a consultation meeting if they are invited. The weak point is that villagers hardly discuss or share their concerns in the meeting, especially if someone higher ranking in society is there. They are shy to speak out, especially the females. Therefore, we sometimes don’t receive comments or feedback from them at all, so from that perspective, it is kind of wasting time and money to organize a consultation meeting. (Interview # EL-47)

Another interviewee who is a staff member of an INGO and has long worked to promote participation of villagers in this area also responded that:

> The key barrier to operating consultation effectively is linked to traditional cultural norms. I have experienced that rural villagers in Laos actively participate in consultation meetings if they are invited, but they mainly tend to be passive participants. As they rarely share their concerns with others, most consultation meetings, not only in the EIA system, but all forms of consultation, do not produce fruitful outcomes. So, I think it is necessary that the organizers understand the traditional cultural norms of rural communities and employ appropriate methods for consultation, and that will improve effective consultation meetings. (Interview # N-49)

Overall, it is clear from the interviews and the field observations that the practice of public participation in EIA in Laos faces considerable challenges. However, these challenges are not unsurmountable; for example, NGOs are interested in playing a greater role and could act as intermediaries and even advocates for affected villagers and others. As well, there are opportunities to involve local parliamentary members, academics and researchers from institutions in Laos.

7.5 Conclusion

As identified throughout this Chapter, the procedural elements of the EIA system in Laos are a long way from meeting what is considered international best-practice. As the

criteria-based evaluation establishes, while there are legal requirements for systematic decision-making concerning EIA reviewing and approval, mitigation measures, monitoring and public participation, deficiencies remain in the actual implementation of these processes. This is highlighted by the interviews which strongly suggest that having multiple sectoral agencies involved causes not only friction between staff from different departments, but also, inefficiencies as often the work of monitoring for example, is duplicated by the various agencies involved. This inefficiency was also linked by interviewees to the quality and timeliness of EIA reviews which all interviewees saw as associated with a lack of capacity, both human and financial.

In regards to public participation, which is considered vital for the success of EIA practice overall, in Laos, this tends to be interpreted merely as public 'consultation' where the only 'participants' are government employees and representatives from affected villages. This is in spite of there being a legal requirement in Laos for public participation (as governed by the EPL and the ESIA Instruction), as well as a guideline for conducting public participation. This element, like many others in the EIA system in Laos tends to function more as a 'tick the box' exercise, rather than being a means for true engagement.

Essentially, what these examples suggest is that as identified in other studies on EIA in developing countries, there is a 'procedures-practice gap' where there is a disjunct between what exists 'on paper' and how this translates 'on the ground' (see Glasson & Salvador, 2000; Wayakone & Makoto, 2012). By combining the two-pronged criteria-based and practice-based approach, this thesis offers a more nuanced understanding of the procedures-practice gap in Laos. Chapter 8 will discuss this further and offer recommendations for narrowing this gap in the future.

CHAPTER EIGHT: CONCLUSION

8.1 Introduction

An exploration of the EIA system in Laos using both a criteria and practice-based framework for evaluation has allowed this thesis to capture unique insights into the operationalization of EIA. Although studies of EIA 'on paper' have been conducted in Laos previously (see Wayakone & Makoto, 2012), no other study thus far has conducted research which 'tests' these criteria against the legal, institutional and procedural elements of EIA as practiced 'on the ground'. This level of analysis has allowed for a thorough examination of the EIA system in Laos which has yielded many important though perhaps contentious findings. These are discussed below in Section 8.3. Section 8.4 makes recommendations on how improvements might be made to the EIA system in Laos and Section 8.5 considers the contribution this thesis makes to the literature on EIA and sustainable development in developing countries more broadly. Before this, however, Section 8.2 reaffirms the study's intentions.

8.2 Background, Aim and Objectives of this Research

As has been clearly established throughout this thesis, Lao PDR is a country in economic transition. Its marked transformation began in 1986 when the Government of Laos (GoL) introduced its new economic policy called *New Economic Mechanism* (NEM) which shifted Laos from a centrally planned economy to a more market-oriented economy. In recent years, the GoL has introduced a number of incentives to attract foreign direct investment, particularly in the natural resource sectors. This change has indeed created a better investment climate in various sectors such as rubber tree plantations, mineral extraction and hydropower dams across the country. While in some respect, the rapid

increase of these investment projects nationwide is seen by many to represent good opportunities for the socio-economic development of the country, in reality, these development activities have also created substantial environmental and social impacts locally and regionally (see also Dwyer, 2007; Barney, 2009; Melle et al., 2009; Baird, 2014; Baird & Barney, 2017).

Acknowledging the adverse impacts associated with increased investment projects and development activities, the GoL responded by legally establishing an EIA system in 2000. The government hoped that with an EIA system in place, it could help support development projects in the way that could make them more environmentally sound, socially acceptable and economic viable. As a government approved instrument for assessing and mitigating the impacts of development projects, it is essential that the EIA system be reviewed to improve its effectiveness and to ensure it meets the requirements for the international EIA best practice. Essentially, by examining and identifying the strengths, weaknesses or limitations of the existing EIA system, it helps discover which elements require strengthening. As Fuller (1999:72) suggests, an evaluation of the EIA process provides an opportunity for making substantial advances to an EIA system which assists in making it robust and efficient in operation. As this thesis has shown, since the introduction of the EIA system in Laos, the government has made several amendments and changes to the system itself and its legal frameworks. Since that time, however, no other research on the EIA system in Laos has been conducted to 'test' the criteria recommended by Ahmad and Wood (2002) to explore the system's effective performance on the ground. It has been the intention of this research project to attempt to fill this gap through the use of both a criteria-based approach and a practice-based approach.

As mentioned in Chapter 1 (Section 1.2), the overall aim of this research project is to evaluate the effectiveness of the EIA system in Lao PDR by focusing on two key objectives:

- To what extent is the existing EIA system in Lao PDR effective?
- What improvements are needed to ensure that the design and operation of the EIA system meets the standards of best-practice and, as a result, how can this help Laos achieve its overall goal of sustainable development?

8.3 The Main Findings

There are five major issues that emerge from this research, these are: 1) an inconsistency in the laws and their application; 2) poor inter-governmental relations between those operationalizing the EIA system; 3) a lack of proper resourcing; 4) a culture of unscrupulous behaviour by some developers; and finally, 5) a lack of political will to fully support the EIA system and its goal of supporting sustainable development. Each of these elements is discussed below. It should be noted, however, that none of these are 'stand-alone' issues, they are all inter-related and provide a picture of a system that 'on paper' points the way towards better decision-making but fails to do so because the elements below greatly weaken its potential.

Inconsistency in the laws and their application

The first major issue preventing the successful implementation of the EIA system is the confusing nature of the legal system in Laos. As suggested in Section 8.2, while Laos has had an EIA system in place since 2000, over a relatively brief period of time, there have been several changes which have caused uncertainty among EIA practitioners. For example, the system originally put in place to activate EIA was the EIA Regulation

(2000). Despite its initial 'teething problems' this was widely recognised as *the* key mechanism for the implementation of the EIA system. By 2010, however, a new EIA Decree was ushered in, which arguably was better than the Regulation, but this only lasted three years before it too was replaced and changed to the current IEE and ESIA Instructions (2013). Essentially, what these changes have done is rather than strengthening the system and making it easier to implement, it has caused wide-spread confusion particularly for administrators at the provincial and district levels who often are unaware of the changes in the law and what they mean for EIA implementation. This is further hampered by the poor communications network throughout Laos, where the very people who need to be 'on-top-of-things' cannot be as there is no internet in many provinces and districts, and often no budgets to even photocopy or deliver the latest legal documents to officials to refer to.

As outlined in Chapters 5, 6 and 7 of the thesis, there are also a series of Guidelines (and other supporting documents) to assist in the implementation of EIA, however, these Guidelines have also not kept pace with the over-arching legislative changes and this has resulted in inconsistencies between the various documents and their application. Interviewees repeatedly highlighted how this produced considerable confusion and thereby eroded the effectiveness of the EIA system in Laos. Two notable examples that were identified by interviewees are: 1) that some EIA consultants were not aware that the *Environmental Impact Assessment Guidelines* (EMSP, 2011) (established under the previous EIA Decree) were still relevant under the IEE and ESIA Instructions despite it having been in place for 3 years and 2) that the ESIA Instruction requires 'three' consultation meetings during the technical content review process, conducted by collaboration between EIA authority, DPRA and project developers while the *Guideline*

for Public Participation suggests that there should be 'at least four' consultation meetings undertaken by project developers. While these might seem like small inconsistencies, given that project developers hire consultants to prepare their EIA reports, they need to know that those tasked with this, are aware of their legal obligations. Likewise, as private developers pay for consultation meetings, often reluctantly, knowing up front, how many this will include is important when it comes to applying the rule of law in a systematic and reliable way.

Poor inter-governmental relations

The second major issue associated with operationalizing EIA is that the very ministries and departments responsible for this have different agendas and do not respect each other's authority or position. Two examples of this are: that first, MoNRE, MEM and MPI have different positions when it comes to hydropower project proposals. MoNRE wants to approve hydropower projects but impose greater conditions to ensure that project developers take environmental and social impacts and mitigation measures into account throughout the life of a project, (so that cumulative impacts are also taken into account). In contrast, MEM and MPI want the flexibility to approve hydropower projects so that more room is allowed for negotiation and exemption from the laws in order to facilitate a fast-paced approval of investment projects. What is clearly borne out here is that MoNRE recognises these proposals as 'development' projects, whereas MEM and MPI see them purely as 'investment' opportunities. Thus, there is a constant tension between these ministries as MoNRE on one hand is trying to ensure that projects meet their social and environmental obligations as part of the goal for achieving sustainable development, while on the other, MEM and MPI want to encourage more investment, so seek to water

down the legislated requirements to make Laos appear more attractive to foreign investors.

Secondly, the coordination mechanism between the ministries and their relevant departments (even within the same ministry) is poorly established. As there is not a strictly enforced 'chain of command' in place directing the order in which approvals are needed (and from whom), some ministries simply break protocol and 'skip' this step in the EIA signoff process so as to fast-track approval. On one hand, this fails to take into account that some approvals, such as those concerning large and complex hydropower developments may need extra time to review; on the other hand, it speaks not only to a lack of respect for other EIA authorities, but also to a lack of transparency and accountability in the EIA approval process overall. If ministries like MEM and MPI and other departments under their umbrella are allowed to continually behave in this manner and ignore the part other departments and ministries such as MoNRE and DESIA have to play in this process, then not only will the goals of EIA be severely diluted, but sustainable development will also be almost impossible to achieve. This lack of protocol is quite well-known (as suggested by interviewees in Chapter 6), yet neither formally nor informally is there a mechanism in place to deal with these breaches in behaviour which speaks loudly to a much larger systemic governance problem.

A lack of Resourcing

The third major issue associated with the operationalization of the EIA system in Laos is that it is severely hampered by a lack of resourcing, both in terms of human and financial resources, at all levels. For example, as suggested in Chapter 6, although DESIA at the central level has increased the number of staff employed in recent years, most of them are

inexperienced and/or newly graduated from the universities in Laos and work as volunteers. Thus, while they might have a theoretical knowledge of EIA, they do not have a working knowledge of how the system functions in reality in Laos, nor what is required to keep pace with the enormous amount of projects being handled by their specific departments at one time. At the provincial and district levels, it is much worse, as there are many untrained officers and high volunteer levels which has a large impact on the capacity of those being tasked with implementing the EIA system.

As suggested above, this is most obvious when local authorities are unaware of changes to the law and when the monitoring of projects is required. Likewise, as many interviewees in this project suggested, often there is a lack of budget or funding to support monitoring operations and this is compounded further by the fact that there is also no appropriate equipment with which to monitor impacts, so no baselines can be drawn and compared over time. While many scholars suggest that a shortage of funding is a common finding in most developing countries (see Nadeem & Hameed, 2008; Marara et al., 2011; Betey & Godfred, 2013), it nevertheless continues to create a substantial barrier to the effective operation of the EIA system in Laos.

A culture of unscrupulous developer behaviour

A fourth and very large impediment to the effective implementation of EIA in Laos, rests with the power developers hold and the way they can influence the decision-making processes around them. Even though, the laws and a project's individual ECC states that monitoring for example, *must occur*, the timing, financing and access to a development project is determined by the developer. The fact that EIA authorities are reliant upon developers to finance the monitoring of their projects essentially leaves authorities open

not only to the potential for bribery, but also places them on a lower authority than developers who have the power to accept or reject when, how and even if monitoring will occur on their site. Ironically, rather than the developers having to comply with the law, it is in fact the EIA authorities themselves who have to comply with the developer's whims once a project is approved. As no mechanism exists to penalise developers who do not provide the finances for monitoring operations or who cause obvious environmental damages, in effect, it is the EIA officers themselves who are powerless to act.

This becomes particularly problematic when authorities are trying to ensure compliance with the law and with recommended social and environmental targets put in place to assist a project in meeting its environmental and social obligations in relation to sustainability. As scholars such as Wilson et al. (2017:7) suggest, often the withholding of funds is a way to prevent scrutiny as:

> conventional methods of data collection, particularly when confronted with large spatial and long temporal scales, are very costly. Consequently, when confronted with expensive monitoring efforts, developers tend to keep these funds for the project itself, rather than allocate for further environmental investigation.

Given this, it is obvious that there is a serious need for more legislated transparency and accountability to be imposed on developers in regards to their obligations. This also applies in relation to public participation as part of the EIA process overall. As stated in Chapter 7, in Laos, public consultation and participation is seen as more of a 'tick-the-box' situation rather than an opportunity to engage in meaningful dialogue and improve the final outcomes of decision-making regarding impact management and mitigation.

Most developers and EIA consultants interviewed as part of this research, saw public consultation and participation as simply ‘a waste of time and money’.

A lack of political will

As suggested above, the final and most pressing finding of this research relates to the GoL’s lack of political will when it comes to strengthening the EIA system. Although, an EIA system was supposedly introduced to assist development projects to work toward sustainable development goals, it is clear that this is more rhetoric than reality at this moment in time in Laos. While the legislation in Laos goes part way to supporting the EIA system, it is in the operationalization of it, however, that the system falls down. Much of this stems from the mixed messages that emanate from the central government about hydropower development being the only means with which to achieve progress. Admittedly, while this message has also been championed by the World Bank and other financial institutions, there tends to be an overall assumption that somehow simply by having an EIA system in place, that good governance will follow. As we have seen in Laos, this is not the case.

As Johnston (2003:3) suggests:

> Good governance involves far more than the power of the state or the strength of political will. The rule of law, transparency, and accountability are not merely technical questions of administrative procedure or institutional design. They are outcomes of democratizing processes driven not only by committed leadership, but also by the participation of, and contention among, groups and interests in society–processes that are most effective when sustained and restrained by legitimate, effective institutions.

In Laos while the institutions to support EIA exist, because of the GoL’s desire to be the ‘battery of ASEAN’, sectorial ministries and other lead agencies are effectively working

in opposition to each other. For example, MEM and MPI see their principal mandates as being to attract FDI and so under this guise, the EIA system is viewed merely as an approval tool with which to facilitate the fast pace of approval of 'investment' projects. It is also viewed as a way to guarantee that potential developers are able to obtain loans from financial institutions. This in itself, implicitly reinforces the bad behaviour of developers who know that Laos craves their business and as such, is amenable to adapting the regulations as it sees fit.

As discussed above, MoNRE's overall goal, however, is to ensure greater protection for the country's natural resources and the environment and to do all it can to work towards facilitating sustainable development. Unfortunately, these efforts are severely hampered at every turn as the short-term benefits of projects are elevated above those of longer term sustainable development. This is most clearly recognised in the fact that no mechanism exists in the current EIA system in Laos for a project to be rejected, no matter how high the social or environmental costs associated with it. If the GoL were truly concerned with achieving sustainable development, then this option and others allowing penalties, stricter rule of law and mandated codes of professional practice would all be part of its EIA system. Their absence only confirms that the GoL is merely offering 'lip service' to the EIA system and that development at all costs is the real goal. This is in the face of continued criticism from scholars and NGOs who argue that the environmental and social costs caused by large-scale hydropower development projects in Laos are substantial compared to the economic benefits (see Howe & Sims, 2011; Hirsch & Scurrah, 2015; Friis & Nielsen, 2016; Baird & Barney, 2017). Fundamentally, for wide-spread and effective change to occur within the EIA system in Laos, a shift in the GoL's priorities is

needed, as without this, development projects that offer the opportunity to provide Laos with much needed incomes, will always be given precedence, no matter what the cost.

Given this and the overall findings of this research, it is hoped that the recommendations provided below will offer some guidance of a better path to follow and be given the consideration that they deserve by the GoL. These recommendations are presented with a genuine desire to see the EIA system in Laos improved so that it can truly be a robust and effective means through which to achieve long-term sustainable development in Laos.

8.4 Recommendations

Based on the main findings above, the recommendations that emerge from this research are related to the legal, institutional and procedural elements of the EIA system in Laos. They are therefore discussed under these three categories though as noted above, none of these are stand alone and in fact for the system to work effectively, all of these elements must be addressed.

The Legal Context

Beginning with the ESIA Instruction and other technical Guidelines, it is essential that they all 'speak the same language' and are consistent in their application and with the rule of law more generally in Laos. All levels of government need to have access to the most up-to-date copies of the legal documents to do with EIA and to understand them. To ensure that all those operationalizing EIA are 'on the same page', workshops need to be held for all employees at all levels so that they know which laws and regulations are to be applied and how to apply them. If there is no budget for this, then IDAs such as the

World Bank, ADB and UNDP should be approached for the necessary funding as it is also in their interest to see EIA applied appropriately.

Secondly, in terms of the different Guidelines associated with the implementation of EIA on the ground, two require updating to ensure that they are consistent with the current ESIA Instruction and the Environmental Protection Law (namely the *Guideline for Public Participation* and the *Guideline for Monitoring of Impacts*). They also need to meet at least the minimum standards of international best-practice. In terms of reviewing ESIA reports, the earlier *Guideline for Reviewing EIA Reports* (MoNRE, 2011), which was prepared with input from the UNEP and UNDP, took into account international best-practice. However, the new *Guideline for Reviewing ESIA Reports* (DESIA, 2016b), while consistent with the 2013 ESIA Instruction, does not follow international best-practice to the same degree (although it does include important developments such as being written in the Laotian language). Thus, there is room to update 'old' Guidelines and to strengthen those that have been updated, especially if meeting best practice standards is the goal.

Finally, once these changes are made, the GoL needs to stop tinkering with the laws associated with EIA to give them time to 'settle in' and become widely known and understood by all stakeholders. The laws also need to be strictly enforced so that there are no grey areas that can be misinterpreted. Only when this happens, can there be some consistency in the requirements and practices of EIA in Laos.

The Institutional Arrangements

As this research has tried to show, even with reasonable laws and sound guidelines, once the human element comes into play, different interpretations of the EIA process, particular roles within it and different priorities begin to influence how EIA is operationalized on the ground. This not only impacts upon the effectiveness of the system as a whole, but also as indicated above, on the level of accountability and transparency shown by those in charge of its implementation.

As Chapter 6 suggested, there are many stakeholders involved at different levels of the EIA process from the lead agencies through to the developers and the financial institutions. In terms of reviewing EIA documents in respect to large hydropower, one of the areas that needs improving is the use of *ad-hoc* expert committees to review a project's EIA report and other sub-plans. While this is a good practice, there should be a permanent external committee established that meets regularly to review large development projects for all sectors. The fact that it is the project developers themselves who are expected to cover the costs for the work done by the committee/s, remains problematic (MoNRE, 2013b). Perhaps either the UNDP or donor countries with strong EIA systems could initially be encouraged to sponsor the permanent establishment of this committee, thereby taking it out of the hands and the potential influence of developers. What's more, in return for their investments, they could suggest members of their own staff who would be willing to sit on this committee, thus further enhancing its transparency and accountability.

In terms of the agencies or departments themselves involved in a decision-making process to approve the EIA documents, a similar concept to the EIA report reviewing process such as an *ad-hoc* committee for decision-making process should be established to

improve accountability. In addition, a code of professional conduct for *ad-hoc* committee members could be introduced. This would not only ensure that there was a robust governance system in place but also, that staff are more obligated to follow the rules and less inclined to let standards slip, personal and professional. It might also engender greater respect for the role each department plays in the EIA process is established.

There are various examples that exist in developed countries around the world but a strong example appears to be the Code of Conduct the Queensland government in Australia put in place in 2017 for all ministry, agency and departmental employees (see QLD Government, 2017a). The Code of Conduct was developed to strengthen the integrity and accountability of the Queensland public service and applies to "any Queensland public service agency employee whether permanent, temporary, full-time, part-time or casual [and] any volunteer, student, contractor, consultant or anyone who works in any other capacity for a Queensland public service agency" (QLD Government, 2017b:1). It also assumes that all managers and supervisors have a responsibility to "model and promote the Code" and to "proactively manage the work performance and personal conduct of employees" (QLD Government, 2017b:2). This Code is an extension of the Queensland *Public Service Act 2008 and the Public Sector Ethics Act 1994.*

Whilst this obviously is related to the legal system in Laos, establishing these types of behavioural codes would not only give greater weight and reliability to the decisions made by government representatives within the different ministries, but also promote an organizational culture that values and respects high, ethical standards and behaviour overall. Likewise, just as a code of professional conduct and associated laws would improve intergovernmental cooperation, so too would a consistent penalty regime that is

strictly applied. This will be discussed further under the Procedural elements section below.

Finally, while improving expectations and behaviour on the ground is one thing, those tasked with operationalizing the EIA system also need to be empowered to make appropriate decisions in regards to inappropriate and potentially impact heavy or risk-laden development projects. To do this, they have to be enabled with the possibility of evoking the 'Precautionary Principle' which currently does not exist in Laos at all. As Jalava et al. (2013:280) state, the Precautionary Principle "helps decision-makers to be more sensitive to uncertainties, ambiguities and ignorance related to development". The Precautionary Principle is considered a vital part of any EIA system especially where risks and uncertainties are high as they are in the development of hydropower in Laos. As such, the inclusion of this Principle is paramount if Laos really is to have a chance to develop sustainably. Without it, the status quo remains unchanged and the environment and the people of Laos will continue to suffer as part of a system that visualises them as merely an opportunity cost or an inevitable feature of development.

The Procedural Elements

Extending on from the interrelated issues discussed above, many of the flaws in the EIA system in Laos can be found in the way the procedural elements of the process are applied. For example, one of the largest gaps lies in the absence of the 'public' in public consultations. Without their participation, then the chance to improve the quality EIA documents, and effective reviewing and transparent decision-making processes of the EIA documents is lost. Often this is able to explained away by developers who claim to

have a superior knowledge of the issues and see the presence of the public are a hindrance. As Armeni (2016:415- 416) suggests:

> the space for such participation is repeatedly constrained by technical risk assessment, cost-benefit analysis and the idea that the public lacks expertise and misunderstands science.

In Laos, as revealed in Chapter 7, it is mostly the IDAs rather than the developers themselves who are calling for more 'public' participation in EIA decision-making. As Chapter 7 suggested, many scholars recommend that public participation should take place from an early stage in the EIA system and in all EIA procedures from screening through to the monitoring of impacts (see Gilpin, 1995; Hanna, 2005; Elliott & Thomas, 2009; Glasson et al., 2012; Noble, 2015; and Figures 7.1 and 7.2). As we know from this research, however, public participation occurs only as part of the consultation process and is aimed more at 'public acceptance' of a decision that has already been made, rather than truly being directed towards 'participation' and the potential to inform the final decision. As Armeni (2016:416) notes, this type of participation offers merely "a shadow of participation" and remains problematic for it fails to acknowledge that people have a right to be informed and participate in shaping the decisions that will affect their lives.

This is particularly problematic in Laos at the district and village levels where affected parties may require compensation, resettlement and/or restoration programs. As suggested in Chapters 4 and 6, it remains absolutely vital that they are appropriately informed and fully consulted with about development projects, including any benefits and impacts of a project together with impact mitigation plans. The only way this can occur in a satisfactory manner in Laos, however, is if the notion of 'the public' is expanded to include members of local parliamentary, NGOs, IDAs and other interested parties.

Alongside this, there is also a need for a longer time limit in which affected parties can seek assistance in reading and understanding the EIA documents. Only when this occurs, can public participation in Laos move closer towards what is envisaged in international best-practice.

Another urgent area requiring attention is in the sphere of monitoring. Although, all projects have ECCs, as stated in Chapters 5 and 7, there is only effects monitoring but no compliance monitoring in Laos, so many impacts or legally imposed requirements/conditions, could easily slip through the cracks. The first step to improving this is by also insisting on compliance monitoring. At its simplest level, this can be done by using a check-list, However, over time, technical equipment will be required to test whether the predicted impacts that were supposed to be mitigated or have mitigation measures put in place have occurred and if so, to what degree. While effects monitoring can monitor for scale and extent of an impact, again without valuable equipment with which to at least establish a base-line data, then effective monitoring is difficult to achieve. This, as well as inexperienced staffing levels and a lack of capacity, makes the process near impossible.

A way this could be improved though is by having an external agent, either an NGO or IDA approach scientific agencies such as CSIRO, Eco-Tech and others in Australia and elsewhere and ask them to donate their older, though still working equipment to Laos so that this can be used for monitoring. These agencies regularly dispose of older equipment which is either recycled or destroyed, so giving them a third more useful option also allows them to play a part in furthering scientific knowledge and methods in the developing world.

Further compounding these issues though, is the fact that Laos lacks a penalty system which means that EIA authorities have nothing with which to enforce the law. As mentioned above, this essentially hands over all the power to the developers who often exploit this fact knowing that there is nothing legally authorities can do, even if they do find problems. As Norberry (1993:10) noted in her study of regulatory agencies in Australia, many agencies when they found a problem, tended to "own the problem" themselves rather than enforcing laws, which at least in Australia exist. In terms of this element of EIA, Wood and Coppell (1999) note, that a legal provision for penalty is an essential component for any EIA system as it substantially strengthens the power to enforce mitigation measures (i.e. environmental conditions) imposed by government on development projects. If Laos is to truly tighten this gap in its EIA system, then it is going to need to not only introduce this component into its laws but also to ensure it is enforced effectively. This will require assistance from the UNDP and other such organisations. The International Association of Impact Assessment (IAIA) could also be useful here in up-skilling EIA staff as this is their core business and they also offer small grants which can be used to improve EIA facilitation. As their focus is sustainability, they could also help the GoL refocus its efforts here.

It can be assumed that if the GoL were to implement all of these recommendations, that its major concern would be that it scare away FDI and developers. What the GoL needs to remember, however, is that because of its central location on the Mekong River, it is situated "at the forefront of [hydropower] development" (Sayatham & Suhardiman 2015:17). Anyone wanting to stake a claim in this, therefore, has to go through Laos. As such, Laos as a nation needs to stop short-changing itself. While developers and other investors may threaten to leave, in the long run this must be seen for the bluster it is as

the resources they desire are present in Laos. Laos only needs to look at Norway's example to see that this is true. Norway has the most expensive royalties (foreign income/company tax) in the world, at 78 percent, yet still the investors keep coming for its North Sea oil (Milman, 2014). While this research is not suggesting that taxes of this nature be introduced in Laos, it does suggest that Laos has little to fear from strengthening its laws and the EIA system more generally. By doing so, it essentially signals to investors both foreign and domestic that not only is it serious about achieving sustainable development, but also that it has a robust system in place to ensure that its EIA system is working efficiently and effectively.

8.5 Contribution to the Literature

Although this thesis has focused on the EIA system in Laos in terms of hydropower development, it also makes a contribution to the broader literature on EIA. While many studies have applied variations of Ahmad and Wood's (2002) criteria to examine EIA systems as outlined in Chapter 2, this research, has used a combined criteria and practice-based approach. In so doing, the thesis goes beyond an 'on paper' investigation of EIA effectiveness to inquire into the actual practice of EIA 'on the ground'. The thesis demonstrates the value of this combined approach because it has been able to examine not only the legal system in place to implement EIA, but more broadly, how this is operationalized by staff throughout Laos at the central, province, district and village levels. Combining a document study with fieldwork interviews of 52 key stakeholders including government officials at all levels, representatives from NGOs, environmental consulting firms, hydropower companies, IDAs and villagers as well as observations of EIA practice at monitoring and public participation events, this research has been able to go well beyond that of other previous studies which have remained mainly desk-top

based. Essentially, it provides a more nuanced way to understand the components of EIA system by examining them in a culturally specific manner. As Wilson et al. (2017:2) note, even if there is a consensus about the purpose of EIA, there is no international legislation that defines the content nor how it is applied.

This research clearly shows that the EIA system in Laos is very bureaucratic but like others in developing countries is “also easily derailed by political and economic pressures” (Glasson & Salvador, 2000: 191). This finding is consistent with other studies of Laos and the Lower Mekong Basin (LMB) (see Campbell et al., 2015; Sano et al., 2016; Wells Dang et al., 2016), but as this research identifies, even after the introduction of the 2013 IEE and ESIA Instructions, the same problems noted under the earlier EIA system, still remain. Thus, while an EIA system does indeed exist in Laos, it continues to suffer from what scholars have called a ‘procedures-practice gap’ where the mechanisms or policies to operationalize the system are in place but the performance or ‘practice’ of the system is weakened by internal and external elements (see Glasson & Salvador, 2000; Wayakone & Makoto, 2012). Thus, as suggested above, the current EIA system in Laos is currently more of “a project justification tool than a project planning tool for sustainable development” (Wayakone & Makoto, 2012:1655). This fits the pattern that Wood (2003) discovered in his studies on EIA in developing countries. He noted (2003:14) that “[t]oo many examples exist in developing countries of mechanistic EIA reports being produced that have little or no effect on decisions" and further that "most EIAs seem to have been a function of justifying a decision (usually to develop) that has already been made and are concerned only with remedial measures”. Although written a decade and a half ago, these words remain pertinent to the EIA system in Laos today as this thesis has tried to demonstrate.

Although this is not an uncommon finding in developing countries as Lawrence (2005:25) notes,

> whether the intent is to replace, reform, or just fine-tune EIA requirements and procedures, the benchmark should be good regulatory practice. The good regulatory practice criteria are derived from good practice examples. Patterns in requirements and procedures across the [various elements] provide a sense of the gaps between what is and what could be.

Thus, for an EIA system to function effectively, it needs to work not only on paper but on the ground where the 'real' work happens. As the weaknesses of the EIA system are outlined above and throughout this thesis, they will not be re-discussed here, but it is hoped if the recommendations suggested are applied, that the identified procedures-practice gap will be able to be closed or at least, move closer to meeting international standards of best-practice.

The second contribution that this thesis makes is towards understanding the relationship between EIA and sustainable development. As outlined in Chapter 2, even though EIA is essentially about generating more sustainable forms of development, the connection between EIA and measurable sustainable development is not just difficult to research but may itself be tenuous. As scholars such as Cashmore et al. (2004:296) suggest, it is "unrealistic to expect EIA to act as a tool for sustainable development" unless the EIA system itself is functioning as intended, and even then, "the interplay of non-rational variables (such as power, agency, experiences and expectations)" can seriously influence a system's effectiveness and outcomes, as we have seen in Laos (Cashmore et al., 2007:1233). Scholars have therefore, suggested that the best that EIA can hope to contribute to sustainable development is to ensure that there is a well-functioning EIA system in place that is likely to lead to effective practice. This is not just in terms of the present, but in terms of shifting expectations about what can be achieved and leading to

what Wood (2003:241) has called “the diffusion of EIA practice”. Although, this diffusion is now world-wide, international best-practice is still a goal in many places, including Laos.

8.6 Advantages, Limitations and Further Research

While there were challenges in conducting this research, the researcher did have access to many government officials at various scales that other researchers would not have, due to his previous employment at MoNRE. This was a considerable advantage which assisted in gaining him access to field sites, ‘public participation’ events and in gaining the opinions of many working in the field applying EIA. Most importantly, he was also able to attend parliamentary sessions and speak to those responsible for making the laws that operationalise the EIA system. This unprecedented access, has meant that the findings of this study represent the reality of ‘practicing’ EIA on the ground and offer a highly nuanced understanding and comprehensive examination of the system from the top down.

One limitation of this research, however, as discussed in Chapter 3, was that some interviewees in the hydropower sector may have known that the researcher had previously been employed by MoNRE and as such, they may have been less likely to open up or share their dissatisfaction of EIA processes in case the comments were relayed back to authorities. Obviously, their anonymity was assured as part of the ethics for this project but this was sometimes still difficult to convey to potential participants.

Finally, as this research was always intended to be applied post-thesis to improving the EIA system in Laos, there was pressure (self-imposed) on the researcher to make sure

that all the information and data in the thesis was accurate and an honest representation of what he was told by the various participants in throughout the research process. Likewise, the accuracy of his observation of monitoring operations and public participation events was important in ensuring that if changes were to be made, that they were meaningful and worked towards achieving true engagement.

Overall, however, it is hoped that these challenges and limitations have made for a more nuanced and richer thesis that not only provides a thorough and accurate examination of the current EIA system in Laos but ultimately, provides a useful template for where and how to begin to reform the system in the future.

In summary, this thesis demonstrates that the EIA system in Laos still has far to go if it is to be more effective—and if more sustainable forms of development are to be achieved. It is hoped, however, that with an increased effort to align the legal, institutional and procedural elements of its EIA system, it can, ultimately improve its performance and work towards a better future. Future research opportunities exist for studies that build upon this research and investigate whether the recommendations of this thesis are implemented in the near future or not. The findings of this research project are to be presented at ministerial meetings and workshops and published in international journals. As such, it is hoped that by opening a frank and constructive dialogue about the current strengths, weaknesses and limitations of the EIA system, that meaningful and significant changes might be forthcoming.

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Appendix 1

Summary of findings from other studies of EIA in the developing countries

Table 1 Findings related to legal context

Authors	Countries studied	Main findings related to legal component
Ahmad & Wood (2002)	Egypt, Turkey and Tunisia	✓Existence of EIA legal frameworks and specific regulations ×Lack of provisions for appeal against decision-making ×Lack of user-specific guidelines for preparing EIA reports, reviewing EIA reports and making decisions ×Lack of enforcement impact monitoring mechanisms
El-Fadl & El-Fadel (2004)	21 Countries in the MENA	✓Existence of EIA legal frameworks and specific regulations. ×Lack explicit EIA legislation ×Provision for appeal is only required in 4 out of 21 countries ×Time limits for decision-making only exist in 7 countries ×Weak regulatory enforcement
Nadeem & Hameed (2008)	Pakistan	✓Sound EIA legislation and regulation ✓Comprehensive guidelines for preparing EIA reports, reviewing EIA documents and public participation ✓Availability of sectoral guidelines ×Weak enforcement of EIA regulations and guidelines
Toro et al. (2010)	Colombia	✓Existence of EIA legislation ×Lack explicit EIA regulations ×Absence of Strategic Environmental Assessment (SEA)
Marara et al. (2011)	Kenya, Rwanda and Tanzania	✓Existence of EIA legislative frameworks ✓Existence of legal provision for appeal ✓Clearly state time limits for each EIA procedure ✓Quite good technical guidelines for EIA
Naser (2012)	Bahrain	×Incomprehensive EIA legislation and regulations that neglect public participation and cumulative impacts ✓Comprehensive guidelines on ecological surveys and monitoring suspended sediments ×Inadequate EIA guidelines for operating EIA procedures
Panigrahi & Amirapu (2012)	India	✓Fairly good EIA legislation ✓Comprehensive package of EIA guidelines
Betey & Godfred (2013)	Egypt, Ghana, Mauritius, South Africa	✓Fairly robust and clear regulatory framework for EIA ✓EIA legal frameworks include: a framework enabling EIA and detailed regulation of EIA process ✓Provisions for appealing against the decisions of the competent authority are identified in the EIA legislation ×Lack of regulatory enforcement ×Inconsistencies between legal requirements and actual implementation

Table 2 Findings related to institutional arrangements

Authors	Countries studied	Main findings related to institutional component
Ahmad & Wood (2002)	Egypt, Turkey and Tunisia	✓Existence of administrative arrangements for EIA ×Weak inter-agency cooperation between relevant agencies.
El-Fadl & El-Fadel (2004)	21 Countries in the MENA	×Highly centralized and understaffed of EIA authorities ×Lack of specification of sectoral responsibilities ×Weak coordination between relevant agencies
Nadeem & Hameed (2008)	Pakistan	×Inadequate human resources ×Weak coordination among relevant agencies
Toro et al. (2010)	Colombia	✓Existence of EIA administrative body ×Insufficient human resources to operate the EIA
Marara et al. (2011)	Kenya, Rwanda and Tanzania	✓Existence of EIA administrative body ✓Sectoral responsibilities are clearly identified in their guidelines ×Low autonomy of the EIA authority ×Poor coordination between EIA Authority and lead agency ×Inadequate human capital
Naser (2012)	Bahrain	×Overlapping roles between EIA authority and sectoral agencies ×Shortage of skilful personnel
Panigrahi & Amirapu (2012)	India	×EIA Authority lack capacity to operate the EIA system ×Weak coordination between EIA authority and lead agency.
Betey & Godfred (2013)	Egypt, Ghana, Mauritius, South Africa	×Low autonomy of EIA Authority ×Highly centralized, understaffed, inexperienced personnel

Table 3 Findings related to procedural elements

Authors	Countries studied	Main findings related to procedural component
Ahmad & Wood (2002)	Egypt, Turkey and Tunisia	×Inadequate information for screening process ×Inadequate scoping approach ×Inadequate review of EIA reports. ×Lack of transparency in EIA decision-making ×Limited impact monitoring ×Ineffective or no requirement for public participation in the EIA process
El-Fadl & El-Fadel (2004)	21 Countries in the MENA	×Inadequate screening approach ×Inappropriate scoping approach ×Low quality of reviewing EIA reports ×Poor integration of EIA into decision-making ×Weak implementation of mitigation measures ×Absence of EIA follow-up
Nadeem & Hameed (2008)	Pakistan	×Screening is mainly based on a scale of project ×Scoping process excludes public involvement and not require preparation of ToR ×Poor EIA reports and low quality of reviewing EIA report (no criteria, only relies on personal judgment) ×Limited and ineffective public participation ×Weak implementation of mitigation measures ×Impact monitoring only responds to complaints
Toro et al. (2010)	Colombia	×Limited information for screening ×Inappropriate scoping approach ×No requirement for alternatives ×Low quality of EIA review ×Lack transparency in EIA decision-making process ×Limited and ineffective public participation ×Weak implementation of EMP and lack of monitoring
Marara et al. (2011)	Kenya, Rwanda and Tanzania	✓EIA reports influence decision makers to some degree ✓Records of decisions are published and stakeholders are informed the reasons behind decision-making ×Weak public participation ×Weak implementation of EMP and insufficient monitoring
Naser (2012)	Bahrain	×Ineffective screening process (no criteria and thresholds) ✓Fairly good scoping process ×Limited consideration of alternatives ×No legal requirement for public participation in EIA process ×No formal procedure for reviewing EIA reports ×Impact monitoring only limits to air emissions and wastewater effluents
Panigrahi & Amirapu (2012)	India	×Deficiencies in screening and scoping process ×Ineffective public participation ×Low quality of reviewing EIA reports ×Poor integration of EIA into decision-making ×Inadequate implementation of mitigation measures and monitoring impacts
Betey & Godfred (2013)	Egypt, Ghana, Mauritius, South Africa	×Screening is mainly relied on lists and thresholds ✓Scoping requires preparation of ToR that identifies significant impacts of projects ✓Consideration of alternatives of project proposal is required ×Poor integration of EIA reports into decision-making ×Lack of post-decision monitoring

Table 4 Findings related to contextual setting

Authors	Countries studied	Main findings related to contextual setting
Ahmad & Wood (2002)	Egypt, Turkey and Tunisia	×Insufficient sectoral guidelines for EIA ×Inadequate EIA technical expertise
El-Fadl & El-Fadel (2004)	21 Countries in the MENA	×Deficiency in sectoral and technical guidelines ×Inconsistencies between legal requirements and actual implementation
Nadeem & Hameed (2008)	Pakistan	×Lack of political will ×Insufficient financial capital
Marara et al. (2011)	Kenya, Rwanda and Tanzania	✓Some good EIA expertise in Kenya and Tanzania ×Lack of political will to enforce EIA regulations ×Low level of public environmental awareness ×Shortage of financial resources
Naser (2012)	Bahrain	×No requirement for EIA follow-up ✓Highly qualified EIA expertise exists ×Limited numbers of highly qualified EIA expertise
Panigrahi & Amirapu (2012)	India	✓High level of political support ✓Good Independent Review Committee ✓Active role of NGOs involvement in EIA system ×Lack of EIA expertise in conducting EIAs
Betey & Godfred (2013)	Egypt, Ghana, Mauritius, South Africa	×Shortage of qualified and certified of EIA professionals and consultancies ×Poorly funded authorities

Appendix 2

Checklist of
Investment Projects and Activities Requiring
IEE and ESIA in Lao PDR

Lao People's Democratic Republic

Peace Independence Democracy Unity Prosperity

Ministry of Natural Resources and Environment Issue No: 8056/MoNRE

Vientiane Capital, Date: 17 December, 2013

Checklist of

Investment Projects and Activities Requiring IEE and ESIA in Lao PDR

The checklist comprises of five major types of investment projects and sectors. Whether or not the investment projects or activities are subject to IEE or ESIA, they are determined by their different types and scales. A small-scale investment project identified in (Category 1) requires IEE and a large-scale investment project identified in (Category 2) is subject to ESIA as indicated in a table below.

Type of investment projects and activities		**Category 1 (IEE)**	**Category 2 (ESIA)**
Investment projects and activities in an energy sector			
Investment projects for electricity			
1.1	Hydropower project	Capacity 1-15 MW or; Reservoir storage <200 m3 or; Reservoir area <1.500 hectares	Capacity ≥15 MW or; Reservoir storage ≥200 m3 or; Reservoir area ≥1.500 hectares
1.2	Nuclear power plant project		All scales
1.3	Bio-gasses project	Capacity 5-50 MW	Capacity >50 MW
1.4	Wind farm project	Capacity 2-10 MW	Capacity >10
1.5	Coal power project	Capacity ≤10	Capacity >10
	Investment projects for gasses and petroleum		
1.6	Gasses and petroleum pipeline project		All scales
1.7	Gasses and petroleum extraction project		All scales
1.8	Petroleum processing project		All scales
1.9	Petroleum storage project	5.000-50.000 m3	>50.000 m3
	Investment projects for transmission line		
1.10	Electricity transmission line		
1.10.1	≥230 kV	≤15 kV	>15 kV
1.10.2	>230 kV	All scales	
1.11	Electricity hub/station	<10	≥10
Investment projects and activities in agricultural and forestry sectors			
	Tree and/or crop plantation		
2.1	Tree plantation and/or logging project	20-200 hectares	>200 hectares
2.2	Crop plantation project	hectares	>20-400 hectares
	Raising animals and aquaculture		
2.3	Project for herbivore farming (e.g. cow, buffalo, horse farming and etc…)	≥500	

2.4	Project for chicken and/or duck farming	≥5,000	
2.5	Project for pig farming	≥500	
2.6	Project for fish farming in a pond	≥10 hectares	
2.7	Project for fish farming in a net along a river	≥300 square meters	
2.8	Project for crocodile farming	≥100 crocodiles	
Investment projects and activities in industrial sector			
	Industrial food processing		
3.1	Factory for food production, food processing and/or food storage (e.g. meat, fish, fruit, oil extracted from vegetation or animals)	≤1 tone/day	>1 tone/day
3.2	Factory for milk processing and/or production	≤40 tones/day	>40 tones/day
3.3	Factory for flour processing and/or production	40-80 tones/day	>40-80 tones/day
3.4	Factory for sugarcane processing and/production	≤30 tones/day	>30 tones/day
3.5	Factory for alcohol processing and production	≤500,000 litres/year	>500,000 litres/year
3.6	Factory for drinking water processing and production	All scales	
3.7	Factory for cigarette processing and production	All scales	
	Cotton, paper or timber industry		
3.8	Factory associated with cotton, thread, clothing processing and production	All scales	
3.9	Factory associated with soaking and massaging leather	All scales	
3.10	Factory for leather processing and production	≤1 million items/year	>1 million items/year
3.11	Factory associated with rattan and crafting production	All scales	
3.12	Factory associated with logging and timber processing	≤100,000 square meters/year	>100,000 square meters/year
3.13	Factory for paper processing and production	≤30 tones/day	>30 tones/day
3.14	Factory for printing	All scales	
	Chemical production and medical equipment industries		
3.15	Factory associated with petroleum and hydrogen carbon		All scales
3.16	Factory associated with chemical substance		All scales
3.17	Factory for medical and drug production through chemical processing and analysis		All scales
3.18	Factory associated with cleaning, polishing and beauty production	≤10 tones/day	>10 tones/day
3.19	Factory associated with rubber band and/or rubber production	50-200 tones/year	>200 tones/year
3.20	Factory associated with plastic processing and production	≤400 tones/year	>400 tones/year
	Mineral production industries excluding metal		
3.21	Factory associated with glass processing and production	All scales	
3.22	Factory associated with mineral which is not metal	All scales	
3.23	Factory associated with cement and/or plaster processing and production	≤20 tones/hour	>20 tones/hour
	Industry for metal extraction from mineral		
3.24	Factory associated with metal and steel processing	≤5,000 tones/year	>5,000 tones/year
3.25	Factory associated with metal melting furnace which is not iron mineral		All scales
3.26	Factory associated with melting furnace steel and iron	≤50 tones/day	>50 tones/day
3.27	Factory associated with melting furnace metal which is not iron	All scales	

3.28	Factory associated with producing structures made from metal (e.g. tank)	All scales	
3.29	Factory associated with electric transformers	All scales	
	Other industries		
3.30	Factory associated with kitchen appliances, office equipment and electrical appliances	All scales	
3.31	Factory associated with batteries	≤70 tones/year	>70 tones/year
3.32	Factory associated with spare-parts of vehicles and machines	≤1,000 tones/year	>1,000 tones/year
3.33	Factory associated with bicycles and wheelchairs	≤10,000 units/year	>10,000 units/year
3.34	Factory associated with household furniture	≤10,000 units/year	>10,000 units/year
3.35	Factory for water supply	All scales	
	Management of rubbish		
3.36	Storage of none hazardous wastes	≤5,000 tones/year	>5,000 tones/year
3.37	Storage of hazardous wastes		All scales
3.38	Destruction of hazardous wastes		All scales
3.39	Treatment and management of general wastes		All scales
3.40	Factory for waste recycle		All scales
3.41	Project for incinerator construction		All scales
3.42	Construction of urban waste treatment station	≤50,000 people	>50,000 people
3.43	Construction industrial waste treatment station		All scales
3.44	Construction of creek for discharge general waste water	All scales	
Investment projects and activities in infrastructure and service sectors			
4.1	Construction in a lake, stream, creek that may create problems to society		All scales
4.2	Construction of an apartment, flat,	>50 rooms	
4.3	Construction of a golf course		All scales
4.4	Construction of a sport complex		All scales
4.5	Construction of a hotel or resort	≤80 rooms	>80 rooms
4.6	Construction of a luxury hotel	≤50 hectares	>50 hectares
4.7	Development of a tourist site in an area that is social and environmental riches		All scales
4.8	Development of a special or specific economic development zone		All scales
4.9	Construction a hospital	≤80 beds	>80 beds
4.10	Construction of railway		All scales
4.11	Construction of a new road (e.g. national highway, provincial, district, rural or specific road)	All scales	
4.12	Improvement of a national highway, provincial, district, rural or specific road	All scales	
4.13	Construction of an airport		All scales
4.14	Construction of communication networks	All scales	
4.15	Transportation on waterway (improvement of waterway along the Mekong River)	≤200 tones	>200 tones
4.16	Construction of ports		
4.16.1	A port for transportation of passengers	≤500 tones (excluding ship's weight)	>500 tones (excluding ship's weight)
4.16.2	A port for transportation of general goods	≤500 tones (excluding ship's weight)	>500 tones (excluding ship's weight)
4.16.3	A port for transportation of dangerous goods		All scales
4.17	Construction of river bank erosion prevention	≤1 kilometre	>1 kilometre
Investment projects and activities in a mineral sector			
	Mineral extraction and processing		

5.1	Rock and sand extraction from a river	1,000-50,000 m3/day	>50,000 m3/day
5.2	Mining and transporting rocks	≤50 tones/day	>50 tones/day
5.3	The use of earth, rocks, sand) in construction areas	≤100,000 m3/day or ≤20 hectares	>100,000 m3/day or >20 hectares
5.4	Extraction of hard mineral (without using chemical substance)		All scales
5.5	Extraction and processing of mineral through the use of chemical substance		All scales
5.6	Processing of hard mineral	≤50,000 tones/year	>50,000 tones/year
	Water allocation and management		
5.7	Extraction and utilization of underground water for industry, agriculture and consumption	500-5,000 m3/day	>5,000 m3/day
5.8	Construction of reservoir and dam	1-200 million m3/day or dam's height ≤10 meters	>200 million m3/day or dam's height >10 meters

Note: The author's translation from a Laotian version

Source: Decision on the Checklist of Investment Projects and Activities Requiring IEE or ESIA in the Lao PDR, issued No: 8056/MoNRE, Vientiane Capital, and dated in December 17th, 2013.

Appendix 3

Samples of Ethics Materials

Letter for Seeking Permission from Organisations

Dr Meg Sherval
School of Environmental and Life Sciences
Faculty of Science and Information Technology
University of Newcastle
University Drive, Callaghan, NSW, 2308
Tel: (+61) 2 4921 6809
Fax: (+61) 2 4921 5877
Email: meg.sherval@newcastle.edu.au

[insert name of the Ministry]
[insert address and contact detail]

Research Project Tittle: Evaluating the Effectiveness of the Current Environmental Impact Assessment (EIA) System in Laos
Document Version # 02; dated: 16 / 10 / 2014

Dear [insert name],

We are writing to you in relation to the research project as identified above which is being conducted by Mr Aengphone Phaengsuwan – a PhD student researcher supervised by Dr Meg Sherval and Dr Lesley Instone from the School of Environmental and Life Sciences, Faculty of Science and Information Technology at the University of Newcastle in Australia.

This research project aims to evaluate the effectiveness of the current EIA system in Laos and examines the degree to which the EIA system assists hydropower development projects to achieve sustainable development goals. It also aims to explore a more effective EIA system that promotes socio-economic development with environmentally sound decision-making in the context of Laos.

In order to gain a broader and deeper understanding of the EIA system in relation to hydropower development projects in Laos, we are seeking permission from your organization to carry out data collection tasks and interview staff who are at middle and senior level working in the [insert name of the Department/Division] in the [insert name of the Organisation/Ministry]. These divisions/departments are selected for this research because their roles and responsibilities are related to one of these following fields - socio-economic development, rural development, natural resource management, environmental protection, EIA, and/or development and operation of hydropower projects.

If permission is granted, the student researcher will then contact suggested individuals in the Departments/Divisions mentioned above by email/telephone or in person. For more detailed information on this project, please see Appendix 07 - the Project Information Statement which is attached herewith.

If you agree to allow the student researcher to contact your staff, please sign Appendix 09 - the consent form which is attached herewith, and leave it with your secretary/receptionist for collection in one week's time. If you require any further information, please do not hesitate to contact us at any time either via email or telephone.

Thank you very much for your kind consideration of this request. We look forward to hearing from you soon.

Sincerely,

Mr Aengphone Phaengsuwan
PhD Candidate
School of Environmental and Life Sciences
The University of Newcastle
Ph-office: (+61) 2 4921 6809 (Australia)
Ph-office: (+856) 21 264 921 (Laos)
Mobile: (+856) 20 2222 0466 (Laos)
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Dr Meg Sherval
Project Supervisor
School of Environmental and Life Sciences
The University of Newcastle
Ph: (+61) 2 4921 6809
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Dr Lesley Instone
Project Supervisor
School of Environmental and Life Sciences
The University of Newcastle
Ph: (+61) 2 4921 6637
Fax: (+61) 2 4921 5877
Email: Lesley.instone@newcastle.edu.au

Complaints about this research

Australia:

This project has been approved by the University's Human Research Ethics Committee, Approval No. **[H-2014-0332].** Should you have concerns about your rights as a participant in this research, or you have a complaint about the manner in which the research is conducted, it may be given to the researcher, or, if an independent person is preferred, to the Human Research Ethics Officer, Research Office, The Chancellery, The University of Newcastle, University Drive, Callaghan NSW 2308, Australia, telephone (02) 49216333, email Human-Ethics@newcastle.edu.au

Laos:

This research is focused on evaluation of the effectiveness of the EIA system in Laos. Should you have concerns about your rights as a participant in this research, please report to Mr Xayaveth Vixay, Director General of the Department of Environmental and Social Impact Assessment, Ministry of Natural Resources and Environment, telephone (21) 244 398 / 264 921.

Information Statement for Organisations

Dr Meg Sherval
School of Environmental and Life Sciences
Faculty of Science and Information Technology
University of Newcastle
University Drive, Callaghan, NSW, 2308
Tel: (+61) 2 4921 6809
Fax: (+61) 2 4921 5877
Email: meg.sherval@newcastle.edu.au

Research Project Tittle: Evaluating the Effectiveness of the Current Environmental Impact Assessment (EIA) System in Laos
Document Version # 02; dated: 16 / 10 / 2014

The research project identified above is being conducted by Mr Aengphone Phaengsuwan, a student researcher from the School of Environmental and Life Sciences at the University of Newcastle. This research is funded by the University of Newcastle and AusAID, and it is part of the requirement for the Degree of Doctor of Philosophy at the University of Newcastle which is supervised by Dr Meg Sherval and Dr Lesley Instone from the School of Environmental and Life Sciences at the University of Newcastle in Australia.

Why is the research being done?
In Laos, land, forest and water resources play vital roles in the country's socio-economic development and therefore, the need for better management of these natural resources is critical if sustainable development goals are to be achieved. Since 2000, the Government of Laos has applied an Environmental Impact Assessment (EIA) system to decision-making processes for the approval of development projects, aiming to avoid, prevent or reduce impacts caused by development projects. However, several reports by international NGOs have suggested that the current development projects in Laos are unlikely to achieve sustainable development goals because of weak EIA legislation. Therefore, this research seeks to evaluate the effectiveness of the current EIA system in Laos and identify where improvements may be required to ensure development projects better protect the environment and generate optimum social and economic benefits for all Laotians.

Who is the research relevant to?
This research is relevant to governments/organizations/institutions, in particular policy makers, decision-makers and individuals in Laos whose jobs are associated with one of these following fields - natural resource management, environmental protection, environmental impact assessment, approval and management of development projects. In addition, this research may be relevant to international development organisations, developers, NGOs, and Consultant Companies whose responsibilities are connected with socio-economic development, rural development, natural resource management, environmental protection and/or development and operation of hydropower projects in Laos.

What choice do participants of this research have?
Participation in this research is entirely voluntary and no economic and financial benefits will be made to a participant. A staff/employee who wishes to participate in this research is required to give his/her informed consent. Then, the participant can choose to be interviewed either in English or the Lao Language or to provide written answers to some open-ended questions sent by email

in either English or the Lao Language. Whether or not the participant decides to participate in this research or not, his/her decision will not disadvantage them. All interviewees will be anonymous and their information represented by a numerical code known only to the researcher and his supervisors.

Although, a staff/employee of your organisation does decide to participate, he/she may still withdraw from the research project at any time without giving any reason and have the option of withdrawing all data which he/she has provided to this research. Withdrawal is not possible, However, beyond 30th October 2015 due to deadlines for writing, publishing and submitting the work to the University of Newcastle.

What will participants be asked to do if they choose to participate?
If a staff/employee of your organisation agrees to participate in this research, he/she will be invited for one audio recorded interview at a date, time and place that is convenient to him/her. During the interviews, he/she will be asked questions relating to his/her knowledge and experience in one of the following fields -socio-economic development, rural development, natural resource management, environmental impact assessment, and/or development and operation of hydropower projects in Laos. The participant will also be asked general questions about any improvements or changes he/she thinks that need to be made to ensure better and long-term sustainable development is taking place in Laos. For more detailed information regarding the types of questions which may be asked, please see **Appendix 12 - the Indicative Interview Schedule** which is attached herewith.

If a participant is a staff member from the Department of Environmental and Social Impact Assessment, Ministry of Natural Resources and Environment or an EIA Consultant Company, he/she may be asked to allow the student researcher permission to observe his/her work in the field if his/her responsibilities are involved in EIA compliance monitoring or in public participation events regarding EIA reporting and outcomes. This is due to the researcher wishing to observe how a public participation meeting and compliance monitoring are usually implemented on the ground in Laos.

During the interview or observation, if the participant feels uncomfortable about the questioning during the interview or the observation being undertaken, he/she may ask it to be stopped or redirected at any time.

How much time will it take?
The involvement of a participant in this research will be comprised of one audio recorded interview (face–to–face dialogue). If a participant is unavailable for an interview, he/she can choose to provide written answers to some open-ended questions which will be emailed to the participant. The involvement in this research either by the interview or answering questions should take approximately 40 minutes.

In relation to the observation, the researcher wishes to observe how a public participation meeting and compliance monitoring are conducted in practice. As such, each observation may take longer than 40 minutes depending on how long a consultation meeting or the compliance monitoring takes.

What are the risks and benefits of participating?
The potential risks associated with participants who participate in this research are minimal. To avoid any potential risk of identification of participants by their roles or responsibilities, all interviewees will be anonymous and their information represented by a numerical code known only to the researcher and his supervisors. To help mitigate this risk further, ***participants of this research will have a chance to verify the interview transcripts or if requested, field notes taken from any observation event***. Participants may then make changes, amend, partially withdraw, or completely draw the transcripts or notes as they wish up until 30th July 2015.

The benefits to a participant personally are minimal. He/she can request a summary of the results of this research from the researcher via an email after the thesis has been officially approved by the University of Newcastle. The involvement of the participants in this research, However, may provide benefits to their Department/Division or Company or Organization and the country (Laos) as a whole. These may take the form of increased awareness in understanding of the vital role of EIA in helping development projects, in particular hydropower development projects, to achieve sustainable development goals in Laos.

How will privacy of organizations, companies and participants be protected?
Any information or data provided from the participants, in the form of interview recordings, transcripts, materials and/or field notes will be securely kept in digital form on an encrypted hard disk of the researcher' personal computer with password protected. Hard copies of interview transcripts and field notes will be stored in a locked filling cabinet in a locked office at the University of Newcastle. Access to the data will be limited to the researcher and his supervisors, except as required by law. Any information or data collected and used by this research ***will not identify the participants by name or position***. Names of the participants will be replaced with numerical codes when the data, including interview recordings, transcripts and field notes, are stored in a locked filling cabinet as well as used in the thesis.

In accordance with the New South Wales State Records regulations (GDA23) in Australia, data obtained from the research will be retained for a period of at least five years at the University of Newcastle.

How will the data collected be used?
The data and information provided by the participants will be used in a thesis submitted by Mr Aengphone Phaengsuwan for the Degree of Doctor of Philosophy at the University of Newcastle. The results of this research will later be used in published papers. A final copy of the thesis will be kept in the School of Environmental and Life Science, the library of the University of Newcastle.

What do you need to do for your organisation to participate?
Firstly, please ***read Appendix 07 - the Information Statement*** and be sure you understand its content before giving your consent to allow a student researcher to contact your staff.

Secondly, please ***complete Appendix 09 - the Consent Form for Organisation and return it*** via email to the address below or inform the researcher by email or return to the front reception desk of your organisation for the researcher to collect. Upon receipt of the organisational consent form or email, the researcher will then contact your suggested individuals to arrange a date, time and place that is convenient for an interview or observation, if they feel that they would like to participate in this research.

Finally, if there is anything that you do not understand or you have further questions, please contact the researcher or the project supervisors at any time.

Further information
If you would like further information, please contact either the researcher or the project supervisors via the contact information below.

Mr Aengphone Phaengsuwan
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Email: meg.sherval@newcastle.edu.au

Dr Lesley Instone
Project Supervisor
School of Environmental and Life Sciences,
The University of Newcastle, Callaghan.
Ph: (+61) 2 4921 6637
Fax: +61 2 4921 5877
Email: Lesley.instone@newcastle.edu.au

Complaints about this research

Australia:

This project has been approved by the University's Human Research Ethics Committee, Approval No. **[H-2014-0332]**. Should you have concerns about your rights as a participant in this research, or you have a complaint about the manner in which the research is conducted, it may be given to the researcher, or, if an independent person is preferred, to the Human Research Ethics Officer, Research Office, The Chancellery, The University of Newcastle, University Drive, Callaghan NSW 2308, Australia, telephone (02) 49216333, email Human-Ethics@newcastle.edu.au

Laos:

This research aims at evaluating the effectiveness of the EIA system in Laos. Should you have concerns about your rights as a participant in this research, please report to a student researcher or Mr Xayaveth Vixay, Director General of the Department of Environmental and Social Impact Assessment, Ministry of Natural Resources and Environment, telephone (21) 244 398 / 264 921.

Indicative Interview Schedule

Dr Meg Sherval
School of Environmental and Life Sciences
Faculty of Science and Information Technology
University of Newcastle
University Drive, Callaghan, NSW, 2308
Tel: (+61) 2 4921 6809
Fax: (+61) 2 4921 5877
Email: meg.sherval@newcastle.edu.au

Research Project Tittle: Evaluating the Effectiveness of the Current Environmental Impact Assessment (EIA) System in Laos
Document Version # 02; dated: 16 / 10 / 2014

The researcher will employ semi-structured interviews to conduct a face-to-face dialogue with each participant of this research project. During the interview, each individual participant from all agencies contacted, (including government departments at the central, provincial and district levels), will be asked to respond to thematic questions as briefly outlined below. Questions will be tailored to suit specific participant occupations (i.e. - not all questions may be relevant).

1. Introduction

- Greeting and introducing of a student researcher.
- Give a brief overview of the research project such as context and key objectives of the research.

2. Background Information

- Questions about – the current policies and strategies of the government of Laos in relation to socio-economic development, rural development, natural resource management, environmental protection, environmental impact assessment (EIA) or development and operation of hydropower projects.
- Questions about – the current laws, decrees or regulations associated with the implementation of the principles of sustainable development in Lao PDR.

3. Specific Information

- Questions about - the relationship or contradictions between the laws and decrees on investment promotion, electricity (hydropower development and operation) and environmental protection in practice.
- Questions about – the enforcement and Implementation of the decree on Environmental Impact Assessment (EIA) at different levels of government.
- Questions about – the sustainable outcomes generated by hydropower development projects that are associated with the enforcement of the current EIA system, including positive and negative implications.
- Questions about – the reflections on and responses to the successes and/or failures of the implementation of the current EIA system.
- Questions about – what key challenges might exist that make it difficult for Laos to work towards achieving sustainable development goals.

Consent Form for Organizations

Dr Meg Sherval
School of Environmental and Life Sciences
Faculty of Science and Information Technology
University of Newcastle
University Drive, Callaghan, NSW, 2308
Tel: (+61) 2 4921 6809
Fax: (+61) 2 4921 5877
Email: meg.sherval@newcastle.edu.au

Research Project Tittle: Evaluating the Effectiveness of the Current Environmental Impact Assessment (EIA) System in Laos
Document Version # 02; dated: 16 / 10 / 2014

Please read the following information and tick the items to which you consent. Then, provide your name, contact detail and sign this Consent Form.

- ☐ I agree to allow the student researcher - Mr Aengphone Phaengsuwan to contact with staff in my organisation, institution or company who is relevant to this research as stated in the letter of seeking permission from the organisation to carry out data collection and interviews.
- ☐ I understand that this research project will be conducted as described in the Information Statement, a copy of which I have retained.
- ☐ I understand participation of the staff in this research project is entirely voluntary and he/she can withdraw from the research project at any time without giving any reason for withdrawing.
- ☐ I understand that a participant of this research will be anonymous but will have a chance to review and/or edit the transcript of his/her interview after the interview records are transcribed or notes of the observation are typed up in a readable form, if requested.
- ☐ I understand that data and information gathered by this research project will be used in the PhD thesis of Mr Aengphone Phaengsuwan.
- ☐ I understand that this consent statement is made on behalf of the organisation allowing a researcher to speak to appropriate individuals. I understand that individuals may still choose not to be involved in this research and must also personally consent to be involved.

Print name of organisation:
_____

Print name of authorised person: _____

Phone: _____

Email: _____

Signature: _____Date: _____

Letter for Participant Invitation for Interview

Dr Meg Sherval
School of Environmental and Life Sciences
Faculty of Science and Information Technology
University of Newcastle
University Drive, Callaghan, NSW, 2308
Tel: (+61) 2 4921 6809
Fax: (+61) 2 4921 5877
Email: meg.sherval@newcastle.edu.au

Research Project Tittle: Evaluating the Effectiveness of the Current Environmental Impact Assessment (EIA) System in Laos
Document Version # 02; dated: 16 / 10 / 2014

Dear [insert name],

We are writing to you concerning the research project identified above which is being conducted by Mr Aengphone Phaengsuwan - a PhD student researcher supervised by Dr Meg Sherval and Dr Lesley Instone from the School of Environmental and Life Sciences, Faculty of Science and Information Technology at the University of Newcastle in Australia.

This research project aims to evaluate the effectiveness of the current EIA system in Laos and examines the degree to which the EIA system assists hydropower development projects to achieve sustainable development goals. It also aims to explore a more effective EIA system that promotes socio-economic development with environmentally sound decision-making in the context of Laos.

The researcher has obtained permission from the World Bank office in Laos on the 3rd December 2014 to contact and invite individual staff to participate in the research. You are invited to participate in this research because your roles and responsibilities are related in one of these following fields - socio-economic development, rural development, natural resource management, environmental protection, EIA, and development and operation of hydropower projects. Participation in this research involves you undertaking an interview.

To assist you in considering this request, please find more detail information of this research project from these documents which are attached herewith.

1. **Appendix 8 - Information Statement for Participant:** This document outlines detailed information about the research project, roles and requirements of participants and how data received from the interviews will be used.

2. **Appendix 10 - Consent Form for Interview**: This document details some conditions for your participation in this research. This form must be signed by a participant before an interview can be conducted.

3. **Appendix 12 - Indicative Interview Schedule**: This document outlines the information and types of questions that will be asked during the interview.
   If you wish to participate in this research project, please sign the Consent Form for Interview attached herewith and return it to us by email to the address provided below. Alternatively, you can notify the student researcher of your interest to participate in this research project by

email and then return the Consent Form prior to the interview is taken place.

If you require any further information, please do not hesitate to contact us at any time either via email or telephone.

Thank you very much for your kind consideration this request. We look forward to hearing from you soon.

Sincerely,

Mr Aengphone Phaengsuwan
PhD Candidate
School of Environmental and Life Sciences
The University of Newcastle
Ph-office: (+61) 2 4921 6809 (Australia)
Ph-office: (+856) 21 264 921 (Laos)
Mobile: (+856) 20 2222 0466 (Laos)
Email: aengphone.phaengsuwan@uon.edu.au

Dr Meg Sherval
Project Supervisor
School of Environmental and Life Sciences
The University of Newcastle
Ph: (+61) 2 4921 6809
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Email: meg.sherval@newcastle.edu.au

Dr Lesley Instone
Project Supervisor
School of Environmental and Life Sciences
The University of Newcastle
Ph: (+61) 2 4921 6637
Fax: (+61) 2 4921 5877
Email: Lesley.instone@newcastle.edu.au

Complaints about this research
Australia:
This project has been approved by the University's Human Research Ethics Committee, Approval No. **[H-2014-0332]**. Should you have concerns about your rights as a participant in this research, or you have a complaint about the manner in which the research is conducted, it may be given to the researcher, or, if an independent person is preferred, to the Human Research Ethics Officer, Research Office, The Chancellery, The University of Newcastle, University Drive, Callaghan NSW 2308, Australia, telephone (02) 49216333, email Human-Ethics@newcastle.edu.au

Laos:
This research aims at evaluating of the effectiveness of the EIA system in Laos. Should you have concerns about your rights as a participant in this research, please report to the student researcher or Mr Xayaveth Vixay, Director General of the Department of Environmental and Social Impact Assessment, Ministry of Natural Resources and Environment, telephone (21) 244 398 / 264 921.

Information Statement for Participant

Dr Meg Sherval
School of Environmental and Life Sciences
Faculty of Science and Information Technology
University of Newcastle
University Drive, Callaghan, NSW, 2308
Tel: (+61) 2 4921 6809
Fax: (+61) 2 4921 5877
Email: meg.sherval@newcastle.edu.au

Research Project Tittle: Evaluating the Effectiveness of the Current Environmental Impact Assessment (EIA) System in Laos
Document Version # 02; dated: 16 / 10 / 2014

The research project identified above is being conducted by Mr Aengphone Phaengsuwan, a student researcher from the School of Environmental and Life Sciences at the University of Newcastle. This research is funded by the University of Newcastle and AusAID and it is part of the requirement for the Degree of Doctor of Philosophy at the University of Newcastle which is supervised by Dr Meg Sherval and Dr Lesley Instone from the School of Environmental and Life Sciences at the University of Newcastle in Australia.

Why is the research being done?
In Laos, land, forest and water resources play vital roles in the country's socio-economic development and therefore, the need for better management of these natural resources is critical if sustainable development goals are to be achieved. Since 2000, the Government of Laos has applied an Environmental Impact Assessment (EIA) system into decision-making processes of the approval of development projects, aiming to avoid, prevent or reduce impacts caused by development projects. However, several reports of international NGOs have suggested that the current development projects in Laos are unlikely to achieve sustainable development goals because of weak EIA legislation. Therefore, this research seeks to evaluate the effectiveness of the current EIA system in Laos and identify where improvements may be required to ensure development projects protect the environment and generate optimum social and economic benefits for Laotians.

Who is the research relevant to?
This research is relevant to governments/organizations/institutions, in particular policy makers, decision-makers and individuals in Laos whose jobs are associated with one of these fields such as natural resource management, environmental protection, environmental impact assessment, approval and management of development projects. In addition, this research may be relevant to international development organisations, NGOs, developers and EIA Consultant companies and whose responsibilities are connected with socio-economic development, rural development, natural resource management, environmental protection, development and operation of hydropower projects in Laos.

What choice do you have?
Your participation in this research is entirely voluntary and no economic and financial benefits are to be made to a participant. Each participant of this research is required to give his/her Consent Form and return it to the student researcher. Alternatively, you can notify the student researcher of your interest to participate in this research project by email and then return the Consent Form prior to the interview/observation is taken place.

You can choose to be interviewed either in English or the Lao Language or to provide written answers to some open-ended questions in either English or the Lao Language. Whether or not you decide to participate in this research, your decision will not disadvantage you.

In addition, if you do decide to participate in this research, you may withdraw from the research project at any time without giving any reason and have the option of withdrawing all data which you have provided to this research. Withdrawal is not possible, However, beyond 30th October 2015 due to deadlines for writing, publishing and submitting the work to the University of Newcastle.

What will you be asked to do if you choose to participate?
If you agree to participate in this research, you will be invited for one audio recorded interview at a date, time and place that is convenient you. During the interviews, you will be asked questions relating to your knowledge and experience in one of these fields such as socio-economic development, rural development, natural resource management, environmental impact assessment, and development and operation of hydropower projects in Laos. You will also be asked general questions about any improvements or changes you think that need to be made to ensure better and long-term sustainable development are taking place in Laos. For detail information, **please see Appendix 12 – Indicative Interview Schedule** for an indication of the types of questions that will be asked during an interview. Appendix 12 is attached herewith.

If you are a staff from the Department of Environmental and Social Impact Assessment, Ministry of Natural Resources and Environment or EIA Consultant Companies, you may be asked to allow the student researcher permission to observe your work in the field if your responsibilities are involved in EIA-post monitoring or in public participation events regarding to EIA reporting and outcomes. This is due to the researcher wishes to observe how a public participation meeting and compliance monitoring are usually implemented on the ground in Laos.

During the interview or observation, if you feel uncomfortable about the questioning for the interview or the observation being undertaken, you may ask it to be stopped or redirected at any time.

How much time will it take?
Your involvement in the research will be comprised of one audio recorded interview (face–to–face dialogue). If you are unavailable for an interview, you can choose to provide written answers to some open-ended questions which will be emailed to you. Your involvement in this research either by the interview or answering questions should take approximately 40 minutes.
In relation to the observation, the researcher wishes to observe how a public participation meeting and compliance monitoring are conducted in practice. As such, each observation may take longer than 40 minutes depending on how long a consultation meeting or compliance monitoring takes.

What are the risks and benefits of participating?
The potential risks associated with participants who participate in this research are minimal. To avoid any potential risk of identification of participants by their names, roles or responsibilities, all interviewees will be anonymous and their information represented by a numerical code known only to the researcher and this project supervisors. To help mitigate this risk further, ***participants of this research will have a chance to verify the interview transcripts or if requested, field notes taken from any observation event***. Participants may then make changes, amend, partially withdraw, or completely draw the transcripts or notes as they wish up until 30th July 2015.

The benefits to you personally are minimal. You can request a summary of the results of this research from the researcher via an email after the thesis has been officially approved by the University of Newcastle. Your involvement in this research, However, may provide significant benefits to your Department/Division or Company or Organization and the country (Laos) as a whole. These may take the form of increased awareness in understanding of the vital role of EIA in helping development projects, in particular hydropower development projects, to achieve sustainable development goals in Laos.

How will privacy of organizations, companies and participants be protected?
Any information or data provided from you, in the form of interview recordings, transcripts, materials and/or field notes will be securely kept in digital form on an encrypted hard disk of the researcher' personal computer with password protected. Hard copies of interview transcripts and field notes will be stored in a locked filling cabinet in a locked office at the University of Newcastle. Access to the data will be limited to the researcher and supervisors, except as required by law. Any information or data collected and used by

this research ***will not be identified by name of the participants***. Names of the participants will be replaced with numerical codes when the data, including interview recordings, transcripts and field notes, are stored in a locked filling cabinet as well as used in the thesis.

In accordance with the New South Wales State Records regulations (GDA23) in Australia, data obtained from the research will be retained for a period of at least five years at the University of Newcastle.

How will the data collected be used?
The data and information provided by the participants will be used in a thesis submitted by Mr Aengphone Phaengsuwan for the Degree of Doctor of Philosophy at the University of Newcastle.
The results of the research will later be used in published papers. A final copy of the thesis will be kept in the School of Environmental and Life Science, the library of the University of Newcastle.

What do you need to do to participate?
Firstly, ***please read Appendix 08 - Information Statement*** (this document) and be sure you understand its contents before you consent to participate in this research project.

Secondly, ***please complete Appendix 10 - Consent Form*** and return it via email to the address below or inform the researcher by email. Upon receipt of your Consent Form or your email, you will be contacted by the researcher to arrange a date, time and place that is convenient to you for the interview or observation.

Finally, if there is anything you do not understand or you have further questions, please contact the researcher or the project supervisors at any time.

Further information
If you would like further information, please contact either the researcher or the project supervisors via the contact information below.

Mr Aengphone Phaengsuwan
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The University of Newcastle
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Mobile: (+856) 20 2222 0466 (Laos)
Email: aengphone.phaengsuwan@uon.edu.au

Dr Meg Sherval
Project Supervisor
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Complaints about this research
Australia:
This project has been approved by the University's Human Research Ethics Committee, Approval No. **[H-2014-0332].** Should you have concerns about your rights as a participant in this research, or you have a complaint about the manner in which the research is conducted, it may be given to the researcher, or, if an independent person is preferred, to the Human Research Ethics Officer, Research Office, The Chancellery, The University of Newcastle, University Drive, Callaghan NSW 2308, Australia, telephone (02) 49216333, email: Human-Ethics@newcastle.edu.au

Laos:
This research aims at evaluating of the effectiveness of the EIA system in Laos. Should you have concerns about your rights as a participant in this research, please report to the student researcher or Mr Xayaveth Vixay, Director General of the Department of Environmental and Social Impact Assessment, Ministry of Natural Resources and Environment, telephone (21) 244 398 / 264 921.

Consent Form for Participant (interview)

Dr Meg Sherval
School of Environmental and Life Sciences
Faculty of Science and Information Technology
University of Newcastle
University Drive, Callaghan, NSW, 2308
Tel: (+61) 2 4921 6809
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Research Project Tittle: Evaluating the Effectiveness of the Current Environmental Impact Assessment (EIA) System in Laos
Document Version # 02; dated: 16 / 10 / 2014

Please read the following information and tick the items to which you consent. Then, provide your name, contact details and sign this Consent Form.

- ☐ I agree to participate in the research project identified above and give my consent freely.
- ☐ I understand that the research project will be conducted as described in the Information Statement, a copy of which I have retained.
- ☐ I understand that I can withdraw from the research project at any time and do not have to give any reason for withdrawing.
- ☐ I have had the opportunity to have all questions about this research answered to my satisfaction.
- ☐ I understand that I will have a chance to review and/or edit the transcript of my interview after it is transcribed, if requested.

Please read the following information and tick the items to which you consent:

- ☐ I consent to an interview and allow the interview to be audio-recorded or
- ☐ I consent to provide written answers to the questions emailed me.
- ☐ I consent to provide data/information to a student researcher in English Language or
- ☐ I consent to provide data/information to a student researcher in Lao Language.

- ☐ I wish to receive an electronic copy of the summary results of this research project.
- ☐ I understand that all information gathered by this research is confidential and shall not be used with other projects without my consent.
- ☐ I consent to being identified as an anonymous participant in this research project and I understand that my personal information such as name, position and name of company or organisation shall be de-identified and replaced with a numerical code.

Print name of a participant: _____
Phone: _____Email: _____

Signature: _____ Date: _____

Letter for Participant Invitation for Observation

Dr Meg Sherval
School of Environmental and Life Sciences
Faculty of Science and Information Technology
University of Newcastle
University Drive, Callaghan, NSW, 2308
Tel: (+61) 2 4921 6809
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Research Project Tittle: Evaluating the Effectiveness of the Current Environmental Impact Assessment (EIA) System in Laos
Document Version # 02; dated: 16 / 10 / 2014

Dear [insert name],

We are writing to you concerning the research project identified above which is being conducted by Mr Aengphone Phaengsuwan - a PhD student researcher supervised by Dr Meg Sherval and Dr Lesley Instone from the School of Environmental and Life Sciences, Faculty of Science and Information Technology at the University of Newcastle in Australia.

This research project aims to evaluate the effectiveness of the current EIA system in Laos and examines the degree to which the EIA system assists hydropower development projects to achieve sustainable development goals. It also aims to explore a more effective EIA system that promotes socio-economic development with environmentally sound decision-making in the context of Laos.

The researcher has obtained permission from the [insert name of organisation authority] on [insert date] to contact and invite individual staff to participate in the research. You are invited to participate in this research because you have been working in or are involved in one of the following fields - socio-economic development, rural development, natural resource management, environmental protection, EIA or development and operation of hydropower projects. Participation involves allowing the student researcher to observe how you conduct a public participation meeting and to accompany you on a compliance monitoring check.

To assist you in considering this request, please find more detail information of this research project from these documents which are attached herewith.

1. **Information Statement for Participants** – this document outlines detailed information about the research project, roles and requirements of participants and how data received from the interviews will be used.

2. **Consent Form for Observation** – this document details some conditions for your participation in this research. This form must be signed by a participant before observation can be conducted.

If you wish to participate in this research project, please sign a consent form for interview attached herewith and return it to us by email to the address provided below.

If you require any further information, please do not hesitate to contact us at any time either via email or telephone.

Thank you very much for your kind consideration this request. We look forward to hearing from you soon.

Sincerely,

Mr Aengphone Phaengsuwan
PhD Candidate
School of Environmental and Life Sciences
The University of Newcastle
Ph-office: (+61) 2 4921 6809 (Australia)
Ph-office: (+856) 21 264 921 (Laos)
Email: aengphone.phaengsuwan@uon.edu.au

Dr Meg Sherval
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Email: Lesley.instone@newcastle.edu.au

Complaints about this research
Australia:
This project has been approved by the University's Human Research Ethics Committee, Approval No. **[H-2014-0332]**. Should you have concerns about your rights as a participant in this research, or you have a complaint about the manner in which the research is conducted, it may be given to the researcher, or, if an independent person is preferred, to the Human Research Ethics Officer, Research Office, The Chancellery, The University of Newcastle, University Drive, Callaghan NSW 2308, Australia, telephone (02) 49216333, email Human-Ethics@newcastle.edu.au

Laos:
This research is focus on evaluation of the effectiveness of the EIA system in Laos. Should you have concerns about your rights as a participant in this research, please report to Mr Xayaveth Vixay, Director General of the Department of Environmental and Social Impact Assessment, Ministry of Natural Resources and Environment, telephone (21) 244 398 / 264 921.

Consent Form for Participant Observation

Dr Meg Sherval
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Research Project Tittle: Evaluating the Effectiveness of the Current Environmental Impact Assessment (EIA) System in Laos
Document Version # 02; dated: 16 / 10 / 2014

Please read the following information and tick the items to which you consent. Then, provide your name, contact detail and sign this Consent Form.

☐ I agree to participate in the research project identified above and give my consent freely.

I agree to allow the researcher to:

☐ Observe and take notes while participating a public participation meeting with stakeholders who may be affected by a development project and/or;

☐ Observe and take notes while accompanying a monitoring team to carry out compliance and effect monitoring on the project site.

☐ I understand that this research project will be conducted as described in the Information Statement, a copy of which I have retained.

☐ I understand that the observation can be stopped or cancelled at any time without giving any reason for cancelling.

☐ I understand that information and materials collected from the observation are confidential and used for this research. They shall not be used with other projects without my consent.

☐ I understand that I will have a chance to review field notes taken from the observation after they are typed up if requested.

☐ I wish to receive an electronic copy of the summary results of this research project.

☐ I consent to being identified as anonymous participant in this research project and I understand that my personal information such as name, position and name of company or organisation shall be de-identified and replaced with a numerical code.

Print name of a participant: _____

Phone: _____Email: _____

Signature:_____ Date: _____
_____

ຂໍ້ມູນກ່ຽວກັບການສຶກສາຄົ້ນຄວ້າສຳລັບຜູ້ເຂົ້າຮ່ວມສຳພາດ

THE UNIVERSITY OF NEWCASTLE AUSTRALIA

ທ່ານ ດຣ ນາງ ເມັກ ເຊີໂວ
ພະແນກວິທະຍາສາດສິ່ງແວດລ້ອມ ແລະ ສິ່ງທີ່ມີຊີວິດ
ຄະນະວິທະຍາສາດ, ຂໍ້ມູນຂ່າວສານ ແລະ ເທັກໂນໂລຊີ
ມະຫາວິທະຍາໄລ ນິວຄາໂຊ
ຖະໜົນມະຫາວິທະຍາໄລ, ກາຫຼັກຮັນ, ນິວຊາວເວ່ວ, 2308
ໂທລະສັບ: (+61) 2 4921 6809
ແຟັກ: (+61) 2 4921 5877
ອີເມ້ວ: Meg.sherval@newcastle.edu.au

ຫົວຂໍ້ການສຶກສາຄົ້ນຄວ້າ: **ການປະເມີນປະສິດທິພາບຂອງລະບົບການປະເມີນຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມ ຢູ່ ສປປ ລາວ**

ເອກະສານສະບັບ # 02, ວັນທີ: 16 ເດືອນ: 10 ປີ: 2014

ການສຶກສາຄົ້ນຄວ້າທີ່ກ່າວມາຂ້າງເທິງນີ້ ແມ່ນດຳເນີນໂດຍ ທ່ານ ແອງພອນ ແພງສຸວັນ ຊຶ່ງເປັນນັກສຶກສາປະລິນ ຍາເອກ ຢູ່ພະແນກວິທະຍາສາດສິ່ງແວດລ້ອມ ແລະ ສິ່ງທີ່ມີຊີວິດ, ມະຫາວິທະຍາໄລນິວຄາໂຊ, ປະເທດອົດສະຕາລີ. ການ ສຶກສາຄົ້ນຄວ້ານີ້ໄດ້ຮັບການສະໜັບສະໜູນທຶນຈາກມະຫາວິທະຍາໄລນິວຄາໂຊ ແລະ ອົດສະເອດ (AusAID) ແລະ ເປັນສ່ວນໜຶ່ງຂອງການສຶກສາຄົ້ນຄວ້າປະລິນຍາເອກ ຢູ່ມະຫາວິທະຍາໄລນິວຄາໂຊໂດຍມີອາຈານທີ່ປຶກ ສາຄື: ທ່ານ ດຣ ນາງ ເມັກ ເຊີໂວ (Dr Meg Sherval) ແລະ ທ່ານ ດຣ ນາງ ແລສລີ ອິນສະໂຕນ (Dr Lesley Instone). ອາຈານທີ່ປຶກສາທັງສອງທ່ານ ເປັນອາຈານສອນຢູ່ພະແນກວິທະຍາສາດສິ່ງແວດລ້ອມ ແລະ ສິ່ງທີ່ມີຊີວິດ ຂອງມະຫາວິທະຍາໄລ ນິວຄາໂຊ, ປະເທດອົດສະຕາລີ.

ເປັນຫຍັງຈຶ່ງມີການສຶກສາຄົ້ນຄວ້າກ່ຽວກັບປະເດັນ ນີ້ ?

ຢູ່ ສປປ ລາວ, ຊັບພະຍາກອນປ່າໄມ້, ດິນ ແລະ ນ້ຳ ມີບົດບາດສິ່ງສຳຄັນຫຼາຍຕໍ່ການພັດທະນາເສດຖະກິດ-ສັງ ຄົມຂອງປະເທດ. ສະນັ້ນ, ການຄຸ້ມຄອງຊັບພະຍາກອນທຳມະຊາດດັ່ງກ່າວ ໃຫ້ມີປະສິດທິພາບແມ່ນມີ ຄວາມຈຳເປັນທີ່ສຸດ ຖ້າ ສປປ ລາວ ຢາກຈະບັນລຸເປົ້າໝາຍການພັດທະນາແບບຍືນຍົງ. ນັບແຕ່ປີ 2000 ເປັນຕົ້ນມາ, ລັດຖະບານແຫ່ງ ສປປ ລາວ ໄດ້ນຳໃຊ້ລະບົບການປະເມີນຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມ ເຂົ້າ ຊ່ວຍໃນການພິຈາລະນາອະນຸດມັດໂຄງການພັດທະນາຕ່າງໆ, ແນໃສ່ເພື່ອຫຼີກລ້ຽງ, ປ້ອງກັນ ຫຼື ຫຼຸດຜ່ອນ ຜົນກະທົບດ້ານລົບທີ່ອາດຈະເກີດຂຶ້ນຈາກໂຄງການພັດທະນາ. ແຕ່ວ່າ, ໃນໄລຍະຜ່ານມາ ມີອົງການຈັດຕັ້ງ ສາກົນທີ່ບໍ່ຂຶ້ນກັບລັດຖະບານຈຳນວນໜຶ່ງ ໄດ້ລາຍງານ ແລະ ໃຫ້ທັດສະນະວ່າ ການພັດທະນາ ຢູ່ ສປປ ລາວ ໃນຮູບແບບປັດຈຸບັນອາດຈະບໍ່ສາມາດບັນລຸເປົ້າໝາຍຂອງການພັດທະນາແບບຍືນຍົງໄດ້ ຍ້ອນວ່າ ລະບຽບກົດໝາຍ ແລະ ຂະບວນການປະເມີນຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມບໍ່ຮັດກຸມ. ສະນັ້ນ, ການສຶກສາ ຄົ້ນຄວ້າຄັ້ງນີ້ ຈຶ່ງມີເປົ້າໝາຍເພື່ອປະເມີນປະສິດທິພາບຂອງລະບົບການປະເມີນຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມ ຢູ່ ສປປ ລາວ ແລະ ຊອກຫາຊ່ອງທາງໃນການປັບປຸງແກ້ໄຂໃນຕໍ່ໜ້າ ເພື່ອຮັບປະກັນໃຫ້ ບັນດາໂຄງການພັດທະນາມີສ່ວນ ຮ່ວມໃນການປົກປັກຮັກສາສິ່ງແວດລ້ອມ ໄປຄຽງຄູ່ກັບການນຳເອົາຜົນປະ �โຫຍດສູງສຸດທາງດ້ານເສດຖະກິດ ແລະ ສັງຄົມມາໃຫ້ປະຊາຊົນລາວ.

ການສຶກສາຄົ້ນຄວ້ານີ້ ພົວພັນກັບພາກສ່ວນໃດແດ່ ?

ການສຶກສາຄົ້ນຄວ້ານີ້ ແມ່ນພົວພັນກັບບັນດາຂະແໜງການ ແລະ ສະຖາບັນທີ່ກ່ຽວຂ້ອງຂອງລັດ ໂດຍສະເພາະແມ່ນຜູ້ທີ່ມີຄວາມຮັບຜິດຊອບໃນການວາງແຜນ, ຕັດສິນບັນຫາ ແລະ ບຸກຄົນທີ່ມີຄວາມຮັບຜິດຊອບກ່ຽວກັບການຄຸ້ມຄອງຊັບພະຍາກອນທຳມະຊາດ, ປົກປັກຮັກສາສິ່ງແວດລ້ອມ, ຈັດຕັ້ງປະຕິບັດຂະບວນການປະເມີນຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມ, ອະນຸມັດ ແລະ ຄຸ້ມຄອງໂຄງການພັດທະນາ ຢູ່ ສປປ ລາວ. ນອກຈາກນັ້ນ, ການສຶກສາຄົ້ນຄວ້ານີ້ ອາດຈະພົວພັນກັບອົງການຈັດຕັ້ງສາກົນ, ອົງການຈັດຕັ້ງທີ່ບໍ່ຂຶ້ນກັບລັດຖະບານ, ບໍລິສັດທີ່ປຶກສາດ້ານສິ່ງແວດລ້ອມ ແລະ ຜູ້ພັດທະນາໂຄງການຈຳນວນໜຶ່ງ ທີ່ເຮັດວຽກໃນຂົງເຂດເຊັ່ນ: ການພັດທະນາເສດຖະກິດ-ສັງຄົມ, ພັດທະນາຊົນນະບົດ, ຄຸ້ມຄອງຊັບພະຍາກອນທຳມະຊາດ, ປົກປັກຮັກສາສິ່ງແວດລ້ອມ ຫຼື ການພັດທະນາ ແລະ ຄຸ້ມຄອງໂຄງການເຂື່ອນໄຟຟ້ານ້ຳຕົກ ຢູ່ ສປປ ລາວ.

ມີທາງເລືອກໃດແດ່ ໃຫ້ຜູ້ທີ່ຈະເຂົ້າຮ່ວມການສຶກສາຄົ້ນຄວ້າຄັ້ງນີ້ ?

ການເຂົ້າຮ່ວມໂຄງການສຶກສາຄົ້ນຄວ້ານີ້ແມ່ນຂຶ້ນກັບຄວາມສະໝັກໃຈ ແລະ ນັກສຶກສາທີ່ດຳເນີນການສຶກສາຄົ້ນ ຄວ້າຄັ້ງນີ້ ບໍ່ມີວັດຖຸປັດໃຈໃດໆມອບໃຫ້ຜູ້ເຂົ້າຮ່ວມ. ບຸກຄົນທີ່ມີຄວາມສົນໃຈຢາກເຂົ້າຮ່ວມການສຶກສາຄົ້ນຄວ້າຄັ້ງນີ້, ຈະຕ້ອງໄດ້ສະເໜີຕົວເປັນລາຍລັກອັກສອນ ໂດຍຈະໄດ້ປະກອບຟອມແລ້ວສົ່ງໃຫ້ໃຫ້ນັກສຶກສາທີ່ດຳເນີນການສຶກສາຄົ້ນຄວ້າ. ອີກທາງເລືອກໜຶ່ງ, ຜູ້ທີ່ມີຄວາມສົນໃຈເຂົ້າຮ່ວມການສຶກສາຄົ້ນຄວ້າຄັ້ງນີ້ ສາມາດແຈ້ງຄວາມປະສົງການເຂົ້າຮ່ວມຜ່ານ ທາງອີເມ໌ວກໍໄດ້ ແລ້ວຈົ່ງສົ່ງຟອມຕອບຮັບການເຂົ້າຮ່ວມຕາມພາຍຫຼັງ ຫຼືວ່າ ກ່ອນຈະດຳເນີນການສຳພາດ ຫຼື ສັງເກດການ.

ຜູ້ທີ່ຈະເຂົ້າຮ່ວມສາມາດເລືອກເຂົ້າຮ່ວມການສຳພາດເປັນພາສາອັງກິດ ຫຼື ພາສາລາວ ຫຼື ຈະເລືອກຕອບຄຳຖາມ ເປັນພາສາອັງກິດ ຫຼື ພາສາລາວ ກໍໄດ້. ການຕົກລົງເຂົ້າຮ່ວມການສຶກສາຄົ້ນຄວ້າຄັ້ງນີ້ ຫຼື ການປະຕິເສດຂອງທ່ານ ຈະບໍ່ມີຜົນກະທົບຫຍັງຕໍ່ທ່ານ.

ນອກຈາກນັ້ນ, ຖ້າທ່ານໄດ້ຕັດສິນໃຈເຂົ້າຮ່ວມການສຶກສາຄົ້ນຄວ້າຄັ້ງນີ້ ແລະ ຢາກຖອນຕົວອອກຈາກການສຶກ ສາຄົ້ນຄວ້ານີ້ ທ່ານກໍສາມາດຖອນຕົວອອກເມື່ອໃດກໍໄດ້ ໂດຍບໍ່ຕ້ອງການເຫດຜົນອ້າງອີງໃດໆ ແລະ ທ່ານສາມາດເອົາຂໍ້ມູນຂອງທ່ານທັງໝົດກັບຄືນໄດ້. ແຕ່ວ່າ ການຖອນຕົວອອກຈາກການເຂົ້າຮ່ວມໂຄງການສຶກສາຄົ້ນຄວ້ານີ້ ຈະຕ້ອງດຳເນີນກ່ອນວັນທີ: 30 ເດືອນ: 10 ປີ: 2015 ເນື່ອງຈາກວ່ານັກສຶກສາທີ່ດຳເນີນການສຶກສາຄົ້ນຄວ້າຄັ້ງນີ້ ຈະຕ້ອງໄດ້ຂຽນບົດລາຍງານ, ຈັດພິມບາງຂໍ້ມູນ ແລະ ສົ່ງບົດວິທະຍານິພົນຕາມກອບເວລາທີ່ມະຫາວິທະຍາໄລນິວຄາໂຊ ກຳນົດໃຫ້.

ຜູ້ເຂົ້າຮ່ວມການສຶກສາຄົ້ນຄວ້າຄັ້ງນີ້ ຈະຕ້ອງໄດ້ເຮັດຫຍັງແດ່?

ຖ້າທ່ານຕົກລົງເຂົ້າຮ່ວມການສຶກສາຄົ້ນຄວ້ານີ້, ທ່ານຈະຖືກເຊີນເຂົ້າຮ່ວມການສຳພາດ 01 ຄັ້ງ ໃນວັນເວລາ ແລະ ສະຖານທີ່ໆສະດວກສຳລັບທ່ານ. ການສຳພາດແມ່ນກ່ຽວກັບຄວາມຮູ້ ແລະ ປະສົບປະການຂອງທ່ານ ໃນຂົງເຂດວຽກງານ ເຊັ່ນ: ການພັດທະນາເສດຖະກິດ-ສັງຄົມ, ພັດທະນາຊົນນະບົດ, ຄຸ້ມຄອງຊັບພະຍາກອນທຳມະຊາດ, ປະເມີນຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມ ຫຼື ການພັດທະນາ ແລະ ຄຸ້ມຄອງໂຄງການເຂື່ອນໄຟຟ້ານ້ຳຕົກ ຢູ່ ສປປ ລາວ. ນອກຈາກນັ້ນ, ທ່ານຍັງຈະໄດ້ຕອບຄຳຖາມກ່ຽວກັບການປັບປຸງແກ້ໄຂ ບັນຫາທີ່ທ່ານຄິດວ່າເປັນອຸປະສັກຕໍ່ການຈັດຕັ້ງປະຕິບັດກົນໄກການພັດທະນາ ແບບຍືນຍົງຢູ່ ສປປ ລາວ. ສຳລັບ

ຂໍ້ມູນເພີ່ມເຕີມກ່ຽວກັບການສໍາພາດ, ກະລຸນາສຶກສາໄດ້ຢູ່ໃນເອກະສານຊ້ອນທ້າຍ 12 -ຮ່າງຄໍາຖາມ ສໍາພາດ ທີ່ໄດ້ຄັດຕິດມາພອ້ມນີ້.

ຖ້າທ່ານເປັນພະນັກງານສັງກັດຢູ່ກອງປະເມີນຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມ ແລະ ສັງຄົມ, ກະຊວງຊັບພະຍາກອນທໍາມະຊາດ ແລະ ສິ່ງແວດລ້ອມ ຫຼື ບໍລິສັດທີ່ປຶກສາດ້ານສິ່ງແວດລ້ອມ, ນັກສຶກສາທີ່ດໍາເນີນການສຶກສາຄົ້ນຄວ້າ ອາດຈະຂໍອະນຸຍາດນໍາທ່ານເພື່ອຂໍເຂົ້າຮ່ວມສັງເກດການກ່ຽວກັບການຈັດຕັ້ງປະຕິບັດວຽກງານການຕິດຕາມກວດກາແຜນຄຸ້ມຄອງສິ່ງແວດລ້ອມ ແລະ ສັງຄົມ ຫຼື ການດໍາເນີນປະຊຸມປຶກສາຫາລືກັບຜູ້ທີ່ຖືກຜົນກະທົບຈາກໂຄງການພັດທະນາ ເນື່ອງຈາກວ່ານັກສຶກສາທີ່ດໍາເນີນການສຶກສາຄົ້ນຄວ້າຄັ້ງນີ້ ມີຄວາມປະສົງຢາກຮຽນຮູ້ ແລະ ເຂົ້າໃຈເລິກເຊິ່ງກ່ຽວກັບ ການດໍາ ເນີນການຕິດຕາມກວດກາ ແລະ ການຈັດກອງປະຊຸມປຶກສາຫາລືກັບຜູ້ທີ່ຖືກຜົນກະທົບໃນຕົວຈິງ.

ໃນເວລາດໍາເນີນການສໍາພາດ ຫຼືວ່າ ສັງເກດການ, ຖ້າທ່ານມີຄວາມຮູ້ສຶກບໍ່ສະບາຍໃຈຕໍ່ກັບຄໍາຖາມ ຫຼື ການເຂົ້າຮ່ວມສັງເກດການຂອງນັກສຶກສາທີ່ດໍາເນີນສຶກສາຄົ້ນຄວ້າ, ທ່ານສາມາດບອກໃຫ້ຢຸດຕິການສໍາພາດ ຫຼື ຍົກເລີກການເຂົ້າຮ່ວມສັງເກດການຂອງນັກສຶກສາ ເມື່ອໃດກໍໄດ້.

ການເຂົ້າຮ່ວມໂຄງການສຶກສາຄົ້ນຄວ້ານີ້ ຈະໃຊ້ເວລາດົນເທົ່າໃດ ?

ການເຂົ້າຮ່ວມຂອງທ່ານໃນໂຄງການສຶກສາຄົ້ນຄວ້ານີ້ ຈະປະກອບມີການສໍາພາດ 01 ຄັ້ງ (ເປັນການສົນທະນາເຊິ່ງໜ້າ). ຖ້າທ່ານບໍ່ສາມາດເຂົ້າຮ່ວມການສໍາພາດໄດ້, ທ່ານສາມາເລືອກຕອບຄໍາຖາມກໍໄດ້ ຊຶ່ງນັກສຶກສາທີ່ດໍາເນີນການສຶກສາຄົ້ນຄ້ວາຄັ້ງນີ້ ຈະສົ່ງຄໍາຖາມໃຫ້ທ່ານຜ່ານທາງອີເມ໌ວ. ການສໍາພາດ ຫຼືວ່າ ຕອບຄໍາຖາມ ອາດຈະໃຊ້ເວລາປະມານ 40 ນາທີ.
ສໍາລັບການເຂົ້າຮ່ວມສັງເກດການ, ນັກສຶກສາທີ່ດໍາເນີນການສຶກສາຄົ້ນຄວ້າ ມີຄວາມປະສົງຢາກຮຽນຮູ້ ແລະ ເຂົ້າໃຈເລິກເຊິ່ງ ກ່ຽວກັບການຈັດຕັ້ງປະຕິບັດການຕິດຕາມກວດກາ ແລະ ການຈັດກອງປະຊຸມປຶກສາຫາລືກັບຜູ້ທີ່ຖືກຜົນກະທົບຈາກໂຄງການພັດທະນາ. ສະນັ້ນ, ການເຂົ້າຮ່ວມສັງເກດການແຕ່ລະຄັ້ງອາດຈະໃຊ້ເວລາຫຼາຍກວ່າ 40 ນາທີ ຊຶ່ງຂຶ້ນ ກັບໄລຍະເວລາຂອງການຈັດຕັ້ງປະຕິບັດວຽກງານຕົວຈິງ.

ຄວາມສ່ຽງ ແລະ ຜົນປະໂຫຍດຂອງການເຂົ້າຮ່ວມການສຶກສາຄົ້ນຄວ້າ ມີຫຍັງແດ່ ?

ຄວາມສ່ຽງທີ່ພົວພັນກັບຜູ້ເຂົ້າຮ່ວມການສຶກສາຄົ້ນຄວ້າຂອງໂຄງການນີ້ ແມ່ນມີໜ້ອຍ. ເພື່ອຫຼີກລ້ຽງບັນຫາກ່ຽວ ກັບການເປີດເຜີຍຂໍ້ມູນສ່ວນຕົວຂອງຜູ້ເຂົ້າຮ່ວມການສຶກສາຄົ້ນຄວ້າຄັ້ງນີ້ເຊັ່ນ: ຊື່ ແລະ ນາມສະກຸນ, ໜ້າທີ່ຮັບຜິດຊອບ. ລາຍຊື່ ແລະ ໜ້າທີ່ຮັບຜິດຊອບຂອງຜູ້ເຂົ້າຮ່ວມແຕ່ລະທ່ານຈະຖືກປ່ຽນແທນດ້ວຍລະຫັດຊຶ່ງມີແຕ່ນັກສຶກສາທີ່ດໍາເນີນການສຶກສາຄົ້ນຄວ້າຂອງໂຄງການນີ້ເທົ່ານັ້ນຮູ້ຂໍ້ມູນດັ່ງກ່າວ. ເພື່ອປ້ອງກັນ ແລະ ຫຼີກລ້ຽງຄວາມສ່ຽງທີ່ພົວພັນກັບຜູ້ເຂົ້າ ຮ່ວມ, ນັກສຶກສາທີ່ດໍາເນີນການສຶກສາຄົ້ນຄວ້າຂອງໂຄງການນີ້ຈະໄດ້ຂຽນຖອຍຄວາມອອກຈາກສຽງສໍາພາດ ຫຼື ການບັນ ທຶກຈາກການສັງເກດການ ແລະ ພິມເປັນເອກະສານແລ້ວສົ່ງໃຫ້ຜູ້ທີ່ເຂົ້າຮ່ວມໂຄງການສຶກສາຄົ້ນຄວ້ານີ້ ເພື່ອກວດກາຄືນ ຄວາມຖືກຕ້ອງ ແລະ /ຫຼື ປັບປຸງແກ້ໄຂຂໍ້ມູນຕ່າງໆ ຕາມໃ ຈຊອບ ຈົນເຖິງວັນທີ: 30 ເດືອນ: 07 ປີ: 2015.

ຜົນປະໂຫຍດທີ່ພົວພັນກັບບຸກຄົນທີ່ເຂົ້າຮ່ວມການສຶກສາຄົ້ນຄວ້າຄັ້ງນີ້ ແມ່ນມີໜ້ອຍ. ຖ້າຜູ້ເຂົ້າຮ່ວມໂຄງການສຶກສາຄົ້ນຄວ້ານີ້ ມີຄວາມຕ້ອງການຢາກໄດ້ຮັບບົດສັງລວມຫຍໍ້ກ່ຽວກັບຜົນຂອງການສຶກສາຄົ້ນຄວ້າ

ຄັ້ງນີ້, ທ່ານສາມາດແຈ້ງຄວາມປະສົງໃຫ້ນັກສຶກສາທີ່ດຳເນີນການສຶກສາຄົ້ນຄວ້ານີ້ຊາບ. ພາຍຫຼັງບົດວິທະຍານິພົນຖືກຮັບຮອງຈາກມະຫາວິທະໄລນິວຄາໂຊນັກສຶກສາທີ່ດຳເນີນການສຶກສາຄົ້ນຄວ້ານີ້ຈະສົ່ງບົດສັງລວມຫຍໍ້ໃຫ້ທ່ານຜ່ານທາງອີເມ໌ວ.

ແຕ່ວ່າ, ການເຂົ້າຮ່ວມຂອງທ່ານອາດຈະສ້າງຜົນປະໂຫຍດລວມໃຫ້ປະເທດລາວ ໂດຍສະເພາະແມ່ນບັນດາພະແນກ, ກົມກອງ, ບໍລິສັດ ແລະ ອົງການຈັດຕັ້ງຂອງທ່ານ. ຜົນປະ�โຫຍດເລົ່ານັ້ນ ອາດຈະເປັນໃນລັກສະນະຮູບແບບການ ສ້າງຈິດສຳນຶກ ແລະ ຄວາມເຂົ້າໃຈກ່ຽວກັບຄວາມສຳຄັນຂອງວຽກງານການປະເມີນຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມ ຂອງໂຄງ ການພັດທະນາຢູ່ ສປປ ລາວ ເພື່ອໃຫ້ບັນລຸເປົ້າໝາຍການພັດທະນາແບບຍືນຍົງ ໂດຍສະເພາະແມ່ນໂຄງການເຂື່ອນໄຟຟ້ານ້ຳຕົກ.

ອົງການຈັດຕັ້ງ, ບໍລິສັດ ແລະ ຜູ້ເຂົ້າຮ່ວມສຶກສາຄົ້ນຄວ້ານີ້ ຈະໄດ້ຮັບການປົກປ້ອງຄືແນວໃດ ?

ບັນດາຂໍ້ມູນທີ່ໄດ້ຮັບຈາກຜູ້ເຂົ້າຮ່ວມໂຄງການສຶກສາຄົ້ນຄວ້ານີ້ ລວມທັງການສຳພາດ, ການບັນທຶກ ແລະ/ຫຼື ເອກະສານຕ່າງໆ ຈະຖືກເກັບຮັກສາໄວ້ໃນລະບົບຖານຂໍ້ມູນທີ່ມີຄວາມປອດໄພ ແລະ ມີລະຫັດສະເພາະສຳລັບນັກສຶກສາທີ່ດຳເນີນການສຶກສາຄົ້ນຄວ້າຂອງໂຄງການນີ້. ບັນດາເອກະສານ ລວມທັງຖ້ອຍຄວາມທີ່ຖືກຂຽນອອກຈາກສຽງສຳພາດ ແລະ ການບັນທຶກຕ່າງໆ ຈະໄດ້ເກັບຮັກສາໄວ້ຢູ່ໃນຕູ້ເອກະສານໃນຫ້ອງເກັບມ້ຽນຖານຂໍ້ມູນຂອງມະຫາວິທະຍາໄລນິວຄາໂຊ ທີ່ມີຄວາມປອດໄພສູງ. ມີພຽງແຕ່ນັກສຶກສາທີ່ດຳເນີນການສຶກສາຄົ້ນຄວ້າ ແລະ ອາຈານທີ່ປຶກສາຂອງໂຄງການສຶກສາຄົ້ນຄວ້ານີ້ເທົ່ານັ້ນ ສາມາດເຂົ້າຫາຂໍ້ມູນຂອງທ່ານໄດ້ ເວັ້ນເສຍແຕ່ທ່ານເປັນຜູ້ອະນຸຍາດ ຫຼື ໄດ້ລະບຸໄວ້ຢູ່ໃນກົດໝາຍ. ທຸກຂໍ້ຄວາມ ແລະ ຂໍ້ມູນທີ່ຖືກນຳໃຊ້ຢູ່ໃນບົດລາຍງານການສຶກສາຄົ້ນຄວ້າຄັ້ງນີ້ ຈະບໍ່ໄດ້ເປີດເຜີຍລາຍຊື່ຂອງຜູ້ເຂົ້າຮ່ວມການສຶກສາຄົ້ນຄວ້າຄັ້ງນີ້. ໃນເວລາເກັບຮັກສາຂໍ້ມູນ ແລະ ນຳໃຊ້ຂໍ້ມູນຢູ່ໃນບົດວິທະຍານິພົນ, ລາຍຊື່ຂອງຜູ້ເຂົ້າຮ່ວມການສຶກສາຄົ້ນຄວ້າຄັ້ງນີ້ຈະຖືກປ່ຽນແທນດ້ວຍລະຫັດ ລວມທັງສຽງສຳພາດ, ເນື້ອໃນຂອງບົດສຳພາດ ແລະ ເອກະສານຕ່າງໆ.

ອີງໃສ່ກົດໝາຍຂອງລັດນິວຊາວເວ່ວ (GDA23), ປະເທດອົດສະຕາລີ ກ່ຽວກັບການບັນທຶກສຽງສຳພາດ ແລະ ການເກັບກຳຂໍ້ມູນເພື່ອສຶກສາຄົ້ນຄວ້າ, ຂໍ້ມູນຂອງທ່ານຈະຖືກເກັບຮັກສາໄວ້ຢູ່ໃນລະບົບຖານຂໍ້ມູນທີ່ມີຄວາມປອດໄພ ຂອງມະຫາວິທະຍາໄລນິວຄາໂຊ ເປັນເວລາ 05 ປີ ຈຶ່ງຈະຖືກລຶບຖິ້ມ.

ຂໍ້ມູນທີ່ເກັບກຳຈາກການສຶກສາຄົ້ນຄວ້າຄັ້ງນີ້ ຈະເອົາໄປນຳໃຊ້ຄືແນວໃດ?

ຂໍ້ມູນທີ່ໄດ້ຮັບຈາກທ່ານ ຈະຖືກນຳໃຊ້ເຂົ້າໃນການຂຽນບົດວິທະຍານິພົນປະລິນຍາເອກຂອງທ່ານ ແອງພອນ ແພງສຸວັນ ເພື່ອສົ່ງໃຫ້ມະຫາວິທະຍາໄລນິວຄາໂຊ ເປັນຜູ້ພິຈາລະນາຮັບຮອງ.

ຜົນຂອງການສຶກສາຄົ້ນຄວ້າຄັ້ງນີ້ອາດຈະຖືກຕີພິມເປັນເອກະສານອອກສູ່ສັງຄົມ. ບົດວິທະຍານິພົນສະບັບສົມບູນ ຈະຖືກເກັບຮັກສາໄວ້ຢູ່ພະແນກວິທະຍາສາດສິ່ງແວດລ້ອມ ແລະ ສິ່ງທີ່ມີຊີວິດ ແລະ ຫໍສະໝຸດຂອງມະຫາວິທະຍາໄລນິວຄາໂຊ.

ຈະຕ້ອງໄດ້ເຮັດຫຍັງແດ່ ໃນການເຂົ້າຮ່ວມການສຶກສາຄົ້ນຄວ້ານີ້ ?

1. ທ່ານຈະຕ້ອງໄດ້ອ່ານເອກະສານການຊ້ອນທ້າຍທີ 08 - ການຊີ້ແຈງຂໍ້ມູນໂຄງການສຶກສາຄົ້ນຄວ້າ (ສະບັບນີ້) ເພື່ອໃຫ້ເຂົ້າໃຈລະອຽດ ກ່ຽວກັບຈຸດປະສົງ ແລະ ເປົ້າໝາຍຂອງການສຶກສາຄົ້ນຄວ້າ ກ່ອນຈະຕົກລົງເຂົ້າຮ່ວມ.
2. ຂໍຄວາມກະລຸນາໃຫ້ທ່ານຕື່ມເອກະສານຊ້ອນທ້າຍທີ 10 - ຟອມຕອບຮັບການເຂົ້າຮ່ວມ ທີ່ໄດ້ຄັດຕິດມາພ້ອມນີ້ເພື່ອເປັນການຢືນຢັນການເຂົ້າຮ່ວມໂຄງການສຶກສາຄົ້ນຄວ້າຄັ້ງນີ້ແລ້ວສົ່ງຟອມດັ່ງກ່າວໃຫ້ນັກສຶກສາທີ່ດຳເນີນການ ສຶກສາຄົ້ນຄວ້າຄັ້ງນີ້. ຫຼັງຈາກໄດ້ຮັບຟອມຕອບຮັບການເຂົ້າຮ່ວມຈາກທ່ານ ຫຼື ອີເມ໌ວຈາກທ່ານ, ນັກສຶກສາທີ່ຮັບຜິດຊອບການສຶກສາຄົ້ນຄວ້າຄັ້ງນີ້ ຈະຕິດຕໍ່ພົວພັນຫາທ່ານເພື່ອປຶກສາຫາລືກ່ຽວກັບວັນເວລາ ແລະ ສະຖານ ທີ່ຈະດຳເນີນການສຳພາດ ຫຼື ເຂົ້າຮ່ວມສັງເກດການທີ່ສະດວກສຳລັບທ່ານ.
3. ຖ້າທ່ານຍັງມີຂໍ້ສົນໃຈ ຫຼື ມີຄຳຖາມເພີ່ມເຕີມ ກະລຸນາສອບຖາມນຳນັກສຶກສາທີ່ດຳເນີນການສຶກສາຄົ້ນຄວ້າຄັ້ງນີ້ ໄດ້ຕະລອດເວລາ.

ຂໍ້ມູນເພີ່ມເຕີມ

ຖ້າທ່ານຕ້ອງການຂໍ້ມູນເພີ່ມເຕີມ ກະລຸນາຕິດຕໍ່ພົວພັນນຳນັກສຶກສາທີ່ດຳເນີນການສຶກສາຄົ້ນຄວ້າຂອງໂຄງການນີ້ ຫຼື ຈະຕິດຕໍ່ພົວພັນນຳອາຈານທີ່ປຶກສາ ຕາມຂໍ້ມູນທີ່ໄດ້ສະໜອງໃຫ້ດັ່ງລຸ່ມນີ້.

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ການຮ້ອງທຸກກ່ຽວກັບການສຶກສາຄົ້ນຄວ້າຂອງໂຄງການນີ້:

ປະເທດອົດສະຕາລີ:

ການສຶກສາຄົ້ນຄວ້າຂອງໂຄງການນີ້ ໄດ້ຮັບອະນຸຍາດຈາກຄະນະຮັບຜິດຊອບດ້ານອາລິຍະທຳຂອງມະຫາວິທະຍາໄລນິວຄາໂຊ ເລກທີ: **[H-2014-0332].** ຖ້າທ່ານຫາກເຫັນວ່າການສຶກສາຄົ້ນຄວ້າຄັ້ງນີ້ ລະເມີດສິດທິຂອງທ່ານ ຫຼື ທ່ານມີບັນຫາອື່ນໆ ທີ່ພົວພັນກັບການສຶກສາຄົ້ນຄວ້າຂອງໂຄງການນີ້, ທ່ານສາມາດແຈ້ງໃຫ້ນັກສຶກສາທີ່ດຳເນີນການສຶກສາຄົ້ນຄວ້າຂອງໂຄງການນີ້ ຫຼື ຈະແຈ້ງໃຫ້ຄະນະຮັບຜິດຊອບດ້ານອາລິຍະທຳ ຂອງມະຫາວິທະຍາໄລນິວຄາໂຊ ຕາມຂໍ້ມູນດັ່ງລຸ່ມນີ້: ມະຫາວິທະຍາໄລນິວຄາໂຊ, ຖະໜົນມະຫາວິທະຍາໄລ, ກາຫຼັກຮັນ, ລັດນິວຊາວເວ່ວ 2308, ປະເທດອົດສະຕາລີ. ໂທລະສັບ: (+61) 2 492 6333; ອີເມ໌ວ: Human-Ethics@newcastle.edu.au

ປະເທດລາວ:

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