

Strengthening EIA in Asia

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Executive Summary

As Asian countries face rapid economic growth and associated infrastructure and industrial development, the Environmental Impact Assessment (EIA) process has been increasingly playing a critical role for fostering sustainable development in the region. Although many Asian countries have already introduced EIA systems, there are still various challenges to overcome with regards to the systems themselves and the way they are implemented.

This report was prepared for the Asia EIA Conference 2016 organised on 10 May by the Ministry of the Environment, Japan (MOEJ). The conference was held under the theme of enhancing EIA as a sustainable development planning tool in Asia in collaboration with the Asian Development Bank (ADB) and in cooperation with the US Environmental Protection Agency (USEPA).

The report is based on a study conducted in seven Asian countries, namely Cambodia, Indonesia, Korea, Lao PDR, Myanmar, Thailand and Viet Nam, on their national EIA systems and their implementation, between September 2014 and February 2016. The report aims to summarise and analyse challenges, opportunities and good practices on EIA in these countries to propose possible ways forward as well as potential mutual learning points for strengthening EIA implementation and thus advancing towards a sustainable society. Findings are presented in four segments: (i) quality of EIA (screening and scoping, impact assessment and environmental management and monitoring plan (EMMP), and review and approval of EIA); (ii) information disclosure and public participation; (iii) EMMP implementation; and (iv) Strategic Environmental Assessment (SEA) and upstream EIA. Summaries of country systems in the study countries are included in Annex 2.

Key Findings

Quality of EIA: Screening and Scoping

Screening is the first point of entry to the EIA process, but some projects do not enter the process or it is not appropriately done. There are cases in which project owners downsize the projects to avoid EIA in all countries where checklists are used for screening. Good practices that have been introduced include revising line ministry regulations to ensure that all necessary projects go through the screening process and online screening systems in Indonesia, and a site visit for screening in Cambodia. Screening could be used as an incentive system for environmental consideration by project owners.

Scoping provides the framework of EIA investigation and analysis, but there are cases where the scoping exercise fails to scope out low-priority issues or even overlooks important issues. There is no public participation for the scoping stage in some countries. Provision of scoping training (Indonesia) and GIS information on zoning, protected areas and vulnerable ecosystems through an online system (Korea) may improve the scoping practice, and a more intensive scoping system driven by experienced experts or organisations is suggested.

Quality of EIA: Impact Assessment and Environmental Monitoring Plans

Impact assessment is the core part of EIA. Often the quality of EIA is compromised, however, by limited budget and time given to the study. Access to scientific or laboratory analysis is limited in many countries. To cope with these problems, training is conducted in Indonesia and Lao PDR, and several Indonesian banks have integrated environmental and social risk management into their credit/loan appraisal process. A separate contract for EIA consultants has been introduced to assure the independence of the consultant in Korea. Some kind of system which assures the independence of consultants with adequate cost and time estimates should be sought.

Environmental monitoring plans have a supporting role to deal with the uncertainty of EIA predictions. Common challenges are that the monitoring plan is too general to implement, no mitigation hierarchy is adopted, or no alternatives are examined. Korea introduced a pre-EIA procedure for adopting a mitigation hierarchy. Lao PDR developed a template for a concession agreement as part of EIA to be approved to ensure compliance with the environmental monitoring plan. In the future, new systems can be considered to encourage a net positive impact.

Quality of EIA: review and approval of EIA

To ensure sound EIA review and approval, it is critical to strengthen the technical knowledge of review staff in national and local agencies, and secure adequate staff time and budget for EIA review. In most study countries, these are major constraints to effective EIA review. In Cambodia, there is no external EIA review system to seek advice from external experts, apart from reviews conducted by the Ministry of Environment, other line ministries and NGOs. In Cambodia, Indonesia, Lao PDR, Myanmar, Thailand and Viet Nam, project permits are sometimes issued before final EIA approval. In Lao PDR, Thailand and Viet Nam, construction of some projects started before the approval of EIA. One of the causes of these challenges seems to be insufficient inter-agency coordination.

To address these challenges, the respective governments have organised training for EIA review staff collaborating with external institutions, such as JICA, UNDP, US-EPA, in Indonesia, Lao PDR and

Myanmar. As Indonesia, Korea, Lao PDR, Thailand and Viet Nam have established an external review panel for EIA review to achieve higher quality of reviews, other countries can learn from their experiences. To improve EIA review procedures, ADB supported the development of EIA review procedures in Myanmar, and the Finnish Government supported guidance of EIA review for national and local government in Lao PDR. Following the examples of Indonesia and Myanmar, establishing regulations that require an environmental permit as a precondition of issuing a project permit by line agencies is one of the ways to avoid inter-governmental coordination.

Information disclosure and public participation

Timely information disclosure is still a critical challenge for many of the studied countries. In Indonesia, Korea and Thailand, a web-based EIA information system has been established. However, Cambodia, Lao PDR, Myanmar and Viet Nam are still in the process of establishing a similar system to provide EIA-related information in a timely manner. Although Indonesia and Thailand have already started online operations, there is still room for improvement, such as disclosure of draft EIA reports during the review stage in Thailand and all other related information on the website as regulations stipulates in Indonesia. In order to narrow these gaps, Korea's experience of providing EIA and related spatial information databases would be helpful for other Asian countries to learn from. Furthermore, providing not only supply-side information but also information that users have the right to know or access to all relevant information is another challenge to overcome in assisting an effective decision-making process in the future. This is an area where further collaboration is needed, bringing together local governments, local organisations and NGOs for effective decision-making.

At the same time, effective, efficient and meaningful participation is still one of the biggest issues in most study countries. In many countries, it is not always the case that all key stakeholders are invited to a public participation process. Indonesia, Lao PDR and Thailand have taken the first step and developed guidelines for public participation. Collaborating with local organisations and NGOs in a public participation process is one way to address key challenges, such as identifying key stakeholders; addressing cultural, religious and gender issues; managing expectations; raising awareness and building trust with local communities. Continuous engagement with local stakeholders from the early stages through the monitoring and closing stages of projects has proved to be effective from experience in Cambodia, Indonesia, and Myanmar. Cases in Indonesia and Lao PDR have shown that private sector investment from developed countries, financed by the World Bank, IFC and commercial banks which have signed up for the Equator Principles, plays a critical role to demonstrate effective public participation in their projects following international standards of stakeholder engagement. It is also

important to exchange these hands-on experiences on effective public participation among project proponents.

In addition, relevant government officials, project proponents, local communities and NGOs will benefit from training opportunities on awareness-raising about effective public participation and on fostering skilled facilitators for more effective public participation. International agencies, financial institutions, private sectors and NGOs would be able to play a critical role in these areas.

Environmental Management and Monitoring Plan (EMMP) implementation

While rules and regulations on EMMP implementation are in place in most of the studied countries, compliance with the EMMP is often problematic. Insufficient implementation of EMMPs can be attributed to a rudimentary EMMP which is sometimes too generic or unrealistic to implement. There may also be a lack of incentives for the project proponent to duly implement the agreed EMMP. In tackling these issues, some countries in the region have had successful cases. These include: (i) strengthening of rules and enforcement procedures including stringent penalties on non-compliance in the EIA law in Lao PDR and Cambodia (in process); (ii) incentives for improving environmental performance in Indonesia; (iii) a bottom-up approach to strengthening national compliance mechanism on EMMP implementation from a special economic zone in Myanmar; (iv) involvement of project financiers to enforce EMMP implementation and prior deposit of the budget for mitigation measures in Indonesia; (v) prioritisation of monitoring items in Viet Nam; (vi) institutionalised monitoring review to strengthen the control points of EMMP implementation in Korea; and (vii) proactive participation of civil society actors in impact monitoring in Myanmar. Efforts in developing countries are often supported by external institutions such as ADB, JICA and USAID. The study results demonstrate that various options are available for policymakers and international aid institutions to strengthen EMMP implementation, corresponding to the issues that they are facing.

Strategic Environmental Assessment and upstream EIA

There is a large difference in the level of practice between the countries already practising SEA and those that are not. This may reflect the development history of safeguard systems in response to large-scale infrastructure projects and related assistance received from development agencies in each country. Those case study countries which have a longer history of EIA practice tend to have more experience in practising SEA for spatial or land use planning for larger territories (Indonesia, Viet Nam, Korea). Overall, it seems that study countries see the expected benefits and necessity of SEA, but the largest challenge likely lies in lack of or insufficient hands-on application. Commonly-found challenges in implementation of SEAs include lack of or insufficient baseline data and the timing of

such upstream assessment. This is critical to avoid project-level sub-optimal decisions from a macroscopic point of view, which can often be challenges in EIA implementation for project-level decision-making. On the other hand, in the absence of a formal SEA system (legal basis and practical guidelines), more discussion is called for on how each government wishes to use SEA, raise public participation in decision-making, and materialise its benefits from this participatory and transparent process for its longer-term policy-level planning.

Key challenges, good practices, and ways forward are summarised in the Table below.

Synthesis

Synthesis of the above findings is attempted through three key perspectives: (i) EIA as a project planning and management tool; (ii) EIA as a tool for participatory decision-making processes; and (iii) implications as a policy planning tool towards sustainable development.

EIA as a project planning and management tool

To ensure EIA is used as a project planning and management tool, the study identified three key areas that need to be improved: (i) collaboration with other ministries; (ii) capacity development; and (iii) compliance mechanisms. First the environment agency needs to establish the necessary collaboration with line ministries and local governments who are in charge of projects. In most studied countries, the ministry of environment or an expert review committee has the authority of final approval of the environmental permit which is a condition of project approval under EIA legislation. However, there are still several projects that have received project approval and/or started construction/operation without a review from the environment ministry and/or conducting the full EIA process. Some study countries are closing such loopholes, for example by revising legislation of line ministries in Indonesia, or requiring environmental permission as a pre-condition under the foreign investment law in Myanmar. More stringent laws with penalty clauses, which are also applied to government officials, are being considered in Cambodia under the proposed new environmental code. A comprehensive project management online database between the Ministry of Planning and Investment and Ministry of Natural Resource and Environment is under development in Lao PDR.

Second is the need for capacity development of personnel involved in EIA implementation including national and local government staff, EIA consultants, local communities and NGOs. Capacity development of government officials, particularly in local government and line ministries, is vital to improve screening, scoping, review and monitoring of projects as a part of the EIA process. Capacity development for EIA consultants and facilitators of public consultation are also important to achieve

sound implementation of EIA. The study finds that provision of training for sound implementation by national and local government and EIA consultants in Lao PDR, Myanmar and Indonesia, through collaborating with external institutions such as ADB, JICA, US-EPA, UNDP, has been a good practice to address these issues.

Third is that the study found a variety of compliance mechanisms including those to ensure implementation of EMMPs which is a common challenge. Many countries are struggling to ensure implementation of mitigation measures that project proponents promised to conduct as one condition when receiving environmental permits for projects. Innovative approaches to address this issue include incorporation of the EMMP as a part of the concession agreement for the project (Lao PDR), regular review of the environmental compliance certificate (Lao PDR), review of monitoring reports by an external institution (Korea), and establishment of independent monitoring bodies (Lao PDR).

EIA as a tool for participatory decision-making process

Ensuring stakeholder engagement is a critical component embedded in the EIA systems and was discussed in this study in two dimensions: information disclosure and public participation. The former may be considered as only a necessary condition for supporting the ‘right to know’ but it provides the foundation to various stakeholders for the latter. While all study countries established an EIA system with information disclosure and public participation components, the current practices in many studied countries come up short when it comes to meaningful participation for effective decision-making of projects. Stakeholder identification and engagement from the earliest possible stage to monitoring and closure of projects, appropriate information disclosure, as well as collaboration with local organisations and NGOs on stakeholder engagement are considered to be effective practices. Good practices of stakeholder engagement from this study include an expert committee involved in the scoping stage in Indonesia, site visits and stakeholder consultation during the screening stage in Cambodia, and NGO involvement in project monitoring in Myanmar.

More broadly, the perspective on public participation may not be always positive and can sometimes be myopic, when project proponents fail to see the longer-terms risks and costs arising from insufficient consultation with the public. It is desirable that the process be supported by transparent procedures (laws, regulations, guidelines) and set a reasonable timeframe to settle any concerns. However, determining how much consultation is enough to make a democratic decision is easier said than done. Exchanging good practices and sharing experiences on a ground through face-to-face and/or on-line forums or the projects such as the Mekong Partnership for the Environment supported by the USAID (ongoing from 2014, focusing on Lower Mekong Countries), are vital to offer regular

learning opportunities. As manifested in the sustainable development goals, public participation may become even more important in the context of inclusiveness in achieving sustainable development.

Implications for policy planning beyond project-level decisions for sustainable development

While EIA has been one of the primary country systems to ensure environmental safeguards, addressing the issues beyond narrowly defined project level such as cumulative impacts, transboundary impacts, climate change impacts, impacts on biodiversity requires additional processes such as SEA, vulnerability assessment, and others. SEA suggests a systematic upper-stream science-based analysis and recommendations for ‘cleaner production’ of spatial, sectoral or strategic plans to avoid sub-optimal micro-level decisions and opt for longer-term decisions. In reality, however, the applications are still generally limited and various methodologies are being developed. Only a few study countries have established legal bases for SEA and apply it for land use planning, or receive training for implementation (Korea, Indonesia, and Viet Nam). Key issues identified in implementing or introducing SEA include the integration of project planning into land use planning, zoning, and/or land ownership, necessary data collection and disclosure, and consistency of projects with other existing plans within a country or in the region which require coordination with other related ministries and agencies.

In Indonesia and Korea, EIA and land use management systems have better integration and this type of cross-referencing can shed light on the possible synergies or conflicts/inconsistencies with other existing regulations or systems. In Viet Nam, government officials are discussing what kinds of infrastructure, structure, or culture should be inherited by future generations in the process of SEA. Another similar good practice found from this study at the policy level (beyond project level) was that in Indonesia the loan approval by financial institutions uses the EIA system in their appraisal process to ensure environmental risk management.

Another long-standing issue surrounding policy-level planning is data collection and improving its consistency within a country or in the region (harmonisation). Such collaborative efforts will enhance the chances of assessing impacts beyond each nation’s borders. Organisations such as ASEAN and ADB (especially in Lower Mekong countries) have been assisting the region in this area.

Table: Summary of key challenges, good practices and ways forward in seven study countries

		Key challenges	Good practices	Ways forward
Quality of EIA	Screening and scoping	<p>Screening</p> <ul style="list-style-type: none"> Some projects are approved without applying the screening process (Cambodia, Lao PDR Indonesia, and Viet Nam). Screening is not properly conducted at the local level (Indonesia and Viet Nam). Project owners are downsizing/splitting projects to avoid EIA in all countries. Screening cannot be conducted appropriately because of limited information (Lao PDR, Cambodia, and Myanmar). <p>Scoping</p> <ul style="list-style-type: none"> There was no scoping part in the EIA reports (Viet Nam). EIA items are scoped in accordance with reviewers' specialty (Indonesia). Scoping exercise fails to scope out low-priority issues or overlooks important issues. Public participation is not conducted on scoping stage (Lao PDR, Myanmar, Thailand and Viet Nam). 	<p>Screening</p> <ul style="list-style-type: none"> Law and regulations of line ministries are amended to include EIA as part of approval process (Indonesia). Online screening system is being planned to cover the low capacity of local governments (Indonesia). Site visit for screening is introduced to supplement information of the project site and improve screening (Cambodia). <p>Scoping</p> <ul style="list-style-type: none"> Detailed scoping guidelines and training systems (Indonesia). An online information system helps prevention of overlooking important issues (Korea). 	<p>Screening</p> <ul style="list-style-type: none"> Consider a new screening system which categorise the projects based on how project owners considered environment <p>Scoping</p> <ul style="list-style-type: none"> Establish 'scoping specialist system' and/or special organisation for scoping.
	Impact Assessment and EMP development	<p>Impact assessment</p> <ul style="list-style-type: none"> Biased assessments are found in some countries. Limited budget and time for EIA in many countries. Access to scientific and laboratory analysis is limited (Lao PDR, Myanmar). Social impact assessment or biodiversity/ecosystems assessment is limited in many countries. <p>EMMP development</p> <ul style="list-style-type: none"> EMMP is too generic to implement (Indonesia). Mitigation hierarchy was not well adopted to project EIA Alternatives are not required (Myanmar). 	<p>Impact assessment</p> <ul style="list-style-type: none"> Central Bank has integrated environmental and social risk management into the credit/loan decision making process (Indonesia). Training and guidelines are prepared (Indonesia and Korea). Rules for separate contract for EIA consultants and design consultants are introduced (Korea). <p>EMMP development</p> <ul style="list-style-type: none"> Pre-EIA system for achieving mitigation hierarchy is introduced (Korea). A template of EMMP in a concession agreement is developed to ensure compliance of EMMP (Lao PDR). 	<p>Impact assessment</p> <ul style="list-style-type: none"> Further ensure the independence of the assessment. <p>EMMP development</p> <ul style="list-style-type: none"> Seek net-positive impacts through EMMP.

		Key challenges	Good practices	Ways forward
	Review and approval of EIA	<ul style="list-style-type: none"> • In most of the study countries, it is one of the biggest challenges to improve technical capacity, staff time and budget for EIA review. • In Cambodia, there is no external EIA review system to seek some advice from external experts, besides review conducted by ministry of environment, line ministries and NGOs. • Inter-agency coordination and consultation is insufficient. • In Cambodia, Indonesia, Lao PDR, Myanmar, Thailand and Viet Nam, project permission sometime issues before EIA approval. In Lao PDR, Thailand and Viet Nam, construction of projects started before the approval of EIA in some cases. 	<ul style="list-style-type: none"> • Governments organised training for EIA review staff collaborating with international donors (Indonesia, Lao PDR and Myanmar). • Governments have established external review panels for EIA review (Indonesia, Korea, Lao PDR, Thailand and Viet Nam). • To improve EIA review procedures, ADB and JICA supported developing EIA review procedures and capacity (Myanmar), and Government of Finland supported developing guidance of EIA review for national and local government (Lao PDR). • In order to avoid obtaining project permission or starting project construction without environmental permission, governments established regulations which required environmental permit as precondition or requirement for project permission under the line agencies (Indonesia and Myanmar). 	<ul style="list-style-type: none"> • Provide technical training of EIA review, such as in Lao PDR (UNDP), Indonesia (US-EPA) and Myanmar (ADB) collaborating with external institutions. • Establish an external review panel for EIA review, while Indonesia, Korea, Lao PDR, Thailand and Viet Nam have established an external review panel for EIA review • Establish regulations which required environmental permit as precondition or requirement for project permission under the line agencies, following examples of Indonesia (ADB) and Myanmar (ADB), in order to avoid obtaining project permission without environmental permission.
	Information disclosure and public participation	<ul style="list-style-type: none"> • Disclosure of critical information related EIA is still a challenge for many countries. • It is also a challenge to disclose information that is not too technical and effective for active engagement of decision-making process. • Public consultation and participation in seven studied countries are still limited in a way to ensure the quality, comprehensiveness and effectiveness of the EIA. • In some countries, only limited members of communities are invited to a public participation process and not all community members are free to speak up in the public participation process. • Participation of diverse stakeholders (cultural, gender, etc.) are not secured. • Public participation in the EIA process may need to be stipulated in EIA law. 	<ul style="list-style-type: none"> • Web-based EIA information system has been established for easy and timely access for EIA related information (Indonesia, Korea, Thailand and Viet Nam (ongoing)). • Community engagement in early stage of EIA helps to improve quality of decision-making process (Cambodia and Indonesia). NGO involvement helps to improve monitoring activities and awareness rising of public participation in local communities (Myanmar). Commercial banks observe Equator Principles (Indonesia, Lao PDR). • Draft EIA law was developed through series of public consultations with transparent and accountable manner (Cambodia). 	<ul style="list-style-type: none"> • Establish web-based EIA information system. This is clear area that mutual learning is relevant. It is vital to continue exchanging good practice information, sharing experiences on a ground and learning from each other through face to face and/or on-line forums. • Provide training on effective public participation for relevant government officials, project proponents, local communities and NGOs; and for fostering facilitators of public participation in each country. International agencies, financial institutions, private sectors and NGOs would be able to play a critical role in these areas. • Hold a series of public consultation with transparent and accountable manner to amend the EIA law towards effective decision making through EIA process.

	Key challenges	Good practices	Ways forward
EMMP implementation	<p>Environmental management</p> <ul style="list-style-type: none"> Quality of EMMP is not sufficient, often too generic or prescribing unrealistically high standards (Indonesia, Viet Nam) Project proponents/owners sometimes do not comply with EMMP (including mitigation and monitoring) (Cambodia, Indonesia, Thailand, and Viet Nam). Project proponents/owners are not motivated to implement EMMP and monitoring (Indonesia) <p>Monitoring</p> <ul style="list-style-type: none"> Budget and government capacity is insufficient for implementing a full-fledged monitoring (Viet Nam). Monitoring items do not cover important items, e.g. biological or social aspects (Indonesia, Viet Nam) Limited validity, accountability and use/effectiveness of monitoring results (Cambodia, Indonesia, Viet Nam) 	<p>Environmental management</p> <ul style="list-style-type: none"> Government strengthened rules, enforcement and penalties on EMMP implementation (Cambodia, Lao PDR) Government identifies and awards good mitigation performance to incentivise project proponents to comply with EMMP (Indonesia) A bottom-up approach was taken from the establishment and implementation of a small-scale integrative system nested in the national EIA system (Myanmar) EIA was streamlined into project financing, e.g. mandating lenders to freeze loans when they identify debtors' non-compliance with EMMP, in order to enhance their compliance with EMMP in the post-EIA phase (Indonesia) Government collects and pools resources for mitigating unexpected environmental impacts (Indonesia) <p>Monitoring</p> <ul style="list-style-type: none"> Review of monitoring reports was institutionalised to strengthen a control point of EMMP implementation (Korea) Civil society actors were engaged in monitoring (Myanmar) Independent monitoring agency was set up for 'complex' projects (Lao PDR). Monitoring items are prioritized (Viet Nam). Environmental compliance inspector system was introduced (Indonesia) 	<ul style="list-style-type: none"> Strategically identify intervention points from various options to achieve the enhancement of EMMP implementation Promote information sharing among various actors to enhance cooperation Build capacity of various actors including national and local governments, as well as non-state actors including finance, industry and civil society sectors.
SEA and Upstream EIA	<ul style="list-style-type: none"> No system of SEA or its legal basis and technical guidelines for implementation and associated institutional capacity exist (Cambodia, Lao PDR, and Myanmar, Thailand). Inter-agency coordination and consultation is poor in many countries. Baseline data is not available. Securing transparency in the decision process or conflict resolution is difficult in many countries. Securing appropriate resources is difficult or there is no strong willingness in many countries. 	<ul style="list-style-type: none"> SEA is applied to landfill site decision (Korea). Environmental Protection Planning (EPP) component was added in the Law on Environmental Protection (Viet Nam). 	<ul style="list-style-type: none"> Raise awareness of the public participation. Increase hands-on experience and applications for policy-level decision making and avoid EIA coming to place too late. Support SEA or other policy-level decision making with data collection and/or other policies/regulations that help mainstream environmental and social safeguards.

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1. Introduction

As Asian countries face rapid economic progress and associated infrastructure and industrial development, the planning tool of environmental impact assessment (EIA) has been increasingly playing an essential role for fostering sustainable development. Although many Asian countries have already introduced EIA systems, there are various challenges in their implementation to ensure effective environmental and social safeguards.

This report was prepared for the international conference in May 2016 in Nagoya, Japan on the theme of enhancing EIA as a sustainable development planning tool in Asia organised by the Ministry of the Environment, Japan (MOEJ) in collaboration with the Asian Development Bank (ADB) and in cooperation with the US Environmental Protection Agency (USEPA). The conference aims at strengthening mutual learning to address key challenges in Asian countries and the region by promoting exchange of lessons, matchmaking needs and good practices with other countries and/or development agencies through this network/community.

The report is based on case studies conducted in seven selected countries in Asia, namely Kingdom of Cambodia (Cambodia), Republic of Indonesia (Indonesia), Republic of Korea (Korea), Lao People's Democratic Republic (Lao PDR), Republic of the Union of Myanmar (Myanmar), Kingdom of Thailand (Thailand), and Socialist Republic of Viet Nam (Viet Nam) on their EIA systems, where implementation challenges, opportunities, and good practices in EIA are summarised and analysed to propose possible ways forward for strengthening EIA implementation and thus advancing towards sustainable society.

EIA has come a long way since it was first introduced in the United States in 1970. It has been introduced in many countries including across most of Asia. It has been practised and has evolved in each country as well as by development agencies as one of their essential safeguarding systems and as part of loan operations by development and commercial banks. Existing reports such as by Lohani et al. (1997) and other various guiding documents offered by development agencies provide a snapshot of practices as they evolved and valuable insights. One of the key documents frequently used in the region is the Asian Development Bank's Safeguard Policy Statement of 2009 which already captured an increased demand for environmental and social safeguards and concern about long-term sustainability:

Rapid industrialisation and urbanisation, coupled with increased demand for natural resources, are triggering changes in land use and human settlement,

declining water quality and quantity, loss of biodiversity, deforestation and desertification, elevated pollution levels, and negative impacts on human health (ADB 2009).

More drastic changes since 1970 in Southeast Asia, where the majority of study countries of this study are located, have been the speed of economic development and the flow of foreign investment and associated resource exploitation accompanied by unwanted environmental and social impacts, democratic movements, economic integration (ASEAN Economic Community (AEC) included), increased concerns and risks of climate change and biodiversity loss, and new banking and investment policies and practices to support the increasing volume of development projects. The recent launch of the Asian Infrastructure Investment Bank is expected to bring changes in the development finance landscape. Globally, EIA and other safeguarding systems or planning tools are also evolving and being discussed in a wider context of the impact assessment community of practice, including the International Association for Impact Assessment (IAIA).

EIA readiness and experience greatly vary among the seven study countries. At one end, some already have a long history of implementing EIA; at the other, full-scale EIA or safeguard systems have not taken off yet. Nonetheless, social, economic, or cultural differences aside, there is a rich pool of experience that can be shared and used for mutual learning in Asia. There is a large amount of EIA literature discussing narrowly-defined specific types of projects or sectors, and there are several key guiding documents on EIA, mostly by development agencies, as well as some case studies in South Asian countries, but there has not been much literature found on comparative studies in EIA practices in Southeast Asian countries. The question of whether EIA has been effectively functioning as one of the major safeguard systems in East and Southeast Asia (seven study countries in the case of this report) is beyond the scope of this report; however, the report attempts to draw some lessons from latest EIA practices captured in the study and shed light on how to move forward.

The remainder of the report presents key common challenges identified, and good practices and existing support by external institutions found to address some of key challenges across the case study countries, followed by discussion on findings and ways forward in four major segments surrounding EIA or safeguard systems. The report provides summaries of the EIA systems in the study countries in Annex 2.

2. Research framework and methodology

The information (primary data) was obtained from experts and/or government officials in charge of EIA from each of the seven case study countries (Cambodia, Indonesia, Lao PDR, Myanmar, Thailand, Korea, and Viet Nam) from various sources available including interviews and presentations conducted or made by each country during the period between September 2015 and February 2016, including those from the International Workshop for EIA Systems and Implementation in Asia held on 24-26 February, 2015, in Tokyo, Japan and Asia EIA Symposium Preparatory Meeting held on 2 February, 2016 in Bangkok, Thailand. Other information (secondary data) was obtained from existing literature and used as reference material. Comparison or analysis was largely based on the descriptions or narratives provided in the above or numerical data, where available. Good practice collected in the study include both those closely related to each system (EIA, EMMP, information disclosure, public participation, or SEA) and practices found in each country conducted by authorities in the country or with assistance of other parties (development agencies, etc.). Good practices were collected with the aim of learning from various approaches and thus should not be considered as selected according to any strict criteria. Also, the study placed more focus on environmental aspects than social aspects (such as involuntary resettlement and others) partially reflecting the nature of existing EIA systems and status of their implementation in study countries.

3. Synthesis of key challenges, good practices, support by external institutions and ways forward

Key common challenges, good practices, existing support by international agencies, and findings and ways forward are presented in four segments: (i) quality of EIA with three subsections (screening-scoping, impact assessment and development of environmental management and monitoring plan (EMMP), and EIA review-approval); (ii) information disclosure and public participation; (iii) EMMP implementation; and (iv) Strategic Environmental Assessment (SEA) and upstream EIA measures.

3.1. Quality of EIA (1): Screening and Scoping

3.1.1. Section summary

Screening is the first point of entry to the EIA process, but some projects do not enter the process or it is not appropriately done. There are cases in which project owners downsize the projects to avoid EIA in all countries where checklists are used for screening. Good practices that have been introduced include revising line ministry regulations to ensure that all necessary projects go through the screening process and online screening systems in Indonesia, and a site visit for screening in Cambodia.

Screening could be used as an incentive system for environmental consideration by project owners (Table 3.1.1).

Table 3.1.1. Summary of key challenges, good practices, and ways forward in ensuring the quality of EIA – Screening and scoping

Key challenges identified	<p>Screening</p> <ul style="list-style-type: none"> • Some projects are approved without applying the screening process (Cambodia, Indonesia, Lao PDR and Viet Nam). • Screening is not properly conducted at the local level (Indonesia and Viet Nam). • Project owners are downsizing/splitting projects to avoid EIA in all countries. • Screening cannot be conducted appropriately because of limited information (Lao PDR, Cambodia, and Myanmar). <p>Scoping</p> <ul style="list-style-type: none"> • There was no scoping part in the EIA reports (Viet Nam). • EIA items are scoped in accordance with reviewers' specialty (Indonesia). • Scoping exercise fails to scope out low-priority issues or overlooks important issues. • Public participation is not conducted on scoping stage (Lao PDR, Myanmar, Thailand and Viet Nam)
Good practices found	<p>Screening</p> <ul style="list-style-type: none"> • Law and regulations of line ministries are amended to include EIA as part of approval process (Indonesia). • Online screening system is being planned to cover the low capacity of local governments (Indonesia). • Site visit for screening is introduced to supplement information of the project site and improve screening (Cambodia). <p>Scoping</p> <ul style="list-style-type: none"> • Detailed scoping guidelines and training systems (Indonesia). • An online information system helps prevention of overlooking important issues (Korea).
Ways forward	<p>Screening</p> <ul style="list-style-type: none"> • Consider a new screening system which categorise the projects based on how project owners considered environment. <p>Scoping</p> <ul style="list-style-type: none"> • Establish 'scoping specialist system' and/or special organisation for scoping.

Scoping provides the framework of EIA investigation and analysis, but there are cases where the scoping exercise fails to scope out low-priority issues or even overlooks important issues. There is no public participation for the scoping stage in some countries. Provision of scoping training (Indonesia) and GIS information on zoning, protected areas and vulnerable ecosystems through an online system

(Korea) may improve the scoping practice, and a more intensive scoping system driven by experienced experts or organisations is suggested (Table 3.1.1).

3.1.2. Basic facts

Screening

All seven countries have a screening system stipulated by laws or guidelines. All countries have more than two categories such as EIA and Initial Environmental Examination (IEE). A unique category in Thailand is the Environmental and Health Impact Assessment (EHIA). Indonesia, Myanmar and Viet Nam have a special category for registration of projects, which does not require a screening review. Cambodia requires site visits for screening together with the Ministry of the Environment and project owners (Table 3.1.2).

Table 3.1.2. Screening categories and condition

Country	Categories				Screening Conditions		
	EIA	Health impact	IEE	Other	Type & Size	Location	Case by Case
Cambodia	Y	-	Y ²⁾	-	Y	-	Y
Indonesia	Y ¹⁾	-	Y ⁶⁾	Y ⁴⁾	Y	Y	-
Korea	Y	-	Y ³⁾	-	Y	Y	-
Lao PDR	Y	-	Y	-	Y	-	-
Myanmar	Y	-	Y	Y ⁵⁾	Y	Y	Y
Thailand	Y	Y	Y	-	Y	Y	-
Viet Nam	Y	-	-	Y ⁵⁾	Y	Y	-

1) AMDAL in Indonesian; 2) Initial Environmental Impact Assessment (IEIA) ; 3) Small-scale Environmental Impact Assessment (SSEIA); 4) EMP without review; 5) submission of Environment Protection Plan without review. 6) Only EMP

Scoping

Terms of reference (TOR) for EIA documents (TOR/EIA) are required in five countries and reviewing TOR/EIA is required in five countries. Three countries require public participation for preparing TOR/EIA (Table 3.1.3). Recommended scoping methods vary among case study countries, but a matrix method is found to be most common for scoping. Indonesia has a systematic scoping method, whereas Viet Nam introduced a scoping process which focuses on affecting sources and affected objects. A comparison of detailed scoping items is tabulated in Annex 1.

Table 3.1.3. Requirements of scoping and methods

Country	TOR/EIA	Review	Public Participation	Scoping Methods
Cambodia	Y	Y	Y ¹⁾	No specific scoping methods are introduced.
Indonesia	Y	Y	Y	Network analysis, matrix, and detail scoping methods are introduced with guidelines.
Korea	Y	Y	Y ²⁾	Matrix method is introduced
Lao PDR	Y	Y	N	Scoping methods are not stipulated. Guidance for writing EIA, under development by Ministry of Natural Resource and Environment (MONRE), may include guidance for scoping. MONRE prepares TOR/EIA with project owner. MONRE has special teams by sectors.
Myanmar	Y	Y	N	No specific methods are introduced.
Thailand	N	N	N	Checklist system is introduced in the guidelines. Sector guidelines give examples of scoping items.
Viet Nam	N	N	N	Scoping policy is introduced. 20 sector guidelines show some examples of scoping items.

1) Recommended; 2) Disclosure of TOR/EIA and getting feedback are required.

3.1.3. Key challenges across countries

Screening

Common challenges found in case study countries include skipping EIA, low compliance at the local level, downsizing project size, and limited information.

Some projects have been found to be approved without conducting EIA or IEE in Cambodia, Indonesia, Lao PDR, and Viet Nam. Possible reasons include that project owners do not know about the EIA system, project approval agencies or line ministries ignore the EIA procedure, or project owners cannot find the suitable application window.

Screening is not applied to projects that are planned in rural areas or implemented by local governments. This problem was reported in Indonesia and Viet Nam. One of the reasons is local governments are unable to appoint suitable persons with an environmental background. Another reason is the project owner, EIA reviewer and the person who approves the project might be the same person. This makes it difficult to conduct a fair and reliable screening at the local level.

Sometimes project owners divide the project into multiple parts or phases to make the project size smaller than the EIA screening criteria. This malpractice occurs in all case study countries. Project owners often think EIA process takes up too much time and money.

Indonesia, Korea, Myanmar, Thailand and Viet Nam require location information for screening. However, it is not always easy to get the boundaries of the protected area or special zones set by the other ministries. This lack of information sharing or difficulty in accessing the information can result in faulty screening.

Scoping

Scoping should select important items and exclude negligible or low-priority items to save cost. However, in actual implementation, negligible or low-priority items are found in EIA reports otherwise.

In Viet Nam in the past there was no scoping process in EIA reports and similar scoping items were used in many EIA reports due to no scoping section in the EIA decree. This made it difficult to prioritise important issues for the assessment.

Indonesia introduced a systematic scoping system and conducts training for scoping using its detailed scoping guidelines, but implementation is still problematic – sometimes special interests are reflected in the scoping by the reviewer who is specialised in a specific environmental issue and is not familiar with EIA.

It was also found that public consultation is not always done during the scoping stage (Lao PDR, Myanmar, Thailand, and Viet Nam).

3.1.4. Good practices or lessons learnt to address key challenges

Screening

In order to cope with the problem of skipping EIAs, **Indonesia** amended the line ministry laws and regulations to include EIA as part of project approval. As a result, there has been higher awareness of EIA among government officials in the line ministries and increased application of EIA.

An online web-based screening is being planned in **Indonesia**. The project owner will be able to submit an application document online and experienced specialists will screen the projects adequately. This system might support the limited capacity of local governments.

In **Cambodia**, a site visit is required for the screening process. Such site visits would be effective for the countries which do not have much experience of EIA and have to deal with lack of information and few useful databases.

Scoping

Web-based GIS has been found useful for conducting scoping (**Korea**). Korea's website provides zoning plans, protected areas, and vulnerable ecosystem areas. Data obtained from EIA surveys and/or monitoring can also be useful for survey planning. Provision of relevant information can help to avoid overlooking important issues.

Indonesia has developed a detailed guideline for scoping and offers periodic training for consultants supported by USEPA. Using a networking diagram, the guideline shows how to scope out the important items step-by-step.

3.1.5. Existing support provided by international agencies

DANIDA through the Environment Support Program (ESP) 3 (2009-2012) supported the development of the EIA Scoping Guideline (Indonesia). USEPA (2012-2015) supported the EIA distance learning programmes, the EIA training workshop and the EIA and Environmental Permit Internship Program (Indonesia). ADB is also supporting Viet Nam's EIA system. ADB-TA on strengthening CSS is establishing an EIA Procedures Decree and general technical guidelines (Myanmar). JICA is providing support to develop guidance for resettlement (Cambodia). ADB is supporting scoping research to strengthen the EIA system (Cambodia). ADB has also conducted two training sessions on EIA in provinces in 2015 (Cambodia).

3.1.6. Discussion and ways forward

Screening

Changing the rules and upgrading information systems might support better enforcement. One practice example outside case study countries is when the Ministry of Environment Japan (MOEJ) created a 'gray zone' category, which is for any projects that are slightly smaller than the size that requires an EIA. In this case, the project owner must consult MOEJ as to whether the proposed project needs an EIA or not. This system might address the problem of downsizing or splitting projects. However, enforcement by itself will not solve all challenges if project owners view EIA as a burden rather than a project improvement benefit. Screening could work more effectively as an incentive for project owners to conduct environmentally-sound planning if it takes into account the level of environmental consideration that the project owners are prepared to build into project design. In other words, screening can potentially fast-track good project proposals.

Scoping

Provision of information and methodologies through the web and/or scoping guidelines can help implementation of better scoping, but the person in charge requires a high level of knowledge and experience about EIA processes, environment and impact mitigation. A more intensive scoping system driven by experienced specialists or organisations may be more effective rather than providing training on scoping to a large number of staff engaged in EIA.

3.2. Quality of EIA (2): Impact assessment and environmental management and monitoring plan

3.2.1. Section summary

Impact assessment is the core part of EIA. Often the quality of EIA is compromised, however, by limited budget and time given to the study. Access to scientific or laboratory analysis is limited in many countries. To cope with these problems, training is conducted in Indonesia and Lao PDR, and several Indonesian banks have integrated environmental and social risk management into their credit/loan appraisal process. A separate contract for EIA consultants has been introduced to assure the independence of the consultant in Korea. Some kind of system which assures the independence of consultants with adequate cost and time estimates should be sought (Table 3.2.1).

Environmental monitoring plans have a supporting role to deal with the uncertainty of EIA predictions. Common challenges are that the monitoring plan is too general to implement, no mitigation hierarchy is adopted, or no alternatives are examined. Korea introduced a pre-EIA procedure for adopting a mitigation hierarchy. Lao PDR developed a template for a concession agreement as part of EIA to be approved to ensure compliance with the environmental monitoring plan. In the future, new systems can be considered to encourage a net positive impact (Table 3.2.1).

Table 3.2.1. Summary of key challenges, good practices, and ways forward in Impact assessment and EMP development

Key challenges identified	<p>Impact assessment</p> <ul style="list-style-type: none"> • Biased assessments are found in some countries. • Limited budget and time for EIA in many countries. • Access to scientific and laboratory analysis is limited (Lao PDR, Myanmar). • Social impact assessment or biodiversity/ecosystems assessment is limited in many countries. <p>EMMP development</p> <ul style="list-style-type: none"> • EMMP is too generic to implement (Indonesia). • Mitigation hierarchy was not well adopted to project EIA • Alternatives are not required (Myanmar).
Good practices found	<p>Impact assessment</p> <ul style="list-style-type: none"> • Central Bank has integrated environmental and social risk management into the credit/loan decision making process (Indonesia). • Training and guidelines are prepared (Indonesia and Korea). • Rules for separate contract for EIA consultants and design consultants are introduced (Korea). <p>EMMP development</p> <ul style="list-style-type: none"> • Pre-EIA system for achieving mitigation hierarchy is introduced (Korea). • A template of EMMP in a concession agreement is developed to ensure compliance of EMMP (Lao PDR).
Ways forward	<p>Impact assessment</p> <ul style="list-style-type: none"> • Further ensure the independence of the assessment. <p>EMMP development</p> <ul style="list-style-type: none"> • Seek net-positive impacts through EMMP.

3.2.2. Basic facts

Impact Assessment

Five countries have a registration system for consulting firms and three countries have a registration system of individual consultants (Table 3.2.2). In Cambodia all international consulting firms have to work with registered Cambodian firms. Training is offered to consultants by registered training organisations (on a regular basis) in Indonesia and by universities and donors (not on a regular basis) in Viet Nam.

Korea, Viet Nam, Thailand and Indonesia have developed sector-specific guidelines and issue guidelines (Table 3.2.3).

Table 3.2.2. Registration system

Country	Firm (Number of registered firms, year)	Consultant (Number of registered consultants, year)
Cambodia	Y (11, 2015)	N
Indonesia	Y: (123, 2015).	Y: (850, 2015).
Korea	Y: (350, year unknown)	Y: (6, year unknown)
Lao PDR	Y: (No figure)	N
Myanmar	N	Y: (under development)
Thailand	Y: (72, 2014)	N
Viet Nam	N	N

Y: Yes or exists; N: No or does not exist.

Table 3.2.3. EIA guidelines

Country	General guidelines	Issue guideline	Sector guideline	Support from
Cambodia	Y ¹⁰⁾	N	N ⁴⁾	Oxfam
Indonesia	Y	Y ²⁾	Y ⁵⁾	USEPA, KEI (Korea)
Korea	Y	Y:	Y ⁶⁾	-
Lao PDR	Y ¹¹⁾	Y ¹²⁾	Y ⁷⁾	Finland, World Bank
Myanmar	Y ¹⁾ :	N	N	ADB, JICA
Thailand	Y	Y ³⁾	Y ⁸⁾	-
Viet Nam	Y	N	Y ⁹⁾	Demark, ADB

Y: Yes or exists; N: No or does not exist.

1) Drafted by ADB

2) Air, water, health impact assessment (HIA), social impact assessment (SIA), and cumulative impact assessment

3) Health impact assessment (HIA), SEA, ecological impact assessment, public participation, SIA

4) Unofficial oil & gas and mining guideline together with Oxfam

5) Coal power plant, housing, port, road, airport, sand/gravel mining, commercial building, palm plantation, transmission line, electroplating, instant noodle, hydropower plant, river normalisation

6) There are 29 guidelines

7) Hydropower (2015)

8) Forest protected area, thermal power project, land transport project, industrial project, petroleum exploration and production project, petroleum refinery project, petrochemical industry project, housing project, land reclamation project, monitoring guidelines for various sectors

9) Textile, bauxite mining, thermal power plant, waste disposal, basic chemical, cement, chemical fertiliser, industrial park, paper and pulp, iron training, waste water treatment, shipyard, SEA (3), EPC (2)

10) Ministry of Environment declaration (Prakas (Declaration) on General Guidelines for Developing Initial and Full Environmental Impact Assessment Reports, No. 376 BRK.BST)

11) Under development of 1) Guideline for consultants, 2) For reviewers, and 3) Public involvement

12) Guidance for public participation (under revision)

EMMP

All case study countries require EMMP as part of the EIA approval process and Viet Nam, Indonesia and Lao PDR require a detailed EMMP. Indonesia and Lao PDR have a reviewing process of the detailed EMMP. Viet Nam has further approval step for EMMP before operation of the completed project (Table 3.2.4).

Table 3.2.4. Requirements for EMMP, mitigation hierarchy, and alternatives

Country	EMP requirement	EMP Guidelines	Mitigation hierarchy	Alternative analysis
Cambodia	Y	N	N	N
Indonesia	Y ¹⁾	Y	Y ³⁾ ;	Y
Korea	Y	Y	N	Y
Lao PDR	Y ¹⁾	N	N	N
Myanmar	Y ²⁾	N	N	Y
Thailand	Y	Y	N	Y
Viet Nam	Y ¹⁾	Y	N	Y

1) Additional detail EMP should be reviewed for approval before construction; 2) Proposed in the law under development; 3) MOE Regulation (2012)

3.2.3. Key challenges across countries

Impact assessment

The quality of EIA reports is a universal challenge across case study countries and more so in countries where there is less experience of EIA. Often EIA reports have only sparse quantitative evaluations, have provided no maps or survey data, or have copied text from other documents.

To conduct EIA for small projects, budget and time are often very limited. Compromises are made by hiring lower quality consultants or avoiding detailed surveys. For safeguarding biodiversity/ecosystems, a scientific site survey and quantitative impact assessment are still rarely conducted. For example, around 80% of survey costs are typically allocated for physical environmental issues and 20% are allocated for biological and social issues in Indonesia. This limitation cannot give enough time for a biological survey covering all seasons even if the survey is required in the TOR/EIA. There is only limited access to scientific analysis or laboratories in some countries (Myanmar, Lao PDR), and EIA can suffer from lack of reliable analysis.

Social impact assessment is still limited, partially due to many EIA consultants tending to have an engineering or natural science background. In Indonesia, compensation of resettlement and land acquisitions are managed by the land laws and there is often a conflict of resettlement or compensation after an EIA is approved.

Low reviewing capacity is also causing low quality impact assessment, especially in relation to impact projection, if such assessment is easily approved. Cumulative impact assessment is not often fully conducted in local EIAs due to insufficient information about the other development projects.

Independence of consultants is not assured when the relationship between project owners and consultants is too close or consulting remuneration is conditional on project approval.

EMMP

Developed EMMP in Indonesia is often too generic to implement. Sometimes there is no specific mitigation place or sampling points, no reporting format or ways to disclose monitoring results, no mitigation/monitoring cost information described in EMMP.

Setting the mitigation hierarchy or proposing alternatives to the original project is often difficult. In Indonesia, the project design, layout or size is rarely changed by an alternative analysis. In Korea a mitigation hierarchy was rarely adopted in EIA. In Myanmar proposition of alternatives is not required if the project site already has approval for investment.

3.2.4. Good practices or lessons learnt to address key challenges

Impact assessment

Korea and **Indonesia** developed various guidelines for EIA reviewing, and conduct training not only for consultants but also for reviewers. Indonesia's EIA division conducts regular performance evaluation for registered EIA consultants and commissions at the local level. **Indonesia** is developing consultant registration systems for special items such as biology and sociology, and offers relevant training.

Organisations such as the Korea Environment Institute (KEI) can review the cumulative impacts because they have access to all other project EIAs, monitoring reports, and spatial environmental data. Cumulative impact should be examined by higher level organisations other than the consultant for one project.

Korea strengthened the rule to ensure the independence of consultants. The new rule bans the project owner from merging the design consulting contract and EIA study contract. Similar rules are adopted by European donors. Bank Indonesia, the central bank in **Indonesia**, has integrated environmental and social risk management into the credit/loan decision-making process at the major commercial banks in Indonesia under Act Number 10/1997. USAID and MOEF supported developing a guideline for the renewable energy sector.

Outside case study countries, a cost estimate standard for biological surveys set by the environment ministry is used in **Japan**. It may help to incorporate the cost of biological surveys into the EIA preparation costs.

EMMP

For road projects in **Korea**, alternative site locations and routes are proposed and Pre-EIA does not require detailed surveys but avoidance mitigation can be selected in this stage.

In **Lao PDR**, the Government developed a template for environmental and social mitigation measures (Standards of Environmental and Social Obligation or SESO) to be included as an annex in the concession agreement of a major project to ensure compliance of EMMPs for projects in the power, mining and agriculture sectors.

3.2.5. Existing support provided by external institutions

Impact Assessment

In Lao PDR, the **International Finance Corporation (IFC)** established a hydropower working group to exchange good practices among the hydropower sector and negotiate with the government officials together with other working group members. Water and Land Ecosystems Program of the **Consultative Group for International Agricultural Research (CGIAR)** also established a forum to exchange information and good practices among different stakeholders on hydropower sector including the private sector, financial institutions, academics, international institution, consultants and NGOs in Lao PDR. The **World Bank** supported development of hydropower sector guidelines in Lao PDR.

Regarding the assistance related to sector guidelines, **Oxfam** supported development of oil and gas sector guidelines (Cambodia); and the **Danish Government** supported sector guidelines (Viet Nam).

There was a variety of capacity development programmes provided to the case study countries: in Indonesia, **USEPA** supported the EIA distance learning programmes, EIA training workshop and EIA, and the Environmental Permit Internship Program and **KEI** supported training workshops related to EIA and EIA methodologies in water issues and the internship program on the EIA Support Systems. In Lao PDR the **Government** of Finland supported development of guidance for EIA for consultants and **ADB** (Myanmar), **JICA** (Myanmar) and **UNDP** (Lao PDR) support EIA review training for national and local governments; **JICA** helps the EIA report review process, as well as by establishing an EIA firm registration system (Myanmar); **ADB** supports improved EIA guidelines and training system (Viet Nam); and **International EIA Consultants** are expected to provide on-the-job training for local EIA consultants for all international EIA consultants needed to work with local EIA consultants as a joint venture on EIA work (Cambodia).

3.2.6. Discussion and ways forward

Impact Assessment

Personnel who survey and conduct impact assessment are usually hired consultants and therefore the quality of impact assessment depends on their ability. Even if technical guidelines and training are provided, EIA consultants are always under pressure from a limited budget, limited time, and the risks of giving favoured assessment in exchange for a successful permit or paid consultant's fees. However, the independence of the assessment remains critical as Fuggle (2012) emphasises. For ethics and a basic policy of consulting to prevail, a separate contractual framework for assessment work or a compliance system with an incentive system may be effective. The cost estimate standard for EIA survey in Japan is one way of making the necessary costs explicit and recognised in EIA preparation.

EMMP

Consideration of alternative plans before starting a project is a better way of managing potential impacts than doing so in the EMMP, and implementation of the EMMP requires a commitment by the project owner. If EMMP is targeting only off-setting or no-net-loss, it cannot be useful in reducing the risk of continuous degradation of environmental value by development. In order to achieve sustainable development, a long-term net-positive impact should be the aim.

3.3. Quality of EIA (3): Review and approval of EIA

3.3.1. Section summary

To ensure sound EIA review and approval, it is critical to strengthen the technical knowledge of review staff in national and local agencies, and secure adequate staff time and budget for EIA review. In most study countries, these are major constraints to effective EIA review. In Cambodia, there is no external EIA review system to seek advice from external experts, apart from reviews conducted by the Ministry of Environment, other line ministries and NGOs. In Cambodia, Indonesia, Lao PDR, Myanmar, Thailand and Viet Nam, project permits are sometimes issued before final EIA approval. In Lao PDR, Thailand and Viet Nam, construction of some projects started before the approval of EIA. One of the causes of these challenges seems to be insufficient inter-agency coordination.

To address these challenges, the respective governments have organised training for EIA review staff collaborating with external institutions, such as JICA, UNDP, US-EPA, in Indonesia, Lao PDR and Myanmar. As Indonesia, Korea, Lao PDR, Thailand and Viet Nam have established an external review panel for EIA review to achieve higher quality of reviews, other countries can learn from their

experiences. To improve EIA review procedures, ADB supported the development of EIA review procedures in Myanmar, and the Finnish Government supported guidance of EIA review for national and local government in Lao PDR. Following the examples of Indonesia and Myanmar, establishing regulations that require an environmental permit as a precondition of issuing a project permit by line agencies is one of the ways to avoid inter-governmental coordination (Table 3.3.1).

Table 3.3.1. Summary of key challenges, good practices, and ways forward in review and approval of EIA

Key challenges identified	<ul style="list-style-type: none"> • In most of the study countries, one of the biggest challenges is to improve technical capacity, staff time and budget for EIA review. • In Cambodia, there is no external EIA review system to seek advice from external experts, besides reviews conducted by ministry of environment, line ministries and NGOs. • Inter-agency coordination and consultation is insufficient. • In Cambodia, Indonesia, Lao PDR, Myanmar, Thailand and Viet Nam, project permission sometime issues before EIA approval. In Lao PDR, Thailand and Viet Nam, construction of projects started before the approval of EIA in some cases.
Good practices found	<ul style="list-style-type: none"> • Governments organised training for EIA review staff collaborating with international donors (Indonesia, Lao PDR and Myanmar). • Governments have established an external review panel for EIA review (Indonesia, Korea, Lao PDR, Thailand and Viet Nam). • To improve EIA review procedures, ADB and JICA supported developing EIA review procedures and capacity (Myanmar), and government of Finland supported developing guidance of EIA review for national and local government (Lao PDR). • In order to avoid obtaining project permission or starting project construction without environmental permission, governments established regulations which required environmental permit as precondition or requirement for project permission under the line agencies (Indonesia and Myanmar).
Ways forward	<ul style="list-style-type: none"> • Provide technical training of EIA review, such as in Lao PDR (UNDP), Indonesia (US-EPA) and Myanmar (ADB) collaborating with external institutions. • Establish an external review panel for EIA review, while Indonesia, Korea, Lao PDR, Thailand and Viet Nam have established an external review panel for EIA review • Establish regulations which required environmental permit as precondition or requirement for project permission under the line agencies, following examples of Indonesia (ADB) and Myanmar (ADB), in order to avoid obtaining project permission without environmental permission.

3.3.2. Basic facts

Table 3-3-2 illustrates some features of the EIA review system in the seven studied countries. Cambodia, Myanmar and Lao PDR still have a smaller number of EIAs to review, thus indicating less

experience in EIAs and reviewing capacity. Although it includes many housing projects, Thailand reviews more than 480 EIAs, Korea more than 210 EIAs, Viet Nam more than 150 EIAs, and Indonesia more than 80 EIAs every year. On the other hand, Lao PDR has three different EIA review departments depending on different sectors, hydropower, mining or agriculture/infrastructure/industry, and Indonesia has 96 technical reviewers including external specialists. Thus, these countries are relatively better off dealing with technical matters in their review.

Comparing the numbers of EIA reports that one review staff needs to handle every year in seven study countries, Myanmar, Thailand and Viet Nam have a particularly small number of EIA review staff, considering that there are 96 technical reviewers in Indonesia, 112 review staff in Korea and 62 review staff in Lao PDR. Five countries, namely Indonesia, Korea, Lao PDR, Thailand and Viet Nam have established independent EIA review panels consisting of external experts in addition to the review by the EIA department of their countries. This ensures a robust EIA review of projects. Although the review results of external EIA review panels are not open, the results should be incorporated into decision-making on EIA reviews by the EIA departments in all countries (Table 3.3.2).

Table 3.3.2. EIA review system

Country	Number of EIAs reviewed (per year)	Number of reviewers in MOE	Number of EIAs reviewed per staff in a year	External review panel	Transparency of review, incorporation of external review results into decisions
Cambodia	16.8 EIAs (average between 2009-2013)	7 staff in review office, 65 staff in total	2.4 EIAs	No ³⁾	No, n/a
Indonesia	82.25 EIAs (average between 2009-2014)	16 review staff and 96 technical reviewers including external specialists	1.3 EIAs	Yes ⁴⁾	Yes, Yes
Korea	218.6 EIAs (average between 2000-2013)	112 staff for EIA review (28 in HQ and 84 in 7 local offices)	1.9 EIAs	Yes ⁵⁾	No, Voluntary
Lao PDR	25.6 EIAs (average between 2007-2014)	62 staff (22 for energy, 20 for mining and 20 for agriculture, infrastructure and industry projects), 120 staff in total	0.4 EIAs	Yes ⁶⁾	No ¹⁰⁾ , Yes
Myanmar	19.6 EIAs (average between 2012-2014)	5 staff (2 technical and 3 administrative staff for review), 14 staff in total	3.9 EIAs	No ⁷⁾	No, n/a
Thailand	481 EIAs (average between 2011-2014)	122 ¹⁾ staff in total (not clear number of staff for EIA review)	n/a ²⁾ , <8 EIAs>	Yes ⁸⁾	No ¹¹⁾ , Yes
Viet Nam	155 EIAs in 2014	40 ¹⁾ staff in total (not clear number of staff for EIA review)	n/a ²⁾ , <7.7 EIAs>	Yes ⁹⁾	No, Yes

1) Number of staff involved in EIA review is not clear in Thailand and Viet Nam

- 2) 8 EIAs if half of the staff involved in review in Thailand and 10.3 EIAs if half of the staff involved in review in Viet Nam
- 3) MOE establishes a technical working group, including other relevant ministries and representatives of NGOs, as a part of MOE review of EIAs.
- 4) In addition to an administrative review and the Technical review team (including external specialists), there is the Review committee including research institutions, technical experts, and local and NGO representatives.
- 5) KEI, which has 45 staff for EIA review, serves as an independent third party for EIA review.
- 6) For complex projects, MONRE have to appoint a technical expert committee including domestic and foreign experts and consultants.
- 7) ECD establishes an EIA review committee composing with high level government officials from relevant ministries and ECD review staff. The Committee consisted of 39 members from various government agencies. Of which 20 members from MOECAP, 19 members from other ministries (including technical experts from Universities under the Ministry of Education and Ministry of Science and Technology), and 3 members from respective City Development Committees (Yangon, Nay Pyi Taw).
- 8) 15 expert review committees for different sectors review EIAs. Members of the committee are selected by ONEP (ONEP is in charge of only preliminary review).
- 9) The EIA review council consists with seven to nine external experts, and may include two members of opposition group where appropriate. At least 30 % of council members should have 6 years' experience on EIAs.
- 10) The technical expert committee shall keep all the information received in strict confidential.
- 11) Any concerned stakeholders would be able to bring a case to the Administrative Court to the decision of the committee.

3.3.3. Key challenges across countries

Major challenges on review and approval of EIA observed in seven studied countries are summarised in four categories: (i) limited capacity of EIA review; (ii) time and budget constraints; (iii) inadequate review system; and (iv) insufficient inter-agency coordination and project permission before EIA approval.

Limited capacity of EIA review

All studied countries, except Korea, raised the issue of limited capacity of EIA review staff both for technical reasons and number of staff. Cambodia, Indonesia, Lao PDR and Myanmar are particularly concerned about the limited capacity of Initial Environmental Examinations (IEEs) or EIA reviews in local government offices. In Viet Nam, the review capacity of the EIA department in the line ministries needs to be strengthen and objectivity of EIA review by line ministries themselves is questionable as well. As a result, in many cases IEEs or EIAs receive approval without thorough review by the local government office. In Thailand, more than 480 EIAs (average per year between 2011 and 2014; the majority is related to housing projects) need to be reviewed in a year and there is a serious capacity issue for reviewing such a great number of EIAs every year. If the number of EIA reports that one review staff needs to handle every year in seven study countries is compared, Myanmar, Thailand and Viet Nam have a small number of EIA review staff, as mentioned above. In Indonesia, many reviewers are specialised in the physical environment, but not many reviewers are specialised in the biological

and social aspects of EIAs. Korea also recognises that it needs to strengthen the social aspects of EIA reviews.

Time and budget constraints

In addition to limitations to the technical capacity of review staff and the number of review staff, there are time and budget constraints surrounding EIA reviews. All countries set a timeline for EIA reviews to make ensure efficiency. However, many countries, including Cambodia and Lao PDR, have difficulty in finishing the required review process within the timeline set in the regulations. In Thailand, the Environmental Review Committee (ERC) requests project owners to conduct further research into the EIA review process. However, sometimes such study has not been completed due to budget constraints.

Inadequate review system

While Cambodia does not have any external review system besides reviews conducted by the Ministry of the Environment, the establishment of a sound EIA review system is another challenge for these countries. Indonesia, Korea, Lao PDR, Thailand and Viet Nam have established an external review panel that include technical experts and/or representatives from local communities or NGOs as members, independent from the Environment Ministry, and the review results need to be incorporated into the final decision-making on project approval. It should be noted that review results by external review panel are not open to the public.

Insufficient inter-agency coordination and project permission before EIA approval

In Cambodia, Indonesia, Lao PDR, Myanmar, Thailand and Viet Nam, the problem of project permission being issued before EIA approval is commonly found. In Cambodia, not all projects are subject to EIA and the Ministry of the Environment and other line ministries do not issue project permission without EIAs. In Viet Nam, some government projects are practically approved by the regulatory agency before EIA approval by MONRE. In Myanmar, some line ministries provide prior permission before the project acquires its Environmental Compliance Certificate (ECC). Local governments in Indonesia tend to approve projects without environmental permission particularly for local projects. In Lao PDR, Thailand and Viet Nam, construction of projects are started before the approval of EIA in some cases.

3.3.4. Good practices or lessons learnt to address key challenges

The study identified four areas of good practices to address limited capacity for reviews, time and budget constraints, inadequate review systems and project permission before EIA approval.

Capacity building for EIA review

In Indonesia, the Ministry of Environment and Forestry (MOEF) provides various EIA training and technical assistance for the EIA reviewers. USEPA, through the EIA capacity development programme, also provided training to Indonesian government officials regarding technical issues of EIA, such as biodiversity offset, responding to the needs of the Indonesian government. USEPA's training was regularly provided to the Indonesian government through a TV conference system every 2-3 months between 2012 and 2015. USEPA also held a face-to-face training workshop in Jakarta in 2012, and provided the EIA and environmental permit internship programme for Indonesia in 2013. With UNDP's support, Lao Government is planning to provide training for national and local government officials to review EIAs following the newly-developed EIA guidance to review EIA/IEE. Training on EIA review in Asia is supported by external institutions. In Myanmar, ADB, collaborating with JICA, supported capacity building for Myanmar government officials to undertake EIA review, monitoring and compliance, to improve institutional linkages ensuring necessary inter-agency coordination on environmental management. ADB provided comprehensive support for the application of a newly-developed EIA Procedure, including introduction of administrative and technical EIA review systems in Myanmar.

External review of EIAs

The Korea Environment Institute (KEI), which is affiliated with the office of the Prime Minister, serves as an independent institution reviewing and examining EIA reports in **Korea**. The Minister of the Environment refers to KEI's opinions on EIA reports when it examines the reports under Article 28 of the EIA Act. In **Thailand**, the Office of Natural Resources and Environmental Policy and Planning (ONEP) provides only preliminary review and comments on EIA. The actual review and consideration for approval of an EIA report will be made by a committee of experts or the Expert Review Committee (ERC), for which ONEP serves as secretariat. There are fifteen ERCs for different sectors and areas, and members of the committee are selected by ONEP. When the ERCs have approved EIA reports, ONEP will notify the permitting authority about the result of consideration by the ERCs. In **Lao PDR**, in the case of complex investment projects and activities, the Ministry of Natural Resources and Environment (MONRE) appoints a technical expert committee to review the ESIA report. All associated costs for engaging the technical expert committee should be covered by

project owners. For the environmental review council in **Viet Nam**, the council is able to ask project proponents to revise the EIA as many times as necessary, and time spent on revising the EIA by the project proponents does not count as part of the review period. In addition, the council members themselves are able to conduct environmental surveys and/or interview project-affected communities. With this robust review system in Viet Nam, the council is able to conduct thorough reviews of EIAs, and around 10% of EIAs in Viet Nam were rejected by the council. In **Indonesia**, there are three layers of EIA review: (i) administrative review by EIA review staff of MOEF to check basic formation of EIAs; (ii) technical review by EIA review staff of MOEF and external specialists; and (iii) a review committee including research institutions, technical experts and representatives of local communities and NGOs. These three layers of EIA reviews complement each other and help to improve the quality of EIA reviews.

Development of EIA review guidelines

With support from Finland, the **Lao Government** developed guidelines for ESIA/IEE reviews for both national and local governments together with guidance on (i) ESIA/IEE development for consultants; and (ii) public engagement. In **Myanmar**, ADB provided comprehensive support for the drafting of a new EIA procedure to strengthen the project proposal review process and ensure consistency with environmental assessment requirements set out in relevant laws, rules and notifications, including the 2012 Foreign Investment Law.

Integration of environmental permits into project approval

In Indonesia, the Ministry of Environment and Forestry, collaborating with line ministries, incorporated a requirement of the environmental permit for project approval not only into the EIA regulations, but also in the regulations on project approval in several sectors, including geothermal, river normalisation, toll roads, and seaports and hydropower plants, which come under the other line agencies. While robust legal linkage between the EIA Procedure and the Foreign Investment Law has been established in Myanmar, approval of IEE/EIA is a precondition for foreign investment approval or licensing.

3.3.5. Existing support provided by external institutions

Capacity building for EIA review

To fulfil the needs of capacity building for EIA review, **UNDP's** Poverty-Environment Initiative (2000-2016) supports the Lao PDR Government to organise EIA training for both national and local

government utilising new guidance for ESIA/IEE review for governments. **USEPA** provided training and a workshop in Indonesia. **JICA**, through the Technical Cooperation Project for capacity development in basic water environment management and EIA system in Myanmar, supports enhancing the capacity of the EIA authority and consultants by helping the EIA report review process. **ADB**, collaborating with JICA, supported Myanmar Government building capacity to undertake EIA review, monitoring and compliance, and improving institutional linkages forged to ensure necessary inter-agency coordination on environmental management between 2014 and 2015.

Development of EIA review guidelines

With **Government of Finland** support (2010-2015), Lao PDR's Government developed guidelines for EIA/IEE review for both national and local governments. In Myanmar, **ADB** provided comprehensive support drafting of new EIA Procedure to strengthen the project proposal review process and ensure consistency with environmental assessment requirements set out in relevant laws, rules and notifications, including the 2012 Foreign Investment Law. Also in Indonesia, **ADB** supported incorporating a requirement for environmental permits for project approval not only in the EIA regulations, but also in the regulations regarding project approval in several sectors, including geothermal, river normalisation, toll roads, and seaports and hydropower plants, which come under the other line ministries between 2013 and 2014.

3.3.6. Discussion and ways forward

EIA review involves systematic appraisal of the quality of the environmental impact statement (EIS) as a contribution to the decision-making process. The decision-making on the project involves consideration by the relevant authority of the EIS, including consultation responses, together with other material considerations (Glasson et al. 2012). The most immediate purpose of EIA is to supply decision-makers with an indication of the likely environmental consequences of their actions (Jay et al. 2006). Ensuring a systematic appraisal of the quality of the EIS and contributing effective decision-making process, four key challenges are identified in this study: (i) limited capacity of EIA review; (ii) time and budget constraints of EIA review; (iii) an inadequate review system; and (iv) provision of project permission before an EIA approval.

Limited capacity of EIA reviewing staff in the line ministries and particularly in the local agencies resulted in difficulties to carry out systematic appraisal of the quality of EIA in Viet Nam. To ensuring the quality of EIA appraisal, it is critical to strengthen technical knowledge of EIA review staff, and increase staff time and budget for EIA review. All studied countries except Korea need support for capacity building of EIA reviews. Myanmar, Thailand and Viet Nam have a particularly small number

of review staff considering the number of EIAs they review. Providing technical training for EIA reviews, like those in Lao PDR, Indonesia and Myanmar, is one way to address this challenge. Developing guidance for sound EIA review is another way to improve capacity for EIA review. In Myanmar, ADB supported the development of EIA review procedures and the Government of Finland gave its support to developing guidelines for EIA reviews by national and local governments in Lao PDR.

In addition to EIA review by the Ministry of the Environment, establishing an external review panel to get technical and more independent inputs for EIA review is a systematic solution to ensuring quality of EIA appraisal. Indonesia, Korea, Lao PDR, Thailand and Viet Nam have established such an external review panel for EIA review including technical experts and representatives of local communities and NGOs, so other countries would be able learn from their experiences. In order to avoid issuing project permission or starting project construction without environmental permission, Indonesia and Myanmar established regulations which required an environmental permit as a precondition or requirement for project permission by line agencies. These regulations may help reinstate the importance of the quality of EIA reviews.

As seen above, many good practices in seven study countries are initiated not only by governments, but also supported by external institutions. External institutions are particularly helpful in bridging the gaps between environmental ministry and other line ministries as well as to exchanging experiences of improving the EIA review and appraisal process among Asian countries and beyond, through available knowledge-sharing mechanisms. More experienced countries, such as Korea, Thailand and Indonesia, may be able to help further to improve the EIA review and approval process in other Asian countries from their hands-on experiences.

3.4. Information disclosure and public participation

3.4.1. Section summary

Timely information disclosure is still a critical challenge for many of the studied countries. In Indonesia, Korea and Thailand, a web-based EIA information system has been established. However, Cambodia, Lao PDR, Myanmar and Viet Nam are still in the process of establishing a similar system to provide EIA-related information in a timely manner. Although Indonesia and Thailand have already started online operations, there is still room for improvement, such as disclosure of draft EIA reports during the review stage in Thailand and all other related information on the website as regulations stipulates in Indonesia. In order to narrow these gaps, Korea's experience of providing EIA and related spatial information databases would be helpful for other Asian countries to learn from. Furthermore, providing not only supply-side information but also information that users have the right to know or

access to all relevant information is another challenge to overcome in assisting an effective decision-making process in the future. This is an area where further collaboration is needed, bringing together local governments, local organisations and NGOs for effective decision-making.

At the same time, effective, efficient and meaningful participation is still one of the biggest issues in most study countries. In many countries, it is not always the case that all key stakeholders are invited to a public participation process. Indonesia, Lao PDR and Thailand have taken the first step and developed guidelines for public participation. Collaborating with local organisations and NGOs in a public participation process is one way to address key challenges, such as identifying key stakeholders; addressing cultural, religious and gender issues; managing expectations; raising awareness and building trust with local communities. Continuous engagement with local stakeholders from the early stages through the monitoring and closing stages of projects has proved to be effective from experience in Cambodia, Indonesia, and Myanmar. Cases in Indonesia and Lao PDR have shown that private sector investment from developed countries, financed by the World Bank, IFC and commercial banks which have signed up for the Equator Principles, plays a critical role to demonstrate effective public participation in their projects following international standards of stakeholder engagement. It is also important to exchange these hands-on experiences on effective public participation among project proponents.

In addition, relevant government officials, project proponents, local communities and NGOs will benefit from training opportunities on awareness-raising about effective public participation and on fostering skilled facilitators for more effective public participation. International agencies, financial institutions, private sectors and NGOs would be able to play a critical role in these areas (Table 3.4.1).

Table 3.4.1. Summary of key challenges, good practices, and ways forward in public participation and information disclosure

Key challenges identified	<ul style="list-style-type: none"> • Disclosure of critical information related EIA is still a challenge for many countries. • It is also a challenge to disclose information that is not too technical and effective for active engagement of decision-making process. • Public consultation and participation in seven studied countries are still limited in a way to ensure the quality, comprehensiveness and effectiveness of the EIA. • In some countries, only limited members of communities are invited to a public participation process and not all community members are free to speak up in the public participation process. • Participation of diverse stakeholders (cultural, gender, etc.) are not secured. • Public participation in the EIA process may need to be stipulated in EIA law.
Good practices found	<ul style="list-style-type: none"> • Web-based EIA information systems have been established for easy access for EIA related information (Indonesia, Korea Thailand and Viet Nam (ongoing)). • Community engagement in early stage of EIA helps to improve quality of decision-making process (Cambodia and Indonesia). NGO involvement helps to improve monitoring activities and awareness raising of public participation in local communities (Myanmar). • Commercial banks observe Equator Principles (Indonesia, Lao PDR). • Draft EIA law was developed through series of public consultations with transparent and accountable manner (Cambodia).
Ways forward	<ul style="list-style-type: none"> • Establish web-based EIA information system. This is a clear area where mutual learning is relevant. It is vital to continue exchanging good practice information, sharing experiences on a ground and learning from each other through face to face and/or on-line forums. • Provide training on effective public participation for relevant government officials, project proponents, local communities and NGOs; and for fostering facilitators of public participation in each country. External institutions, financial institutions, private sectors and NGOs would be able to play a critical role in these areas. • Hold a series of public consultation with transparent and accountable manner to amend the EIA law towards effective decision making through EIA process.

3.4.2. Basic facts

Out of the seven study countries, only Indonesia and Thailand have developed mandatory guidelines for information disclosure and public participation. Indonesia, Korea and Thailand developed a web-based EIA information system, but Indonesia and Thailand have not disclosed all EIA related information on their website. In particular, these two countries do not disclose critical information during EIA review stage, not do they disclose the draft EIA. In Thailand, project proponents are supposed to disclose draft EIA during the review, and in Indonesia, EIA regulations require disclosure of draft EIA on the website, but the systems are under development for now. In Viet Nam, new legislation in 2015 stipulates that all EIA-related documents need to be disclosed. However, Viet Nam

has not specified the media that would be used to do this . All the studied countries require public participation at some stage of the projects. Some require starting early in the screening stages and some require public participation only during the assessment or EIA review stages. All the studied countries are still trying to find the best way to have meaningful public participation for effective decision-making. For example, Indonesia and Thailand developed mandatory guidance in order to ensure meaningful and timely public participation. However, they still face challenges to achieve this. Cambodia, Myanmar and Viet Nam have not developed guidance for public participation. Only three countries out of seven require public participation during the EIA review stage, and only four countries require that the results of public participation are included in decision-making (Table 3.4.2).

Table 3.4.2. Measures to strengthen information disclosure/public participation on EIA

Measures	CM	ID	KR	LA	MY	TH	VN
Guidelines of information disclosure and public participation	N	M	N	V	N	M	N
Informed consultation and participation	M	M	V	M	M	V	N
Public consultation/ participation during screening stage	M	V	N	V	M	V	N
Public consultation/ participation during scoping stage	M	M	N	V	M	M	N
Public consultation/ participation during assessment stage	M	V	M	M	M	M	N
Public consultation/ participation during review stage	V	V	N	M	M	V	M
Incorporation of result of public consultation into decision-making	V	M	V	V	M	M	M
Grievance mechanism	N	M	N	N	N	M	M
Disclosure of full SEA (website)	N	V	M	N	N	N	M*
Disclosure of full SEA (hard copy)	N	M	N	N	N	N	M*
Disclosure of draft full EIA during review stage (website)	N	V	M	V	M*	N	M*
Disclosure of draft full EIA during review stage (hard copy)	V	M	N	M	M*	N	M*
Disclosure of draft EIA summary during review stage (website)	N	V	N	V	M*	N	M*
Disclosure of draft EIA summary during review stage (hard copy)	N	M	N	M	M*	N	M*
Disclosure of full EIA after approval (website)	N	V	M	V	N	M	M*
Disclosure of full EIA after approval (hard copy)	N	M	N	M	N	M	M*
Disclosure of EIA summary after approval (website)	N	V	N	V	N	M	M*
Disclosure of EIA summary after approval (hard copy)	N	M	N	M	N	M	M*
Disclosure of EIA monitoring reports (website)	N	V	M	V	N	M	M*
Disclosure of EIA monitoring reports (hard copy)	N	M	N	M	N	M	M*

CM: Cambodia; ID: Indonesia; KR: Korea; LA: Lao PDR; MY: Myanmar; TH: Thailand; and VN: Viet Nam
M: Mandatory; V: Voluntary; and N: none; *Media not specified

3.4.3. Key challenges across countries

Three studied countries (Cambodia, Myanmar and Viet Nam) have not established clear guidance for information disclosure and public participation regarding EIA. Thus, it is urgent to establish basic guidance material for information disclosure and public participation in order to secure meaningful and timely information disclosure and public participation.

Information disclosure

Disclosure of critical information related to EIA is still a challenge for many countries. Regarding information disclosure, timely and sufficient disclosure of EIA-related information to stakeholders is still a key challenge in six out of the seven studied countries, namely Cambodia, Indonesia, Lao PDR, Myanmar, Thailand and Viet Nam. Disclosed information is too technical and hard to understand for local communities and this is another key challenge. Web-based EIA information systems have been established in Indonesia, Korea and Thailand. However, Cambodia, Lao PDR, Myanmar and Viet Nam are still in the process of establishing web-based EIA information systems. Among those countries that have established web-based EIA information systems, Thailand does not disclose draft EIA during the review stage on the system, which is considered a critically important document to disclose in order to ensure meaningful participation. While the Thai information act ensures the disclosure of EIA-related documents that are considered public (letters and other documents addressed to project proponent or consultant), the disclosure of draft EIA is the responsibility of the project proponent, not of the Thai government's EIA information system. In Indonesia, based on elucidation of Article 65, EPMA No. 32 of 2009 and MOE Regulation No. 17 of 2012 concerning Public Participation in EIA and Environmental Permit, EIA documents shall be open to the public, and the government shall provide the public with access to EIA documents. However, uploading all EIA documents onto the web-based EIA information system is still a work in progress.

Public participation

Most of the seven studied countries face major challenges related to securing meaningful and timely public participation, including vulnerable and minority communities, based on appropriate information disclosure, and to ensuring opportunities for various groups of peoples to speak up. Conversely, informed consultation and participation have been made mandatory for four of the studied countries. Concerns found in this study include: (i) limiting invitation to public participation (to only a few representatives of local communities or irrelevant stakeholders); (ii) securing a political space for local communities, specifically vulnerable ones, to speak up during public participation; (iii)

identifying stakeholders from various levels from local to global; and (iv) addressing cultural, religious, literacy and gender diversity.

Meaningful participation is vital to improve the quality of EIAs and support the limited capacity of government staff, but it is not easy to ensure it with constraints on the costs and schedule of proposed projects in all studied countries. Other identified challenges in this study include: (i) managing expectations of local communities in decision-making on the EIA process; and (ii) raising awareness of public participation by other government agencies, project proponents, general public and NGOs and building trust among them. Public participation in the process to establish or amend the EIA law would be also required.

3.4.4. Good practices or lessons learnt to address key challenges

Information disclosure

Regarding information disclosure, web-based EIA information systems have been established in Indonesia, Korea and Thailand. Other countries certainly can learn from their experience. For example, Korea provided technical support for Indonesia to establish a comprehensive EIA information system and this kind of mutual learning process will be helpful among Asian countries and beyond.

Korea's Ministry of the Environment (MoE) and the Korea Environment Institute (KEI) launched the Environmental Impact Assessment Support System (EIASS) in 2009. EIASS is an online information service to support the decision-making of EIA by providing environmental information such as project overview, environmental quality index and statistics, and spatial analysis. EIASS provides the following three main functions. First, it improves access to EIA and other related documents, including the Draft Environmental Impact Statement and Final Environmental Impact Statement, and also informs about the ongoing phase of the EIA process and the result of each phase. Second, it provides all EIA documents in full-text form from the previous projects. These are also opened to the public. Third, it gives sufficient environmental information such as environmental criteria, location of the cultural assets as well as the spatial and GIS database for making EIS.

In **Indonesia**, under legislation, all documents should be disclosed and public opinions can be accepted anytime during the EIA and environmental permit procedures. People have a right to access all the EIA documents at any time and give comments to decision-makers any time during the project lifetime through the EIA Information Systems ('DADU-Online'). Features available in the EIA Information Systems are as follows: (i) data input from EIA documents to the application system; (ii) chronology of the EIA process; (iii) geospatial data and information (need improvement); (iv) public notices of

the proposed project and environmental permit application; (v) all reference materials related to EIA; and (vi) access to EIA documents on-line. The government is still in the process of preparing for full disclosure of EIA documents.

In **Thailand**, in order to fulfil its duties and responsibilities under the Official Information Act (1997), the ONEP developed a computerised web-based database for information related to EIA such as projects and activities for which EIA reports were approved. The database includes information on EIA reports, Initial Environmental Examination (IEE), EIA report approval documents, EIA monitoring and audit reports, and a list of registered EIA consultants. The database can be remotely accessed and EIA information can be downloaded through the ONEP website.

A mobile application called “Smart EIA” was also developed to further improve the accessibility to EIA information by any interested person through a smart phone or a tablet from anywhere where a signal is available. The “Smart EIA” application is available for both IOS and Android operating systems and can be downloaded from the App Store and Google Play, respectively. The “Smart EIA” mobile application has the capability to search for: (i) EIA reports by project or activity names, provinces, owners and types; (ii) EIA approved projects and activities in the neighbourhood area where the smart phone is used; and (iii) quick scan of QR Code of EIA approved projects and activities.

In **Lao PDR**, project proponents are responsible for the disclosure of EIA and related information on their websites in the case of projects led by the private sector. The Lao government is still in the process of establishing an EIA information system. In the mean time, EIA-related information for private sector-led projects are required to be on the project proponent website.

Public participation

Several good practices are found from the case study although these may be addressing only a part of the challenges identified.

Public participation practices in **Cambodia** start from the screening stage. Public consultation, particularly with local authorities, on a project site at the screening stage helps to identify: (i) environmental concerns of the community; (ii) land use and land concessions already committed by government agencies; and (iii) locations of cultural, historic and conservation areas. Draft new EIA law in **Cambodia** has been developed in a participatory and transparent manner.

In order to get feedback from local communities and NGOs starting from the scoping stage of EIAs, the **Indonesian** government has established an expert committee including representatives of local

communities and NGOs, and seeks their input from the scoping stage of EIA. They find that input from local communities and NGOs is helpful since information provided by the project proponent at the scoping stage is very limited and it is hard to understand on-the-ground information at this stage.

In **Myanmar**, the role of civil society organisations has been vital in strengthening the capacity of people affected by the project to be involved in EIA monitoring, and in understanding the importance of scientific monitoring data upon which communities can leverage in their actions towards mitigating environmental impacts. The other good practice in Myanmar is that an NGO has been providing training for rural communities in order to enhance participation in public hearing meetings and thus improve their effectiveness.

3.4.5. Existing support provided by external institutions

Information disclosure

Web-based EIA information systems have been established in Indonesia, Korea and Thailand. However, Indonesia and Thailand still need to improve the system for full disclosure of EIA related documents, and Cambodia, Lao PDR, Myanmar and Viet Nam are still in the process of establishing web-based EIA information systems. Thus, these countries still need support to establish robust EIA information systems. For example, **KEI** provided technical support for Indonesia to establish a stringent EIA information system. This kind of mutual learning process among Asian countries and beyond will be helpful.

Regarding EIA-related information systems, **UNDP** in Lao PDR is supporting the establishment of a comprehensive database of investment project information in collaboration between the Ministry of Planning and Investment and the Ministry of Natural Resources and Environment in order to manage EIAs for all investment projects. In Indonesia, the information system on land use planning and the EIA system are linked to make sure that EIA is developed based on land-use planning. Linking EIA systems with other relevant system will be helpful to ensure collaboration with other relevant ministries.

Public participation

Regarding existing support for developing public participation guidelines, Finnish development agencies provide support to the Lao government to develop guidance for public involvement on EIA process between 2010 and 2015. The World Bank supported the development of Indonesia's public participation guidelines on EIA in 2004. Currently, **USAID** is supporting initiatives to develop

common guidelines on public participation in Mekong countries including Cambodia, Lao PDR, Myanmar, Thailand and Viet Nam. These initiatives mean that most of the countries will develop public participation guidelines. Even with these clear guidelines, each country will still need to ensure that the guidelines are actually implemented and it will be important to develop capacity to carry out meaningful information disclosure and public participation.

3.4.6. Discussion and ways forward

Information disclosure

As noted by Mitchell (1998), States need to be transparent about their behaviour as a way to enhance regime effectiveness, and it is vital to disclose relevant information about the projects as early as possible to ensure meaningful public participation in the decision-making process. Looking at Indonesia, Korea and Thailand, it can be seen that a web-based public EIA information system is a feasible and effective solution for this issue. In the transition period, another way will be project information disclosure through project proponents' websites under their responsibility, to address information disclosure considering the government's capacity as in the case of Lao PDR,. However, as Weil et al. (2006) and Gupta (2008) argue, it is also critical to consider whether information disclosure only from the supply-side of information is good enough so that the user side can contribute to effective decision-making. In this regard, information disclosure should be ideally tailored to the user side, feeding into the public participation process, identifying and inviting all relevant stakeholders, as well as addressing cultural, religious, literacy and gender diversity at the same time. The governments and/or project proponents need to identify the most effective ways of providing relevant information to all stakeholders, and collaborating with local governments and NGOs. Other good practices may help raise the standard of practice in the region. Project proponents tend to hesitate to disclose project information even though that information is critically important for stakeholders to understand the social and environmental impacts of the project. Thus, it is vital that project proponents fully understand the benefits of information disclosure and public participation for the effective process of project development.

Public participation

The 4th edition of the Introduction to Environmental Impact Assessment said that public consultation and participation aim to ensure the quality, comprehensiveness and effectiveness of the EIA, and that the public's views should be adequately taken into consideration in the decision-making process (Glasson et al. 2012). However, public consultation and participation in the seven study countries are still limited in a way to ensure the quality, comprehensiveness and effectiveness of the EIA.

Many countries have developed or are going to develop guidance for public participation. Thus, in order to ensure implementation of the guidance, sharing good practices of information disclosure and public participation as practical examples from their experiences may help others to follow. For example, in Indonesia, one of the projects applied to the Equator Principles was demonstrated as one of the best practices of community engagement for private sector investment in the country. Although it took time to achieve meaningful participation from the communities, the company was able to build trust with local communities, to proceed with the project without any delay in the schedule and to get full social license from the communities to operate in the areas.

At the same time, collaborating with local governments, organisations and NGOs will be one of the ways to ensure effective public participation since they often know the key local stakeholders, culture and languages. Providing training for facilitators of public participation can be another effective investment in each country. The timing of public participation is critical—Cambodia and Indonesia are trying to engage with stakeholders in the early stage of EIA to ensure a meaningful participation process. Awareness-raising with other ministries, project proponents and NGOs would be helpful so that the benefits of meaningful participation such as acceleration of the process, social license to operate, and risk and reputation management would be given full consideration. Securing enough budget for public participation in the projects will be another important aspect.

Each country is in a different stage of development and at a different level of EIA and so implementation and consequently strengths and weaknesses in the EIA system and/or its implementation varies. Going forward, there are thus many mutual learning opportunities to exchange information and share experiences on the ground. For example, experience in establishing a web-based EIA information system can offer a mutual learning opportunity for information disclosure. Actions taken by the Mekong Partnership Program can be considered as one of the most up-to-date efforts in addressing the issue of public participation in the region, and lessons can be mutually learned. It is also useful to provide training on effective public participation for relevant government officials, project proponents, local communities and NGOs; and for building the capacity of facilitators for public participation in each country. External institutions, the private sector and NGOs would each be able to play a vital role in this.

3.5. Implementation of Environmental Management and Monitoring Plan (EMMP)

3.5.1. Section summary

While rules and regulations on EMMP implementation are in place in most of the studied countries, compliance with the EMMP is often problematic. Insufficient implementation of EMMPs can be

attributed to a rudimentary EMMP which is sometimes too generic or unrealistic to implement. There may also be a lack of incentives for the project proponent to duly implement the agreed EMMP. In tackling these issues, some countries in the region have had successful cases.

Table 3.5.1. Summary of key challenges, good practices, and ways forward for EMMP implementation

Key challenges identified	<p>Environmental management</p> <ul style="list-style-type: none"> • Quality of EMP is not sufficient, often too generic or prescribing unrealistically high standards (Indonesia, Viet Nam) • Project proponents/owners sometimes do not comply with EMP (including the mitigation and monitoring plans) (Cambodia, Indonesia, Thailand, and Viet Nam). • Project proponents/owners are not motivated to implement EMP and monitoring (Indonesia) • Project proponents/owners sometimes do not comply with EMP (including the mitigation and monitoring plans) (Cambodia, Indonesia, Thailand, and Viet Nam). • Project proponents/owners are sometimes not motivated to implement EMP and monitoring (Indonesia) <p>Monitoring</p> <ul style="list-style-type: none"> • Budget and government capacity is insufficient for implementing a full-fledged monitoring (Viet Nam). • Monitoring items do not cover important items, e.g. biological or social aspects (Indonesia, Viet Nam) • Limited validity, accountability and use/effectiveness of monitoring results (Cambodia, Indonesia, Viet Nam)
Good practices found	<p>Environmental management</p> <ul style="list-style-type: none"> • Government strengthened rules, enforcement and penalties on EMMP implementation (Cambodia, Lao PDR) • Government identifies and awards good mitigation performance to incentivise project proponents to comply with EMMP (Indonesia) • A bottom-up approach was taken from the establishment and implementation of a small-scale integrative system nested in the national EIA system (Myanmar) • EIA was streamlined into project financing, e.g. mandating lenders to freeze loans when they identify debtors' non-compliance with EMP, in order to enhance their compliance with EMMP in the post-EIA phase (Indonesia) • Government collects and pools resources for mitigating unexpected environmental impacts (Indonesia) <p>Monitoring</p> <ul style="list-style-type: none"> • Review of monitoring reports was institutionalised to strengthen a control point of EMMP implementation (Korea) • Civil society actors were engaged in monitoring (Myanmar) • Independent monitoring agency was set up for 'complex' projects (Lao PDR). • Monitoring items are prioritized (Viet Nam). • Environmental compliance inspector system was introduced (Indonesia)
Ways forward	<ul style="list-style-type: none"> • Strategically identify intervention points from various options to achieve the enhancement of EMMP implementation • Promote information sharing among various actors to enhance cooperation • Build capacity of various actors including national and local governments, as well as non-state actors including finance, industry and civil society sectors.

These include: (i) strengthening of rules and enforcement procedures including stringent penalties on non-compliance in the EIA law in Lao PDR and Cambodia (in process); (ii) incentives for improving environmental performance in Indonesia; (iii) a bottom-up approach to strengthening national compliance mechanism on EMMP implementation from a special economic zone in Myanmar; (iv) involvement of project financiers to enforce EMMP implementation and prior deposit of the budget for mitigation measures in Indonesia; (v) prioritisation of monitoring items in Viet Nam; (vi) institutionalised monitoring review to strengthen the control points of EMMP implementation in Korea; and (vii) proactive participation of civil society actors in impact monitoring in Myanmar. Efforts in developing countries are often supported by external institutions such as ADB, JICA and USAID. The study results demonstrate that various options are available for policymakers and international aid institutions to strengthen EMMP implementation, corresponding to the issues that they are facing (Table 3.5.1).

3.5.2. Basic facts

Most of the seven case study countries have a compliance mechanism with penalties imposed on project owners for non-compliance, while almost a half of the countries have penalties for project owners and/or on EIA consultants when non-compliance was found.

Table 3.5.2. EMMP implementation

Process	System to reinforce EMMP	CM	ID	KR	LA	MY	TH	VN
EMP implementation	Compliance mechanism	N	M	M	M	M	M	M
	Penalties on non-compliant project owners	N	M	M	M	M	M	M
	Penalties on government personnel	N	N	M	N	N	M	N
	Penalties on EIA consultants	N	N	M	N	N	M	N
	Establishment of a funding mechanism, e.g. environmental conservation fund	N	M	N	N	M	N ¹⁾	N
Monitoring	Obligation for regular monitoring	M	M	M	M	N	M	M
	Disclosure of monitoring reports	V	M	M	M	M	M	M
	Participation of affected communities and/or civil society actors	N	N	V	M	M	V	N

CM: Cambodia; ID: Indonesia; KR: Korea; LA: Lao PDR; MY: Myanmar; TH: Thailand; and VN: Viet Nam

M: Mandatory, V: Voluntary; N; Not identified; 1) Similar mechanism exists but not specifically for EMP implementation.

In addition to these, two countries have established a funding mechanism to respond to unexpected impacts. Monitoring and disclosure of results are mandatory in many countries, but there are only a few cases where affected communities and/or civil society actors participated in the monitoring practices (Table 3.5.2). Formal mechanisms to enforce EMP and monitoring are in place in the most of the studied countries, but this is not necessarily associated with the actual EMP implementation.

3.5.3. Key challenges across countries

Non-compliance with EMP, including the mitigation and monitoring plans, is a paramount problem across many case study countries (Cambodia, Indonesia, Thailand, Viet Nam). This is largely attributed to weak enforcement by national and local governments. Non-compliance may also be linked to limited motivation for project proponents (Indonesia), imposed penalties/disincentives being too light (Viet Nam) and/or the insufficient quality of EMP developed before the approval. In the latter case, implementation is frequently hindered by proposed mitigation actions prescribed in EMP being too generic or of an unrealistically high standard (Indonesia). There may also be technical difficulties in managing and monitoring cumulative impacts from the projects in nearby sites.

Monitoring is an essential means to ensure the effectiveness of EMP. It however entails many issues including: (i) budget limitation for monitoring; (ii) insufficient coverage of important monitoring items particularly on biological and social aspects; (iii) monitoring results not linked to the improvement of environmental performance (Indonesia, Viet Nam); (iv) data manipulation by the project owners; (v) insufficient data auditing and supervision (Cambodia, Indonesia); (vi) limited transparency in the monitoring activities; and (vii) limited information disclosure of monitoring results to the local communities (Indonesia).

3.5.4. Good practices or lessons learnt to address key challenges

Strengthening rules and enforcement

In **Cambodia**, the EIA Department issues an environmental protection contract to a project proponent upon the approval of EIA, which is legally binding and requires project proponents to fulfil obligations of implementing EMMP. The new draft EIA Law provides stringent penalties for violation, including temporal closure of a project.

In **Lao PDR**, in order to ensure implementation of environmental social management and monitoring plan (ESMMP) for one of the controversial hydropower projects, the Lao Government in consultation with the World Bank made a statement on environmental and social conditions of the project as a part

of a legally binding concession agreement with project proponent. With the success of this approach, the Lao government has developed a SESO template for the hydropower sector (aforementioned).

In **Lao PDR**, under the Ministerial Instruction on Environmental and Social Impact Assessment (ESIA) Process of the Investment Projects and Activities (2013), the ESMMP as part of ESIA report must be certified by the Environmental Compliance Certificate (ECC) and renewed throughout the investment period of the approved project. ESMMP is valid only for a period of two to five years, depending on the determination of MONRE. Thus, the project owner should review and revise the ESMMP to reflect the actual circumstances in each period in the project, and submit the revised ESMMP to MONRE for approval and renewal of the ECC.

Also in **Lao PDR** for ‘complex’ projects (definition is case-by-case), the Government asks developers to establish an Independent Monitoring Agency (IMA) to hire specialists to independently monitor the project. The cost of this IMA should be covered by project proponents. The frequency of monitoring depends on each project, but in one case, IMA monitors a project quarterly and their monitoring reports should be open to public.

Positive incentives for improving environmental performance

Indonesia has a unique awarding system (PROPER) to incentivise project proponents for the compliance with EMP. In PROPER, the Ministry of Environment and Forestry assesses the gas and water emissions from the production facility of the types that commonly associate significant air and water pollution, rate their achievements against their mitigation goals, and award them with gold, silver or bronze medals according to their achievements. With this system some project proponents have carried out the EMP implementation well.

A bottom-up approach to complement national EIA system

Myanmar saw the promulgation of the first national EIA law only recently, in December 2015. A national-level system for enforcing and monitoring EMP implementation is currently under development. The rapid influx of foreign investment since economic liberalisation in 2011 and the accompanying negative environmental consequences call for immediate measures to mitigate environmental impacts. Special economic zones (SEZs) and industrial parks constitute the major locations for foreign industrial investment, which basically has gone through a provisional (Dec 2015) or formal (Jan 2016) EIA procedure in their development phase. What is commonly lacking is an effective mechanism to manage environmental impacts caused by their tenant factories, e.g. air, liquid and solid waste emissions. The Thilawa SEZ, developed by a consortium of a state-owned company

and a Japanese private sector company, is the first SEZ in the country to establish an integrated environmental management system that constitutes a sub-set of the new national EIA system, including efficient application of EIA procedures for incoming tenants, as well as the supervision on EMMP implementation for existing tenants. The SEZ management office ensures the linkage between its own environmental management system and the national EIA system by assigning an expert seconded from the government EIA authority to its environmental management division. Success with this pilot scheme could encourage a bottom-up approach to strengthening EMMP implementation on a broader scale. For complex projects in **Lao PDR**, the government asks developers to establish an independent monitoring agency (IMA) to hire specialist to independently monitor the project. The definition of complex projects is not explicit and it depends on the project. Frequency of monitoring depends on each project, but for one project, IMA monitors a project quarterly and the monitoring reports should be open to the public. Project developers have to bear the cost of IMA.

Approach from project financing

In **Indonesia**, Bank Regulation 2012 concerning the Assessment of Commercial Bank Asset Quality (aforementioned) mandates lenders to freeze loans when they identify debtors' non-compliance with EMP, in order to enhance their compliance with EMP in the post-EIA phase.

In **Cambodia**, a new draft EIA Law dated 5 February, 2015 obliges project proponents to contribute a minimum of one percent of the project cost to an Environmental and Social Fund, created by the Ministry of Environment (MoE). The fund shall be created by the MoE to provide finance for the restoration of the environment, conservation of biodiversity and social development in and around the area where the project is located.

On a similar note, **Indonesia** has established a Return on Shareholder Funds under the Ministry of Environment and Forestry, which is based on the collection of payments from project proponents. The fund can be used for mitigating impacts when a project proponent cannot take mitigation actions because, for example, the company goes bankrupt before decommissioning.

Prioritisation of monitoring items

In **Viet Nam**, to effectively cover important monitoring items with limited budget, monitoring items were prioritised based on the intensity of predicted impacts and their perceptions by local people, as well as by the use of proxy indicators. The Thac Mo Hydropower expansion project was predicted to have a significant impact on river water quality, inviting resistance from local people. However it was seen to have less impact on air quality, so monitoring items on water pollution were strengthened while

those on air quality were reduced. On air quality, turbidity and suspended dust were used as proxy for total suspended solid (TSS) and PM10 as these four indicators showed a strong positive correlation.

Review of monitoring reports by an expert institution

EIA law in **Korea** mandates the project proponents to submit impact monitoring reports after the commencement of construction, while the effectiveness of the review and supervision by the Ministry of the Environment has long been questioned due to its limited staff capacity to bear this responsibility. Recognising the importance of strengthening the supervision on post-EIA monitoring, the 2015 revision to the EIA law specified institutional arrangements to review the monitoring reports by five national research institutes led by the Korea Environment Institute, a third-party organisation under the Prime Minister's Office with a mandate to conduct professional reviews on EIA and related reports.

Role of civil society in monitoring

A community-based approach is also taken in **Myanmar** to fill this institutional gap around monitoring. Eco-Lab, a local environmental NGO, with financial support from the French Government, provides training and equipment to local communities for sampling and measuring air and water pollutants in the areas polluted by various types of projects including industrial development and gold mining. This provides affected local communities with clues for negotiating with the polluters backed by scientific evidence. Such grass-root efforts even on a small scale, demonstrate how civil society sector can effectively complement gaps in formal environment management institutions.

3.5.5. Existing support provided by external institutions

Donors have already been playing a major role in strengthening EMMP implementation especially in developing countries, and the above described good practices are not exceptions. Development of SESO in Lao PDR was supported by the **World Bank, Finish development agencies and UNDP**. JICA has been providing technical assistance to the development of EIA-related institutions and procedures in Myanmar, which also have contributed to the establishment of the linkage between the national EIA system and the environmental management system in Thilawa SEZ. A Sustainable Finance Program and Roadmap in Indonesia were developed with technical assistance from **USAID**. The **French Government** has been providing financial support to a CSO to support community-based monitoring. This kind of international assistance has already demonstrated effectiveness and thus can provide important lessons for strengthening EMMP implementation beyond respective projects. The areas where additional international support is needed include the development of sectoral monitoring guidelines (Cambodia), establishment of a consultant registration system (Thailand), capacity building

for those government officials who will be involved in the enforcement of strengthened penalty system (Cambodia) as well as for non-state actors including environmental compliance inspectors (Indonesia), project proponents, consultants and commissions.

3.5.6. Discussion and ways forward

Challenges in EMMP implementation are multi-faceted, and correspondingly various approaches to their solution have been taken by different actors in case study countries. These are not limited to the improvement in formal institutions centred on national EIA law and associated policies, but also include actions taken by other sectors including finance, industry and civil society. Their collective actions may be more effective to consolidate and operationalise key components to strengthen EMMP implementation. The existing practices demonstrate various options available for policymakers and external institutions to strengthen EMMP implementation, corresponding to the issues that they are facing, as well as in accordance with specific policy contexts and resource availability. Other possible effective measures that have not been identified in the case study countries include adaptive management, impact off-set, monitoring by independent institutions and local communities, as well as the monitoring of cumulative impacts. These also could provide to various actors the basis for strategically identifying intervention points, as well as for enhancing cooperation among different actors, towards a shared goal of strengthened EMMP implementation.

3.6. Strategic Environmental Assessment and Upstream EIA

3.6.1. Section summary

There is a large difference in the level of practice between the countries already practising SEA and those that are not. This may reflect the development history of safeguard systems in response to large-scale infrastructure projects and related assistance received from development agencies in each country. Those case study countries which have a longer history of EIA practice tend to have more experience in practising SEA for spatial or land use planning for larger territories (Indonesia, Viet Nam, Korea). Overall, it seems that study countries see the expected benefits and necessity of SEA, but the largest challenge likely lies in lack of or insufficient hands-on application. Commonly-found challenges in implementation of SEAs include lack of or insufficient baseline data and the timing of such upstream assessment. This is critical to avoid project-level sub-optimal decisions from a macroscopic point of view, which can often be challenges in EIA implementation for project-level decision-making. On the other hand, in the absence of a formal SEA system (legal basis and practical guidelines), more discussion is called for on how each government wishes to use SEA, raise public participation in decision-making, and materialise its benefits from this participatory and transparent process for its longer-term policy-level planning (Table 3.6.1).

Table 3.6.1. Summary of key challenges, good practices, and ways forward in SEA and upstream EIA

Key challenges identified	<ul style="list-style-type: none"> • No system of SEA or its legal basis and technical guidelines for implementation and associated institutional capacity exist (Cambodia, Lao PDR, and Myanmar, Thailand). • Inter-agency coordination and consultation is poor in many countries. • Baseline data is not available. • Securing transparency in the decision process or conflict resolution is difficult in many countries. • Securing appropriate resources is difficult or there is no strong willingness in many countries.
Good practices found	<ul style="list-style-type: none"> • SEA is applied to landfill site decision (Korea). • Environmental Protection Planning (EPP) component was added in the Law on Environmental Protection (Viet Nam).
Ways forward	<ul style="list-style-type: none"> • Raise awareness of the public participation • Increase hands-on experience and applications for policy-level decision making and avoid EIA coming to place too late. • Support SEA or other policy-level decision making with data collection and/or other policies/regulations that help mainstream environmental and social safeguards.

3.6.2. Basic facts

Among case study countries (Cambodia, Indonesia, Korea, Lao PDR, Myanmar, Thailand, and Viet Nam), Korea, Viet Nam and Indonesia have established SEA under their respective laws (Environment Preservation Act in Korea, Law on Environmental Protection in Viet Nam, and Environment Protection and Management Act in Indonesia) and provided details in ministerial regulations or decrees. In other case study countries, SEA is not yet required (Cambodia, Lao PDR and Myanmar) or it is specified by the administrative guidelines (by the National Environment Board in Thailand). Provision of SEA for sector-wide assessment or linkage with land use planning are found in Korea, Indonesia, and Viet Nam (IGES 2016). SEA has been conducted by line ministries and local governments in Indonesia and by the environment department of line ministries in Viet Nam. SEA for policy-level planning is rarely conducted in Korea, but Strategic Environment Impact Assessment (SEIA, since 2012) has been applied for plans and programme level assessment. Cumulative assessment has been conducted for hydro-power projects in Lao PDR.

Table 3.6.2. SEA laws and guidelines

Country	SEA law (Year)	Guidelines
Cambodia	N	N
Indonesia	Y (2011)	Y
Korea	Y (2012)	Y
Lao PDR	N	N
Myanmar	N	N
Thailand	N	Y
Viet Nam	Y (2006)	Y

3.6.3. Key challenges across countries

Reflecting the fact above, many countries expressed their interest and need for having a system of SEA or a legal basis and technical guidelines for implementation along with associated institutional implementing capacity at the last workshop in February in Tokyo and the meeting in February 2016 in Bangkok gathered by the government officials in charge of EIA and experts from case study countries, funded by the Ministry of the Environment, Japan (MOEJ). Cambodia, Lao PDR, Myanmar, and Thailand share a common challenge from lack of legal basis, many countries expressed difficulty in inter-agency coordination and consultation, lack of baseline data (existing and immediate challenges), as well as securing transparency in the decision-making process and appropriate resources and willingness (financial and human) for implementation (foreseen challenges).

3.6.4. Good practices or lessons learnt to address key challenges

Korea shares a good practice in application of SEA to landfills. The location of landfills caused many conflicts with local residents, and it was often the case that the locations were already decided although SEA process required alternative locations. In Cheongju-si (municipal waste treatment facility, approximately 240,000 m²) according to waste management-related regulations (Act on Promoting Installation of Waste Treatment Facilities and Supporting Surrounding Areas), a siting committee was organised made up of experts, resident representatives, city councillors, and government officials and made it possible to conduct evaluation of two locations. The process took about 2.5 years to complete. Lessons drawn include that the assessment considered acceptability of the residents and the appropriate location was selected in the planning phase before designing and impact assessment.

Viet Nam added an Environmental Protection Planning (EPP) component to the Law on Environmental Protection (No. 55) in 2014 to apply it to 10-year socio-economic development planning, which is the highest level of policymaking prepared by the Ministry of Natural Resources and Environment (national level) and by the People's Committees (provincial level). EPP provides guidance and targets to SEA, covering a wide range of environmental issues (status of environment,

climate change, environmental zoning, biodiversity, forest conservation, management of oceans, islands, rivers or waste, and environmental protection infrastructure/monitoring system). Viet Nam has conducted a number of SEAs (economic zone development, city development plan, hydropower development, cumulative impact assessment, etc.) with assistance from development agencies. The Ministry of Natural Resources and Environment and the Ministry of Planning and Investment offer trainings to their staff.

Indonesia has experience in applying SEA for spatial planning and development planning: General Spatial Plan (26 provinces, 378 regencies, and 86 municipals) and Medium Development Plan (33 provinces), and Master Plan for Acceleration and Expansion of Economic Development (evaluation of the Master Plan and Sumatera, Kalimantan, Sulawesi, Bali & Nusa Tenggara, and Maluku & Papua Economic Corridors). The Ministry of Environment and Forestry (MOEF) has set up new Directorate responsible for SEA in 2015 (MOEF Regulation No. 18)

3.6.5. Existing support provided by external institutions

In Indonesia **DANIDA** supported the development of SEA guidelines and SEA training (2009-2012).

In Lao PDR, **UNDP** support developing new set of comprehensive database to manage investment projects for Lao PDR for Ministry of Planning and Investment (MPI) and Ministry of Natural Resources and Environment (MONRE).

SIDA also organised SEA training (around two weeks) for government and NGOs in the Mekong region in 2014.

ADB supported delivering training to the Ministry of Environmental Conservation and Forestry (MOECF) and other sector ministries in Myanmar intended to raise awareness across line ministries and develop capacity on strategic environmental assessment (SEA), and promote future adoption and application.

3.6.6. Discussion and ways forward

The above examples in Korea and Viet Nam demonstrate strategic decision-making prior to EIA at the project level. These specific cases do not necessarily indicate that the SEA system functioned by itself, rather they suggest upstream decision-making was possible and beneficial with support from related regulations. Lohani et al. (1997) earlier indicated the limitation of EIA and suggested ‘new’ approaches where conventional EIA is not adequate including class assessment, programmatic EIAs, sectoral EIAs, regional master planning, development strategies and national budget. There were many

cases where policy-level studies or decision-making came too late. Baird and Frankel (2015) in their comparative assessment of EIA in Lower Mekong Countries also point that the implementation of EIA processes often start too late. The World Bank (2012) emphasises that the timing of conducting SEA is crucial. Korea's case above would underpin this point.

Indonesia also seems relatively advanced with applying SEA for spatial and development plan for larger territories. The World Bank (2012) notes priorities are shifting with climate change mitigation efforts in Indonesia and Viet Nam. Asia also has many ecologically-sensitive spots. SEA will have a larger role in sector-wide (including watershed, biodiversity, etc.) or cross-sectoral (economy-wide) decision-making within and beyond each country's boundaries to achieve a greater good and avoid sub-optimal decisions made by multiple project-based assessment processes. According to UNEP (2004) SEA is generally characterised as proactive, participatory and transdisciplinary, and it will likely become an increasingly important policy level tool for sustainable development. This may require bottom up capacity building.

One of the critical premises of SEA is the participatory process. OECD's definition of SEA is 'analytical and participatory approaches to strategic decision-making that aim to integrate environmental considerations into policies, plans and programmes, and evaluate the inter linkages with economic and social considerations' (OECD-DAC 2006). Another example of the definition of SEA from a newer and practical guideline is 'a strategic framework instrument that helps to create a development context towards sustainability, by integrating environment and sustainability issues in decision-making, assessing strategic development options and issuing guidelines to assist implementation' (Partidário 2012). These definitions share the core objective that environmental issues should be integrated into decision-making. The importance of dialogue with potentially affected communities and concerned authorities (line ministries with whom the divisions in charge of EIA often encounter difficulties) at an early stage and throughout the assessment process cannot be stressed enough. The World Bank (2012) echoes this and notes that the participation should be meaningful, not just providing comprehensive information. Although the case is not related to SEA, Thailand recognises the need for assistance to make complex issues understood by the affected local communities for them to raise their voices. SEA as a system in the upstream is assumed to facilitate inter-agency coordination and consultation and thus improving the transparency in the decision-making process. However, existing examples in the case study countries failed to shed light on how efficiently they facilitate the consultation process. Li (2008) points out that in Lower Mekong countries coordination is weak and EIA is often trumped by more powerful ministries. Yet, whether there is an SEA or not, political influence over large-scale or high-profile projects or plans seems to be an avoidable concern in case study countries.

Another significant hurdle for case study countries is a lack of baseline data for conducting SEA or any pre-project appraisal. This could be considered as a concrete entry point or a package to develop SEA or SEA system. The World Bank (2012) notes that a lending portfolio cannot always include SEA within the context of project preparation, Alternatively there is pressure to address project-specific safeguard requirements. Raising the level of availability and quality especially for critical data would ease this difficulty to some extent. Ultimately, it is desirable to have a dataset in the region with common definitions which can allow not only transboundary assessment but also region-wide policymaking.

Going forward, it seems that the case study countries see the expected benefits and necessity of SEA overall, and the largest challenge likely lies in the lack of hands-on experience. Countries where the SEA system is not set up yet can consider developing or adding to the existing legal framework with the assistance from developing agencies or neighbouring countries, whereas those that already have an established SEA can accumulate experience, improve and then share lessons with other countries. Basic data collection and sharing may need to be addressed within the SEA-EIA framework or beyond at the national level. To ensure meaningful participation by concerned stakeholders, SEA system can be strengthened by providing technical guidelines for implementation and/or assisted by related regulations. In Thailand, disclosure of EIA-related information is supported by a separate law (Official Information Act). The World Bank (2012) identified in its global assessment of SEA that East Asia and the Pacific region needs capacity development (relatively more than awareness-raising and knowledge-sharing) and recommends upstream (macro-level) decision-making and large infrastructure projects and programmes as potential entry points for SEA. Lastly, there still remains the daunting task of addressing how to effectively assess transboundary impacts and accumulated impacts and how to deal with or mainstream issues derived from climate change and shrinking biodiversity. EIA or SEA by themselves will not likely be able solve these problems, but EIA and SEA can evolve, assist or in some areas, lead the problem-solving as these safeguard systems are positioned upstream of the policymaking or project implementation so that they can set the tone right and avoid end-of-pipe pollution control.

4. Synthesis

This section attempts to synthesise the findings and discussions made in the previous sections and summarise them into a few key issues for policymakers in particular to strengthen EIA implementation in Asia in a broader perspective. Focus was given to how better EIA practices and policies can support the sound implementation of EIA and protection of a country's environmental and social conditions,

as well as achieving inclusive sustainable development. Synthesis of the above findings is attempted through three key perspectives: (i) EIA as a project planning and management tool; (ii) EIA as a tool for participatory decision-making processes; and (iii) implications as a policy planning tool towards sustainable development.

EIA as a project planning and management tool

To ensure EIA is used as a project planning and management tool, the study identified three key areas that need to be improved: (i) collaboration with other ministries; (ii) capacity development; and (iii) compliance mechanisms. First the environment agency needs to establish the necessary collaboration with line ministries and local governments who are in charge of projects. In most studied countries, the ministry of environment or an expert review committee has the authority of final approval of the environmental permit which is a condition of project approval under EIA legislation. However, there are still several projects that have received project approval and/or started construction/operation without a review from the environment ministry and/or conducting the full EIA process. Some study countries are closing such loopholes, for example by revising legislation of line ministries in Indonesia, or requiring environmental permission as a pre-condition under the foreign investment law in Myanmar. More stringent laws with penalty clauses, which are also applied to government officials, are being considered in Cambodia under the proposed new environmental code. A comprehensive project management online database between the Ministry of Planning and Investment and Ministry of Natural Resource and Environment is under development in Lao PDR.

Second is the necessity of capacity development for personnel involved in EIA implementation including national and local government staff, EIA consultants, local communities and NGOs. Capacity development of government officials, particularly in local government and line ministries, is vital to improve screening, scoping, review and monitoring of projects as a part of the EIA process. Capacity development for EIA consultants and facilitators of public consultation are also important to achieve sound implementation of EIA. The study finds that provision of training for sound implementation by national and local government and EIA consultants in Lao PDR, Myanmar and Indonesia, through collaborating with external institutions such as ADB, JICA, US-EPA, UNDP, has been a good practice to address these issues.

Third is that the study found a variety of compliance mechanisms including those to ensure implementation of EMMPs which is a common challenge. Many countries are struggling to ensure implementation of mitigation measures that project proponents promised to conduct as one condition when receiving environmental permits for projects. Innovative approaches to address this issue include incorporation of the EMMP as a part of the concession agreement for the project (Lao PDR), regular

review of the environmental compliance certificate (Lao PDR), review of monitoring reports by an external institution (Korea), and establishment of independent monitoring bodies (Lao PDR).

EIA as a tool for participatory decision-making process

Ensuring stakeholder engagement is a critical component embedded in the EIA systems and was discussed in this study in two dimensions: information disclosure and public participation. The former may be considered as only a necessary condition for supporting the ‘right to know’ but it provides the foundation to various stakeholders for the latter. While all study countries established an EIA system with information disclosure and public participation components, the current practices in many studied countries come up short when it comes to meaningful participation for effective decision-making of projects. Stakeholder identification and engagement from the earliest possible stage to monitoring and closure of projects, appropriate information disclosure, as well as collaboration with local organisations and NGOs on stakeholder engagement are considered to be effective practices. Good practices of stakeholder engagement from this study include an expert committee involved in the scoping stage in Indonesia, site visits and stakeholder consultation during the screening stage in Cambodia, and NGO involvement in project monitoring in Myanmar.

More broadly, the perspective on public participation may not be always positive and can sometimes be myopic, when project proponents fail to see the longer-terms risks and costs arising from insufficient consultation with the public. It is desirable that the process be supported by transparent procedures (laws, regulations, guidelines) and set a reasonable timeframe to settle any concerns. However, determining how much consultation is enough to make a democratic decision is easier said than done. Exchanging good practices and sharing experiences on a ground through face-to-face and/or on-line forums or the projects such as the Mekong Partnership for the Environment supported by the USAID (ongoing from 2014, focusing on Lower Mekong Countries), are vital to offer regular learning opportunities. As manifested in the sustainable development goals, public participation may become even more important in the context of inclusiveness in achieving sustainable development.

Implications to policy planning beyond project-level decisions for sustainable development

While EIA has been one of the primary country systems to ensure environmental safeguards, addressing the issues beyond narrowly defined project level such as cumulative impacts, transboundary impacts, climate change impacts, impacts on biodiversity requires additional processes such as SEA, vulnerability assessment, and others. SEA suggests a systematic upper-stream science-based analysis and recommendations for ‘cleaner production’ of spatial, sectoral or strategic plans to

avoid sub-optimal micro-level decisions and opt for longer-term decisions. In reality, however, the applications are still generally limited and various methodologies are being developed. Only a few study countries have established legal bases for SEA and apply it for land use planning, or receive training for implementation (Korea, Indonesia, and Viet Nam). Key issues identified in implementing or introducing SEA include the integration of project planning into land use planning, zoning, and/or land ownership, necessary data collection and disclosure, and consistency of projects with other existing plans within a country or in the region which require coordination with other related ministries and agencies.

In Indonesia and Korea, EIA and land use management systems have better integration and this type of cross-referencing can shed light on the possible synergies or conflicts/inconsistencies with other existing regulations or systems. In Viet Nam, government officials are discussing what kinds of infrastructure, structure, or culture should be inherited by future generations in the process of SEA. Another similar good practice found from this study at the policy level (beyond project level) was that in Indonesia the loan approval by financial institutions uses the EIA system in their appraisal process to ensure environmental risk management.

Another long-standing issue surrounding policy-level planning is data collection and improving its consistency within a country or in the region (harmonisation). Such collaborative efforts will enhance the chances of assessing impacts beyond each nation's borders. Organisations such as ASEAN and ADB (especially in Lower Mekong countries) have been assisting the region in this area.

Limitation of this report and future research need

Overall, what this study found from seven case study countries is within the general scope of what existing literature recommended or suggested. However, safeguarding systems in the case study countries are advancing and will be evolving. One of the severe limitations of this study is that it lacks discussion on social impacts including resettlement or dispute resolution that have often surfaced as critical concerns in the affected communities. The study also failed to cover other potential environmental impacts (either existing or foreseeable) such as climate change and biodiversity, partially reflecting the fact that practices or documents on these issues are still at a nascent stage. Future research on these issues with sufficient numbers of case studies and evidences may become useful.

In addition to conducting comparative analysis, there may be many possible opportunities for Asian countries to exchange information, share good practices and learn from each other. Besides the provision of technical assistance by experienced development agencies, mutual learning between

practitioners is considered effective and often mutually beneficial. Such hands-on learning opportunities would help improve EIA implementation and sustainable development planning in the region.

Acknowledgements

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Annex 1: Scoping items

Category	Items	CM	ID	KR	LA	MY	TH	VN
Physical Environment	Topography	Y	Y	Y	Y	Y	Y	Y
	Land slide, Falling				Y			Y
	Subsidence		Y					Y
	Soil, Erosion, Soil pollution	Y	Y	Y	Y	Y	Y	Y
	Geology	Y		Y		Y	Y	Y
	Natural resources	Y	Y				Y	
	Surface water, Underground water	Y	Y	Y	Y	Y	Y	Y
	River, Creak, lake, shore erosion							Y
	Sedimentation of River, Lake, and Sea	Y	Y		Y	Y		Y
	Wetland, protected flood place					Y		
	Sea, Ocean			Y			Y	
	Climate, weather	Y		Y		Y		Y
	Air	Y	Y	Y	Y	Y	Y	Y
	Odour			Y				
	Noise, Vibration	Y	Y	Y	Y	Y	Y	Y
Biological	Fauna	Y	Y	Y	Y	Y	Y	Y
	Flora	Y	Y	Y	Y	Y	Y	Y
	Vegetation, Forest	Y	Y	Y		Y		Y
	Protected species	Y	Y	Y		Y	Y	
	Ecosystem, vulnerable ecosystem	Y	Y	Y	Y			Y
	Biodiversity including important habitat	Y	Y	Y		Y		Y
Industry and infrastructure	Socially, economically, culturally valuable species					Y		
	Drinking water, water supply, watershed protection forest	Y				Y	Y	
	Transportation	Y				Y	Y	
	Energy, Electricity	Y				Y	Y	
	Flood and river control					Y	Y	
	Agriculture					Y	Y	
	Forestry					Y		
	Industry						Y	
	Mining						Y	
	Tourism	Y						
	Local economy	Y		Y			Y	Y
	Waste			Y	Y			
Life and culture	Land use	Y		Y		Y	Y	
	Population	Y	Y					
	Livelihood	Y	Y					
	Resettlement	Y	Y		Y			
	Land acquisition		Y		Y			
	Indigenous people, Ethnic minority		Y		Y	Y		
	Public health and well-being	Y	Y	Y			Y	
	Health			Y		Y	Y	Y
	Working health						Y	
	Cultural heritage, temples, customs, traditions	Y				Y	Y	
	Amenity, Recreation		Y		Y	Y	Y	
Global warming and risk	Educational value, Education	Y				Y		
	Landscape		Y	Y	Y	Y		
	Effect of Global Warming		Y	Y	Y			Y
	Impact on Global warming		Y	Y	Y			Y
	Risk of accident and natural disaster							Y

M: Cambodia; ID: Indonesia; KR: Korea; LA: Lao PDR; MY: Myanmar; TH: Thailand; and VN: Viet Nam

Annex 2: Summary of EIA systems in each country

A.1. Cambodia

Legal framework

Key legal framework of environmental impact assessment in Cambodia is the Sub-decree on Environmental Assessment Process, No. 72 ANRK.BK, Royal Council of Ministers, Phnom Penh, August 11, 1999, which was established to enforce the EIA provisions of the Law on Environmental Protection and Natural Resources Management (1996). In 2009, Prakas on General Guidelines for Developing Initial and Full Environmental Impact Assessment Reports, MOE, N. 376 BRK.BST Phnom Penh, 02 September 2009 had been approved by Ministry of Environment. This document prescribes procedures for preparing Initial EIA (IEIA)/ EIA reports and related documents and the contents of IEIA and EIA reports.

Organisational structure and capacity

The Department of Environmental Impact Assessment (DEIA) is located under the General Directorate of Environmental Protection. Total staff of DEIA, reported in December 2014, is 65, including: 1) Administrative and Finance office (6-9 staff), 2) Disputed Legislation and International co-operation Office including two teams for Law Enforcement (10-11 staff), 3) Planning and Statistics Office (6 staff), 4) Review Office including four teams of 3-4 persons per team (7 staff), 5) Monitoring Office including four teams (14 staff), 6) Environmental and Social Fund Office (opened in 2012) (3 staff) and 7) Following and Responding Environmental News Office (opened in 2013) (3 staff). All investment projects valued less than US\$2.0 million should be review by the Provincial Departments of Environment for review and their review system. DEIA process around 100-180 projects per year.

Procedures

Project proponents need to provide preliminary project plan. Based on the plan, the Review Office of DEIA will visit a project site, screen projects and decide whether the project needs IEIA or EIA. Based on screening, project proponent will develop TOR of EIA and TOR will be reviewed by DEIA. Based on TOR, project proponent will assess the projects. IEIA/EIA need to include: 1) introduction (project overview, objectives, methodologies and scope of studies), 2) legal frameworks, 3) project description, 4) description of existing environment, 5) public participation, 6) environmental impacts and mitigation measures, 7) environmental management plan, 8) economic analysis and environmental value, 9) conclusion and recommendations.

Within 30 working days, EIAs are reviewed by 1) the Review Office in DEIA, 2) the MOE's Technical Working group including other departments of MOE and 3) inter-ministerial committee. Based on the comments, project proponents will revise EIA. After completed all these review, MOE sends a common letter incorporating all comments from these review to project proponents. Project proponents will revise IEIA/EIA based on the common letter. Project proponents will get a final approval of IEIA/EIA from MOE based on revised IEIA/EIA. The Joint Declaration between MoE and Ministry of Economy and Finance (MEF) on Determination of Service Fee for EIA reviewing and Monitoring (2012) states that project proponents have to pay IEIA/EIA review and monitoring fee, depends on project size and others, to MOE through MEF.

Under the *Sub-decree on Environmental Assessment Process (1999)*, MOE has to follow up, monitoring and other appropriate measures to secure implementation of environmental action plans in IEIAs/EIAs by project proponents.

Information disclosure and public participation need to be conducted by project proponents throughout IEIA/EIA process. MOE provides oral guidance of three stages of public participation to project proponents on 1) screening stage to explain about the project and get feedback from local stakeholders, 2) assessment stage to conduct assessment including interview to local stakeholders and 3) after finishing assessment to explain results of assessment and mitigation measures. However, this guidance has not been in a written document yet.

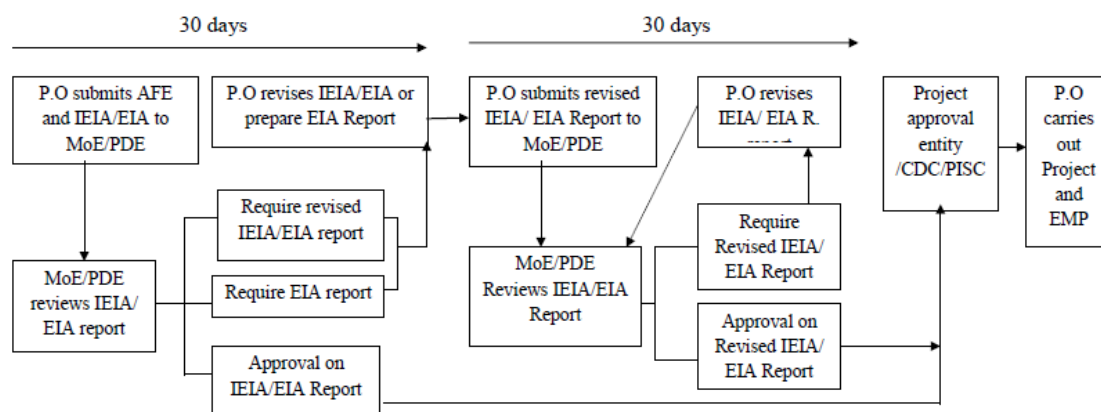


Figure A1.1. IEIA/EIA procedures in Cambodia

Note:

IEIA: Initial Environmental Impact Assessment; EIA: Environmental Impact Assessment;
 CDC: Council for Development of Cambodia; EMP: Environmental Management Plan;
 MoE: Ministry of Environment; P.O: Project Owner; PISC: Provincial Investment Sub-committee;
 PDE: Provincial Department of Environment; and AFE: Application Form of Environment.

Major challenges and needs regarding EIA system and its implementation

Quality of EIA

- TOR of IEIA/EIA depends on project by project bases and there is no guidance to develop TOR of IEIA/EIA.
- There is no sector, technical or public participation guidelines for IEIA/EIA.
- There is no clear description about mitigation hierarchy in the EIA Sub-Decree.
- There is no requirement in the Sub-Decree on EIA to consider project alternatives in EIAs.
- **National government:** MOE took around 80-100 days to complete their review and send a common letter to project proponents. It is difficult to finish 2-3 review meetings within MOE within 30 days
- **Local government:** MOE does not have clear understanding of the EIA review process carried out by provincial governments (for all investment projects of value <US\$2 million) and no statistics are available to estimate the number of IEIAs or EIAs reviewed and approved by provincial authorities

Information disclosure and public participation

- There is no clear guidance of timing and measure of public participation and information disclosure under the EIA Sub-Decree.
- Final IEIA/EIAs have not been disclosed to the public although project information is supposed to be distributed to local stakeholders during screening stage, results of assessment should be shared with local stakeholders, and draft IEIA/EIA distributed to NGOs for their comments at the Inter-ministerial IEIA/EIA review meeting.

Environmental management and monitoring

- There is no penalty for non-compliance under current EIA Sub-decree.
- Limitation on monitoring capacity of both MoE and Provincial Environmental Department staff.
- Monitoring of projects is supposed to be done by MOE, not Project Proponents although Project Proponents have to develop monitoring plans and submit quarterly environmental monitoring report.
- Project proponents rarely submit quarterly monitoring report to MOE as stated in the EIA guideline.
- There are 190 projects (EMP-IEIA/EIA approved) and 1209 projects (Environmental Protection Contracts) that MOE is supposed to monitor; however, MOE's capacity of monitoring is very limited.
- No sector guidelines for conducting environmental monitoring report.
- Monitoring fee is too small to conduct monitoring twice a year by MOE.

Strategic Environmental Assessment

- There is no requirement for SEA under the current laws.
- While some projects and activities go straight to the Council for the Development of Cambodia (CDC) for approval before MOE approval of project IEIA/EIA, MOE does not review all projects and activities of the private or public to decide whether the projects need to conduct IEIA or EIA.

A.2. Indonesia

Legal framework

The general framework related to EIA system is stipulated in Act No. 32/2009 concerning Environmental Protection and Management (EPMA). The EIA system covers from SEA stage, EIA stage, Implementation stage, Closure stage and Post closure stage. The Government Regulation No. 27/2012 lays it down about Environmental Permit (EP). Types of businesses and/or activities subject to EIA (AMDAL) are given in the MoE Regulation No. 05/2012. The MoE Regulation No. 16/2012 is a Guideline for Compiling/Preparing EIA (AMDAL), UKL-UPL and SPPL. There are some technical guidelines for Scoping, Water quality, Review by project type, Health Impact Assessment, Social impact assessment, Cumulative impact Assessment etc.

Organisational structure and capacity

EIA review capacity

EIA Review is conducted by EIA Secretariat, EIA Technical Team, and EIA commission continuously. The reviewers have three levels which are national level, provincial level, and regency/municipality level.

The number of EIA Secretariat staffs is 16 persons, the number of EIA Technical Team members is 96 persons/representatives, and the number of EIA Commission members is at least 18 representatives from the government agencies, experts, affected communities, environmental organisation. The provincial AMDAL Commission consists of at least 15 representatives from the government agencies, experts, affected communities, environmental organisation. At the regency/municipal AMDAL Commission, members consist of at least 12 representatives from the government agencies, experts, affected communities, environmental organisation.

Relationship with other ministries

All sectoral laws and regulations state that AMDAL or UKL-UPL and EP as the requirement for securing the sectorial permits i.e. mining exploitation permit (IUP) (GR No. 23 of 2010), plantation permit (Law No. 18 of 2004 and its revision: Law 39 of 2014), building construction permits (Law No. 28 of 2002), sea reclamation permit (the President Regulation No. 122 of 2012). The EIA Unit of the Ministry of Environment has developed a guideline explaining the linkage of AMDAL or UKL-UPL and EP with every sectoral permit. This guideline explains what sectoral laws and regulation and what articles in every sectoral laws and regulations that state AMDAL, UKL-UPL and EP as the requirement for securing the sectoral permits.

Number of EIA review

The National AMDAL Commission reviewed 54-119 EIAs per year from 2007 to 2015. 58% of them are EIAs of Oil, Gas and Transportation projects.

The number of EIA review is different from the provinces. One of the Provincial AMDAL Commission, DKI Jakarta reviewed 27 to 69 TOR/EIAs and 43 to 62 EIAs per year from 2013 to 2015.

Procedures

Screening

Projects are screened to EIA, UKL-UPL or SPPL by national/provincial, or regency/municipality EIA department based on the submitted Project Brief. Project location, project type, and project size are used for screening. Then study approach and relevant AMDAL commission is identified.

Scoping to Approval (EIA)

(1) Project proponent carries out public notice/announcement (2) Project proponent holds public consultation. This public consultation can be carried out before, during or after the public notice. (3) People have ten working days to submit their comments and input after the public notice. (4) Project proponent submits TOR/EIA to the decision maker (Minister, governor or regent/mayor) through the AMDAL Secretariat. (5) The secretariat conducts the administrative review for TOR/EIA. TOR/EIA is technically reviewed by the AMDAL Technical Team. Head of AMDAL Commission approves TOR/EIA. (6) Project proponent conducts EIA study and prepares Environmental Impacts Statements (EIS) and Environmental Management and Monitoring Plan (EMP). (7) Project proponent submits application for environmental permit (EP) with EIS and EMP to the decision maker. (8) The secretariat

conducts the administrative review for the application. (9) The decision maker carries out public announcement of the application. (10) The EIA Technical Team technically reviews EIS and EMP. (11) AMDAL commission reviews EIS and EMP by analysing the proposed projects with the environmental feasibility or acceptability criteria. Head of AMDAL Commission submits the recommendation to the decision makers. (12) If the project is recommended environmentally unfeasible, the decision maker issues the decision on environmental unfeasibility. (13) If the project is recommended environmentally feasible, the decision maker issues the decision on environmental feasibility and environmental permit. (14) The decision maker carries out public announcement of the environmental permit issuance.

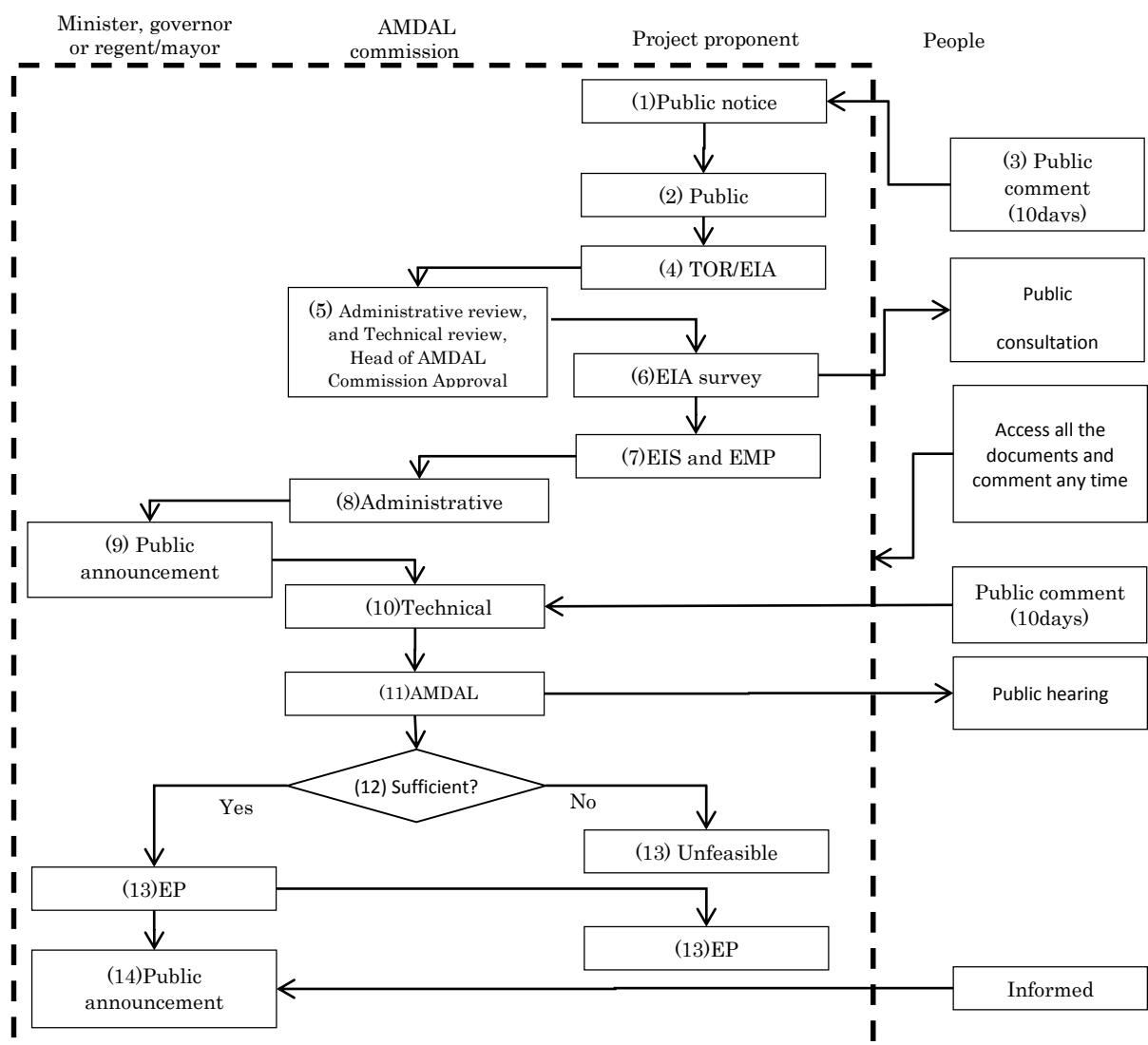


Figure A2.1. EIA procedure of Indonesia

Implementation and Monitoring

Based on the Environmental Permit Governance in Indonesia, issuance of EP is the first step. The next steps are implementation of EP by project proponent/EP holder and compliance inspection (monitoring) of EP Implementation by Environmental Compliance Inspectors (PPLH) respectively.

The project proponent shall prepare the Environmental Permit Implementation Report based on MOE Regulation No. 45/2005. EP and the EP Implementation report are basis for conducting environmental compliance inspection.

Information disclosure and public participation

All the documents are disclosed and the public opinions can be accepted anytime during the EIA and Environmental permit procedures. People formally have 10 working days to submit their opinions to the decision maker during preparation of TOR/EIA. People can give their opinion to the project proponent during the EIA study. People formally have to 10 working days to submit their opinions to the decision maker after EIS and EMP administrative review. People can give their opinion at the Public hearing by AMDAL Commission during EIA review. People is informed the review result after issuance of Environmental Permit. People have a right to access all the EIA documents any time and give comments to the decision maker any time in the project lifetime.

Major challenges and needs regarding EIA system and its implementation

Quality of EIA

Screening

Screening is working well for the national level projects, International funding projects and donor funded projects. But there are still many domestic projects which are approved without proper screening process and even without EIA. And many domestic projects' owners try to avoid EIA by dividing or downsizing the project. Then positive aspects of EIA should be introduced in the training for the project owners, line ministries, decision makers and designers.

Scoping

Although much training is implemented, sometimes very poor scoping results for domestic projects are provided by registered consultants. Important impacts are looked over and less impact items are picked up. Biological survey plan and social survey plan is too general. Information of survey point, survey route, and survey time is not clearly mentioned in the scoping documents. Then scoping

guideline can be changed more simple and easier. Scoping exercise can be included in the training. International good practices should be introduced at the training.

Assessment

Capacity of EIA consultants and Project Proponent is not so high. Capacities of EIA Review Commissions at the local level are low too. Data and information availability is low. Improving the certification system, training system, and training guidelines are required. Developing knowledge-Management for the EIA Practitioners Network & the EIA Information Systems, and Baseline data repository are required.

The quality of study on Biodiversity, Social and Climate change is relatively low. Resettlement and land acquisition issues are not managed in detail in EIA. Then all the regulations and technical guidelines related to biodiversity and climate changes that have been developed by sectoral agencies should be compiled and analysed the gaps. And detailed guideline on biodiversity, social, and climate changes should be developed. Establishment 'Sample Specifications for the Consultant Work' and 'Estimation Standards for Survey and Assessment' might work for low budget and the contract which payment condition is Environmental Permit should be prohibited. Reasonable system coordinating with Land Department (BPN) about the procedure of RAP and EIA should be provided.

EMP

Many EMPs are too general and uniform. Training materials should be upgraded with good practices. Biological Net Gain policy should be applied. Detailed guidelines for formulating and reviewing EMP and EMP Implementation reports shall be strengthened.

Review

Reviewing quality in local level is low. The local EIA reviewers do not have Environmental or social background. The biological and social comments of the reviewers are rare. The frequency of EIA trainings for EIA Reviewers should be increased. The commitment with the local governments to retain the EIA-trained staffs is required.

Approval

Many local projects are approved by local governments without EP. Project proponents have a difficulty to manage various kinds of permits by various ministries. Permit information system which

integrates all permitting process including the Environmental Permit, Environmental Protection and Management Permit, business permit including land acquisition should be developed.

Information disclosure and public participation

Information disclosure

Currently announcements are not attractive enough to get the attention of the people. EIA documents are too scientific and not disclosed on the web. Then strengthening EIA information system and providing good practices to the project proponent is required.

Public consultation

Public consultations are held after the design fixed and some community representatives might not be invited. The other public consultations are held by National Land Affairs Agency after Environmental Permit and it cause some confusion to the people. Then capacity development and social mapping before public consultation, providing review guideline for public consultation, coordination or combination with the public participation by National Land Affairs Agency is recommended.

Environmental management and monitoring

EMP implementation

Quality of EMP is low. Formulation of EMPs is very generic. As a result, EMP is not enforceable and operational. Cost estimation for mitigation and monitoring measures. Detail guideline for Formulating and Reviewing EMP. Then Develop detailed guideline related to EMP formulation and review is required.

Mitigation is not implemented. Implementation schedule is ignored. Reporting procedures are not implemented as planned and many project proponents do not fulfil Commitment.

Inspection and review is not fully implemented. Budget, number and competency of environmental compliance inspectors and reviewers are not enough. Other than PROPER projects, most of the Environmental Inspections are not conducted. Then a clear procedure for reviewing monitoring reports is required. Detail categories of the reviewers' certificate should be established. External specialists can be used for inspection and reviewing.

Information to the community is not enough. Community does not know their role of monitoring EMP implementation and they cannot access the monitoring result easily. EIA Information System (DADU) should integrate monitoring result.

Monitoring

Monitoring reports are submitted but adaptive management cannot be implemented in many companies. Most of the companies conduct only monitoring of physical items. The environmental compliance programs should be strengthened. On-line project implementation report can be developed.

Strategic Environmental Assessment

SEA systems are being established and many SEAs are prepared. But most of them do not work effectively to the decision making and the problems in EIA stage are not so decreased by SEA. Then capacity development for SEA and guidelines are required. Institutional arrangement and SEA information system is needed too. (Upstream, SEA included)

A.3. Korea

Legal framework

General environmental assessment system in Korea dated back to Environment Protection Act, 1977. Environmental Impact Assessment Act (EIAA) was then promulgated in 1993 to reinforce EIA system, including the provisions on public hearing, monitoring, and penalties on non-compliance and supervision on EIA consultants. EIAA was revised in 2012 to integrate Prior Environmental Review System (PERS) with EIAA. EIAA associates EIA rules and ordinance that specify detailed rules for EIA.

Organisational structure and capacity

Ministry of Environment of Korea assigns Korea Environment Institute (KEI) for the review of EIA documents. KEI is an independent body from MOE in terms of budget and institutional management. In addition to this, KEI is mandated to develop indicators, future projection methodologies and information system.

Procedures

EIAA prescribes SEIA for policy and master plans, EIA for development plans, as well as small scale EIA (SSEIA) for small scale development projects. The below figure illustrates the procedures for

SEIA for master plans (number 1-7) and EIA for project plans (number 8-13). Procedures number 14 and 15 indicates monitoring procedures.

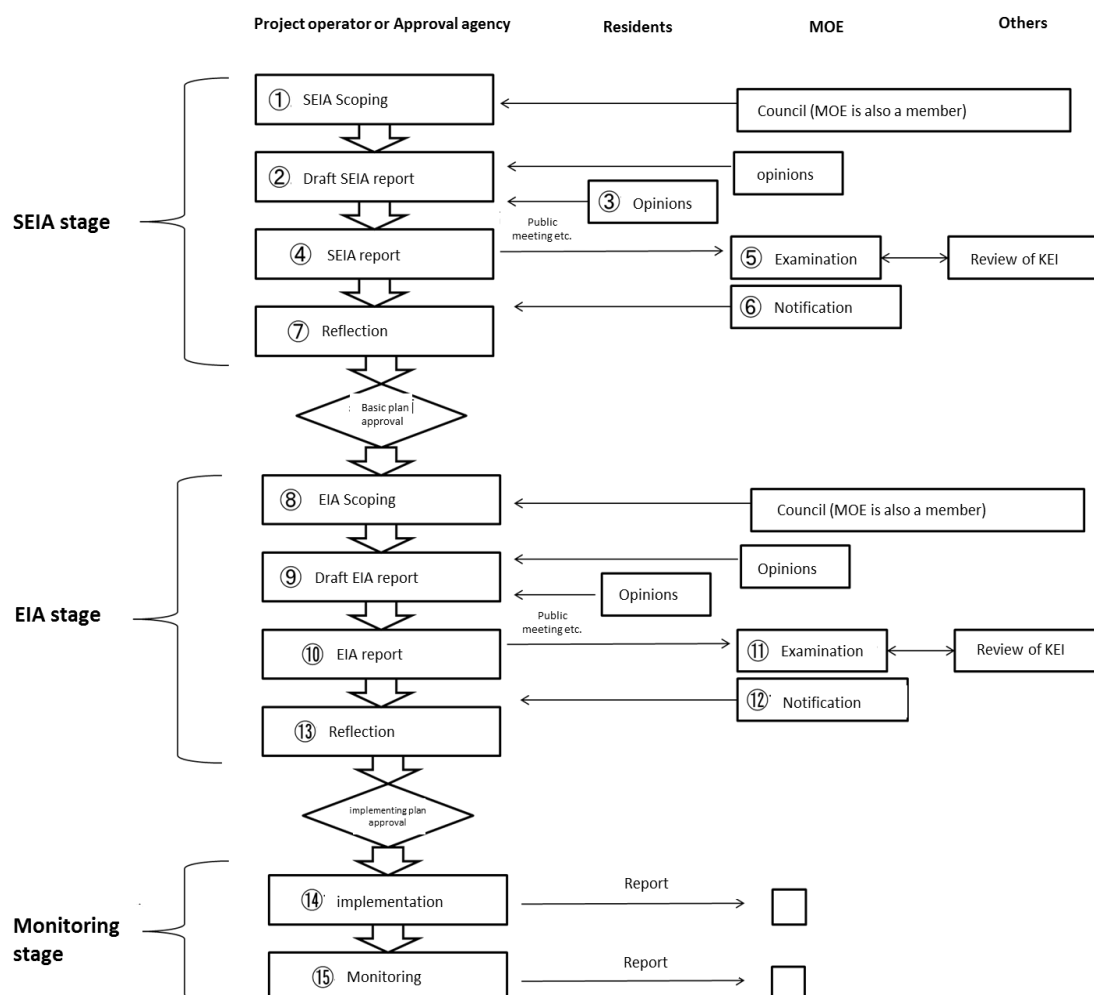


Figure A3.1. SEIA/EIA procedures in Korea

Major challenges and needs regarding EIA system and its implementation

Korea has faced several problems in EIA in its long history since 1977, but has been effectively addressing these by introducing logical policies. However challenges still remain particularly regarding technical aspects of impact assessment, as well as the enforcement of the mitigation actions.

Quality of EIA

Capacity of environmental consultants in impact assessment is high enough to satisfy requirements of EIAA, while there are cases that have more fundamental issues such as the need, size, and structure

of the project. As such issues are more based on the planning capacity and sense of the project proponent rather than those of consultants, it is difficult for consultants to settle these issues. Methodological difficulties were raised in assessing the items that do not have quantitative standards, such as ecosystem conservation. Weak social aspect in the impact assessment was also pointed, which is because consultants are engineering and natural science experts. Mitigation measures of EIA have no priority such as firstly avoidance, secondly minimisation and finally remedy of environmental impacts. There was possibility to underestimate project's negative impacts in order to read the project operators' countenance. Mitigation measures of EIA have no priority such as firstly avoidance, secondly minimisation and finally remedy of environmental impacts.

Information disclosure and public participation

Previously there had been an issue in the limited range of information disclosure during very short period (by the 1990s), but was resolved by EIAA 1993 that prescribed the obligation to hold explanatory meetings mandatorily and public hearing selectively. Another past issue was the public access to monitoring reports and the details of consultation by Ministry of Environment, but is now addressed by the disclosure of all EIA-related documents using EIA Support System (EIASS)

Environmental management and monitoring

While responsibility of project proponents is legally clear, institutional arrangements for confirming such responsibility is not necessarily sufficient. This may constitute the cause of problems such as the commencement of some projects without completing EIA processes, and the contents of EIA reports not reflected to the real project plans. While preparation of EIA report is considered quite important as it closely relates to project approval, administrative inspection to check if environmental management after project approval is properly carried out is basically focused on when there were problems actually happened.

Strategic Environmental Assessment

Since EIA was conducted at a late stage comparing to the whole planning processes, full consideration of environmental impacts was not secured (1990s). Late starting EIAs causes many complementation requests of EIA report and sometimes public conflict situation is occurred because residents express strong opposition. In this case, the project is delayed for quite a long time. A series of efforts to address this challenge were made, including the introduction of PERS in 2006 and its integration with SEIA in 2013.

A.4. Lao PDR

Legal framework

In 1999, the Lao Environmental Protection Law was passed, which created a legal framework for managing environmental resources with the objective of conserving and facilitating the sustainable use of natural resources. In 2010 the Prime Ministerial (PM) Decree on EIA was created and Ministerial Instructions on the EIA process were established in 2013. In addition, the Agreement on the Endorsement and Promulgation of List of Investment Projects and Activities Requiring for Conducting the Initial Environmental Examination or Environmental and Social Impact Assessment were developed in 2013.

Organisational structure and capacity

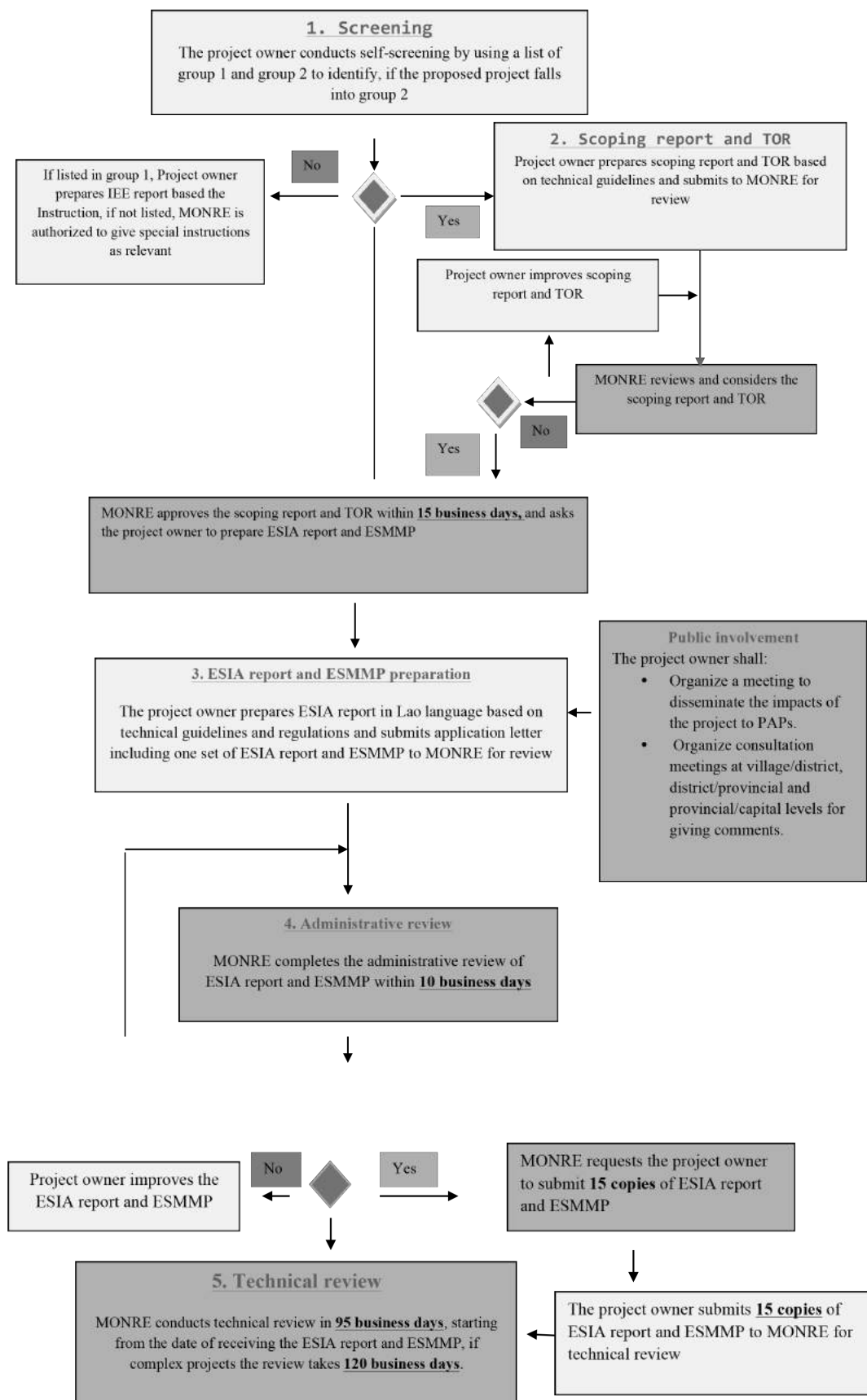
Total staff number of the Department of Environment and Social Impact Assessment (DESIA), as of December 2015, is 120. In the DEIA, there are 6 divisions, which include following.

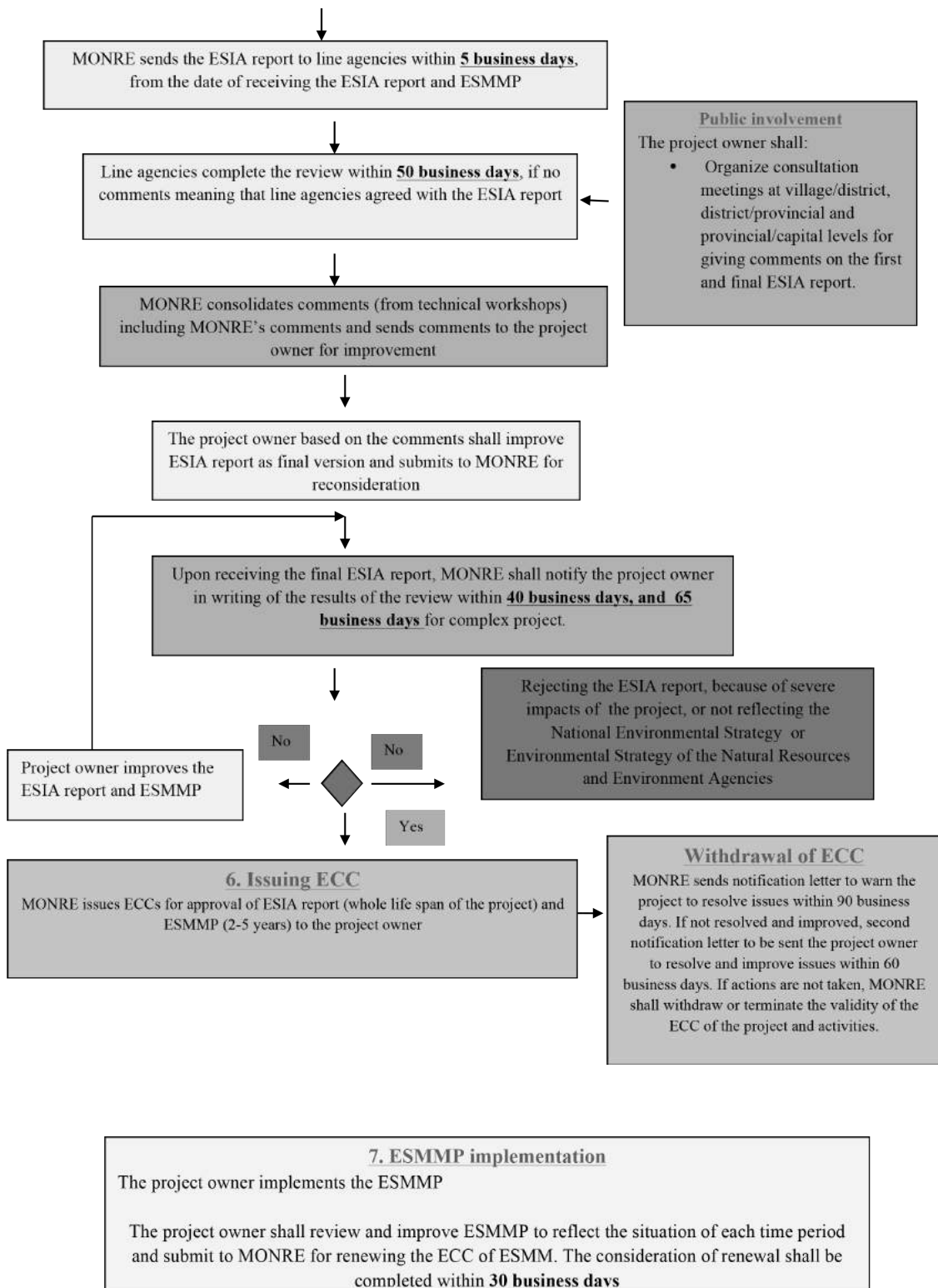
- 1) Planning and Administrative Division (22 staff including 15 volunteers),
- 2) Information dissemination Center (11 staff),
- 3) Environment Management and Monitoring Division (25 staff including 9 volunteers),
- 4) Environment Assessment Center for Energy Project (22 staff),
- 5) Environment Assessment Center for Mining Project (20 staff including volunteers), and
- 6) Environment Assessment Center for Agriculture, Infrastructure and Industry Project (20 staff)

During 2007 to 2015, There are 205 ESIA's, which include 72 hydropower, 69 mining, 50 infrastructure and the government's investment, and 14 agriculture projects.

Procedures

Environmental and social impact assessment process under ministerial instruction, No.8030 (17 December 2013)





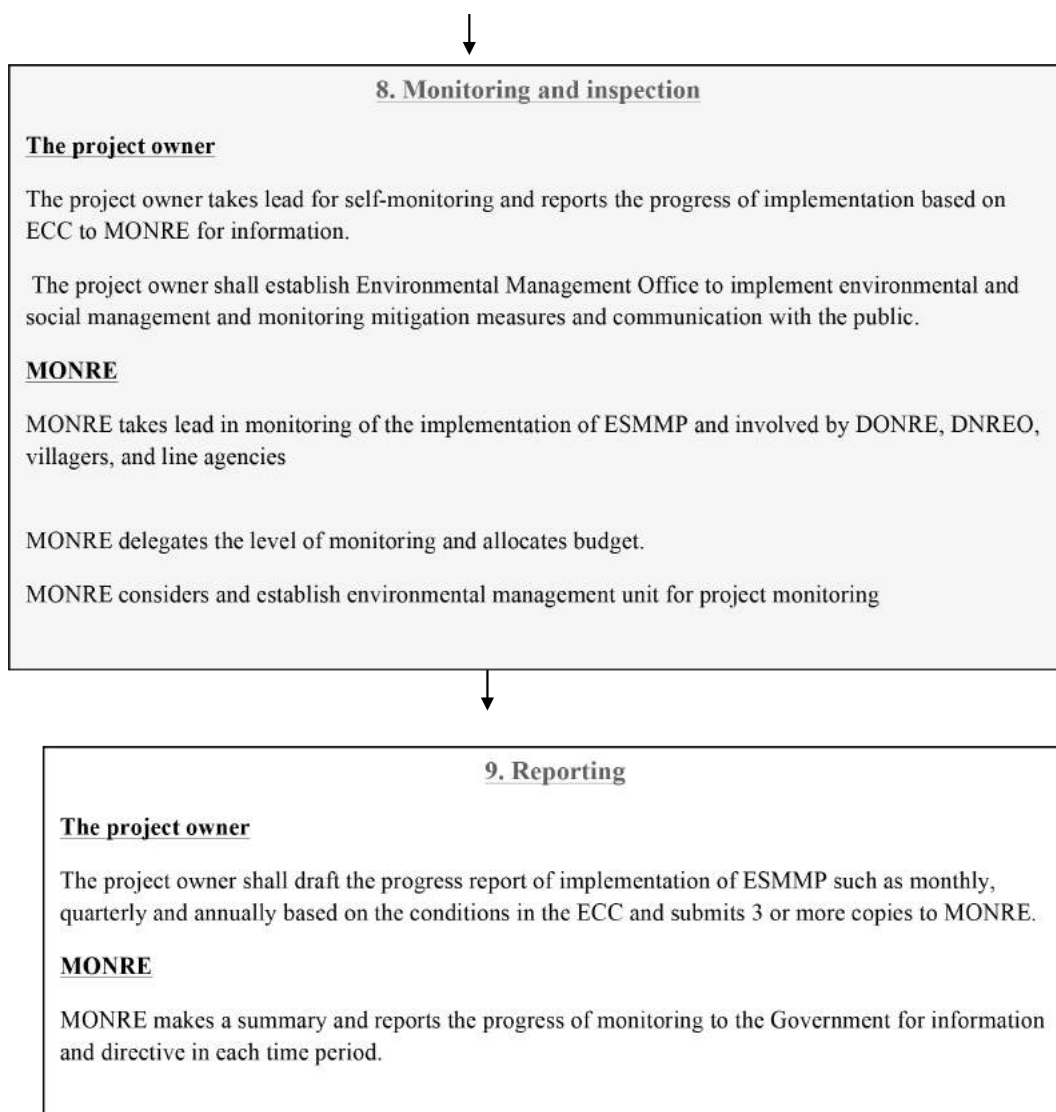


Figure A4.1. IEIA/EIA procedures in Lao PDR

Major challenges and needs regarding EIA system and its implementation

Quality of EIA

- The capacity of EIA consultants to carry out EIAs tends to be limited.
- Registration system of EIA consultants is not transparent nor impartial.
- Despite the creation of ESMMPs, little monitoring actually occurs.
- Central and local officials do not have enough technical capacity to properly review EIAs.
- Capacity of Provincial/Capital Department of Natural Resources to review IEE is still limited

Information disclosure and public participation

- Many projects do not disclose information to the public, and it is difficult to acquire EIAs for many projects.
- MONRE doesn't have the capacity/time to upload them all onto the internet yet, or to provide ways in which the EIAs can be queried by a wider public. Most EIAs (unless they have to be subject to the MRC's PNPCA process) are secret, and that it's very much a case of deals going on between the relevant ministry and the relevant environment ministry.
- Political space for community members and CSOs is limited in Lao PDR.
- Many projects do not conduct public participation although the ESIA instruction said that MONRE shall hold the technical and consultation meetings at the provincial/central level during the review period.
- For the projects that do conduct public participation, it is often limited to the government, excluding affected persons, civil society, NGOs, and the general public.

Environmental management and monitoring

- Monitoring is often not conducted or is highly superficial, in part due to lack of capacity by government staff.

Strategic Environmental Assessment

- There is no requirement for SEIA under the current laws.
- Lack of SEA and cumulative impact assessment is particularly problematic in hydropower sector.
- DESIA's collaboration with other government agencies is limited.

A.5. Myanmar

Legal framework

EIA in Myanmar has its legal basis on Environmental Conservation Law (ECL, 2012) and Environmental Conservation Rules (ECR, 2014), and implemented in accordance with the formal procedures prescribed by the ministerial notification on the Environmental Impact Assessment Procedures (EIAP, 2015). To specify administrative and technical aspects of EIA implementation, two ministerial ordinances are currently under drafting, i.e. Administrative Instruction of EIA Procedure: AIEIAP) and a Consultant Registration Scheme, with the support of Japan International Cooperation Agency (JICA). In addition to these, non-legally binding guidance and guidelines such as EIA General Technical Guidelines (EIAGTG), EIA Review Manual and the National Environmental Quality (Emission) Guidelines are now under preparation.

EIAP, the core legal instrument for EIA implementation in Myanmar, was only recently promulgated in December 2015, while EIA in Myanmar has become operationalized particularly for foreign investment projects based on the Foreign Investment Law (FIL, 2012) and Foreign Investment Rules (FIR, 2013). FIL and FIR require those foreign investors proposing projects in specified sectors and scales to obtain EIA approval for the permit on the proposed project by Myanmar Investment Commission (MIC).

Organisational structure and capacity

Natural Resources and Environmental Impact Assessment Division, Environmental Conservation Department (ECD) of the Ministry of Environmental Conservation and Forestry (MOECAF) carries the primary responsibility for the facilitation and enforcement of EIA process. ECD has satellite branch offices in state and regional government offices which support the facilitation of local EIA processes including public consultations and communications with local governments, as well as the enforcement of the post-EIA implementation and monitoring phase. EIAs on large scale projects such as oil and gas development are reviewed by a formal EIA Review Committee which is composed of 39 members including ECD staff, representatives from other relevant ministries, academic researchers from universities and local government staff. Once accepted, EIA reports are sent to the line ministries for the issuance of license or permit for the proposed project. ECD has been reinforcing its institutional structure since its establishment in 2012, while its current capacity does not allow effective facilitation of EIA process.

Procedures

EIAP prescribes a three-tiered procedure for EIA implementation. Projects of the types or scales that commonly associate significant environmental impacts are required to conduct full EIA with two reviews, while those with relatively small environmental impact firstly enter into initial environment examination (IEE) process with one review, and if the IEE results indicate possible significant impacts, will be required to go through full EIA process. Projects that do not fall under either of the two categories can be required to formulate EMP. All EIA, IEE and EMP-type projects are obliged to receive the Environmental Compliance Certificate (ECC) to have the issuance of license or permit on the commencement of the proposed project from line ministries. In addition to this default EIA procedures, foreign investment projects need to enter into the EIA process from the application for and screening by MIC, and finally are required to obtain an investment permit from MIC.

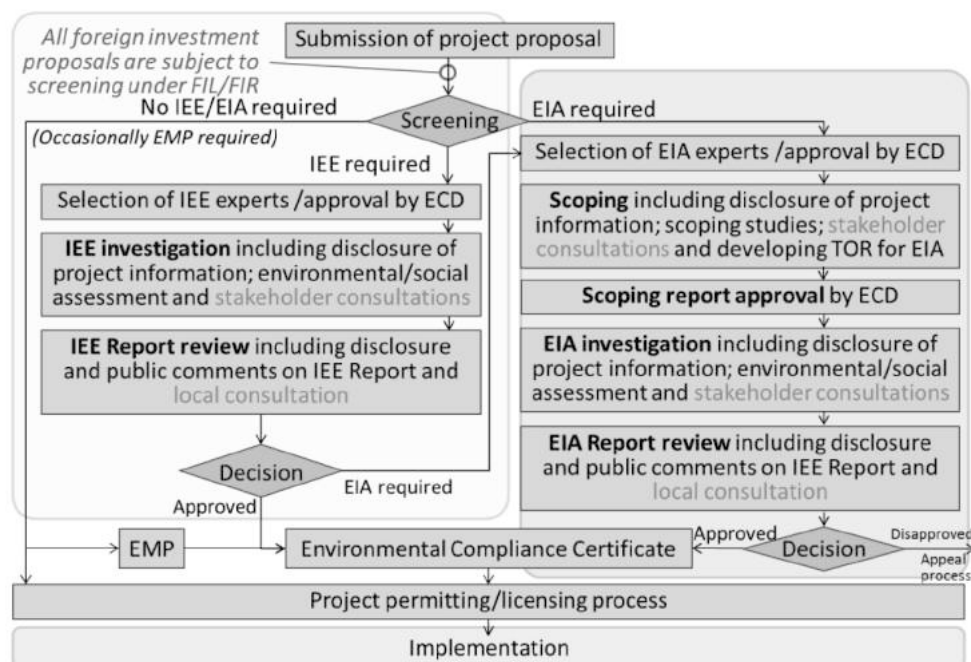


Figure A5.1. EIA procedures in Myanmar

Major challenges and needs regarding EIA system and its implementation

The development of a set of institutions relating to EIA system and implementation is still in a preliminary stage in Myanmar, which are all based on the promulgation of ECL in 2012. Major barriers for effective EIA implementation thus include the technical and institutional capacity of responsible governmental authority, i.e. ECD, as well as of local EIA consultants that play a key role in implementing impact assessments on the ground. Myanmar has achieved 5-8 point annual economic growth (ADB, 2016) since its economic liberalisation in 2011, mainly attributed to rapid influx of foreign investments, while is facing escalating pressures on environment. Given limited capacity of state and non-state actors in EIA and rapidly swelling environmental impacts, prioritisation of actions and capacity building for effective EIA implementation is urgently needed.

Quality of EIA

Clarity of the EIA procedures, environmental standards and the linkage between EIA approval and project permit from the line ministries was raised as an issue, supposedly because the EIA implementation was in a provisional stage before formal promulgation of EIAP (December 2015) when this study was conducted. Relating to these, there were some cases that project proponents and consultants had limited awareness of the requirements of EIA application and reporting. Technical capacity of private EIA firms was also questioned, such as insufficient coverage of biological items, lack of biodiversity mitigation plans as well as limited access to laboratory analytical equipment. They

also claimed the difficulties in securing time and budget for carrying out sound EIA. For the review of EIA reports, insufficient technical capacity of ECD and the review committee were also pointed.

Information disclosure and public participation

Sometimes project proponents and regional/state governments are reluctant to involve NGOs in EIA process. There are cases in which local people resisted, or boycotted attending IEE/EIA public hearing, particularly for the type of projects that have shown significant negative environmental impacts in previous cases, e.g. coal-fired thermal power plants.

Environmental management and monitoring

System, institution or technical capacity for monitoring are currently under development, including the reinforcement of ECD's branch offices in state and regional governments. However these have yet to become operational as no project has started implementation since the de-facto EIA system under draft EIAP came into operation.

Strategic Environmental Assessment

There is no requirement for SEA under the current laws.

A.6. Thailand

Legal framework

The Enhancement and Conservation of National Environmental Quality Act (NEQA, 1992) is the fundamental legislation that stipulates the existing EIA system in Thailand with provisions on EIA screening, preparation, review process, timing, mitigation measures and monitoring. The types and sizes of projects and activities which are required to submit EIA and environmental and health impact assessment (EHIA) including rules, procedures and guidelines for the preparation of EIA are specified in the Ministerial Notifications of the Ministry of Natural Resources and Environment, Thailand (MoNRE) issued under NEQA (1992). The Ministerial Notifications have been regularly updated to meet the changing need and situation. In addition, under Article 67 of the Constitution of Thailand of 2007, any projects and activities which may cause severely adverse impacts to the community with respect to environmental quality, natural resources and health are required to prepare EHIA.

Organisational structure and capacity

ONEP is the main agency responsible for the administration of the Thai EIA system including the development of EIA system and EIA review process. ONEP is responsible for reviewing and making proposals on types and sizes of projects or activities for which EIA is required as well as rules and regulations for the preparation of EIA reports to the National Environment Board (NEB) for approval, the development of guidelines for the preparation of EIA reports for various types of projects or activities, and the registration of EIA consulting firms.

Permitting agencies grant the permission for construction or operation of the projects or activities after they have been notified by ONEP of the result of EIA approval. Permitting agencies shall stipulate the conditions of permission all mitigation measures and comments of the ERC included in the approved EIA.

In 2014, a total 122 staff (both permanent and temporary) in ONEP processed 2,404 EIA reports (both first and revisions submission), of which 586 were approved.

Procedures

EIA reports are reviewed and approved by the Expert Review Committee (ERC) for which ONEP serves as the Secretariat. The ERCs appointed by the NEB consist of representatives from other relevant government agencies, i.e. Department of Health, Department of Industrial Works, Pollution Control Department, Department of Local Administration, Department of Public Works and Town & Country Planning, Industrial Estate Authority of Thailand, and others. There are 15 ERCs as of February 2016. The ERC reviews the EIA report and either gives approval for projects or activities which are not required by law to obtain the approval of the Cabinet or makes comments on the EIA report for the consideration of the NEB and the Cabinet for projects or activities of government agencies or state enterprises, or to be jointly undertaken with private enterprises which are required by law to obtain the approval of the Cabinet. An EIA review process for project or activity of government agency, state enterprise, or to be jointly undertaken with private enterprises which does not require an approval of the Cabinet is presented in Figure below.

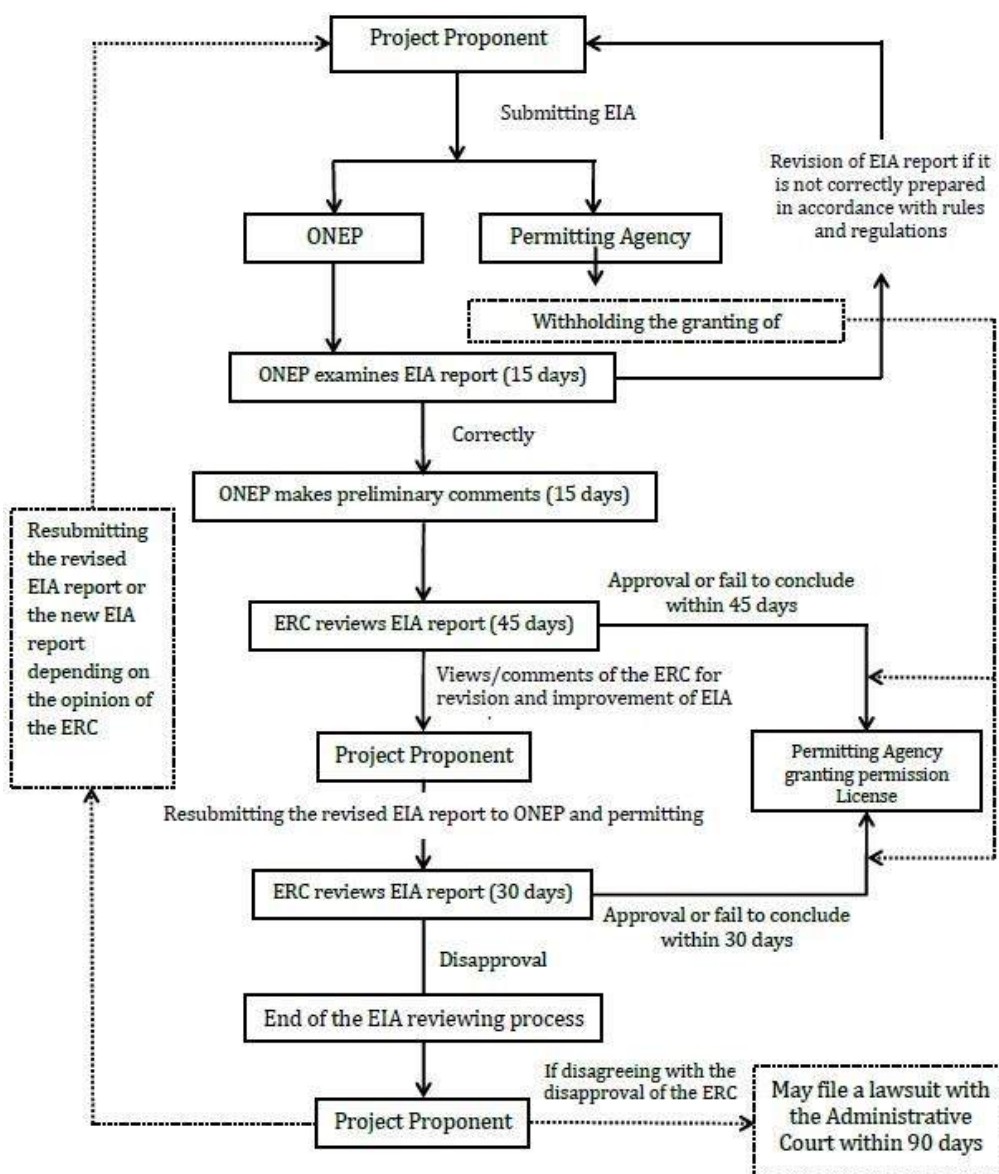


Figure A6.1. EIA procedures in Thailand

(Reference: Environmental Impact Assessment in Thailand (booklet), 2nd edition, June 2013)

Major challenges and needs regarding EIA system and its implementation

Although it has been almost 40 years since the EIA system in Thailand was first introduced in 1975 and in the meantime the system has been constantly developed, improved and implemented under the NEQA (1975) and NEQA (1992), there is still room for improvement with respect to project screening/terms of reference development, EIA report review - monitoring and evaluation process, and the quality of EIA reports prepared by the consultants.

Quality of EIA

While some EIA reports prepared by consultants still suffer from poor quality, there are a few challenges related to EIA system including (i) a need for regular reviews of screening process and improvement in terms of reference, (ii) excess requests made by ERC resulting in exceeding study budget or delay of the EIA report revision, or consultants failing to notice changes in guideline for the preparation of the EIA report made by ERC, and (iii) construction or project started before the final approval notification by ONEP or requirement of land title for the project during the EIA review process in some cases, posing financial risks to project proponent. In the case of (i), ONEP currently faces a large number of EIA reports related to housing projects and it simplified the EIA process for a special case by the National Housing Authority of Thailand (housing project for resident's income not more than 22,000 baht per month per family).

Information disclosure and public participation

NEQA (1992) lacks a legal basis for requiring public participation. Technical advisors may be needed to assist and give advice to the community to address technical matters of the impacts to the communities. Disclosure of information related to EIA is required by the Official Information Act (1997). ONEP offers web-based EIA-related database and introduced a smartphone application for EIA information disclosure.

Environmental management and monitoring

Challenges include obsolete mitigation measures proposed in the report due to time lapsed during lengthy revising process, failing to address cumulative impacts due to individual project-based EIA reporting, delay or incomplete monitoring report, and some permitting agencies failing to carry out monitoring or not requiring mitigation measure as conditions in the permit. There are no specific requirements for climate change measures suggested by IFC's Performance Standards.

Strategic Environmental Assessment

SEA in Thailand relies on an administrative order and lacks legal basis. Also, there are not many SEAs conducted in Thailand.

A.7. Viet Nam

Legal framework

Environmental Impact Assessment system in Viet Nam covers from policy level to project level by Environmental Protection Planning, Strategic Environmental Assessment (SEA), Environmental Impact Assessment (EIA) and Environmental Protection Plans (EPP). They are stipulated by Law on Environmental Protection No. 55/2014/QH13 (Law 55/2014/QH13), Decree on Environmental Protection Planning, Strategic Environmental Assessment, Environmental Impact Assessment and Environmental Protection Plans No. 18/2015/ND-CP (Decree 18/2015/ND-CP), and Circular on Strategic Environmental Assessment, Environmental Impact Assessment and Environmental Protection Plans No. 27/2015/TT-BTNMT (Circular 27/2015/ TT-BTNMT).

In addition to that Ministry of Natural Resources and Environment (MONRE) has issued 22 EIA Technical Guidelines for the following project types such as (1) Development of industrial zones, (2) Urban Development, (3) Traffic works, (4) Brewery and beverage, (5) Thermal Power Plant, (6) Textile Factory (dyeing), (7) Cement Plant, (8) Mining and processing of stone and clay, (9) Hydropower, (10) Pulp and paper plant, (11) Construction of ports, (12) Manufacture of basic chemicals, (13) Construction of landfill (domestic waste, oil and gas extraction), (14) Construction of petroleum storage and refining iron and steel industry, (15) Project mining by open pit methods, (16) Project mining by open pit methods, (17) Rare earth mining project, (18) Rare earth processing project, (19) Bauxite mining project, (20) Reclaiming the conversion of forests into industrial tree plantations, (21) Construction of tourist area, and (22) Construction of hazardous waste incinerator.

Organisational structure and capacity

Department

EIA assessment authorities are (a) The Ministry of Natural Resources (MONRE), (b) Ministries, ministerial agencies, (c) The Ministry of National Defence and the Ministry of Public Security, and (d) The People's Committee of each province. The authorities are different from the project type, location, and size. Number of the staff of EIA review division is 40 in MONRE, 14 in Ministry of Transportation, and 15 – 20 in People's Committee of province. EIA report is reviewed by the EIA report assessment council established by the EIA report assessment authority with at least 07 members. (Article 14 of Decree 18/2015/ND-CP)

Relationship with other ministries and committees

Approval of the EIA report is one of the conditions for project approvals by other ministries. For example Project investment approval, Mineral exploration or extraction Permit, Petroleum exploration or extraction approval, Construction permit, or Investment certificate will not be issued without EIA approval. (Article 25 of Law 11/2014/QH13)

Number of EIA review per year

MONRE has reviewed 115 EIAs from 2010 to 2014, average 31 projects/year. 21% of them are mining and natural resources exploitation projects, 19% of them are Transport, 19% of them are Construction project on tourists/entertainment, and 15% of them are Industrial area projects. Including SEA, EIA, EPP, and post-EIA, the number of projects reviewed by MONRE is around 150 to 190 reports per year.

Ministries and ministerial agencies are reviewing around 30 to 50 projects per year. For example Ministry of Information and Communications (MOIC) reviewed 2 EIAs, Ministry of Health 7 EIAs, Ministry of Transport 30 EIAs, and Ministry of Public Security 20 EIAs in 2015.

People's Committee of each province is reviewing around 30 reports including SEA, EIA, and post-EIA per year in average.

Procedures

Screening

Viet Nam's EIA system covers Policy, Strategy, Masterplan, Planning, Plan, and Project. Environmental Protection Planning is applied to Environmental Protection Policy. Strategic Environmental Assessment (SEA) is applied to Strategy, Masterplan, Planning, and Plan. Environmental Impact Assessment (EIA) is applied to relatively big scale project. Environment Protection Plan (EPP) is applied to small scale project. Strategy, Masterplan, Planning and Plan which required SEA is stipulated in Appendix 1, Decree 18/2015/ND-CP. The EIA required projects are listed in Appendix II, Decree No.18/2015/ND-CP. The projects which size is lower than the list of Appendix II of Decree 18/2015/ND-CP are applied to EPP except the projects which are listed in the Appendix IV of Decree 18/2015/ND-CP.

Scoping and Assessment

The basic concept of scoping and impact assessment is described in Appendix 2.3 of Circular 27/2015/TT-BTNMT. It is suggesting that "affecting sources and affected objects must be detailed".

Affecting primary sources should be described in 'Activities', 'Schedule', 'Technology/Method', and 'Environmental factors likely to occur' by project phase such as (1) Preparation phase, (2) Construction phase, (3) Operation phase, and (4) Other phases (dismantling, closing, environmental remediation and other activities likely to affect the environment).

Affected objects should be surveyed in two categories which are Natural environment conditions, Socio-economic conditions. Natural environment conditions include Geography and geology, Climate and meteorology, Hydrography, Current quality of constituents of soil, water and air environment, and Biological resources. Socio-economic conditions include Economic conditions and Socio-economic conditions.

Then affecting secondary sources should be identified such as noise, vibration, erosion, slide, collapse, land subsidence, erosion of river, stream, lake, coast; silting of river-beds, streambed, lakebed, seabed; change of levels of water surface and underground water; salinisation; alkaline intrusion; deforestation, losing of vegetation and wildlife, impact on sensitive ecosystems, degradation of environmental physical and biological components; biodiversity change, the impacts of climate change and the other waste-unrelated affecting sources. These secondary affected sources should be described by levels, area, time, and probability of impact.

Finally Impact on Affected objects should be assessed by Affecting sources. Each impact shall be evaluated particularly in terms of levels, scope of space, time, probability of impact, and immitigability. The most important negative and positive impacts that need to be assessed and predicted include: Impact on natural environment components; impact on biodiversity; impact of community's health; and impact on climate change.

In addition to that Environmental Impact caused by natural disaster or incidents should be assessed in EIA report. And reliability of the assessment results should be mentioned in the EIA report.

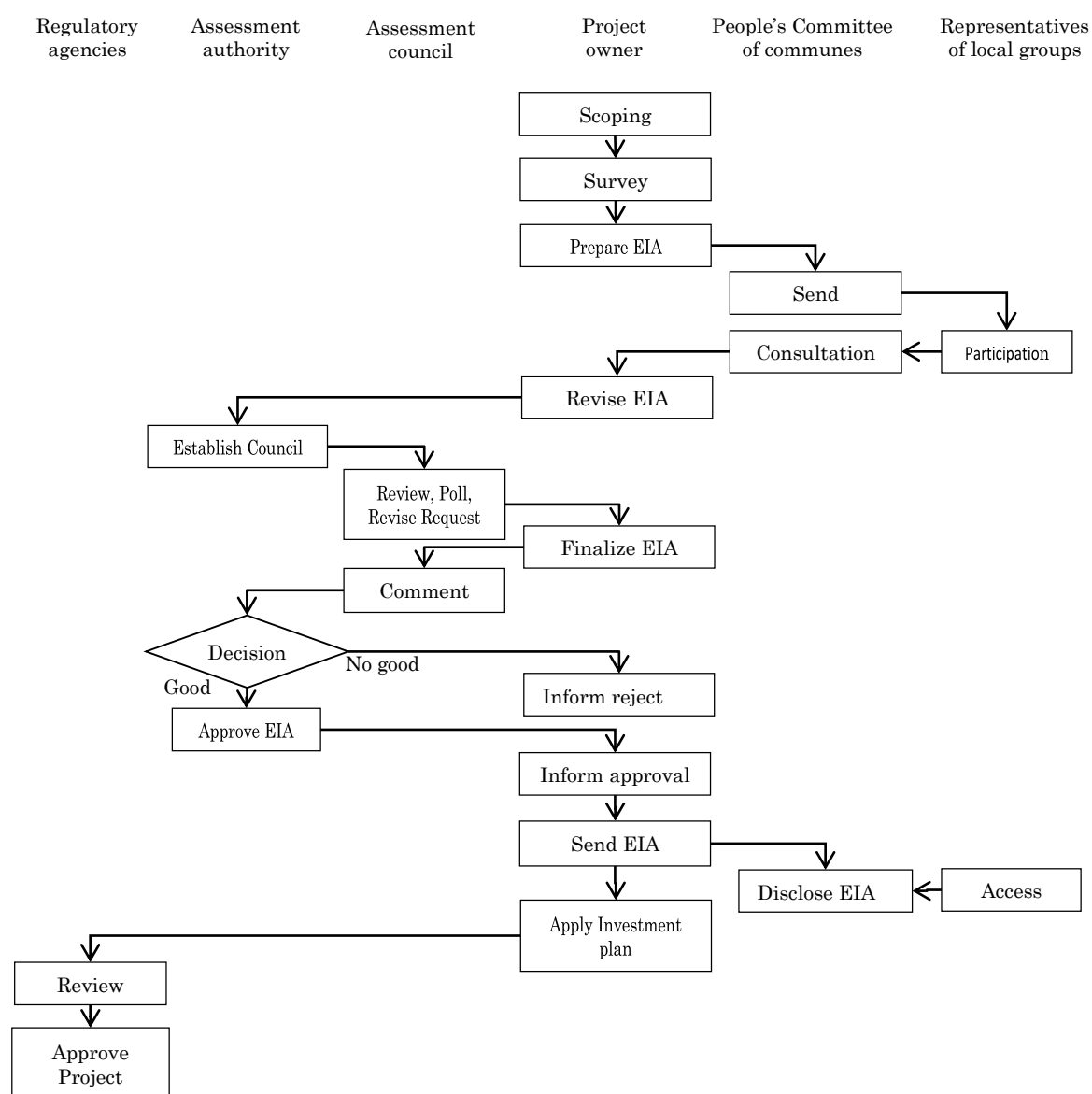


Figure A7.1. EIA procedure in Viet Nam

EMP

The requirement of mitigations and monitoring is described in Appendix 2.3 of Circular 27/2015/ TT-BTNMT.

Mitigation measures should be described for all the assessed impact in EIA report by project phases. The negative impact after the mitigations, Budget of the mitigations, Schedule, Implementation party and supervising parties should be mentioned in EIA report.

Monitoring items should be selected from affecting secondary sources such as waste water, exhaust gas, solid waste, slide, collapse, subsidence, erosion, sedimentation; changes of surface water level, groundwater, salinisation, alum intrusion, endangered and rare species. Monitoring frequency is recommended every three months for waste water and exhaust gas, every six months for other items. But continuous monitoring is recommended for cement production; thermo-electric plants (other than thermo-electric plants using natural gaseous fuels); steel production with capacity of over 200,000 ton per year; chemical manufacturing plants and chemical fertilisers with capacity of 10,000 ton per year; oil industrial plants with capacity of 10,000 ton per year; and industrial boiler with capacity of over 20 ton of steam per hour.

Review and Approval

Reviewing procedure starts by submission of EIA report by project owner. The reviewing should be finished in 45 working days by MONRE and 30 working days by the other assessment authorities. But the period in which the project owners revise the EIA report by the request of EIA report assessment authority shall not be included in the assessment period.

Implementation and Monitoring

Project owner of EIA project has to submit detail Environmental Management Plan to the People's Committee of the commune before construction. Some projects which have waste treatment facilities/ reservoir or revised mitigation measures have to acquire additional permit by approving authority before operation.

During operation project owners have to implement Environmental Protection work following Article 65 to Article 79 of Law 55/2014/QH13. The project owners have to implement monitoring following Article 121 to Article 127 of Law 55/2014/QH13.

Information disclosure

All the SEA reports, EIA reports, EPP, and Monitoring reports except state secrets should be open to the public According to Law 55/2014/QH13. The publishing method must ensure convenience for information recipients and there is no limitation of the disclosed period.

Public participation

Project owners which are required EIA have to conduct public consultation following Article 12 of Decree No. 18/2015/NĐ-CP and Article 7 of Circular 27/2015/ TT-BTNMT. The consultation with

the community shall be carried out in the form of community meeting together with the participation of representatives of Viet Nam's Fatherland Front of communes, socio-political organisations, socio-professional organisations, neighbourhoods, villages convened by the People's Committee of the commune.

Major challenges and needs regarding EIA system and its implementation

Quality of EIA

Screenings of relatively large projects which are reviewed by MONRE are well conducted. But some middle or small size projects which are reviewed by DONRE or Ministries might not be adequately conducted. Some investment plans are approved without Environmental approval because of ignorance of the project approval agencies about EIA system. The new system should be informed all the relative organisations.

Scoping policy is clearly mentioned in Appendix 2.3 of Circular 27/2015/ TT-BTNMT. But the concept is a bit new and some experiences and wide knowledge are required. Certificate in EIA consultancy is mentioned in Article 13 of Decree No.18/2015/ND-CP. But the detail certificate system and training system is not clear.

As far as reviewing the EIA reports conducted so far, the quality of biological part and social part is relatively low. Survey quality and reporting quality are not so high especially for the domestic projects.

Most of the Environmental management plans are too general. They do not show the exact location of the mitigation measures or monitoring points on the map. They will be improved by a new system.

Reviewing capacity of MONRE is enough but the capacities of Ministries and DONRE are not clear. The manual of supporting system for the reviewers might be required.

Information disclosure and public participation

Most of the SEA reports and EIA reports have been disclosed to the general public so far. But under the new law all of the reports should be opened to public. But the disclosure methods are not clear. Information disclosure on the web without limitation should be stipulated.

Environmental management and monitoring

Compliance of some project owners is not so high. There are strict penal rules for the project owners who are noncompliant the laws. But some owners did not follow the laws and pay the penalty. Some

project owners fake the monitoring data. The good practices which prove compliance makes the project success should be introduced widely.

Strategic Environmental Assessment

Viet Nam's EIA system covers from policy level to program level by Law 55/2014/QH13. But it has just started and the experiences are limited. The capacity of the preparation and reviewing of Environmental Protection Planning and SEA is limited. Detail guidelines and trainings are required.



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