

# Comparing Thai EIA with those of Japan and China

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## ABSTRACT

Mainstreaming environmental and social issues into development project level starts with EIA, this approach was established in East and Southeast Asia since the early 1980s. EIA practice was implemented in Thailand after the revision of the Enhancement and Conservation of National Environmental Quality and applied the EIA process as a tool for environmental planning and management in 1981. Up until 2014 more than 7,000 EIA documents have been submitted for assessment. This paper aims to review the EIA system in Thailand and also clarify the statistical data of EIA projects, which were implemented in Thailand into sectorial and regional trends. In addition, the study provides recent description of EIA system in Japan and China including provisions and suggestions to the challenging points. There are some systematic gaps in the EIA system among the countries mentioned above, for example, Thailand should implement a set of laws or ordinances that comply with local governments. On the other hand significant impacts should be a criteria to be classified in the screening step in Japan. Finally, China's EIA should be more concerned on the duration of public participation periods and access of project development information. The results need improvements and/or optimization for more effectiveness to fully benefit the environment and public participation for sustainability in the future.

KEY WORDS: Thailand, Japan, China, Environmental Impact Assessment

## Introduction

Although many countries have already had EIA implemented at the project level for many years and a sound basis of knowledge and experience has been accumulated; nonetheless, the qualities of assessment of the environment and tools used vary from country to country. However, there are few studies of EIA system in Thailand and also its quality and effectiveness.

Our studies are divided into two parts. First is to review the EIA system in Thailand and also clarify the statistical data of EIA implemented in Thailand. The second is to provide recent description of EIA system in Japan and China including provisions and suggestions for the challenging points

between these three countries. Moreover, this study reviews documents and gathers the information via database from ONEP and MONRE Thailand. The statistical data on EIA cases in Thailand that were used in this study is dates back from Jan. 1991 – Aug. 2014. The EIA report and literature review of Japan and China were studied. Some information was gathered from each country's Ministry of Environment.

## **1.EIA in Thailand**

### **1.1 Types of EIA documents in Thailand**

There are three types of EIA documents in Thailand which were defined by ONEP as follows:

1. Initial Environmental Examination (IEE) is the initial study for forecasting the environmental impact. 2. Environmental Impact Assessment (EIA) is a study for forecasting the environmental impacts, both negative impacts, which may cause serious harm to the community, and positive impacts. 3. Environmental Health Impact Assessment (EHIA) is the study to forecast the environmental impacts for projects or activities which may cause serious harm to the community. EHIA is concentrated more on health impact assessment and also require more implantation of public participation than EIA.

### 1.2 Important key processes of EIA in Thailand

Alternatives are one of the important procedures in Thailand's EIA system and it is also included in the scoping step. There are two steps in considering alternatives for project developments (ONEP, 2013):

1. By total sum of damage to environment
2. By analyzing the environmental impacts of various alternatives to develop the project

Prediction or evaluation of impact: Project implementation may generate both positive and negative environmental impacts. In Thailand, the environmental, social and health impact of the project have been conducted covering four items Abiotic/Physical environmental resources, Biological environmental resources, Human use value and Quality of life value.

Public Participation: According to ONEP (NEB, 2006), Public Participation (public meeting) for EIA must be conducted at least two times: The first is during the start of the project to gather the opinions on the draft proposal and scope of study (both the positive and negative impacts that may occur and the scope of study). The second is during the preparation of the draft EIA and mitigation measures. Comments and suggestions from the second meeting shall be added into the EIA report. Public

participation may involve attitude survey, consultation meeting, or other processes as regulated by the Prime Minister's Office.

### 1.3 Outline of past projects (Quantitative data)

This paper shows EIA development that was reviewed by sectorial and regional trends, there is a total of 7,089 EIA projects that were implemented in Thailand starting from 1991 to Aug, 2014 as shown in **Figure 1**.

These projects can be divided into seven sectors that consist of: municipal services and buildings, mining, water resources and agriculture, transportation, petrochemical, industry and energy as shown in **Figure 2**. The highest number of EIA implemented by sectorial based is municipal services and buildings sector such as hotel, hospital and others, which is 2,908 projects (46% overall) and 21% for mining , 13% for industry, 9% for energy, 7% for petrochemical , 3% for transportation and 1% for water resources and agriculture.

**Figure 3** shows the EIA implemented by regional trends, the Central part of Thailand has the highest number of EIA implemented and it sits at 2,575 projects.

In the central part of Thailand, where the capital city of Bangkok is located, the municipal services and buildings sector tops all other projects as a result of tourism and centralized commercial hub.

EIA for mining projects have the major number in the northern, western and north-eastern part of Thailand because of the abundance in mineral resources, such as, lignite, limestone, granite and zinc.

## 2. EIA in Japan

Primary Environmental Impact Consideration is a step for considering the environment in the early stages by dealing with alternative plans which are expected to provide more effective ways to avoid or reduce environmental impacts. Thirteen types of projects are obligated to conduct EIA using

Draft Environmental Impact Statement (DEIS)

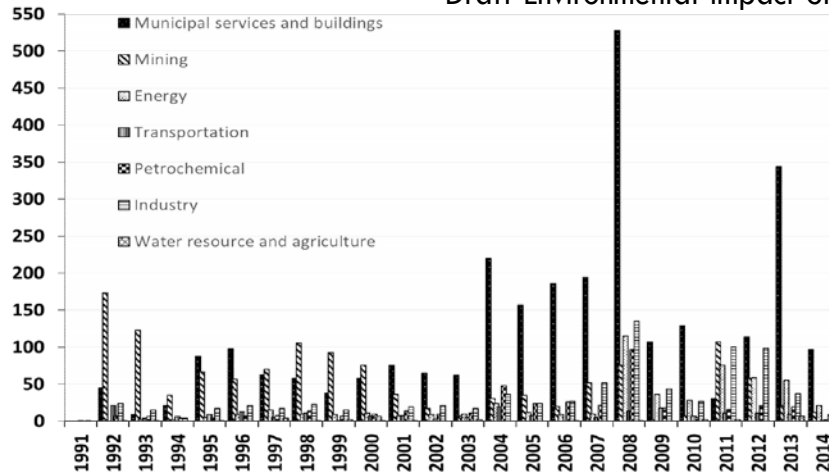


Figure 1 Total EIA implemented since 1991-2014 (Aug)

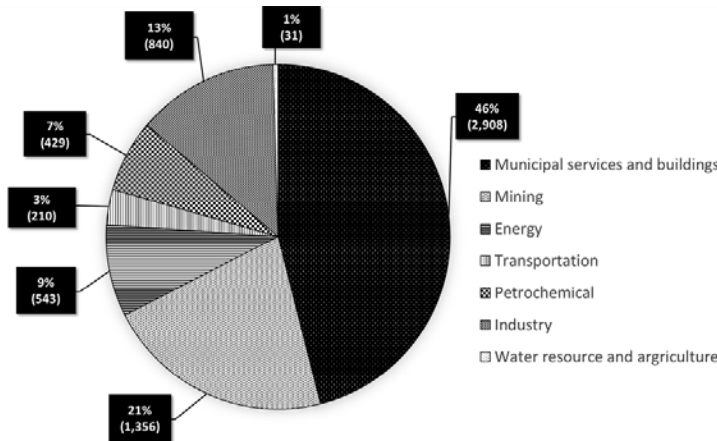


Figure 2 EIA cases by sectorial trend

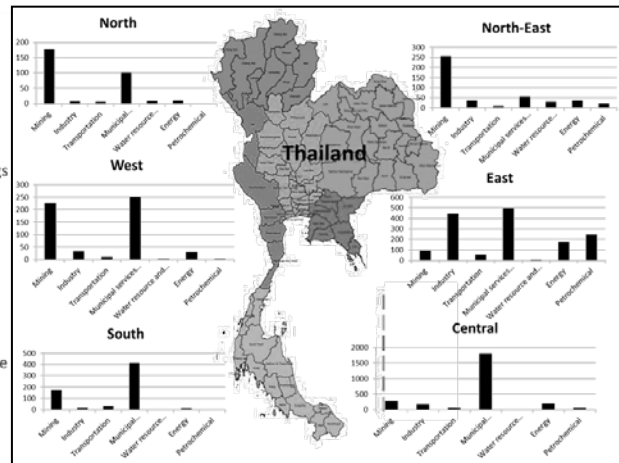


Figure 3 EIA cases by regional trend

in screening step. The projects are divided into two classes by scale as follows: Class-1 Project is a large-scale project and Class-2 Project is a project with a scale smaller than Class-1 Project.

“Scoping Document” describes the assessment method (survey, forecast and evaluation). In addition, each project proponent shall organize public meetings to explain the contents written in the scoping document and anyone who has opinions about the document can express the opinions including the prefecture governor. After the scoping stage, survey, forecast and evaluation of the environmental impact will be implemented.

that describes the assessment results and the approach to addressing environmental protection. These documents need publicly notifies and allows anyone to see and comment. After the procedure for the DEIS is completed, the project proponent examines the opinions of the prefectural governor and the public about the DEIS, then makes the Final-EIS.

### 3. EIA in China

EIA system in China is briefly described as the following;

The concept of Category Management is now recognized (Wang et al, 2003) and the milestone documents for EIA in China are as follows: Category A: Environmental Impact

Report (EIR). Category B: Environmental Impact Form (EIF). Category C: Environmental Impact Registration Form (EIRF).

There are 23 types of projects requiring EIA reports in China. Baseline analysis in China is separated into 2 parts: environmental baseline investigation, and project engineering analysis. Technical Guideline for EIA (TGEIA) provides guidance on prediction method and techniques.

Overall, however, the consideration of alternatives is absent from China's EIA system; there are no legal provisions for the consideration of alternatives in the EIR. (Wang et al, 2003).

In addition, The Revised General Technical Guidelines (2011) give provisions for public involvement during the reviewing of the draft EIA report and require ongoing stakeholder consultation throughout the EIA process. Consultation methods may include questionnaires, interviews, forums, panel meetings, public hearings and/or other measures.

#### **4. Comparisons of EIA system between Thailand, Japan and China**

Comparison of EIA system between Thailand, Japan and China is shown in **Table 1**. There are many differentiates in the system and the main differences as follows: Firstly, in Japan and China there are two governmental bodies that implement EIA, the national government and the local government. However, Thailand has only national level to authorize all types of project required EIA report, some detail of impact might be overlooked. This maybe one way to increase effectiveness of EIA system in Thailand.

In the screening processes, projects requiring EIA in Thailand and China are classified into different levels depending on the impact of the potential effects. In contrast, Japanese EIA are required depending on scale of the project (MOE, 2012). From this point the scale of the projects may not represent the

level of impact from the project implemented.

In Thailand's EIA it is compulsory to include alternative plans during the scoping stages. In Japan, this voluntary step is included at the early stage. China's EIA still does not have any legal provisions for considering alternative processing but there are many projects currently which include alternative planning in the report but, still lack the "no action" part.

#### **Conclusion**

Although EIA system was introduced to Thailand more than 20 years, it's still filled with controversy, especially lack of local EIA authority (ONEP, 2013) and effectiveness in screening processes. There are more than 7,000 EIA projects implemented in Thailand and municipal services and buildings is the highest number of EIA implemented. Japanese EIA should revise screening criteria and China's EIA need to be more concerned about the public participation provision in term of limited timing and access of information. Not only does the system need improvement but, also greater attention and consciousness need to be emphasized on local people in and around the project area. This is recommended to form an effective EIA process. The affected people should be taken responsively on environmental impact and social benefits than the benefit of the project owner (proponents) and political aspects or gains.

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**Table 1** Comparisons of EIA processes between Japan, Thailand and China

Items	Thailand	Japan	China
<b>Enforcement date of EIA act</b>	1997	1999	2002
<b>Central EIA authority</b>	Environmental Impact Evaluation Bureau (EIEB), Office of Natural Resources and Environmental Policy and Planning (ONEP), Ministry of Natural Resource and Environmental (MONRE)	Environmental Impact Assessment Division, Environmental Policy Bureau, Ministry of the Environmental Government of Japan	Ministry of Environmental Protection (MEP)
<b>EIA Authority</b>	National government	National government and local governments	National government and local governments
<b>Type of EIA documents</b>	- IEE - EIS - EHIA	- Primary Environmental Impact Consideration document - EIS	- Category A: EIR - Category B: EIF - Category C: EIRF
<b>Authority company preparing EIS</b>	- Project proponent and consultant	- Project proponent and consultant	- Project proponent and consultant
<b>Project covered/Screening</b>	- 35 types of project (National EIA law)  (Depending on the significance of potential effects)	- 13 types of project: Class-1 and Class-2 project (National EIA law) - Local ordinances (EIA system of local government)  (Depending on scale of the project)	- 23 types of project (catalogue A-W (Categories A,B and C))  (Depending on the significance of potential effects)
<b>Scoping covered</b>	- Scope-outline	- Scoping document	- Action-outline
<b>Alternatives</b>	- In scoping step (Including "no action")	- In primary environmental impact consideration step	- There are no legal provisions for the consideration of alternatives
<b>Evaluation/Prediction the impact</b>	- Covered Physical, Biological and social resources by separated into four parts: Abiotic resource, Biotic resources, Human use value and Quality of life value	- Covered Physical, Biological and social resources by separated into two parts: National situation and Social situation	- Covered Physical, Biological and social resources
<b>Public participation</b>	- Public meeting at least 2 times during scoping and DEIS - Optional: attitude survey, consultation meeting, or other process as regulated by the Prime Minister's Office - Comments included in the report	- Public meeting (Explanation): explain content in "Scoping document" in scoping step and in DEIS steps (due to the thick volume and specialized contents of the DEIS) but if not the DEIS will sent to the local government officer or on the internet - No provision that comments need to include in the report	- Form of public participation is to be made available prior to the completion of DEIS/before submit for approval - Optional questionnaire surveys, interviews, forums, panel meetings, public hearings and/or other measures - No provision that comments need to include in the report
<b>Follow-up monitoring</b>	- Compulsory required	- Compulsory required	- Compulsory required
<b>Consultant firms</b>	- There are 70 companies that can separate into two types; 3 years permission 54 companies and 1-2 years permission 16 companies	- There are 138 environmental consultant companies that have been registered	- There are a total of 1,158 consultancies, among which 192 are category A and 966 are category B
<b>EIA reports/year</b>	- Approximately 200-300 projects	- Approximately 70 projects (National and local level)	- Approximately 20,000 projects (At the national level, MEP approves 300~400 EIAs)
<b>Total EIA report</b>	- Approximately 6,000 (1997-2014)	- Approximately 400 (1999-2014)	- Approximately 180,000 (2002-2012)
<b>Approval timing (full EIAs)</b>	- Approximately 2.5 months	- Approximately 7 months	- Approximately 2 months