

**TOWARDS STRATEGIC ENVIRONMENTAL ASSESSMENT
IN INDONESIA'S DEVELOPMENT**

THESIS

A thesis submitted in partial fulfillment of the requirements for
the Master Degree from the Institut Teknologi Bandung and
the Master Degree from the University of Groningen

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DOUBLE MASTER DEGREE PROGRAM

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INSTITUT TEKNOLOGI BANDUNG**

AND

**ENVIRONMENTAL AND INFRASTRUCTURE PLANNING
FACULTY OF SPATIAL SCIENCES
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ABSTRACT
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Indonesia has already recognized the term of EIA in its development, even though firstly it was only a prerequisite from the donor for Indonesia, recently the government has already improved the role of EIA in conducting the development project by improving EIA regulation. Meanwhile, the development of SEA in other country mostly the developed countries is emerged as it is has already been internationalized.

As a developing country, nowadays Indonesia tries to develop itself to reach the economic advantages through development. The process of development has to be in concert with environment awareness, and it is not only by assessing the project, but also in the level of beyond the project when the policy is made, in the plan level, and also in the program level. SEA promises to give improvement in decision making process as it concerns more in the integrated decision making in the top level before the detail project decision is made. Finally, it is hoped that SEA will improve the environment consideration in which it deals with the development not only in the local scope of a certain development project but also in a broader scope.

This research has objectives to perceive the effectiveness of the existing EIA concept as one of the instrument to increase the environmental planning in Indonesia, and tries to see the potential implication of SEA in the decision making process. In order to make a concrete sight of SEA, this research tries to see the condition in the Netherlands as the country that has already conducted SEA in order to detect possibilities of lesson learning through policy transfer.

Keywords: Environmental Impact Assessment, Strategic Environmental Assessment, Potential SEA, tiered decision making process

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PREFACE

This thesis is a part of requirement of completing my study in master of Environmental and Infrastructure Planning, a twinning program between the faculty of Spatial Science Rijksuniversiteit Groningen (RUG) and Institut Teknologi Bandung (ITB). I choose environmental assessment as the topic of my research as I see that in Indonesia as a developing country conducting rapid development, sometimes the development agents still see environmental aspect in the development as second choice which still needs to be improved. How to improve the environmental planning in Indonesia should be derived from the existing environmental assessment concept, which is the AMDAL. From that reason I chose environmental planning as the topic of my research focusing on environmental assessment, from EIA towards more strategic assessment.

On this occasion, I would like to thank, first to God, for blessing me in finishing my thesis. I would like to thank Dr. Justin Beaumont and Dr. Jos Arts, my supervisors who patiently gave advice and support, and criticize my thesis, and also Dr. Uton Rustan Harun, my supervisor from ITB. I also would like to express my gratitude to Prof. Gerard Linden and Ir. Haryo Winarso, M.Eng., PhD, Dean and the coordinator of this program in RUG and ITB. In this opportunity also, I would like to thank the Netherlands Government through STUNED Program; the Indonesian Government through BAPPENAS; and Ministry of Finance DG Treasury for giving me the opportunity of following this double degree program.

Finally, I am very grateful to my family for all their support and great attention whenever I am feeling down here, all my friends in Groningen and in Indonesia, and my husband Woki, for all the support during my hard times for the last one year.

Yessy Maharini

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LIST OF ABBREVIATION AND ACRONYMS

AMDAL	Analisa Mengenai Dampak Lingkungan (Indonesian EIA)
ANDAL	Analisis Dampak Lingkungan (EIR)
BAPPEDA	Badan Perencanaan Pembangunan Daerah (Local Planning Agency)
BAPPEDAL	Badan Pengendalian dan Pemantauan Dampak Lingkungan (Environmental Impact Management Agency)
BAPPEDALDA	Badan Pengendalian dan Pemantauan Dampak Lingkungan Daerah (Local Environmental Impact Management Agency)
BAPPENAS	Badan Perencanaan Pembangunan Nasional (National Planning Agency)
EIA	Environmental Impact Assessment
EIA TOR	EIA Terms of Reference
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
KLH	Kementrian Lingkungan Hidup (Ministry of Environment)
NGO	Non-Governmental Organization
PKB	Planologische Kernbeslissing (Spatial Planning Key Decision)
PPPs	Policies, Plans and Programs
RKL	Rencana Pengelolaan Lingkungan (Environmental Management Plan)
RPL	Rencana Pemantauan Lingkungan (Environmental Monitoring Plan)
SEA	Strategic Environmental Assessment
SEIA	Strategic Environmental Impact Assessment
SOP	Standard Operational Procedure
UKL	Upaya Pengelolaan Lingkungan (Environmental management Proposal)
UPL	Upaya Pemantauan Lingkungan (Environmental Monitoring Proposal)

CHAPTER 1

INTRODUCTION

As the first chapter of the thesis, this introduction (chapter) will describe the beginning idea of the whole thesis. This chapter is divided into three parts or sub chapters to illustrate the introduction of this research. Firstly, it describes the background of the study of what the background idea of doing the research in this particular topic. Then, it explains the objectives of this study, and finally to make clear the structure of the research, at the end of this chapter a brief description about the structure of the research is given.

1.1 Background

Environment is one of the important aspects in planning. Nowadays the awareness of this important aspect has already been stated by planning authority and the people who concern it as the term of sustainable development has already been a standard in planning arena. This sustainable development concept was firstly described by the Bruntland Commission in 1987 as development that meets the needs of the present without compromising the ability of future generations to meet their own needs (WCED, 1987, in Pope, J et al, 2004). Sustainable development, with its triple bottom lines or three pillars concept, tries to integrate the environment, economy, and social pillars in the development implementation. It is now believed that in most cases, the economic pillar seems to be the most important aspect to be concerned with, and as a result, the other aspect, mostly environmental aspect, is sacrificed.

In order to achieve the balancing of the three pillars in its concept and avoiding the trade-off phenomenon among the aspects in sustainability, knowing the

impact of one activity to the other aspects become an obvious starting point in every development.

The Environmental Impact Assessment (EIA) has been developed as one useful tool in assessing the impact of a certain activity into the environment. Many countries have already used the EIA concept in their development, and in Asia as well (Briffet C, et al. 2002). In Indonesia, the implication of environmental assessment has already been applied using EIA concept, by what is determined as Analisis Mengenai Dampak Lingkungan (AMDAL). Historically, EIA in Indonesia has relatively been established for a long time, as it was formally adopted in 1982 through government act, with initially it was the requirement from financial donor agencies in supporting Indonesia's development. From that time until recently, it finds some changes in the formal system, as the government made some improvement on it (Purnama, 2003).

EIA is a project oriented approach in decision making which sees the impact of a specific project, in which using EIA, the impact of a certain project development will be assessed by minimizing its negative impact to social, environmental, and economic aspects. As the increasing of the need of infrastructure development because of the demand of development escalation, the strategic point of view of decision making emerges. The strategic conception tries to perceive subjects through a broader level rather than merely through a specific and certain case. The intention of this conception is to provide comprehensive and integrative information in the decision making, and finally the interconnectivity among developments is hoped to be synchronized. Derived from that reason, the Strategic Environmental Assessment now comes up as one way to reach that objective. This SEA perceives the environmental assessment in the level of program, plan, and policies, beyond the project oriented EIA.

The SEA is hoped to be able to deal and bridge limitation and weaknesses of the existing EIA as the environmental assessment tool. This integral approach is hoped to develop the decision making into more integrated and coordinated levels so

that the efficiency of the development will be able to be gained by giving more emphasizes in all aspects involved.

Indonesia as a developing country has also concerned with environmental aspects in its development. The learning process of the environmental assessment can also develop gradually from other country's best experience and the international consequences. This study draws up the environmental assessment in Indonesia, towards the SEA in its plans, programs and policy, with elaborating the SEA concept in the Netherlands as one of the countries that has applied environmental assessment concept in its plans, programs and policy. The main reason is not only comparing two different conditions but also from the conception and the practice of SEA in other country there will be reached some conclusion for the best practice of SEA in Indonesia.

1.2. Research Objectives

The objective of this study is to perceive the effectiveness of the existing environmental assessment concept as one of the instrument and to increase the environmental planning in Indonesia's development. Furthermore, it tries to observe the possibilities and the effectiveness of applying SEA concept as a tool to increase the role of environmental planning in Indonesia. Moreover, this study also analyzes SEA concepts in the Netherlands as one of the references to take some lesson learn from its experience. Derived from the analysis, some conclusions and recommendations will be drawn and proposed for the improvement of environmental assessment in Indonesia to the decision maker in Indonesia's development.

1.3. Structure of the Thesis

The structure of this study is elaborated in seven chapters. Briefly, chapter one is the introduction; chapter two is the theoretical framework; chapter three is the key

question and the methodology; chapter four is the EIA concept in Indonesia; chapter five is the Netherlands environmental assessment; chapter six is the analyzes of Indonesian EIA and the Netherlands environmental assessment; and finally chapter seven is the conclusion.

Chapter one of this study describes the background of the study as the starting point of conducting the research in the field of environmental assessment, its objectives and also the structure of this study. Chapter two of this study consists of the theoretical framework that will be the framework and the basic knowledge in doing this research. Firstly, it elaborates the basic knowledge of environmental planning and the environmental assessment concept. Then, it gives details about the EIA concept in terms of what the limitation and the weakness of this concept are, and why the strategic concept is needed. Finally, the conception of strategic EIA, including its objectives and how it will increase the role of environmental planning is given at the end of this chapter together with the conception of policy transfer as one useful concept to analyze the possibility of applying a certain policy based on other country's experience. Chapter three consists of the key questions and the methodology of this study, in which it explains the research question of this research, the method that is used in this research and also the scope and the limitation of this research. Chapter four elaborates the existing concept of EIA in Indonesia, how it is developed and implemented in the decision making of development projects and how it plays a role in the environmental planning. In chapter five, the environmental assessment in the Netherlands will be elaborated, from its EIA to its SEA. The Netherlands' experience is elaborated in order to give reference of the best practice in applying such a tool in one country, and analyze how it works. In chapter six, this study analyzes Indonesian EIA and the Netherlands environmental assessment, based on the explanation in the two previous chapters. The conception in Indonesia is analyzed and also the concept being applied in the Netherlands in their contents. Finally, at the end of the structure of this study, the interpretation towards the

analytical study and findings is drawn into the conclusion and recommendation, based on the previous explanation, especially the analysis in chapter six.

CHAPTER 2

THEORETICAL FRAMEWORK

The theoretical framework here provides a theoretical construction towards the topic of the research. Firstly, it discusses the sustainability and environmental planning as the main umbrella of conducting the environmental planning in the development. Secondly, the roles of the environmental assessment and the recent discussion about the strategic concept of environmental assessment are discussed. At the end of this chapter, the policy transfer concept as a basic concept transferring a certain policy from one country to other country is discussed.

2.1. Sustainability and Environmental Planning

The understanding of environment sustainability comes up as the result of people awareness of environmental position. As we know that environment sometimes is seen from the view of something to be developed for the human needs, or perhaps should be exploited and maintained for human need. This perception has become the influence idea for people such as the academics and those who are aware of environmental issues to discuss limits of growth and environmental exploitation (Buckingham-Hatfield and Evans, 1996 p.2).

In Brundtland Report, the concept of sustainability is described as the development that meets the needs of the present without compromising the ability of future generations to meet their own needs (WECD 1987 in Pope et al. 2004). It is believed that Brundtland Report has brought sustainability concept into the world's concern as from that moment on, sustainability emerges as the policy agenda both internationally and locally (Buckingham-Hatfield and Evans, 1996 p.2).

The conception of three pillars for interpreting sustainability then comes up, as it sees the development issues from social, economic and environmental point of views, in which sustainable development should concern with those pillars, and try to

balance them into harmony. The sustainability becomes the policy goal in the development. Deriving from that reason, it needs medium as the mechanism to achieve its objectives and to integrate factors involved in every development, and here, the role of environmental planning is needed.

2.2. Development and the Role of Environmental Planning

As stated in the previous explanation, environmental planning plays role as a mechanism to achieve sustainability. Environmental planning uses its environmental approaches to deal with the uncertainty in decision-making process in the changing world. As we know that development creates rapid growth in economic and social conditions, thus many support and assistance to these rapid growths are needed. Development creates consequences, from the infrastructure requirements to the consequences of the infrastructure development to the physical condition of the environment and vice versa. These consequences create reciprocal relation among infrastructure development, nature condition, and social economic condition. The three-layer concept describes this phenomenon brightly, in which it is a conceptual representation of a spatial-environmental system consisting of three different layers; those are the ground, infrastructure and the occupancy layers (Ike et al., 2004 p.13). The relationship and dynamic characteristics among these three layers constitute how every layer supports each other and affects each other. The ground layer as the natural layer consists of nature conditions. In order to get utilized, it needs to be built through construction that creates infrastructure. The second layer that is the infrastructure layer consists of construction together with its networks both visible and invisible elements. This layer creates accessibility thus creates the occupancy layer, as the third layer. It is not a single way process, but the process continues backward where the human activity in the occupancy layer has created demand for the new infrastructure from the infrastructure layer, and the process continues on that the new infrastructure

will change the protection and system of the nature condition. In other word, the infrastructure layer affects the condition of ground layer.

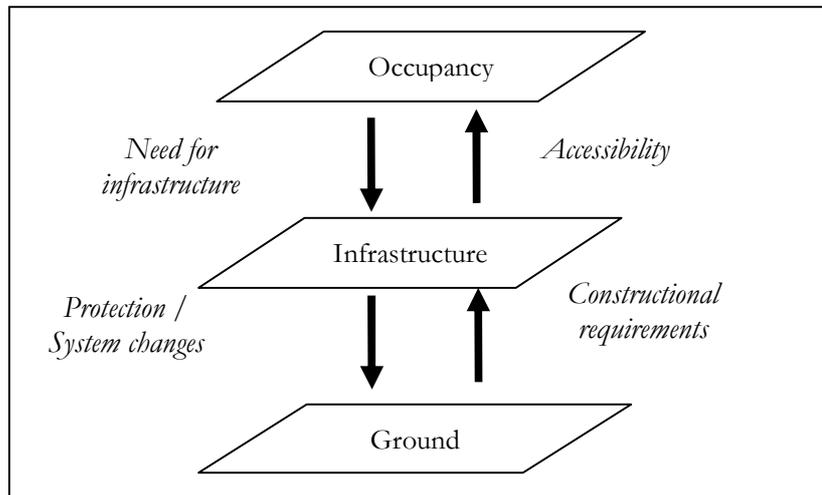


Figure 2.1 The environmental layer concept.
(Source: Ike et al, 2004)

Referring to the environmental layer concept (ELC), it can be concluded that environmental planning should see the development factors as an integral issue because of the linkages among the factors, where one factor will affect the other factors and vice versa. That means environmental planning needs environmental information to deal with the uncertainty in the future. Although the uncertainty cannot be eliminated, it can be understood and reduced (Lein, 2003 p.198).

ELC describes the concerned aspects in environmental and infrastructure planning, in which it illustrates the connection and consequences of the different layers in the development. In order to deal with the consequences of development towards environment, assessing the impact of development to the environment becomes a necessary step before a certain development is conducted. The next sub chapter will describe the EIA concept as a tool in environmental assessment.

2.3. Environmental Impact Assessment (EIA)

As stated before that in order to think integrally in environmental planning towards the future, it is important to recognize that the change in one single factor in the environment will affect the other factors. Deriving from that reason environmental impact assessment comes up as a logic tool in order to support the decision-making in planning.

2.3.1. Definition and Procedure

From its characteristics, environmental impact assessment can be understood as a process of identifying and evaluating the consequences of human actions on the environment and developing procedures for mitigating those consequences that are adverse (Erickson 1994; Marriot 1997; Canter 1996, in Lein 2003). Actually, there are many definitions of EIA, but the most important thing in my opinion is the role of EIA: how it provides the environmental information to support the decision-making achieves the environmental planning's objectives.

As a kind of tool, EIA follows its rule, in which it has a certain method, procedure and process in its concept to make the process of EIA become clear. Several stages have already been stated as the general stages in doing EIA. The stages are started with the screening process, in which it is the starting process to determine the need for EIA in a certain project or activity. The second stage is scoping; it is the process of determining which information is needed, which issues are to be overcome, and what kind of terms of reference is required for EIA. In the scoping stage, the range of assessment study, the possibilities of alternatives, the types of information, the level of details and the methods are determined. The next stage is the start of the EIA study. In this stage, the EIA activities like collecting the information then structuring the information, analyzing and evaluating are taken. The result of this study is reported in the Environmental Impact Summary or EIS, in the next stage, reporting EIS stage. Reviewing the EIS is the next stage, in which content of the EIS

is reviewed, and after determining whether the EIS is sufficient, decision can be taken whether the activity can be continued or not. And ex post evaluation can be taken as the final stage to evaluate the implementation of the activity.

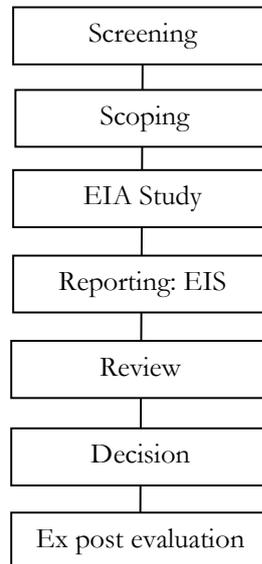


Figure 2.2 Basic elements of EIA
(Source: Arts 1998 p.26.)

The implementation of EIA in many countries may differ from each other according to their situation and condition such as resources, political and the administrative systems, social and cultural systems, and also the level as well as the nature of economic development of every country.

2.3.2. *Limitation of EIA*

As a tool of assessment, EIA has been giving some advantages and support to the decision-making to determine some activities in development, but as its characteristics showed, as an operational approach, EIA is a more reactive process rather than proactive one in which it is needed as the tool to assess the predetermined activity. In regard to that, it also details and specific merely for a certain project or activity, and not the connectivity and impacts among the activity themselves. Furthermore, EIA has a tendency merely as an appraisal rather than a development

towards a project as it does appraise how a certain project or activity will give impact to the environment.

As recent development and awareness towards environmental issues increase, the need of EIA application at earlier and more strategic stages of development is needed; it is along with the purpose of Rio Earth Summit that is to find ways of protecting the Earth from the predicted destruction of economic development (Sheate, 1995). The strategic EIA is then recognized as the use of EIA in the strategic level for policies, plans and programs, as a further development of EIA as a decision-making tool and for overcoming the limitations and problems of operational EIA (Arts, 1998 p.166). Furthermore, discussion about the earlier stages and the form of the involving the environment from the strategic level of the development comes up.

There are also differences between the decision making/planning practice as a cyclic process and EIA process as a linear process which creates different concern among the decision making, the design of project and the impact assessment. Furthermore, it needs integration process from the three of them from the decision making, the design of project and the impact assessment into one integral process as described in figure 2.3.

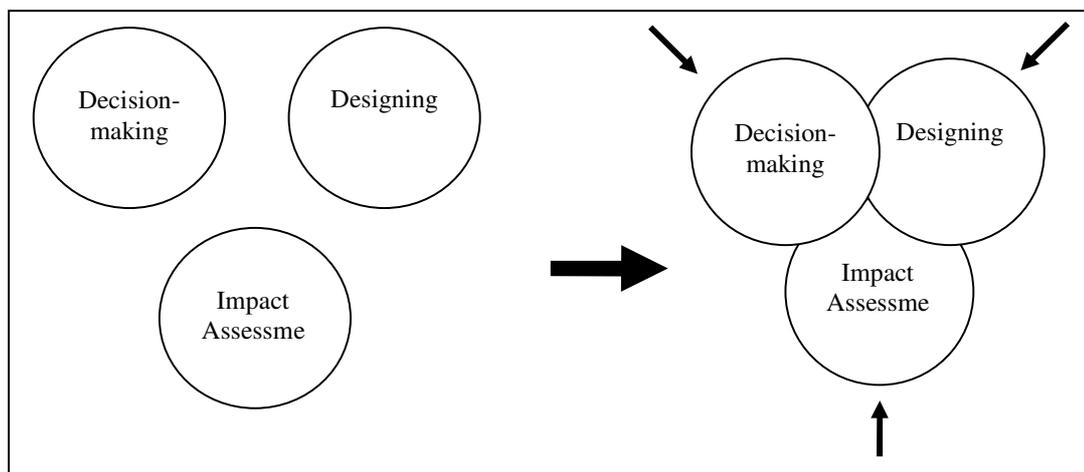


Figure 2.3 Integration of the processes of impact assessment.
(Source: Arts, 2004)

This integration process is one of the limitations in the EIA. The limitations of EIA as mentioned in Arts et al (2005) include the following:

- Prevention of foreclosure of assessing important environmental issues;
- Better focused environmental assessments
- Efficiency gains for (S)EA at lower levels by doing environmental assessment at higher level.
- Better fit with the ongoing nature of decision making and planning process by tiering of environmental assessment
- Improvement of plans and projects that are developed and implemented.

Deriving from those limitations, a concept that deals with them has come up and it is recognized as the strategic environmental assessment.

2.4. Strategic Environmental Impact Assessment

Understanding the Strategic Environmental Assessment (SEA) concept as the tool to make better development recognizes many acknowledgements. SEA that is mentioned above can be understood as applying the EIA concept into strategic levels in policies, plans and programs (PPPs) as it is adopted in the Netherlands. However, the process of evaluating environmental impacts at a strategic level is not necessarily the same as evaluating them at a project level (Glasson et.al, 1999 p.402). Glasson (1999) furthermore describes the role of EIA in strategic level of PPPs decision-making as follows in the figure 2.4.

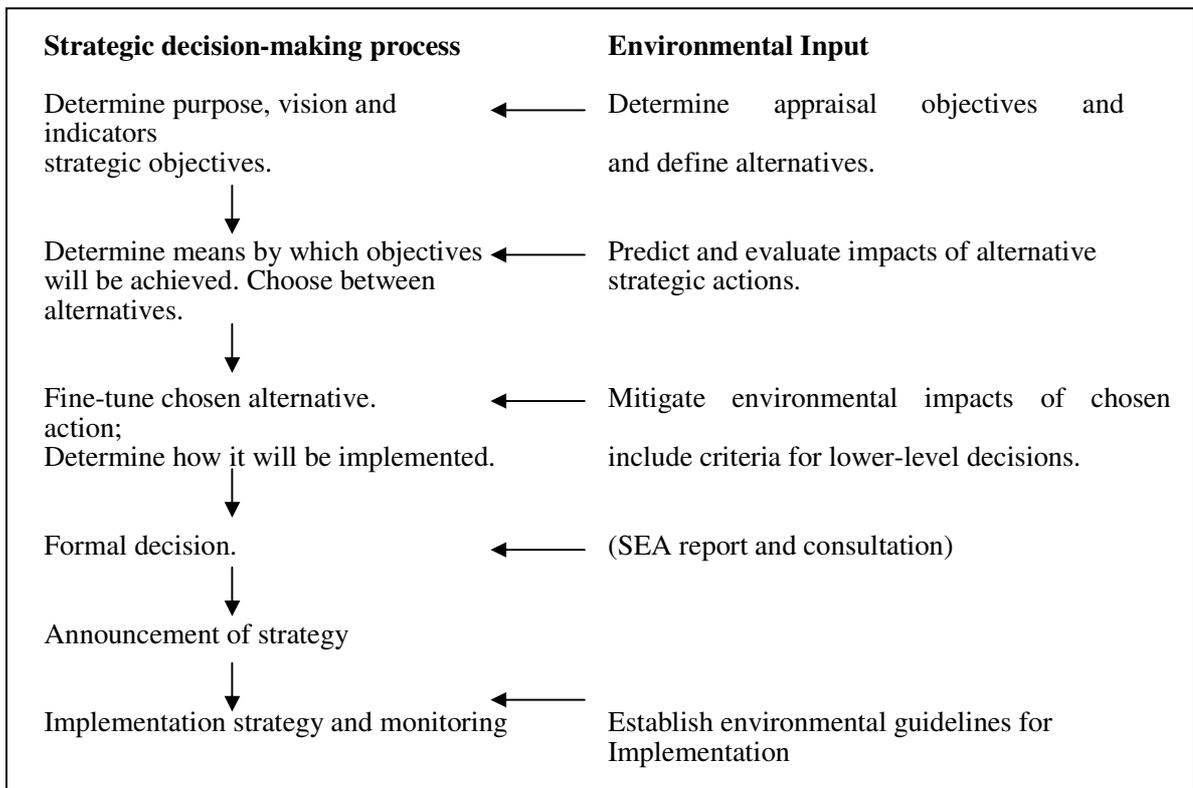


Figure 2.4 Links between Environmental Input and the decision-making process
(Source: Glasson et.al, 1999)

SEA in its definition can be seen as a systematic process for evaluating the environmental consequences of a proposed policy, plan or program initiates in order to ensure that they are fully included and appropriately addressed at the earliest appropriate stage of decision-making on par with economic and social considerations (Sadler and Verheem, 1996, in Therivel 2004 p.5). It is understood that the SEA concept tries to deal the environmental, economic and social considerations in the earlier level of decision making in order to create development that is more integrated in its aspects and it is hoped that it will reduce inefficiency and deal with limitation of project appraisal.

In SEA, it also recognizes a tiered environmental assessment at different planning level. The more global issues, the more strategic decision-making process is

concerning, as the more strategic decision-making deals with the more scope of issues, for example, the cumulative impact and global warming. Environmental quality is taken in the higher level of decision making than the project level (Arts et al 2005). The tiered decision making in policy, plan, program become one issue in SEA, as described in the next sub chapter.

2.4.1. Tiered PPPs and Advantages of SEA

The PPPs are theoretically tiered, as it is known that policy delivers objectives and gives framework for plans, while plans give framework for programs and finally programs guide the projects. Following those tiers, the EIA for these different PPPs can also be tiered as can be seen in figure 2.5.

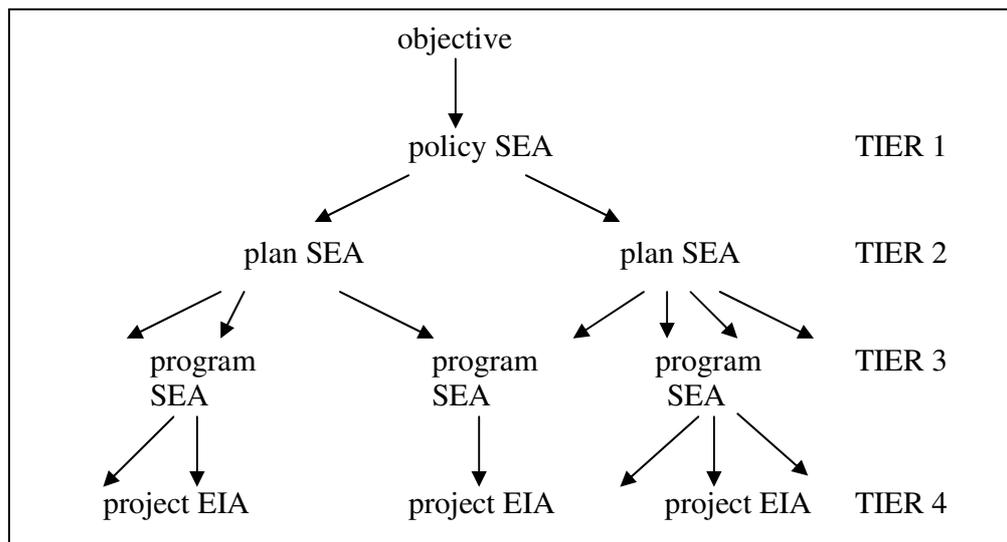


Figure 2.5 Tiers of SEA and EIA
(source: Glasson et.al, 1999)

From the tiered concept of PPPs, it can be seen that both EIA and SEA are complementary to each other, as there is also tiered concept of the impacts themselves. The assessment from each tier should be consistent in which the closer of PPPs to the project, it needs a more detailed assessment on it. The global and

cumulative impacts need to be discussed in the strategic level while the narrower scope of the impact will relate to the operational level. The consistency of the assessment is related to the consistency towards earlier stages of the planning process. Von Seht (1999) states that all assessments should be consistent with each other and should relate to the earlier stages of the planning process and use the findings from earlier SEAs. Furthermore, he says that it can support the coherent implementation of strategic political environmental goals, reduce the assessment work at the lower levels, and ensure that each impact is addressed at the relevant level of decision-making process.

Therivel (2004) proposes the advantages of applying SEA, as it gets earlier, deals with impacts that are difficult to consider at the project level, promotes a better consideration of alternatives, incorporates environmental and sustainability considerations in strategic decision-making, facilitates public participation in strategic decision-making, makes the decision-making process more transparent and robust and finally regarding to its tiered concepts, it promotes more streamlined decision-making. Decisions taken at one planning stage may not need to be revisited at subsequent stages of decision-making.

2.4.2. SEA Stages and Techniques

In applying SEA, Therivel (2004) gives six principles of SEA in general. Firstly, SEA is a tool for improving the strategic action, not a post-hoc snapshot. Secondly, it should promote participation of other stakeholders in the decision-making process. Thirdly, in order to fit with the timescale and resources of the decision-making process, it should focus on key environmental or sustainability constraints, thresholds and limit at the appropriate plan-making level. Fourthly, SEA should help to identify the best option for the strategic action. Fifthly, it should aim to minimize negative impacts, optimize positive ones, and compensate for the loss of valuable features and benefits. And finally, it should ensure that strategic actions do not exceed limits beyond which irreversible damage from impacts may occur. Derive

from its principles, SEA stages and techniques can be described in the following table.

Table 2.1 SEA stages and output

SEA Stage	What to decide	What to record
1. Identify SEA objectives, indicators and targets	What environmental and sustainability objectives, targets and/or indicators to test the plan options and statements against	List of SEA objectives, indicators and targets where relevant
2. Describe environmental baseline, including future trends; identify environmental issues and problems	What environmental and sustainability issues and constraints to consider during decision-making	Data on the baseline environment; list of relevant environmental and sustainability issues and constraints
3. Identify links to other relevant strategic actions	What other strategic actions influence the strategic action in question and how	List of relevant strategic actions, their requirements, and any constraints or conflicts with the strategic action in question
4. Identify (more) sustainable alternatives for dealing with the problems and implementing the strategic action objective	What alternatives or options to consider	List of alternatives or options
5. Prepare scoping report; consult	What to include in the scoping report	Result stages 1-4; agreed written statement of how to proceed with subsequent SEA stages
6. Predict and evaluate impact of alternatives/ statements; compare alternatives; mitigate impacts of chosen	What are the effects of the /alternatives/options and statements on the environmental/sustainability objectives and indicators;	Summary of effects of alternatives/options and statements on the environment and sustainability;

SEA Stage	What to decide	What to record
alternative(s)/statements	what mitigation measures to include	list of preferred alternatives; explanation of why these are preferred; mitigation measures proposed
7. Write the SEA report; establish guidelines for implementation	How to present the data from stages 1-6	Prepare the SEA report
8. Consult	Whom to consult; how to respond to consultation results	How consultation results were addressed
9. Monitor the environmental/sustainability impacts of the strategic action	How to deal with any negative impacts of the strategic action	How the strategic action's impacts will be monitored and significant effects dealt with

source: Therivel (2004 p.16)

2.5. What Can be Achieved Through Strategic Environmental Assessment?

The existing of strategic level of environmental assessment is hoped to deal with and answer the limitation of EIA implementation. In the recent development, a more proactive approach is needed towards environment and human activities in order to increase sustainable development, and here SEA plays its role in an important way.

In the planning system it means that it needs an integrated system that incorporates the environmental and sustainability criteria in the planning process, meaning that environmental and sustainability considerations are incorporated into the objectives of a policy, plans and programs (PPP), identify environmental and sustainability benchmarks by which the effects of a PPP could be tested; and it could

appraise whether the impacts of a PPP are likely to be in accordance with sustainability objectives (Therivel and Partidario, 1996 in Briffett et.al, 2003). SEA can be seen as a new environmental evaluation tool, based on EIA, but more efficiently applied to environmentally integrated planning and policy levels (Therivel and Partidario, 1996 in Briffett et al, 2003). Thus applying SEA in planning process is supposed to achieve a better planning in an earlier stage before the project stage and deal with other limitation of the existing EIA, with commitment to the principle of sustainability, consideration of carrying capacity, in order to maximize the positive outcomes of the development.

2.6. Adopting Other's Experience Through Policy Transfer

Strategic Environmental Assessment comes up from the western society thinking. The implementation and the use of SEA in the development were initiated by the western society, but as the awareness of the need of SEA basically because of its benefits, it is going to be internationalized. It can not be avoided that the process of internationalization of SEA should be integrated with the different conditions and situations and also the unique characteristics in every country, as every country has differences in many aspects. Regarding the uniqueness of countries in the world, the existing differences have affected the implementation of a certain policy, particularly in adopting a kind of policy from other countries, and also for the SEA policy. Here, policy transfer concept becomes a basic thinking where the implementation of SEA concept in a certain country can be transferred directly or indirectly or not in other countries.

Dolowitz and Marsh (1996) determine that policy transfer can be carried out voluntarily or coercively. They state that policy transfer can be understood as a process in which knowledge about policies, administrative arrangements, institution etc in one time and/or place is used in the development of policies, administrative arrangements and institutions in another time and/or place. Furthermore, they state

that degrees of the transfer may vary. It could be copying, meaning adopting a program in use elsewhere without any changes; emulation, meaning accepts not all of the policies but partly by suiting with the condition; hybridization and synthesis, meaning combining elements of programs found in two or more countries to be developed; and inspiration, which means adopting a program or policy inspired by other country's experience.

Table 2.2 Degree of policy transfer

Name of the degree	Definition
Copying	adopts a program in use elsewhere without any changes
Emulation	accepts not all of the policy but partly by suiting with the condition
Hybridization and synthesis	combining elements of programs found in two or more countries to be developed
Inspiration	adopting a program or policy inspired by other country's experience

Source: Dolowitz and Marsh (1996)

In performing policy transfer, several actors will be involved as Dolowitz and Marsh (1996) identify there are six categories of actors involved in it. They are the elected officials, political parties, bureaucrats/civil servants, pressure groups, policy entrepreneurs/experts and supra-national institutions. Here, they play roles as the agents of the transfer through their influences directly or indirectly.

Policy transfer must understand that every country is different and because of that, in carrying it out, it must consider some constraint factors. Dolowitz and Marsh (1996) in their article agree that the constraint factors of policy transfer include the type of policy goal; the type of the problem that is faced; the relation between problem that is faced and the proposed solution; the degree of the side-effect of the policy; the availability of information to support the policy; and also the degree of outcome predictions.

As the conclusion, considering the characteristics of performing the lesson learn through policy transfer, we can examine experience from the SEA practice in the Netherlands to be adjusted to the condition in Indonesia, concerning the differences and constraints. Regarding the degree of the policy transfer in table 2.2 with concerning that there are many differences between Indonesia and the Netherlands, emulation; hybridization and synthesis; and inspiration can be taken as the type of transferring the SEA concept.

CHAPTER 3

KEY QUESTIONS AND RESEARCH METHOD

As stated in the previous chapter, in this part the key question and the method of the research are discussed. This chapter explains the main question of the research together with the supporting questions followed by the method of the research which will be used to conduct the analysis to answer all questions. This chapter provides justification and outlines framework as well, and lastly explains the scope and limitation of the research as a range and boundary of this study.

3.1. Research Questions

This study tries to elaborate the existing concept of environmental impact assessment (EIA) in Indonesia. And as stated in chapter 1 of the introduction, the objective of this study is to perceive the effectiveness of the existing EIA concept as one of the instruments to increase the environmental planning in Indonesia's development. Moreover, by this study, the possibilities and the effectiveness of applying strategic EIA concept as a tool to increase the role of environmental planning in Indonesia will be observed, and finally it tries to analyze SEA concepts in the Netherlands as the references to take some lesson learn from its experience.

In order to reach the objectives of this study, some key questions towards this study are emerged. The main research question of this study is "*how to increase the environmental planning through environmental assessment in Indonesia*". In order to support the main research question, the supporting questions of this study are stated as follow:

1. How does the EIA concept being applied in Indonesia? Answering this question will give description of the existing condition of environmental impact assessment in Indonesia's development projects, and it will be the starting point to do the research.

2. How can strategic environmental assessment concept be applied in Indonesia plan, policy and program? It is questioning how the strategic concept is applied in development plan, program and policy, with questioning of how this concept is being adopt and applied with experiences in a certain country.
3. How should the SEA concept be applied in Indonesia? This question is searching for the precondition and requirement of doing the SEA concept deriving from the set up criteria or whether the SEA concept (or SEA-like) already exists in Indonesia.
4. How will the SEA support to increase the environmental planning in Indonesia's development? At the end, this question is looking for the relation of the SEA concept with environmental planning within Indonesia's development.

3.2. Research Method

This section provides information of how the research is conducted from the beginning, in the process of synthesizing data, analyzing it until the end of the study when the interpretation of the analytical study is drawn and provide conclusion and recommendation. This research is conducted using descriptive qualitative analysis based on literature review. The research method applied for this study can be drawn as the scheme below:

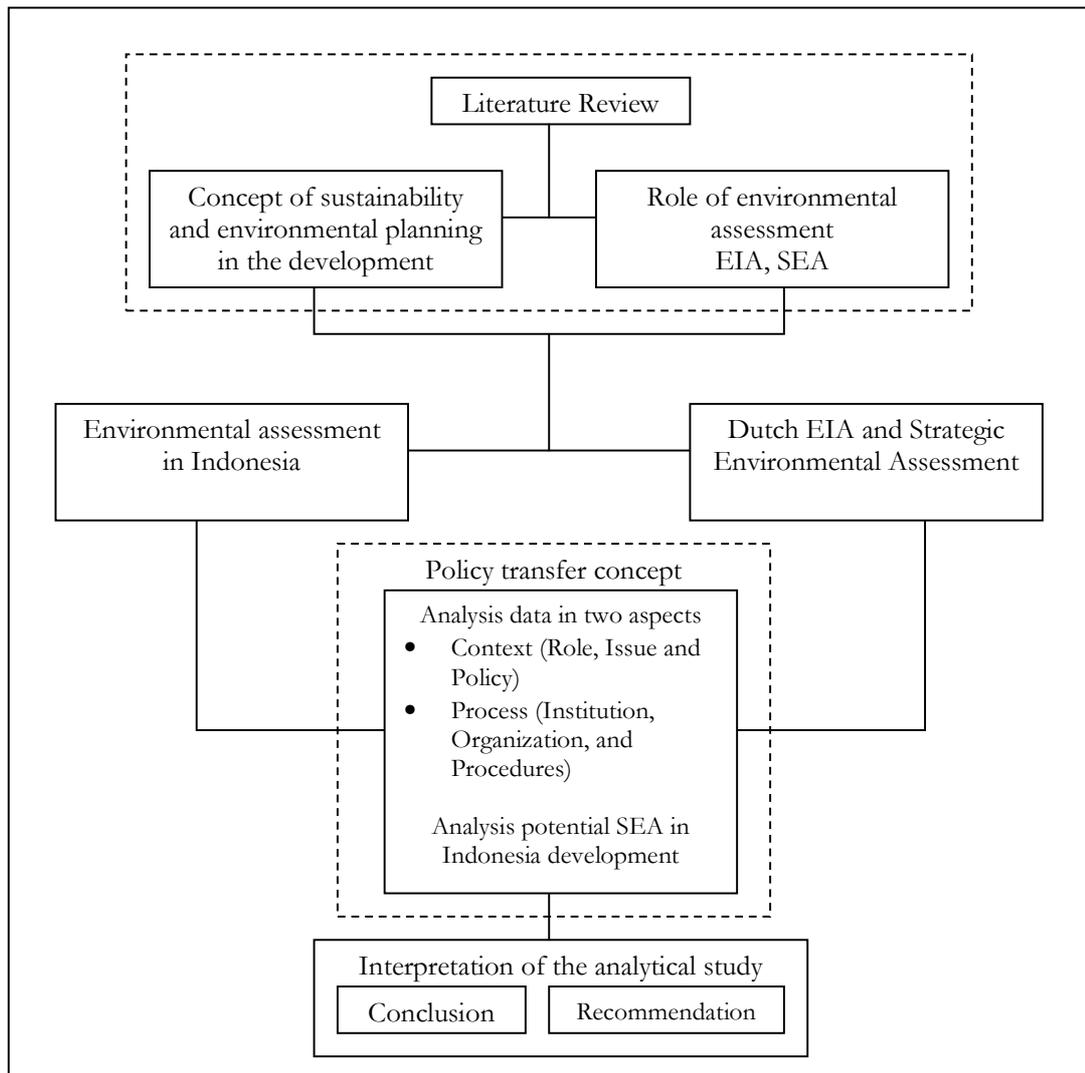


Figure 3.1 Overview of the research method

In performing the research, some steps are followed as the approach method. The steps of conducting the research following the description are below:

1. Determine the background of the study.
2. Describe the literature review which is relevant to this study and formulate the theoretical framework for this study.

3. Describe the existing EIA concept in Indonesia and the concept of SEA in other country in this case in the Netherlands. Analyze the EIA concept in Indonesia and the potential SEA based on the concept of SEA and lesson-learn from the other country's experience with acknowledging uniqueness condition and situation in every country.
4. Interpret the analytical study to answer the research questions in the conclusion and proposed some recommendation.

3.3. Literature Review and Theoretical Framework

In order to answer the research questions, some steps have been taken into consideration, regarding the literature review and the theoretical framework.

- Find relevant literature in EIA and SEA topics and plan, program and policy from international journals, articles and books.
- Elaborate the concept of EIA, SEA, Policy, Planning and Programs (PPPs), and strategic concept, as the analytical bases to study the existing data
- Develop theoretical framework based on the selected discourse that is SEA for plans, programs and policies in the development.

As it will be based mostly on literature study, the data source for this study will be collected from supporting literatures such as journals, books, articles, and previous research about the recent condition of EIA in Indonesia and in other country such as in the Netherlands, mainly in transport infrastructure. Furthermore, published documents such as regulations and factual data will also be used to support this study.

3.4. Research Analysis

There are some steps of doing the research. Firstly, it will elaborate the existing condition of environmental assessment in Indonesia, and secondly, it

describes the Dutch experience of conducting environmental assessment in its development, and thirdly, it will be the analyzing part in which it analyzes the existing environmental assessment from the context and process perspectives. In the context perspective, the emphasis of the analysis will be on the role, the issues and the policy towards environmental assessment and planning. In the process perspective, it emphasizes on the institution of the actors involved, organization, and procedure of how the process of environmental assessment implied.

Still fraction of the third part, analyzing the existing condition towards the potential SEA in Indonesia is discussed from several dimensions. This analytical process will follow the frame work analysis from Briffett et.al (2003) that sees the potential SEA in developing countries from seven dimensions. Briffett et al (2003) compare the dimensions of existing status of environmental strategic decision making and the potential SEA from the political will, legal mandate, institutional capacity, social acknowledgement, technical know how, process implementation and education awareness. The experience of the Netherlands practice in performing SEA will also be used as the evaluation of how other country, a developed country, perceived the assessment and implied it in its development.

Finally, based on the analysis from the two sides of elaboration parts, it is hoped that some factors of the recent condition for the potential implementation of SEA in the scope of lesson learn or policy transfer from the Netherlands' experience will be identified. Those analyses will be used to make conclusion and recommendation of the future environment assessment in Indonesia.

3.5. Scope and Limitation of the Research

This research has a defined scope and limitation towards its content. This research is about promoting the role of environmental assessment in planning. It tries to see from EIA and SEA as the assessment tools to support the decision making

process. This research focuses the environment aspect in the development from strategic point of view not in the technical aspects.

In order to give a better understanding, the term of strategic EIA in the Netherlands in this study can be seen as synonym word of the SEA which is seen as the implementation of EIA in the strategic level. This terminology is important as it is known that SEA has a broad definition and scope more than merely environmental consideration. Limiting the terminology and bear it in mind will give clear understanding of the research.

Regarding the research method, previously this research was planned to use interview method as one of the data collection methods, but due to the time limitation in the research period, the interview method could not be used.

CHAPTER 4

THE EIA CONCEPT IN INDONESIA

This chapter provides the Indonesian EIA and how it is applied. It describes the general term of the Indonesian EIA, the concept and the context in the implementation in Indonesia's development.

4.1. Indonesian EIA

The history of EIA in Indonesia can be traced back to the periods in the past. Purnama (2003) notes that the early EIA in Indonesia was in 1970s, but at that time the requirement of the EIA was assumed more as the requirement from financial donor agencies or multinational companies operated in Indonesia. The birth of EIA in Indonesia was in 1982 with the enactment of Basic Provision of Environmental Management by Act no. 4 of 1982, but the EIA regulation in Indonesia was enacted later by the Government Regulation No.29/1986. From that time until recently, the EIA implementation and regulation in Indonesia has been adjusted to the changing of environmental assessment development and other supporting condition.

Chronologically the EIA development in Indonesia can be divided into four phases; first is the period prior to 1987 with limited implementation of EIA, and then the period of 1987 until 1993 with the enactment of Government Regulation No. 29/1986, followed by the period of 1993 until 2000 with the enactment of Government Regulation No.51/1993 and the last period after 2000 with the enactment of Government Regulation No. 27/1999.

Table 4.1 Timeline of Indonesia's EIA

Period	Characteristics
Prior to 1987	Limited implementation of EIA
1987 – 1993	Enactment of Government Regulation No. 29/1986
1993 – 2000	Enactment of Government Regulation No. 51/1993
After 2000	Enactment of Government Regulation No. 27/1999

Source: (Purnama,, 2003)

4.2. AMDAL, the Indonesian EIA

The environmental impact assessment in Indonesia is known by the term AMDAL (Analisis Mengenai Dampak Lingkungan or analysis of the environment impact). AMDAL can be defined as an analysis of a big and important impact for decision making of a certain planned activity to the environment, that is needed for the decision making process for the implementation of the activity.

AMDAL as the environmental impact assessment is the basic step for the government to decide whether a project or an activity is applicable or not to be implemented with regards to the environment considering to the physical, chemical, biological, social-economic, social-culture and health aspects. It will analyze the positive and negative impacts of a certain activity towards the environment, and the technology to deal with the impact together with the cost of dealing with the impact. If there is no applicable technology to deal with or there is a technology but it will cost a lot, it will be judged that the plan is not applicable to be implemented so it can not be continued. Thus, it can be said that AMDAL guarantees that a certain activity or development project is environmentally suitable for hopes to minimize the negative impacts and develops the positive impact towards environment.

4.3. The Procedure of Performing AMDAL

There are some processes and procedures in doing AMDAL in Indonesia's EIA. According to Government Regulation No. 27/1999, the process is started by the screening process; announcement and public consultancy; scoping process; compiling and appraisal EIA terms of reference; compiling and appraisal EIA, Environmental Management Plans; permitting and licensing environment suitable.

- Screening process

This process is also called by selection of mandatory EIA process. In this screening process, it is determined whether a plan or activity must be required EIA or not. The basic regulation to determine the need of EIA of a certain activity or project is stated by the Decree of Minister of Environment No. 17/2001.

- announcement and public consultancy

Before starting AMDAL, the proponent and government must announce to the public about their activities and plans. The basic regulation for the public consultancy in doing AMDAL is stated in the Decree of the Head of the Environmental Impact Agencies No.8/2000.

- scoping process

It is a starting process to determine the scope of the problem and identify the important impact related to the activity or plan. The result of this process is KA-ANDAL document (EIA terms of references/ EIA TOR).

- compiling and appraisal EIA TOR

Based on the previous step, the proponent compiles the EIA TOR, and submits it to be appraised to the Komisi Penilai AMDAL (EIA commission)

- compiling and appraisal EIA (ANDAL), Environmental Management Plans (EMPs/ RPL and RKL)

This is the process of compiling EIA and EMPs which are implemented on the basis of EIA TOR that have already been approved by the EIA commission.

The content of EIA report includes the scope and the method of the study, detailed technical subproject description together with the baseline data; the environmental and social impact prediction, including indirect and cumulative impacts analysis of alternatives and non-project alternatives, and it also includes the evaluation of large and important impacts. While the content of RKL/RPL depicts a set of mitigation, monitoring, and institutional measures that need to be exercised during implementation and operation of the project to reduce unfavorable environmental and social impacts, to compensate them, and reduce them to the acceptable levels. The RKL/RPL also states the responsibilities of the institutions and stakeholders involved.

Figure 4.1 shows the complete EIA procedure in Indonesia including screening, public participation, scoping, compiling and appraisal EIA TOR, and compiling and appraisal EIA, Environmental Management Plans (EMPs) based on the Government Regulation No 27/1999.

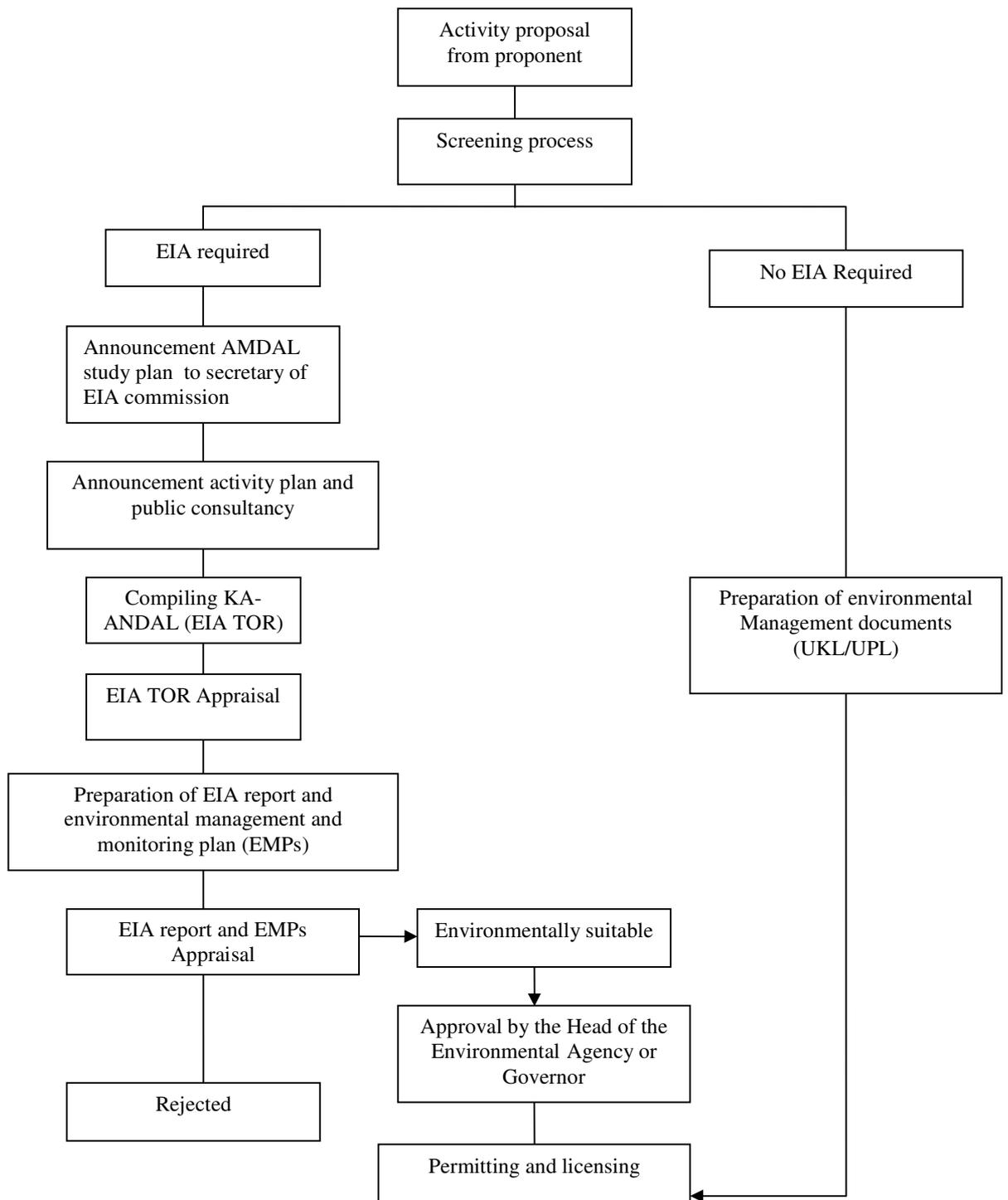


Figure 4.1 AMDAL procedure
 Source: interpretation from Government Regulation No 27/1999

4.4. The Actors Who Play Roles in the AMDAL Process

From the procedure of doing AMDAL, there are actors involved in the mechanism. The actors are the government, proponent, and the public. The government has tasks to determine the suitability of a plan or activity towards the environment, in order to preserve public interest and implement sustainability in development. The proponent can be a person or company that is responsible for the plan or activity. The AMDAL analyst can be sent to the third party, but the implementation of AMDAL regulation and the consequences are the responsibility of the proponent. The decision in the AMDAL process will affect the public. Here the position of the public is the same as the other actors. They are no longer merely become object, but as the subject involving in the decision making process. The mechanism states about the public involvement in the AMDAL process is when they have rights to review the EIA TOR, the EIA and EMPs document (Purnama 2003).

As seen in the procedure of AMDAL, there is a role of AMDAL commission as the board to appraise and determine the suitability of a certain plan or project according to their environmental impact. This commission consists of the chairman, secretary, and member, which can be formed in the national, regional or provincial, and local context. In the national context, it will be led by Deputy Head of Environmental Impact Management Agency who is responsible for environmental impact assessment. In the provincial context, the EIA commission will be led by Head of Provincial Environmental Impact Management Agency, while in the local context it will be led by Head of Local Environmental Impact Management Agency or other government officer who is responsible for the local environmental impact assessment.

This commission accommodates the actors involved in AMDAL mechanism as in its member it will include the representatives of the government instances (national, provincial or local), the expert, environmentalists, and public member as representative from the people who get impacts from the certain development. The

AMDAL commission is supported by the technical team which is formed in order to give input to the commission from technical aspect towards the assessment of the environmental impact.

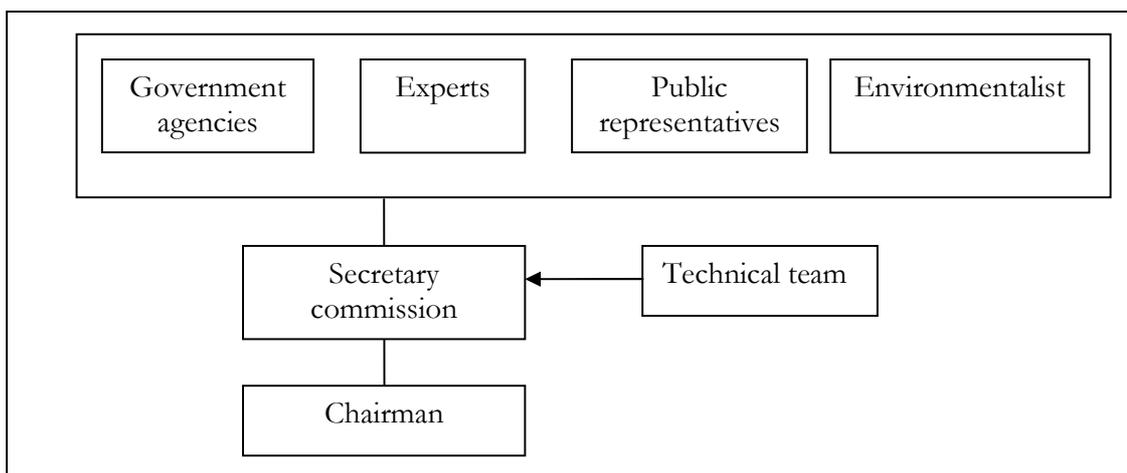


Figure 4.2 AMDAL commission

Source: interpretation from Decree of Minister of Environment No 40/2000

Generally, there are two kinds of activity that is stated as “mandatory” and “non mandatory” in doing EIA in Indonesia, as AMDAL is one of the environmental maintenance instruments, so that not every plan should do this procedure. Mandatory means that the plan or activity must do EIA procedure as one of its complementary in its development and implementation permit. Non mandatory means the plan or activity does not have to do EIA procedure as part of its permit.

The classification of mandatory of non mandatory EIA in a plan or activity according to Ministry of Environment is based on:

- Significant Impact Potential

The significant of impact is measured in the base of several points. Those are the number of people affected, the wide of affected area, impact intensity, number of other environmental components affected, cumulative type of the impact, and reversibility of the impact.

- International References
Some references that have been stated in other countries as basic policy for AMDAL
- Existing technology
Uncertainty of existing technology to deal with the crucial impact that may appear.
- Environmental Study
Some studies regarding the environment aspects of a certain plan or activity by the expert or university
- Input and proposal from various involved technical sectors

The mandatory activities to do AMDAL are listed in the Decree of Minister of Environment No.17/2001. The list in the decree mentions the activities; military, agriculture, fishery, forestry, health, transport, satellite technology, industry, regional infrastructure, energy and mineral resource, tourism, nuclear development, poisonous waste treatment and genetic manipulation. The requirement of AMDAL is based on the type of activity and its scale that potentially has significant impacts towards the environment regarding its development.

AMDAL deals with significant impacts as the consequences of development towards the environment. The significant impacts as the basic criteria of AMDAL are stated in the Decree of the Head of Environmental Impact Management Agency No. 56/1994 as the basic environmental changing due to the impacts of a certain activity or projects that will be taken into account. Factors which determine the significant impacts are regarding to the number of affected people, the wide of area affected, impact intensity, the number of other environmental components affected, cumulative type of the impact, and reversibility of the impact. In each factor there will be several significant impact criteria, such as measurement, specific standard and principle.

Besides that, affecting the natural (protected) areas will be stated as creating significant impact, which means that the activity must do an AMDAL procedure.

Non mandatory AMDAL does not mean that the activity frees from environmental concern. Activities that are categorized as not giving significant impacts, require Upaya Pemantauan Lingkungan (UPL) and Upaya Pengelolaan Lingkungan (UKL). The term UPL and UKL can be translated as environment monitoring and management procedures. UKL and UPL are documents of environmental management for plan or activity that is non mandatory in doing AMDAL and the impact of the plan or activity is relatively able to be maintained with the existing technology.

They are more in the technical procedures to fulfill the environmental standards for the plan or activity, and they play roles in decision making and the basic document for permitting or licensing a certain plan or activity.

These documents are submitted by the proponent of a certain plan to the government. They contain of the identity of the proponent together with the plan or activity proposed and the possibilities of environmental impacts, and the programs in order to deal with maintaining and monitoring the environment. The proponent submits the documents to the government instances that are responsible for environmental management in regional, provincial or national level depending on the scale and level of the proposed plan.

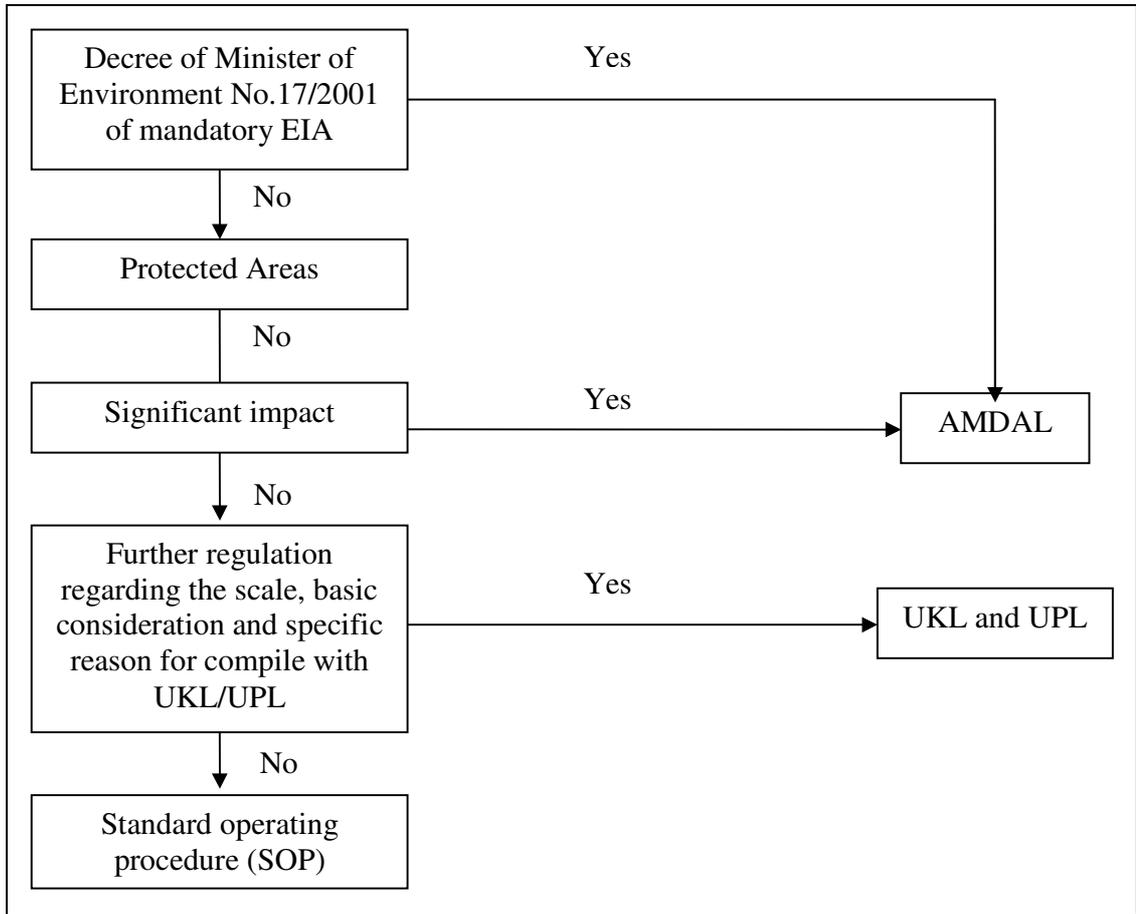


Figure 4.3 Screening process of EIA for the project development
 Source: interpretation from the Government Regulation No 27/1999

CHAPTER 5

DUTCH ENVIRONMENTAL IMPACT ASSESSMENT AND ITS STRATEGIC ENVIRONMENTAL ASSESSMENT

This chapter explains the concept of environmental assessment and the practice of EIA in the Netherlands, and then discusses its SEA concept and practice.

5.1. The Netherlands Environmental Assessment Concept

The environmental assessment concept in the Netherlands is implied with the intent as stated in the Dutch Environmental Management Act, EMA as to take full account of the environmental interest at stake in the decision-making process on a particular project or plan (Tweede Kamer, 1981 in Arts 2004). Like EIA in other countries, it provides information about environmental impact before decisions are taken on plans and project with environmental consequences.

The history of EIA in the Netherlands comes from the year 1986 when the EIA legislation was forced, but it took more than a decade backward to discuss and consider it (Arts, 1998). The arrangements for EIA were incorporated into the Environmental Protection (General Provision) Act, and in the year 1987, the EIA Decree was issued to regulate the application of EIA in the Netherlands.

The regulation towards Dutch EIA is stated in chapter seven of the Dutch Environmental Management Act (Wetmilieubeheer) and in the Environmental Impact Assessment Decree 1994 (Besluit milieu-effectrapportage 1994), as the amendment of the previous EIA decree 1987. In Dutch EIA Decree, it is stated when the EIA should be carried out and in what activities EIA is required. There are two categories of activities and decisions in Dutch EIA Decree. The first is what called by category C which contains a list of activities and decisions require mandatory EIA and the second is category D which contains list of activities and decisions in what so called

'article 7.8a/7.8d procedure' is required. The Dutch EIA Decree 1994 resulted from Directive 97/11, the European Directive for EIA, and it also incorporates the United Nations Economic Commission for Europe (UNECE) treaty on E.I.A. for trans-boundary environmental impacts (ESPOO treaty).

Generally, EIA is mandatory for projects and plans that have potential impacts that harm the environment. The category C in the EIA Decree lists the activities that must do the EIA. Arts (1998) mentions the examples of those activities such as roads, railways, waterways, pipelines; harbors, marinas and airport; land reclamation, dikes, dams; land (re)development, military sites; construction of recreational or tourist facilities, housing and industrial estates; waste disposal; water and mineral extraction; power plants and industrial activities and key planning decisions at the national level.

5.2. Dutch EIA Procedure

The Dutch EIA procedure is following the general guideline of EIA procedure that is commonly used, but it is known that it has more complicated processes, containing ten steps¹. Those are:

1. Pre-starting note: It is the phase when the initiator writes the pre-starting note, a document contains the basic data for the project. After the competent authority publishes the pre-starting note, the EIA procedure can start.
2. Public participation and recommendations: It is open for the public participation for about 4 weeks by focusing on the guidelines for the desired content of the environmental impact statement (EIS). It produces recommendations for the Commission's guidelines for the environmental impact assessment.

¹ Environmental Impact Assessment, Ministry of Housing, Spatial Planning and Environment of the Netherlands

3. Guidelines: within 13 weeks of the publication of the pre-starting note the guidelines will be set by the competent authority, indicating alternatives and environmental impacts that have to be dealt with in the environmental impact report.
4. Environmental impact statement (EIS): It is produced by the initiator, which sends it to the competent authority together with the request for a decision.
5. Acceptability assessment: the assessment will take within 6 weeks of the environmental impact report being submitted. The content and the legal requirement of the EIR are assessed with considering the EIA guidelines.
6. Publication of environmental impact report and application or draft decision: within 8 weeks, the competent authority publishes the report together with the application for the decision. If the decision does not require an application for a decision to be submitted, the environmental impact report will be published with the draft decision or preliminary draft decision.
7. Participation, recommendations and hearing: comment and objection are opened until at least 4 weeks, but follows the period for objections to the procedure for the decision.
8. Review by the environmental impact assessment Commission: within 5 weeks the environmental impact assessment Commission publishes its report on the completeness and the quality of the environmental impact report including comments and recommendations that have been received.
9. Decision: made by the competent authority, explaining what has been done with the result of the environmental impact report, and specifies what is to be assessed

and when. The regulations for making objections and appeals result from the regulations in the decision.

10. Assessment: with the cooperation of the initiator, the competent authority assesses the environmental impacts that actually occur, as laid down in the assessment section of the decision. Where necessary, it takes extra measures to limit the impact on the environment. An objection or an appeal must be submitted within six weeks.

There is also one step more after all of the processes above, that is 'follow up' which consists of monitoring and evaluation EIA or ex post evaluation and monitoring carried out by competent authority (Arts, 1998). Moreover the scheme of the Dutch EIA can be described in figure 5.1

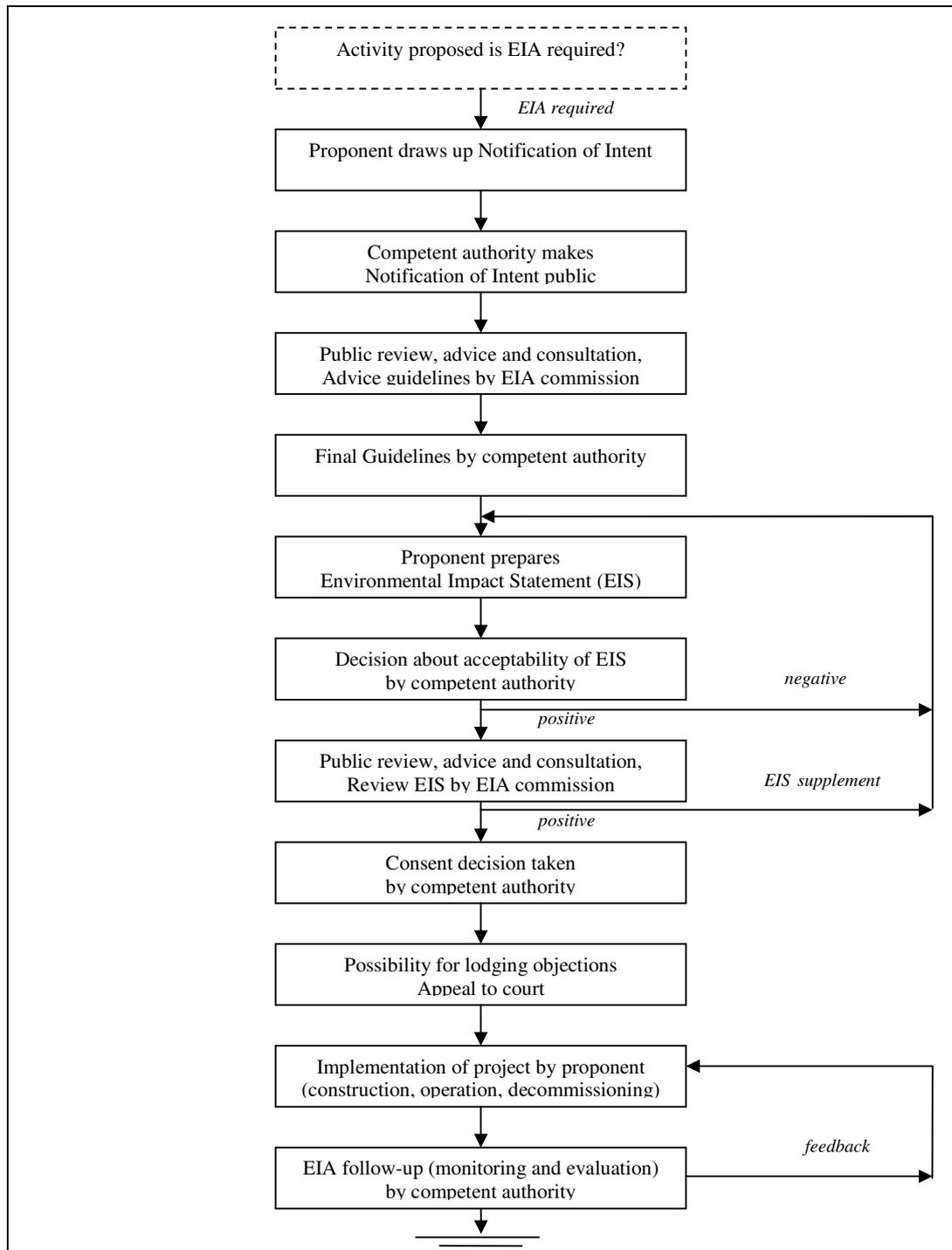


Figure 5.1 The EIA procedures in the Netherlands
source: Arts (2004)

From the Dutch EIA procedure, we can see the actors who play roles in the EIA process. The involved actors here are the proponent or the initiator, it is the party that initiate the activity; competent authority, it is the government agencies that are responsible for the activity and have competencies to give decision for the activity; EIA commission, as the working group of independent experts that give advice to the competent authority, and the public which can be individuals or group organizations. It is stated that the Netherlands Commission for EIA is independent, subsidized by the government, and it is an independent expert committee that is involved in all Environmental Impact Assessments in the Netherlands. The Netherlands commission for EIA has no administrative responsibilities and it is independent-it does not interfere with political judgments. It verifies fulfillment with the basis of legislative requirements for EIA and assesses the information quality to support administrators in decision-making process. The EIA commission is given an important role in the EIA procedure due to the EIA Decree; it advises decision makers (that can be ministers, provincial or municipal councils) on the environmental aspects of certain plans and projects. The commission is independent politically and does not articulate a preference for one alternative or another. It can be said that it plays as an independent expert watchdog to improve the quality of Environmental Impact Statements (EISs).

5.3. SEA in the Netherlands

The existence of strategic environmental assessment in the Netherlands is forced by the EU Strategic Environmental Assessment Directive (Directive 2001/42/EC). This Directive was adopted in July 2001. It lays down the rules for a mandatory environmental impact assessment for strategic decisions. This means that plans for spatial planning must be checked for any impact they may have on the environment.

In Dutch environmental assessment legislation it is recognized with what is called by the EIA for project and EIA for plan. What being the subject of SEA is EIA for plan, assessing the environmental impact in strategic level above the project or operational level. It determines in the global context and strategic level for a certain development. The Dutch voluntarily practices the EIA for plan which can be said it can be translated as the SEA practice, as in the EIA Act specified plans and programs are subject to the EIA Act (1987). SEA comes up with the objectives to ensure that environmental consequences of certain plans and programs are identified and assessed during their preparation and before their adoption to prevent 'foreclosure', to do more transparent planning, and as the central tool: preparation of an environmental report.

In the Netherlands SEA for specific plans and programs follows a mandatory process, including assessing the alternatives, involving public in the scoping, and reviewing phases and reviewing the quality of the information by the independent EIA commission (Dalal-Clayton and Sadler, 2005 p.86). It accommodates the planning procedure as it facilitates integration and as Verheem and Tonk (2000) describes they have similar characteristics:

- Early notification and involvement of the public
- Integration of information into SEA and plan preparation throughout the process
- Consultation with other government agencies and advice from independent expert
- Identification of the best alternative (from the environmental perspective in the SEA)
- Reason for decision and justification of the adopted plan
- Monitoring and follow-up to plan implementation.

As the new Directive from EU about SEA, SEA is mandatory in Europe for certain plans and programs. It affects the EA regulation in the Netherlands. SEA is now regulated in the Dutch Environmental Management Act per 3 July 2006. Now SEA is mandatory for more plans than before including plans and programs in agriculture,

forestry, fisheries, energy, transport, waste management, water management, telecommunications, tourism, town and country planning or land use².

According to the EU Directive, SEA regulations pertain if a certain plan or program set the framework for EIA-projects, and it becomes mandatory SEA if it requires an assessment in view of the likely effects on specially protected European Nature Areas (European Bird and Habitat Directive).

Conceptually, in the content and procedure, SEA and EIA regulations following more or less the same or comparable procedure, with screening process, scoping process and preparing the environmental report are the main elements. SEA in the Netherlands is carried out by the EIA legislation, so that SEA in the Netherlands is characterized as EIA-based SEA³ as it implies the procedure of EIA in the level of plans and programs.

For the policy level, the Netherlands recognizes the Environmental test (E-test) as the tool to assess the potential environmental consequences of draft regulations sent to the Council of Ministers (Cabinet). The E-test has aims to integrate environmental considerations in the introduction of bills, general administrative orders or ministerial decrees and orders. In addition, departments can also test other policy intentions such as plans and notes (VROM, 1996 as cited in Dalal-Clayton and Sadler 2005). In general, the Dutch SEA closely follows the EU Directive with few exceptions (van Eck and Verheem, 2006):

- Publication of the start of the combined SEA/Plan-process is mandatory.
- The Netherlands use a positive list of plans and programs for category 1 plans.
- An independent assessment of the SEA is required in the case of plans with likely significant impact on protected nature area.

² van Eck and Verheem (n.d)

³ according to UNEP (2002) as cited in Effective SEA System and Case Study, 2003.

The procedure of SEA with EIA-based (*Effective SEA System and Case Study, 2003*) can be seen as follow:

- Screening; to determine whether or not an SEA is needed and at what levels.
- Scoping; to identify key issues and alternatives, clarify objectives and develop terms of reference for SEA
- Identification and comparison of alternatives (including no action): to clarify implications and tradeoffs.
- Inform and involve the public: to identify the views and concerns held by stakeholders.
- Analyze and evaluate the impacts: to identify the significant effects of selected alternatives and measures for mitigation and follow-up.
- Document the findings: to provide the information needed for decision-making and/or to comply with legal requirements.
- Review the quality of the information: to ensure it is clear, sufficient and relevant to the decision being taken.
- Carry out follow up measures; to monitor effects, check on implementation, and track any arrangements for subsidiary SEA or EIA.

5.4. SEA and Planning Process

Regarding the tier in the environmental assessment, how the SEA affecting the planning process can be determined in direct or indirect influences. This may take place in two ways as stated by Noteboom (1999) :

- Direct; it occurs when the environmental assessment which is undertaken first influences the later environmental assessment *directly*;
- Indirect; it is when the environmental assessment which is undertaken first, is influencing the PPP for which it is made, and then this PPP influences the second tier and so the SEA is *indirectly* influencing the second tier. One of the

situations is that a PPP contains decisions which are influenced by an SEA, while the PPP influences the lower tier project EIA.

There are two perspectives of how the SEA can influence the planning process:

- Firstly, the planning process, decision-making about one particular PPP or project decision are influenced by one SEA or EIA;
- Secondly, SEA influences one PPP, then the PPP can influence following tiers of decision-making, and their associated SEA or EIA.

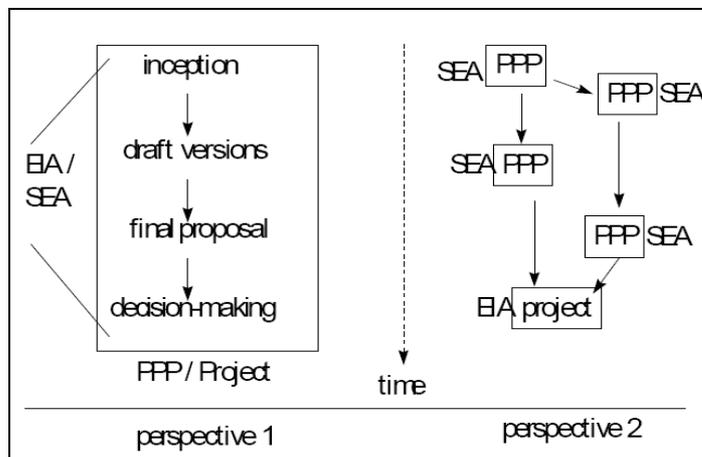


Figure 5.2 Two perspectives in planning process and influence of environmental assessment

Source: Ministry of Housing, Spatial Planning, and Environment (VROM, 1999)

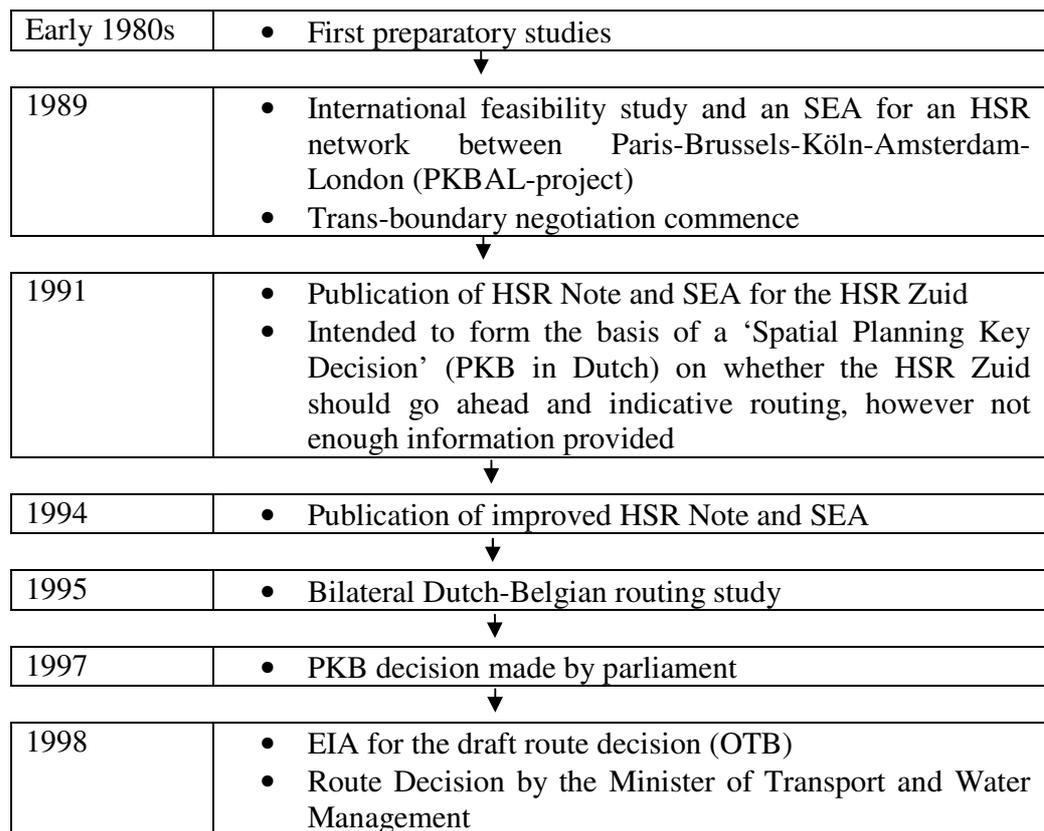
Concerning planning practice in the Netherlands, there is one notable thing that must be kept in mind that is the culture of dialogue and negotiating through consensus planning. As Woltjer (2004) states that the bedrock of consensus planning is to be found in the existence of Dutch consensus culture. This process affected how the planning in the Netherlands is conducted and the type of participation of the public as in the consensus planning there is a more direct interaction between government institutions and citizens and it occurs at an earlier stage than with the

conventional formal consultation process. One more thing is that public involvement focuses on a dialogue and partnership instead of informing and consultation with objectives to achieve agreement or consensus rather than consent (Woltjer, 2004).

Regarding the planning and environmental assessment, an example below is given to describe the experience in the Netherlands.

Box 1. Dutch SEA in High Speed Rail (HSR) Zuid

The HSR Zuid is a new high speed rail line from Rotterdam to the Belgian border. The process of SEA of this corridor is started by the first preparatory studies described as follow:



The environmental assessment was started by an international feasibility study and an international SEA. In this SEA, it dealt with the modal alternatives for a high speed rail. The policy in this level dealt with reducing the environmental impacts of railways concerning issues such as noise level, energy use, and emission. There was no legal binding in this level. The first level of the tiered decision making was the Spatial Planning Key Decision (PKB) that deals with whether the link between the Netherlands and the South was needed, what mode should be chosen as the most appropriate, also the rough proposed route for the HSR was also determined. However, the aspects of impacts discussed in the international SEA were used as information in this level decision making process. The second level of the tiered decision making was the route decision process as the subject of EIA.

From the explanation above it can be seen that the tiered decision making also dealing with tiered impacts as can be seen that global impacts were discussed at the higher levels. At the lowest level, it only deals with aspect regarding the project level even though it is concerned about impacts at PKB level. The conclusions drawn are:

- There were tiered impacts and tiered decision making in which the general tiered order followed existing decision making system
- Decisions towards the environmental term were made at higher tier
- The international SEA was used as guidance in national level means that reduce assessment effort to be made at that level.
- There is reduction of scope at lower level

(Source: EU Commission 2004)

CHAPTER 6

THE ANALYSIS OF STRATEGIC EIA CONCEPT FOR THE DEVELOPMENT

This chapter analyzes the existing condition in the previous chapters in chapter four and five as the basic data for EIA-SEA implementation with the theoretical framework in chapter two as the frame work of thinking. The analyses will be divided into two main categories, the first is about the existing condition and the second is about the possibilities of potential SEA in Indonesia's condition.

6.1. Perspectives in the Indonesian EIA

The analytical perspective here is seen from the context and the process of the EIA concept in Indonesia. AMDAL, as the EIA translated in the Indonesian environmental assessment, can be seen as a part of a feasibility study in a certain infrastructure project. It can not be stated as a license or permit, but it is a prerequisite for gaining the permit in order to do a certain activity. As a part of a feasibility study, AMDAL examines a certain activity towards the environment from both positive and negative impacts, concerning physical, chemical, biological, social economic, social culture and public health. Projects or activities in transport infrastructure that have negative impacts bigger than their positive impacts, or the available technology can not deal with the negative impacts, or if the cost to cope with the negative impact seems to be higher than the potential benefit, so the projects or activities will be judged as unfeasible towards the environment. If stated as unfeasible, it means that the project or activity can not be continued. Conceptually, AMDAL has a role as the tool for the decision maker to be constantly concerned about the environmental consideration in deciding project implementation and it is a part of environmental legislation.

AMDAL as a part of feasibility study points out on the technical aspects of a certain project or activity. It elaborates how a project or activity will affect the environment. It declares the alternatives that can be taken and chosen regarding a certain project and the affects that will come up because of the development from each alternative. The scope of AMDAL is operational scope including the limited aspects when the project of activities is developed. AMDAL studies and sees project per project in relation to their impacts for the environment. Here it also comes up with some alternatives for the project implementation to be chosen, starting from the zero alternative to the other alternatives, together with the impacts of every or each alternative towards the environment.

In assessing the environmental impacts, AMDAL studies some issues which are discussed in AMDAL including engineering, ecological and socio economic issues. Those issues are involving the physical, chemical, biological, economic social, culture social and public health aspects. They are used to assess the impact of the development towards the existing condition and develop the alternatives of the mitigation.

In the policy context, government states the regulation related to the conception of AMDAL and implementation guidance. The responsibility of AMDAL in general is on the ministry of environment, as it is one institution as the policy producer in environmental affairs. In the practice, the government agencies that are responsible for the projects are also responsible for the AMDAL process. Institutionally, AMDAL has already been institutionalized in AMDAL organization involving the Environmental Impact Management Agency, both in the central, regional or local level. Conceptually, AMDAL helps to determine feasibility of a plan or activities regarding the environmental aspects, but in practice, once the project stated will be constructed, the AMDAL will only following and become the small part of the feasibility study and it has no significant role in determining that a project could go or not.

In its process, AMDAL conception in Indonesia tries to accommodate interests from different parties in the development, with the basis of equality among of all the stakeholders or interest parties; transparency in the decision making process; conflict resolution in the principle of win-win solution; and coordination, communication, and cooperation among different parties.

The public here is recognized as the interested people, affected people, and concerned people. The AMDAL mechanism tries to accommodate them to the public involvement in the AMDAL process. The involvement here as the result of the public who has the right to gain information of the environmental impact assessment. They are able to give input or comment towards project plans, and they also have the right to be the representative in the AMDAL commission specifically for the directly affected people.

In the part of AMDAL formal institution it is recognized the AMDAL commission as one that analyzes the AMDAL document from proponent. This institution assesses the quality and completeness of the study in the document, with the basic regulation from the Ministry of Environment Decree No.02 of 2000 that states guidance in assessing AMDAL document.

AMDAL commission is one that gives public services in assessing the Ka ANDAL, ANDAL, RPL and RKL, so it becomes the government's role to facilitate it, with the members from different sides such as government, expert, public, and NGO. The organization of the AMDAL can be formed in central, regional or local level which depends on the projects themselves concerning about the type of the activities and their potential impacts and also the location of the activities.

In its procedural perspectives, AMDAL follows the standard EIA process and procedure, starting in the screening process, then scoping, EIA study, reporting EIS, review and then decision. The screening process is based on the prescribed list from the Ministry of Environment determining the characteristics of mandatory AMDAL activities. In the procedure during the project is implementing, proponent is also responsible for reporting and evaluating the implementation of Environmental

Management Plan or RKL and RPL to the government that is responsible for the project as it is stated in the Minister of Environment Decree No 45/2005. Regarding the time limit of applying AMDAL, it is noticed that the processes for undertaking AMDAL are stated within 150 working days which consist of the first 75 days for EIS TOR and the rest 75 days for the EIS and EMPs review.

Table 6.1 Perspectives on Indonesian EIA (AMDAL)

Perspective		AMDAL
Context:	Role	Part of environmental legislation to support the decision making in a certain project or activities.
	Issue	Engineering, ecological and socio economic issues includes in the physical, chemical, biological, economic social, culture social and public health aspects.
	Policy	Part of the government policy in the environment
Process:	Institutional actors	Integration among different actors; government, proponent, public and environmentalists
	Organizational	Facilitated by the government, can be central, regional or local level according to the type and location of the projects
	Procedure	<ul style="list-style-type: none"> ▪ Screening, announcement and public consultancy, scoping, compiling and appraisal EIA TOR, compiling and appraisal EIA (ANDAL), Environmental Management Plans (EMPs/ RPL and RKL). ▪ Screening in the basis of how scale of the activity and the scientific and specific reason e.g. the potential impacts, pollution and conflicts. ▪ Compiling and appraisal EIA TOR in which based on the previous step, the proponent compiles the EIA TOR, and submits it to be appraised to the Komisi Penilai AMDAL (EIA commission) ▪ Compiling and appraisal EIA (ANDAL), Environmental Management Plans (EMPs/ RPL and RKL), it is implemented in the basis of EIA TOR that have already been approved by the EIA commission. ▪ The time limitation for the AMDAL process is 150 working days: 75 days for EIS TOR, and 75 days for the EIS and EMPs review

(Source: Compiled by author)

The table above represents the perspective of EIA in Indonesia in how it is stated conceptually, but how it is applied in practice? Hadi (2002) notes, in applying EIA in Indonesia there is still a lack of pertaining the EIA procedures for example announcements are rarely made by project proponent that causes lack of information gathered by the public to figure out the impacts. Furthermore, as the matter of fact the type of participation in AMDAL process is not direct participation but by representation. What happened then is public concern can not be fully addressed.

Besides the implementation of EIA in practice, there is a question which then comes up whether Indonesian's EIA or AMDAL support the better project in the development? It should answer the three questions of what is needed for the decision-making, what is required by the regulation or policy and what are major project specific issues. As it is merely a procedural process, it is only a project appraisal not a project development that deals with evaluation instead of integration and assessing the consequences rather than consideration as Bina (2001) cited by Nilsson and Dalkmann (2001). The role of the AMDAL in decision making is still questioned, and also how it is integrated in the decision-making process is still blur. As it is known that the decision making process should consist of the integration process of the decision making, the designing and the impact assessment as described in figure 2.3 in chapter 2.

The limitation in the EIA approach needs further improvement in the effectiveness from only an appraisal to development project with developing proactive approach rather than reactive. Further improvement in the efficiency context is how to deal with the environmental in the earlier stage to avoid overlapping and dysfunctional of the assessment, and in the quality context is how to increase sustainability concerning not only what happen here in the site but also the global and macro issues.

The Netherlands from the beginning has already been involving the plan as the subject of the EIA. In its regulation it is stated that not only projects that become the subjects of the environmental assessment but also the plan. The EIA plays role in

providing information about environmental impact before decisions are taken on plans and project with environmental consequences. The EIA process includes different actors with public involvement in it. Proponent or the initiator, competent authority, EIA commission, and the public are included as the EIA actors in the Netherlands. As a matter of fact that the Netherlands has the planning culture with consensus through negotiation and participation, the type of public participation in its EIA also opens for those processes. There are two times of public participation before the decision will be made.

Regarding the strategic level, in the Netherlands context, the SEA comes up as one tool for the decision making process. Following the procedure of EIA, it is applied in the level of plan and program. The basis of the study in the SEA tries to integrate the environmental, economic and social aspects as in the concept of three bottom lines from sustainability; that integration is achieved through the integration process of impact assessment and designing into decision-making. Integration in the development also has to be borne in mind as to combine several developments into one integrated plan. Gaining this objective has to accommodate different interests from different parties, and it needs a real public involvement and coordination.

In the Netherlands, the decision making process towards development follows tiered decision making process. The first tier is the top decision making process, it is a policy decision, usually it is in the national scope or level of decision. As it is in the top level of decision making, it has generic characteristics dealing with the cumulative global, regional and local level of impacts. The second tier, one level of decision making below the first tier, has a narrower scope than in the first tier. If the first tier is in the national level, the second tier could be in a regional level. It is a plan that is a derivation from policy which is no longer deal with the cumulative impacts but limited in individual local impacts of the development. The next tier is one tier below the second tier, it is narrower in its scope into program. The next tier is the project level which is considered as the subject of EIA. In the upper tiers, the questions of whether and how and also what and where in generic and indicative

points are discussed. While in the lower tier, detailed aspects are discussed including the technical aspect such as the questions of where the site for the development and how it will be built in detailed focus. It creates reduction of scope at lower tiers so that issues that have been discussed in the strategic level will not be discussed in the lower level and it will increase effectiveness and efficiency in decision making process.

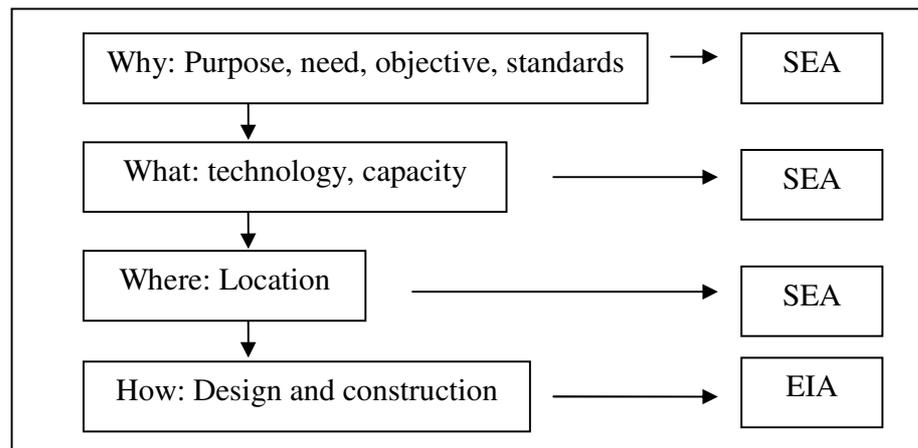


Figure 6.1 SEA and EIA role in the decision making

Source: Adopted from Verheem (2006), SEA case study-presentation for SEA Workshop Columbia May 2006.

From the explanation above it can be drawn some key points regarding the implementation of EIA in Indonesia next to the EIA-SEA practice in the Netherlands. There are still some weaknesses in Indonesia's EIA both in the concept and in the practice. The weaknesses in concept includes in adopting the concept of public participation, describing the role of the EIA commission and setting up its independency. In implementation, some imperfects and bias occurred as some procedures are missing in the practice, the role of AMDAL for environmental assessment is still weak, and it is worsened by the lack of technology for supporting the assessment, and also weakness in public participation. While in the Netherlands' practice, EIA commission has an important role as it has main functions to give advice on the scoping of EIA for the competent authority and produce guidelines on a

specific EIA both supported by its independency. The type of public involvement and the involvement are also different in the decision making for EIA itself.

This part has already discussed environmental assessment both EIA and SEA in Indonesia and in the Netherlands. The next sub chapter will discuss the potential SEA in Indonesian context.

6.2. Possibilities of Potential SEA

The need of strategic thinking in order to answer the question of the need for the decision-making, the requirement of the regulation or policy and answering the major project specific issues, looking for the possibilities of potential SEA can be drawn within Indonesian context. Strategic Environment Assessment is not only a rigid assessment with specific steps but it also has broader field and conception of understanding. According to Dalal-Clayton et al (2005), within the reference of the function of SEA as a means of integrating environmental consideration in to development policy-making and planning, many different types of SEA can be recognized.

Some countries in the world actually have already started with this generic conception although some are still at a very early stage. Even in the developing countries, some 'para-SEA' come up. Para-SEA is acknowledged as the SEA processes that do not meet formal definitions of SEA or their specification in law or policy but which have some of their characteristics and elements (Dalal-Clayton et al, 2005).

In assessing the potential SEA in Indonesia, we have to firstly look at the Indonesian's environmental policy. The umbrella of the environmental policy in Indonesia is the Act No.23 of 1997 as the amendment of the previous Act No. 4 of 1982. In that act it is stated that environmental management has to be done in the concept of state responsibility, sustainability, and utility. The act has already stated in its explanation section that under the state responsibility, state guarantees that the

utilization of natural resources will give maximum benefits to public wealth and life quality on the basis of the sustainability which is utilization of environment which concerning with the responsibility of protecting and concerning nature preservation for the recent and future generation. Politically, the government supports the sustainability in development, but how about the other conditions they still have to be clarified.

In looking for the potential SEA, Briffett et al. compare the dimensions of existing status of environmental strategic decision making and the potential SEA from the political will, legal mandate, institutional capacity, social acknowledgement, technical know how, process implementation and education awareness. Those dimensions are chosen as it will have affected by and closely related to feasible concern regarding the environmental issues and environmental assessment in strategic level.

Based on the existing condition in the Indonesian environmental assessment, some conditions are explored here:

Political will

Political will is important as it draws the motivation from the Indonesian government and political concern in environmental consideration, particularly as the potential factor for the implementation of SEA from the top level government. In Indonesia, it has already had a national environmental charter that is the Indonesian Environment Management Act No.23 of 1997; it is the amendment of the Principles of Environmental Management Act No. 4 of 1982. It states the general consideration towards the management of the environment in Indonesia including the basic principles, objectives and goals, rights and obligations, environment function preservation, precondition of environment management, environmental dispute resolution, environmental crime and investigation.

From the political will dimension, the stability of political regime, active green party and democratic regime are also observed. Stability of political regime in Indonesia is relatively stable even though after the reformation era 1998 there are still some frictions and conflicts in the political arena. For the active green party, it can be said that there is no active green party to influence the top political level. While in the democratic regime dimension the public participation are observed towards the form of the government. Here it means the government form and system are opening the room for the possibilities of the public participation.

Legal mandate

Legal mandate dimension tries to examine the mandatory legislation for environmental concern. AMDAL as the Indonesian EIA becomes the specific impact assessment regulation; it concerns not only the environment in a narrow scope but also includes the broader scope of environment such as economy social and culture. In the regulation it is stated that it assess the impact from physical, chemical, biological, economic-social, culture-social and public health. It becomes a legal mandate to do environmental assessment for a specific development project or activities, but there is no legal mandate for implementing SEA yet in Indonesia.

Institutional capacity

In this dimension, the role and the existence of institution for environment concern are observed. Ministry of Environment plays an important role in Indonesia's environmental consideration. It produces environmental legislation and general regulation for environmental protection and preservation. The legislations are adopted in implementing the development by the other development agencies; such as adopted in the land use and regional planning concept by the BAPPEDA or the regional planning agency, adopted and become the basis of the EIA implementation in transport infrastructure by the Ministry of Public Work. It also issues the

environmental quality report annually and other information regarding the environmental standard, such as ISO 14001 certification.

Regarding the planning, nationally Indonesia has a board of a national planning that is Bappenas (National Planning Agency). As the concept of decentralization system in Indonesia, local has autonomy to develop its own region. It means that the role of the local government in the development becomes more significant than before. Every region has its planning agency and also its environmental impact management agency together with other development agency in the local level. Regarding the NGO environmental, there are some of them in Indonesia as they concern about environment aspect in the development, and their existences are acknowledged and they are part of the public in the development actors. The NGO sometimes are campaigning and promoting environmental issues through their action and program together with publications, and in some cases they also involved together in government programs.

Social acknowledgement

This dimension acknowledges the social role in the development, by evaluating the existing public participation, role of NGO consultation and the social impact assessment. Social acknowledgement is closely related to conceding the public role as it is known that public involvement is one of the important aspect in SEA. Public participation conceptually has already become a requirement in Indonesia's impact assessment as there is a legislation of public involvement and transparency in the process of AMDAL in the Decree of the Head of the Environmental Impact Management Agency No.8 of 2000. This decree is involving the public in the AMDAL process which includes the role of public and NGOs, their rights and obligations and the mechanism of the participation. In Indonesia's development the social impact assessment (SIA) becomes its concern, for example the impact of a certain development towards indigenous people, as the social aspect some times becomes very crucial issues. This means that there are efforts in involving

the public into environmental assessment even though, like being discussed in previous sub chapter (conclusion of sub chapter 6.1), the form of public involvement in Indonesia still needs many improvements.

Technical know how

This dimension evaluates the technical aspect of the environmental concern, including the guidelines and the professional association. For the guidelines, AMDAL is recognized as the Indonesian's EIA system and procedure that wrap up the development activity that has significant impact towards the environment as stated in the Decree of Minister of Environment No.17 of 2001, such as activities in military, agriculture, fishery, forestry, health, transport, satellite technology, industry, regional infrastructure, energy and mineral resource, tourism, nuclear development, poisonous waste treatment and genetic manipulation. Ministry of Environment has also released some standards including the environment quality so it becomes the standard of the minimum quality that should be required such as emission standard, clean water management.

Regarding professional association, some of them are also recognized in Indonesia, it is related to their profession that is related to the environment for example IPLHI (Ikatan Professional Lingkungan Hidup Indonesia or Indonesian Society for Environmental Professionals) and IATPI (Ikatan Ahli Teknik Penyehatan dan Teknik Lingkungan Indonesia or Indonesian Society of Sanitary and Environmental Engineer). The organizations usually consist of experts in environment or environmentalists and they have knowledge in technical aspect of environment. This knowledge should also be supported by the technological aspect such as laboratory with standard accreditation. It is acknowledged that several laboratories are part of the research department of the private company.

Process implementation

In the process implementation dimension, mandatory screening, mandatory scoping, baseline data, impact prediction, mitigation, auditing, mandatory monitoring, independent review and environmental management plan are observed. In Indonesia, mandatory screening and mandatory scoping are implied regarding the implementation of EIA. The impact prediction, mitigation and environmental management and mandatory monitoring plan have also been observed in which it is included in the AMDAL process. The environmental auditing process in Indonesia is recognized by the mandatory environmental auditing, which is regulated by Decree of Minister of Environment No.30/2001.

Education awareness

The last dimension here is the education awareness, in which it focuses in observing university EIA/SEA courses, practitioner training courses, environmental volunteer groups and green NGOs. Ministry of Environment, individually or together with donor institution or university opens the opportunity to carry out environmental courses for practitioner, government officers and environmental society. In order to create environmental awareness, environmental programs are also carried out in various levels such national activity, environmental award, eco-industry etc.

Table 6.2 The analysis of the potential SEA in Indonesia's existing condition.

Dimensions	The Indonesia's condition
Political Will	<ul style="list-style-type: none"> • Environment Management Act No.23 of 1997, it is the amendment of the Principles of Environmental Management Act No. 4 of 1982. • Relatively stable of the stability of political regime • No active green party to influence the top political level. Changing to more democratic system and decentralization system.
Legal mandate	<ul style="list-style-type: none"> • Legal mandate for EIA but not for SEA
Institutional capacity	<ul style="list-style-type: none"> • Ministry of Environment/Bappedal • Bappenas • Other government agencies in national level • Local government • Bappeda • Bapedalda • Other local government agencies in regional local level • NGO environment
Social acknowledgement	<ul style="list-style-type: none"> • There are efforts for public involvement and transparency in the concept of environmental assessment, even though need enhancement in the practice.
Technical know how	<ul style="list-style-type: none"> • The technical know how related environmental assessment through AMDAL guidelines, Environmental standard (emission, clean water management etc.), professional association and environmental technology (laboratory etc.) • There is still lack for technical know how in SEA
Process implementation	<ul style="list-style-type: none"> • Mandatory screening and mandatory scoping, impact prediction, mitigation and environmental management and mandatory monitoring plan have also are implied regarding the implementation of EIA. • There are no SEA practices in Indonesia yet.
Education awareness	<ul style="list-style-type: none"> • AMDAL courses (type A,B,C), Environment courses in University • Courses from international organization

(Source: compiled by author)

6.3. Some Concluding Remarks

Conceptually, Indonesian EIA plays a role in providing information for a specific project in its feasibility study. In practice, many possibilities could occur so that in order to avoid trade off from the environmental interest towards the other interests, particularly economic interest, strengthen the environmental consideration into planning becomes highly needed. While in the Dutch environmental assessment, EIA is applied in two levels both in the level of project and plan. SEA in the Dutch environmental assessment is applying the procedure of EIA into plan, in which it is addressing EIA limitation in the project level. Sometimes it also called SEA EIA-driven or Strategic-EIA (SEIA). The limitation in Indonesian EIA can also be addressed by using the same conception of SEA.

This research discusses the Netherlands as the reference country of applying SEA. The concept of referring the practice in the Netherlands into Indonesia's condition can not only be done by copying the system or adopting the method without compromising the differences. Regarding to the situation in the Netherlands, there are some differences in implementing the application compared with Indonesia's condition. The basic differences are attached in the characteristics of the Netherlands itself, such as the government system and role, it is affecting how planning is designed and implied which it is following comprehensive planning. The role of the government as stated in the legislation has also significantly different as the Netherlands government has the obligation to provide the infrastructure regarding the physical condition. Some differences are also noted here such as the political, social, culture and economic condition that are relatively more stable and less heterogeneous compared with Indonesia. There is also the role of European Union that has power to push its members to apply the EU directives. The decision making culture is also noted as other difference, in which negotiation and consensus have become part of its decision making process.

From the table 6.2 it can be drawn a table of strengths and weaknesses of possibilities SEA in Indonesia.

Table 6.3 Strength and Weakness of Possibilities SEA in Indonesia

Strength	Weakness
<p>Political will The strength comes from the availability of awareness from the government although in recent condition it still SEA excludes.</p> <p>Institutional Capacity Although building institutional capacity still becomes an issue to be developed, it can be categorized as the strength as nowadays concern of environmental arises from the citizen and NGOs than before.</p> <p>Education awareness Environmental awareness through education recognized as nowadays more education open in the field of environment, it becomes starting point from the academic side to provide experts in environmental knowledge</p>	<p>Legal mandate Even though there is a will from the government of benefit of the SEA, but there is no legal mandate of SEA implementation. Legal mandate for applying SEA is needed in order to give legal basis for the action.</p> <p>Social acknowledgment Social acknowledgement is still weak even though it is stated in the regulation, but for implementing SEA more direct public participation and transparency are needed when people do not only get informed but also they play role in determining choices in decision making process. It requires participation and negotiation from the public.</p> <p>Technical know how There is no guidance for SEA, so if there will be applied the concept guidance, the guidance based on international generic SEA can be adopted. This guidance is also important as it will legalize and control the implementation and also provide enough direction in implementation including roles, responsibilities and coordination.</p> <p>Process implementation There is no experience of SEA in Indonesia, but in order to deal with it, learning from other country's experience could be one solution, together with applying concept from international organization e.g. World Bank, ADB as they also promote SEA implementation.</p>

(Source: compiled by author.)

From all the description above, we have to come back to the previous thinking of why an environmental assessment is needed, as stated in the theoretical framework in chapter 2. EA both EIA and SEA have their own roles in enhancing environmental planning. Both help the decision making process to develop the choice regarding the environment. By concerning an environmental aspect in decision, development is hoped to be run in the corridor of dealing with the limitation of environment and the development itself, as stated by the Environmental Layer Concept that all the three layers are bounded each other. Through environmental planning, sustainable development is hoped to be achieved, and here the steps towards sustainability is followed by using environmental assessment both SEA and EIA for more concrete ways. In the Indonesian context, even though there has been EIA as one of the environmental assessments, it is still far from an ideal elucidation as there are still many weaknesses as stated in the sub chapter 6.1. Furthermore, transferring policy of SEA from the Netherlands seems to be promising, but it should be kept in mind to be concern with the differences of situation and condition of both countries. The next chapter will be the conclusion of the research as a whole. All the research questions in chapter three will be answered.

CHAPTER 7

CONCLUSION AND RECOMMENDATION

7.1. Introduction

This chapter, in order to draw final conclusion of the research, and provide some findings, will conclude the discussion from previous chapters. This chapter, based on the theoretical framework in chapter two and the information from the analysis part in chapter six, tries to answer the research questions that have already been stated in chapter three.

The main research question of this research is: *“how to increase the environmental planning through environmental assessment in Indonesia”*. To answer that question, a number of questions have been established as the supporting questions that have already been discussed in chapter three. Those questions and their answers are discussed in the conclusion. One by one the supporting questions are discussed and at the end the main question is discussed as the final conclusion of this research. Furthermore, deriving from the conclusion, some recommendation can be drawn, and they will be discussed in the final part of this chapter (section 7.3).

7.2. Conclusion

Question 1: How does the EIA concept being applied in Indonesia?

In the context dimension, AMDAL as Indonesian EIA plays a role as part of the environmental legislation to support the decision making for a certain project or activities. By assessing issues in the development site, it tries to integrate many possible or potential impacts, but since it is an operational level, the integration level that tries to be caught in AMDAL limited in its context as the project scope. AMDAL is a part of the government policy and the government tries to deal with some

limitation of the AMDAL implementation by issuing new regulations and involving public participation in its process.

EIA concept in Indonesia has already been tried to be developed, by concerning the environmental impact of a certain project or development activities. Conceptually, it helps to determine whether a project is suitable enough or not for the environment, but practically, it is only part of the feasibility study, as the project has already been decided. It is real that conceptually the development should refer and concern with the environmental aspects but sometimes the environmental concern is overshadowed as there is a trade off by the other interest usually the economic interests that is still seen as a more important aspect than environment.

For a more concrete conclusion, regarding the concept and practice of EIA as one of environmental tools, there are still some weaknesses in both the concept and the practice. Public participation, the role of EIA commission and its dependency are judged as the lack of EIA concept in Indonesia. While some imperfect and bias occurred as some procedures are missing, the weakness of the role of AMDAL for supporting environmental assessment, and lack of technology for supporting the assessment, and public participation are weak in the practice of EIA in Indonesia.

Question 2: How can strategic environmental assessment concept be applied in Indonesia plan, policy and program?

This question is related to the basic element of SEA as a tiered process from policy, plan, program and project (EIA). SEA follows tiered decision making process as stated that EIA plays in the operational level while SEA deals with more in the strategic level. As discussed before, in environmental planning we recognize the tiered impacts of the development. There are cumulative and global impacts and also there are individual and local impacts. The cumulative and global impact is a large scale of impact and it is better to be examined in the strategic level as it is affected by strategic alternatives and deal with cross-sectoral manner. This creates tiered decision making where the strategic level examines large scale impacts and the small scale

impact is examined in lower level. Those have already been examined in the upper levels which are derived to the lower levels without having to re-examine, so it creates efficiency and effectiveness in the decision making process, as it can avoid mistakes in the development.

Sometimes SEA at the top level does not have any binding or legal mandate. In this case the lower tier of decision can bind it and create a legal basis using unbinding decision in the upper level. SEA for the high level or policy level, deals with the strategic option, global environmental, and the objectives of sustainability. SEA for plan relates to the decision of the development with regards to general requirement, while SEA for program deals with the cost and benefit of the development.

Furthermore, by implementing SEA in the decision making process, it is not merely sustainable development and environmental concern, but it is related to how the process of the decision making is taken such as improving transparency from the government. It will improve the practice of good governance and existence of public trust, and also it will improve the role of public participation of all the stakeholders involved in the development and planning.

Question 3: How should the SEA concept be applied in Indonesia?

To apply SEA in Indonesia case, there are several preconditions to be concerned. It is not merely in the concept but the most important is in the implementation and the practice. In fact, the condition in Indonesia, conceptually as in the analysis using dimension of potential SEA from Briffett et al (2003), has already had some basic precondition for potential applying the SEA concept.

From the analytical part we concluded a table comparing the strengths and weaknesses of potential SEA implementation in Indonesia. How SEA concept should be applied in PPPs in Indonesia can be achieved by developing the strengths and dealing with the weaknesses as shown in table 6.3. The strength aspects for the Indonesia's potential SEA are: there has already had a political will for environmental

consideration; the existing and the growing awareness of institutional capacity; and also the education awareness. The weakness aspects for Indonesia's potential SEA are: the lack of legal mandate, social acknowledgement, technical know how and process implementation. Those things are just the aspects while the development of the aspect can be included broader sub aspects which include in the related sub aspects which are developed by Briffett et al (2003). Strength aspects should be maintained, while the weakness should be decreased by improving the elements included because those aspects are dynamic following the existing condition and also how the concept is being preserved.

The different interest of actors involved in the development also affects how the environmental assessment is implied. By involving them in the planning it is hoped to deal with those differences. As mentioned as one of the SEA benefit, applying SEA means involving the public in earlier stage of decision making, and it is able to deal with the uncertainty in the strategic level.

Question 4: How will the SEA support to increase the environmental planning in Indonesia's development?

As the project EIA has several limitations, SEA comes up to answer those limitations. SEA tries to plan the development beyond the project and operational level which means as early as possible in order to deal with its long term characteristics and strategic vision. To apply it in Indonesia, the role of the planning agencies is important. The coordination and cooperation from the top level to the lower level must be maintained. Regarding the decentralization in Indonesia, the role of the provincial as the coordinator of the regional area that consists of several locals is important. The central government has to be the guard for the development of the entire nation, while the local government has autonomy to improve their development and their vision in the corridor of the strategic vision from the upper level (binding or not). The development will run with more concern towards environment and avoid

trade off between economic and environmental interest. It is also avoiding mistakes in the development and cutting unnecessary cost.

Main question: How to increase the environmental planning through environmental assessment in Indonesia?

Environmental planning tries to balance the development and the environmental consideration in order to reach sustainability. Increasing environmental planning means support gaining effort to the sustainability as the umbrella of the development recently. Environmental planning can be improved by the implementing of the environmental assessment through the SEA for the policy, plan and program and the EIA for project level. Increasing the environmental planning has means adopting more environmental consideration in planning for the development. Indonesia can take some lesson learned from the Dutch strategic EIA, the concept of applying EIA beyond the project level by considering some limitation regarding the different situation between Indonesia and the Netherlands. It is recognized that the tiered government in Indonesia is different with that in the Netherlands but it has similarities as there are three tiers of government, national, regional or provincial and local government, with the similar scope of areas. From this tiered system of government, the tiered system of decision making process can be taken and it can be the starting point for the implementing SEA.

According to several precondition of potential SEA in Indonesia's condition recently, improving the strength aspects that have already been there as the drawing picture of environmental concern should be taken in to account. More over, there are several weaknesses that have to be dealt with, as already answered by question 3 above to promote implementation of SEA in Indonesia with concerning the existing condition.

Regarding development agency in Indonesia development, there are many development agencies involved so that coordination and cooperation become necessary things and negotiation plays an important role both vertically and

horizontally. While in Indonesia the government organization seems to be wider than it should be. Some functions become overlapping and create inefficiency. Reorganization may be taken to make it slim and efficient, but the most important thing is integrating the main function of the agencies to create better condition. The environmental concern should be the consideration of all the parties in the development, for example, the EIA for the proponent, is not only the part of the feasibility study, but as a guidance of delivering the development; applying all the EIA procedure is also important; and the screening process should be taken into account as there are found some projects in Indonesia which is neglecting EIA requirement.

7.3. Recommendations

In this paragraph recommendations are made concerning the use of the environmental planning concept. These recommendations are permeated to more general recommendations. This recommendation tries to answer the next question: How the Strategic Environmental Assessment concept could support the development in Indonesia to be more efficient and effective without trading off the environment for other interest. There are five recommendations drawn here regarding the question above. Those are pre-condition for implementing SEA, maintenance of the concept, build environmental consideration from all the parties and agencies with negotiation culture, law enforcement by strict legal and sanction without compromising and enhancing environmental education and conducting further research.

Developing pre-condition for SEA in Indonesia

From the pre-condition of applying SEA in Indonesia's development, the tiered government system creates tiered decision making. It should be bore in mind that as the decentralization in Indonesia does not create federal nation so that the conception of central-regional-local relationship should be built in the conception of

acknowledging the role and responsibility in the corridor of cooperation and coordination. Based on this conception performing the policy, plan and program can be accomplished to reach the development objective with concerning stability among ecology, economy and social aspects. Next is the integration among development agencies, involving all the stakeholders and public. Active public participation is not only stating that they are included in the process of decision making but also when they should be involved. Involving them in the earlier stage will create more advantages. According to the analytical part, weaknesses in potential SEA should be dealt with, it means that in developing pre-condition for SEA in Indonesia creating legal mandate, developing social acknowledgement and technical know how are necessary to go through the process implementation.

Maintenance of the concept

It always becomes problems in implementation that the concept can be biased in the practice. Maintaining the concept means that the existing concept such as EIA concept. As stated that SEA and EIA have different scopes and do not replace one another, but strengthen each other, applying SEA means strengthening the existing concept of EIA. The changes of the concept of impact assessment rule and regulation has to be in order to gain the better development process not just replacing the old one for political reason, for example.

Build environmental consideration from all the parties and agencies with negotiation culture

The environmental consideration still lacks in developing countries as the result of the economic trade off. It is not easy to build this, but it does not mean that it will be impossible. Since there a concept of involving public in the decision together with other parties and development agencies, the negotiation culture in decision making process is beginning. Process of public learning in environmental and infrastructure planning has to be developed, in order to achieve consensus. This needs the real form

of public participation as public involvement is not only passive as get informed but also they actively involved through the “consensus process” as developed in the Netherlands and the traditional consensus from Indonesia⁴.

Law enforcement by strict legal and sanction without compromising

It is related to the implementation of the concept. As stated above that the implementation sometimes bias from the rule and regulation because of compromising the law. Strict legal and sanction seem to be a hard thing to do as some people may think it is a little bit autocracy than democracy, but in my opinion, there are some aspects in the development that we can compromise, but there also some aspects that can not be compromised. The law enforcement, legal basis is part of the strict development aspect that should not be compromised. The compromised process again is closely related to trade off by the economic reason. By SEA it is hoped that the compromising process will be decreased as it is stated that it also creates some benefits in performing good governance, public trust, and the role of public participation. Independency of the appraisal commission and their legality in existence should be strengthened so that they will be able to give advisory assistant for environmental friendly development. Here the role of Ministry of Environment is important because it is about the task, duty and its responsibility stated by the law, for example, it should be able to stop ‘illegal’ development such as development that ignores the EIA requirement.

Education and further research

The learning process is not only by formal education only, but also informally. It relates to building public awareness of environmental consideration. Government as

⁴ In the traditional system of decision making in Indonesia the term “musyawarah mencapai mufakat” or negotiating to reach consensus is recognized. Developing the system of traditional consensus in Indonesia with adjusting to the recent condition can be a useful tool to reach agreement.

the public service provider can take part here as the initiator for delivering environmental education for the public. It can be by campaigns or more formal by standard courses. The most important thing is that how to open public consciousness about issues in environment. For example, sustainability for their daily life as it is known that some times discuss about environmental seems to be like discuss blur and unnecessary things for some people.

Finally, this research as stated in the scope and limitation in chapter three discusses how to encourage the environmental planning through environmental assessment in general terms, deriving from that reason further research in this scope area should be taken in order to touch further for the improvement of environmental planning in Indonesia. The questions for further research can be:

- How to apply SEA in sectoral policy (for example transport policy, housing policy drinking water policy, waste management policy)?
- How to increase public participation in Indonesia's environmental assessment?
- How to develop consensus planning in Indonesia's environmental development?

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