

**TOWARDS IMPLEMENTING STRATEGIC ENVIRONMENTAL
ASSESSMENT FOLLOW-UP: AN ORGANIZATIONAL LEARNING
PERSPECTIVE**

MASTER THESIS

**A thesis submitted in partial fulfillment of the requirements for
Master Degree from University of Groningen (RUG) and
Master Degree from Institut Teknologi Bandung (ITB)**

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Double Master Degree Program

**Environmental and Infrastructure
Planning
Faculty of Spatial Sciences
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and
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Planning
School of Architecture, Planning and
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Bandung Institute of Technology**



2014

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“Indeed, in the creation of the heavens and the earth and the alternation of the night and the day are signs for those of understanding”

(2:190)

ABSTRACT

Strategic Environmental Assessment (SEA) aims to integrate sustainable development considerations into policies, plan, and programs (PPP). Indonesia has already issued regulation on SEA. The regulation entails government, in central and local level to implement SEA in the beginning (ex-ante) of PPPs processes in order to ensure sustainable development has been integrated into governmental PPPs. It is important to collect strategic initiatives at the ex-ante processes. During the follow-up stage, assuring whether SEA is implemented properly, worked effectively is also essential. The implementation of SEA follow-up is done differently in each country. In general, most countries including Indonesia, follow-up is integrated into others policies, plans, programs and/or projects (PPPPs) follow-up. This is done, instead of a stand-alone follow-up processes, because it is more operational and do able. However, in Indonesia there is a lack in experience and Indonesia has limited organizational capacity to implement SEA follow-up. To be able to do a SEA follow-up, there should be an organizational capacity which can coordinate and facilitate to bring out all the strategic initiatives for follow-up. Then in order to have a strong organizational capacity, a culture of organizational learning is necessary. Hence, this research studies on relationship between organizational learning, capacity building and SEA follow-up. This is done by comparing every element of organizational learning, SEA capacity building and SEA follow-up in four different countries, namely Indonesia, the Netherlands, Canada and Ireland. This study also investigates on organizational learning perspective from those three developed countries. At the end a framework for stimulating organizational learning in the Indonesian context is proposed.

Keywords: Strategic Environmental Assessment (SEA), Organizational Learning, SEA Capacity Building, SEA Follow-up

GUIDELINE FOR USING THESIS

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This master thesis is a graduation requirement for the double degree master program of Environmental & Infrastructure Planning (RUG)-the Netherlands and Regional and City Planning (ITB)-Indonesia. In general, implementing Strategic Environmental Assessment (SEA) follow-up is quite challenging, because SEA follow-up is sometimes neglected. In doing so, an organizational capacity is also required. On the other hand, SEA follow-up is essential to prevent the objective of SEA, furthers environmental protection by establishing follow-up. Through this thesis, by using comparative study in four different countries, I would like to build a framework of organizational learning which could stimulate organizational capacity to implement SEA follow-up. At the same time, however, successfully bringing thesis to an end is another big challenge.

Many people have helped me to overcome the challenge of bringing my thesis and my master program to an end. In this opportunity, I would like to give my highest appreciation and thank to them. First, foremost are my advisors, Dr. Femke Niekerk and Teti Armiati Argo, PhD thanks for guidance and patience during the processes. To Dr. Bobbi Schijf, Prof. Jos Arts and Prof. Thomas Fischer, I would like to express my grateful for the knowledge sharing, and especially, to all the interviewees, I would also like to thank for time contributions to this research,

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Yudhi Timor Bimo Prakoso,
Groningen, 20 August 2014

GLOSSARY

AA	Appropriate Assessment
Bappeda	<i>Badan Perencanaan Pembangunan Daerah</i> - Regional Development Planning Board
Bappenas	<i>Badan Perencanaan Pembangunan Nasional</i> – National Development Planning Agency
CASP	Core Area Sector Plan of Canada
CEAA	Canadian Environmental Assessment Agency
CME	Coordinating Ministry of Economic Republic of Indonesia
DANIDA	Danish International Development Assistance
DBFM	Design Build Finance and Maintenance
DEHLG	Department of Environment, Heritage and Local Government of Ireland
EA	Environmental Assessment
EC	European Commission
EDEN	Environmental Data Exchange Network
EIA	Environmental Impact Assessment
EPA	Environmental Protection Agency of Ireland
EU	European Union
GIS	Geographic Information System
HID DI	<i>Hoofd Ingenieur-Directeur Dienst Infrastructuur</i> - Chief Engineer and Director Infrastructure Services
IAIA	International Association for Impact Assessment
INKINDO	<i>Ikatan Nasional Konsultan</i> Indonesia – Indonesia’s National Consultant Association
MaVa	Maasvlakte – Vaanplein
MOD	Ministry of Defense Republic of Indonesia
MOE	Ministry of Environment Republic of Indonesia
MOF	Ministry of Forestry Republic of Indonesia
MOHA	Ministry of Home Affairs Republic of Indonesia
MOMFA	Ministry of Maritime and Fisheries Affairs Republic of Indonesia

MOPW	Ministry of Public Works Republic of Indonesia
MOSS	Ministry of the State Secretariat Republic of Indonesia
MOT	Ministry of Transportation Republic of Indonesia
NCC	National Capital Commission of Canada
NCEA	Netherlands Commission for Environmental Assessment
NCR	National Capital Region of Canada
POM	Programs of Measures
PPP	Policy, Plan, Program
PPPP	Policy, Plan, Program, Project
RBD	River Basin District of Ireland
RPA	Regional Planning Authorities
RPS	Rural Planning Services of Ireland
SEA	Strategic Environmental Assessment
UK	United Kingdom
WALHI	<i>Wahana Lingkungan Hidup Indonesia</i> - Indonesia's Environmental Organization
WCED	World Commission on Environment and Development
WFD	Water Framework Directive
WWT	Waste Water Treatment

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CHAPTER 1: INTRODUCTION

1.1 Background

Since decentralization in 1999, Indonesia has achieved remarkable progress in economic development. Currently, Indonesia ranks as the world's 17th largest economy, in the period of 2011 till 2014, in average Indonesia achieved 6% of economic growth (CME, 2011). However, fast economic growth brings consequences to environmental condition. The environment condition has decreased rapidly, though Indonesia has putting efforts to prevent further destruction. Indonesia government have actively joined and involved in the world sustainable development commission, the Brundtland Commission, since 1982 to keep up with the policy and action development on the issues. However, the environmental degradation remains a substantial problem (Salim and Stirman, 2010, WCED, 1987).

From its participation in the commission, Indonesia has tried, intensively, to accommodate and integrate principles of sustainable development into its policies. Since 1996, Indonesian government has stipulated Strategic Environmental Assessment (SEA) as a compulsory instrument which ensures whether environmental aspects has been considered and integrated into levels of planning and decision making (Sadler and Aschemann, 2011). Today, the implementation of SEA has become more concrete by the establishment of environmental law 32/2009. This law urges the government whether in central, and/or local government to implement Strategic Environmental Assessment (SEA) into its government policies, plans and programs (PPPs) (MOE, 2009).

In the implementation, integrating principles of sustainable development into high level of decision making and planning processes could be applied through embracing as many strategic initiatives, both at the ex-ante and the ex-post process of SEA (Fischer, 2003). SEA ex-post or follow-up is a post-decision stage or a process after the approval of PPPs, when options have been closed (Partidário and Arts, 2005). The ex-post evaluation process or follow-up will assure whether all recommendations from SEA are measured, implemented properly, worked effectively. Importantly, it ensures that environmental benefits which expected are achieved (Marshall et al., 2005).

In Indonesia the SEA follow-up is not explicitly regulated. According to researcher's observation, in the field, there are problem exists when carrying the follow-up, such as lack of experience in implementing follow-up activities. Furthermore, in the follow-up, it seems that SEA has lost its organizational anchoring or ownership. Consequently, in many cases outside Indonesia, at the end the follow-up processes will be ended and SEA becomes neglected document (Cherp et al., 2011). To clarify this observation, rigorous research is certainly required.

Meanwhile, in developed countries, SEA follow-up usually comes in various kinds of forms. For example, the Netherlands has a regulation which requires monitoring and evaluation to investigate the effects of an activity to the natural environment, either during or

after its completion (Partidario and Fischer, 2004). Although Canada does not have legal requirement for SEA follow-up in planning level, it has strong SEA ownership (Gachechiladze, 2009). Meanwhile, in Ireland, SEA follow-up is applied under national and local monitoring program (EPA, 2012). As a matter a fact, in 2001, the EU commission has asked for SEA follow-up to be implemented for all the members in its EU Directive 2001/42/EC (IAIA, 2002).

Theoretically, to be able to do an effective SEA ex-post evaluation processes, there should be an organizational capacity which can coordinate and facilitate to bring out all the strategic initiatives. Then in order to have a strong organizational capacity, a culture of organizational learning is strongly needed. The purpose of the organizational learning is to adjust the organization into more adaptive (Fiol and Lyles, 1985), responsive and flexible to the dynamical environmental condition. Organizational learning is also prominence, like in governmental organization, if the government organization has a strong capacity, it ensures that the implementation of policy in SEA ex-post decision making does not differ with the SEA recommendation (Partidário and Arts, 2005), at the end SEA becomes strategic environmental input for the government planning to achieve sustainability. Yet, there are also some challenges in implementing follow-up, it is usually neglected and becomes an unclear part of SEA process, as a consequence it has potential problems on how to implement the follow-up in practice (Persson and Nilsson, 2007, Partidário and Arts, 2005, Morrison-Saunders and Arts, 2004a). Based on above concept and condition, this research try to study the relevancy of organizational learning and SEA capacity building in the implementation of SEA follow up in the context of four governmental organizations in four different countries.

1.2 Problem Statements and Research Questions

The presence of SEA is important and imposes a great challenge to deal with the complex planning situation. SEA follow-up, as an ex-post evaluation of SEA process, has objective to find a strategic change towards environmental sustainability when dealing with uncertainties, new circumstances and deviations with the complex environmental situation (Cherp et al., 2011). In order to find a strategic change, a strong organization capacity is required; therefore an experience and learning process must be followed. Hence, one critical aspect which to be demonstrated through this research are, is organizational learning relevant to build capacity building in implementing SEA follow up? If so, how organizational learning concept could build capacity in implementing SEA follow-up for Indonesian context. To do so, I will elaborate research questions of this study as follows:

1. Why is organizational learning relevant for SEA? And to what extent organizational learning facilitates SEA follow-up, or vice versa?

Through this question, I will study the concept of organizational learning, SEA capacity building, SEA and SEA follow-up. And it is expected that the relationship among organizational learning, SEA capacity building and SEA follow-up concepts will be identified.

2. *How the concept of organizational learning could stimulates SEA capacity building in implementing SEA follow-up?*

Through this question, in this research I will develop theoretical framework model, and then studied in practice, how in the practice the theories are implemented. Next is how the SEA follow-up in real condition could be figured, and how the relationship between organizational learning and SEA capacity building will also be investigated. Some sub-questions will be derived to support this research question:

a. *How the SEA follow-up is practically applied?*

To answer this question, I will see insight how in the countries which has applied SEA follow-up, such as the Netherlands, Canada and Ireland implementing follow-up in their planning process compare with Indonesian's case.

b. *To what extent organizational learning concept stimulates capacity building in practice?*

To answer this question, I will analyze on how the organizations build capacity in implementing SEA follow-up in practice, or seek out the relationship between organizational learning and SEA capacity building in implementing SEA follow-up.

c. *Are there any challenges in implementing organizational learning, building capacity and SEA follow-up in practice? And how to tackle the challenges?*

To answer this question, I will analyze on the problem which occurs during the implementation of SEA follow-up in practice.

3. *What will be the suitable scheme of organizational learning framework in implementing SEA follow-up for Indonesian context?*

Through this question some existing condition and the opportunities of organizational learning will be elaborate, and then, recommendations will be provided for Indonesian context.

1.3 Research Objectives

This study is developed by concern that in Indonesia, the implementation of SEA is relatively new. And the fact that SEA ex-post study has less interest than the ex-ante study (Cherp et al., 2011). Therefore to find framework concept of organizational learning particularly for organization that responsible in preparing SEA follow-up will be quite challenging and essential.

Additionally, in some researches, it found that there is significant evidence that actual implementation of decisions often differs from formally conceived plans, some believe that it is because the lack capacity of organization in doing the SEA follow-up (Cherp et al., 2011). Consequently, strengthening the organization capacity through organizational learning concept framework will be very important.

Hence, the objectives of this thesis are, first, to study a conceptual framework of organizational learning in order to build capacity in implementing SEA follow-up. Secondly from the framework theory it will design a connection between organizational learning and capacity building in order to implement SEA follow-up, further it will analyse the existing

condition and the opportunities for developing organizational learning in Indonesia. To be able in achieving those objectives, I will investigate organizational learning in Indonesia with some countries which have some experience in applying SEA follow-up, such as the Netherlands, Canada, and Ireland.

1.4 Research Significance

This research has two folds implications. Firstly, it gives significance understanding on how to apply organizational learning to build a framework for capacity building in the context of SEA follow-up. Secondly, this research practically contributes to the practice of SEA follow-up in Indonesia. This research is intended to strengthen the concepts of governance concerning environment in Indonesia.

The significance of this research is it will enrich organizational learning, SEA and planning field studies, importantly, on how organizational learning can stimulate SEA capacity building in preparing SEA follow-up. Moreover, this research contributes for SEA research in Indonesia, by providing an interesting perspective of organizational learning and SEA field studies. And at the end, it will strengthen the concepts of environmental governance in Indonesia.

To do so, this research will be divided into five chapters. First chapter will explain about the background study of this research. In the second chapter I conduct literature study on organizational learning and capacity building. To understand the context, I delve in SEA follow-up processes, as a result a conceptual model of organizational learning for the context of SEA capacity building. The third chapter I will provide on research methodology of this research study. To get better understanding in the organizational, capacity building, and SEA follow-up contexts, in chapter four, I will investigate four case studies, as mentioned previously, in Indonesia, the Netherlands, Canada and Ireland. Lastly, I provide recommendations for implementation SEA follow-up using the perspective of organizational learning for Indonesian context.

CHAPTER 2: THEORETICAL FRAMEWORK

This chapter will be divided into three sections. In the first section, I will provide a concept of organizational learning. It is then continued to section two which discuss about SEA and SEA follow-up. Further in the last section, I will discuss on the relationship between organizational learning and SEA capacity building.

In detail, the structure of this chapter is as followed. Section 2.1 will be a description on organizational learning based on Crossan et al. (1999). I would argue why the concept of organizational learning is used by elaborating each premise of this concept. And then, 2.2 discuss the concept of SEA and level of effectiveness of SEA, furthermore, I will elucidate the concept of SEA follow-up, benefits and barriers in doing SEA follow-up, and on how to implementing SEA follow-up. In 2.3 it clarifies the relationship between organizational learning and SEA capacity building. Finally, at the end of this chapter, conceptual model of the theoretical framework will be provided in figure 4 where it illustrates the relationship between all components of all concept theories which explained.

2.1 Organizational Learning

The definition of organizational learning has been evolved, vary and contested (Fiol and Lyles, 1985, Crossan et al., 1999). It comes from different broad range of background, organization theory, industrial economics, economic history, and business, management and innovation, etc. (Dodgson, 1993, Crossan et al., 1999). Organizational learning is a representation of idea about how to evaluate the organization. Similarly, organizational learning can be described as the process of experience when the organization adjust to their environment (Fiol and Lyles, 1985). This process of experience includes gains in cognitions, behaviour, and knowledge (Argote, 2013). It occurs when the members of the organization become the learning agents for the organization as a respond for internal and external change by observing, discovering and improving in organizational theory-in-use, and inserting the results of their analysis within organization (Argyris and Schön, 1978).

Why does an organization learn? March (1991) responded that it is because organization must able to adapt to change in order to have better conditions. A better condition means a condition that has a more optimal orientation of the target as compared to the initial conditions. Theoretically, organizational learning is a process that occurs over time. Argote and Miron-Spektor (2011) explained on how the learning process occurs as an ongoing cycle of process which encourages a task performance experience, and then it will be converted into knowledge, and at the end it turns and changes the organization's context and affects its future experience. In Jha-Thakur et al. (2009), Fiol and Lyles (1985) elucidated that learning is held to be an increase in the capability for effective action in relation to the subject matter in hand. Organizational learning becomes impetus of management innovation (Stata and Almond, 1989). Furthermore, Dodgson (1993) in his research found that there is strong relationship between learning and innovations in the higher level of decision making or strategic level to the lower level or project level. The process of learning connected with

experience, it emerges in the organization when it finished its obligation for adaptation. Experience could be represented in terms of the cumulative number of task performances, and it can vary along many dimensions. And then, it will interact with the context to create knowledge (Argote and Miron-Spektor, 2011). On the one hand, learning implies an ability to articulate a conceptual understanding of an experience “know that or know why”, and on the other hand, a physical ability to produce some action “know how” (Kim, 1998). Learning can be perceived as proactive and deliberate or reactive and reflexive. In either case, learning is associated with change (Cook and Yanow, 1993).

In doing so, organization uses knowledge and approaches (exploitation), or develops a new knowledge and innovative policy approaches to be used (exploration). In other words, the fundamental objectives of organizational learning are to gain change and improvement. The change and improvement occurs not only for the organization itself, but also for the individual as the member of the organization. In other words, the purpose of organizational learning is to achieve strategic improvement of a condition. For example, procedures of policies which had been agreed upon must be changed due to the major event like technological change, natural disaster, political regime change, but the objectives of the policies are still the same. In order to adapt with the new procedures approach, an organization must adapt to new condition. The organization must exploit and explore to achieve their perceived effect policies in the different manner of environment.

To achieve the objective of organizational learning, at the beginning, Argyris and Schön (1978) introduced a three forms learning framework. They are single-loop, double loop and deuterio learning, which reflect to individual learning perspective. Single-loop is a learning form in which the members of the organization respond to changes in the internal and external environments of the organization by detecting errors which they then correct so as to maintain the central features of organizational theory-in-use or a one feedback loop when strategy is modified in response to an unexpected result. While double loop is a learning form which occurs when error is detected and corrected in ways that involve the modification of an organization's underlying norms, policies, and objectives (Argyris and Schön, 1978). The deuterio loop refers to the behavioural adaptation to patterns of conditioning at the level of relationships in organizational contexts. This form of learning is continuous, behavioural communicative, and largely unconscious. It tends to escape explicit steering and organizing. Especially in its pathological, double-binding form, it does not necessarily lead to organizational or individual improvement. Shortly, the deuterio loop is learning about improving the learning system itself (Visser, 2007).

Crossan et al. (1999) observed how the organizational learning framework has evolved and developed. Multi concept of organizational learning frameworks based on different domains have been applied, from information-processing perspective (Huber, 1991), from product innovation perspective (Nonaka and Takeuchi, 1997), and from firm manager perspective (March and Olsen, 1975). In general, Crossan et al. (1999) would like to emphasize that organizational learning framework is a context-dependent concept.

The reason why this concept is used as a main concept in this research is two folds. Firstly, it comes from the multi concepts of organizational learning framework researches. Secondly, it also become the centre gravity which explains not only on how interaction internal and external of organization would provide knowledge and experience, but also provide in detail on how learning context and process. These provisions of organizational learning concept are relevant with complex challenges at various range of decision making level, from strategic level to project level in SEA follow-up (Cherp et al., 2011). There are four premises which I found significant to apply organizational learning to SEA follow-up. The premises of this concept are consist of first, organizational learning involves a tension between assimilating new learning (exploration) and using what has been learned (exploitation). Secondly, organizational learning is multilevel which consist of individual, group, and organization. Thirdly, the three levels of organizational learning (individual, group, and organization) are linked by social and psychological processes: intuiting, interpreting, integrating, and institutionalizing or '4I'. And lastly is interactive relationship between cognition and action.

2.1.1 Exploitation and Exploration

There are two things, namely exploitation and exploration, which are essential for organization to establish strategic renewals (Crossan et al., 1999). Exploitation, in the essence is the refinement and extension of existing competences, technologies, and paradigms, its returns are positive, proximate, and predictable, while the exploration is experimentation with new alternatives. Its returns are uncertain, distant, and often negative (March, 1991). However, March (1991) asserted that in an adaptive systems, exploration and exploitation could run simultaneously. The system which more focuses on exploration will be trapped in experimentation and risks without gaining many benefits. Conversely, a system which engages more in exploitation will be confined in suboptimal stable equilibria. As a result, balancing between exploration and exploitation will be very important to develop such system.

2.1.2 Organizational Learning Level

Crossan et al. (1999) showed learning occurs in multiple level of organization element, as individual, group or in an organization as a whole. Nonaka and Takeuchi (1997) argued that the most important is the understanding that insight and innovative ideas occur in individuals' level, but not in organizations levels. Argyris and Schön (1978) described that knowledge which generated by the individual does not come to bear on the organization independently. Ideas are shared, actions taken, and common meaning developed.

2.1.3 Organizational Learning Processes

Based on Crossan et al. (1999), there are four social and psychological processes which link from the level of organizational learning. The processes are intuiting, interpreting, integrating, and institutionalizing. Intuiting means a pattern of (past) recognition in an individual experience. Interpreting means explaining which can be using words, or/and action, of an idea to one's self and to others. Integrating is the process of developing shared understanding among individual and of taking coordinated action through mutual adjustment.

Meanwhile, institutionalizing is the process of ensuring that routinized actions occur, see table 1.

Level	Process	Inputs/Outcomes
Individual	Intuiting	Experiences Images Metaphors
Group	Interpreting	Language Cognitive map Conversation/dialogue
	Integrating	Shared understanding Mutual Adjustment Interactive systems
Organization	Institutionalizing	Routines Diagnostic systems Rules and procedures

Table 1 Learning Processes in Organizations

Source: Crossan et al. (1999)

2.1.4 Relationship between Cognition and Action

Does learning change behaviour or outcomes? Or vice versa, does the action provide knowledge or understanding? These questions rise in order to identify the interactive relationship between cognition and action, or in essence are learning level of effectiveness. Fiol and Lyles (1985) described cognition as the adjustment process which affecting primarily on organization's interpretation of events the development of shared understanding and conceptual schemes among members of the organization. Meanwhile, action refers to the new responses or actions that are based on the interpretations (Fiol and Lyles, 1985).

2.2 Strategic Environmental Assessment and SEA follow-up

SEA is a process that aims to integrate environmental and sustainability considerations into strategic decision making (Therivel, 2010). In the same vein, Sadler and Dalal-Clayton (2008) explained that SEA is a process for identifying and addressing the environmental and also, increasingly, the associated social and economic dimensions, effect and consequences of PPP and other high-level initiatives. In essence, SEA is an instrument which ensures that environmental considerations are taken into account and inform strategic levels of decision making, like policies, plans and programs (Sadler and Aschemann, 2011).

Why is SEA important? Fischer (2007) in his study explains that there are three main reasons. The first is that it provides decision makers with better information on the impacts of proposal PPPs alternatives. Secondly, it enables attitudes and perceptions to change as a result of participation in a transparent and systematic process. Thirdly, it is argued that it can change established routines leading to increased environmental awareness. Moreover, Dusik et al (2003) explained that SEA contributes to enhancing environmentally sound and sustainable development planning and decision making processes, it also could strengthen PPP processes, save time and money, and improve good governance and public trust in PPP making (Marsden, 2012).

Meanwhile, to obtain SEA effectiveness, van Doren et al. (2012) introduced SEA level of effectiveness. The central idea of measuring effectiveness of SEA is evaluating substantive effectiveness of SEA. A substantive effectiveness means that the evaluation not only takes the procedural level of effectiveness but also finding deeper into the quality result of SEA purposes (van Doren et al., 2012). The degree of SEA level of effectiveness is divided into six levels of performance and conformance groups. They are: acquaintance, consideration, consent, formal-conformity, behavioural-conformity and final-conformity, see figure 1. The acquaintance signifies that the decision-makers who write the plan have become familiar with the content of the SEA follow-up by means of reading and/or consulting it during the decision-making process. Consideration expresses in the use of a SEA follow-up as a reference during the decision-making process to monitor, evaluation, and follow-up the plan and plan alternatives. Consent means that the actors involved in the decision-making process acknowledge the content of the SEA follow-up, are influenced by it, and change their understanding and/or visions accordingly. Formal conformity is attained when the SEA follow-up has led to direct changes in the plan that will make it more environmentally friendly, meaning that adverse environmental effects caused by the plan will be avoided, minimized, or offset. Behavioural conformity implies that the environmentally friendlier policy measures that avoid minimize, or offset adverse environmental effects described in the plan are implemented as decided. The ultimate level of SEA follow-up effectiveness is final conformity when the protection of the environment as a result of the implementation of plans that, due to comprehensive process of SEA, avoid, minimize, or offset adverse environmental effects (van Doren et al., 2012).

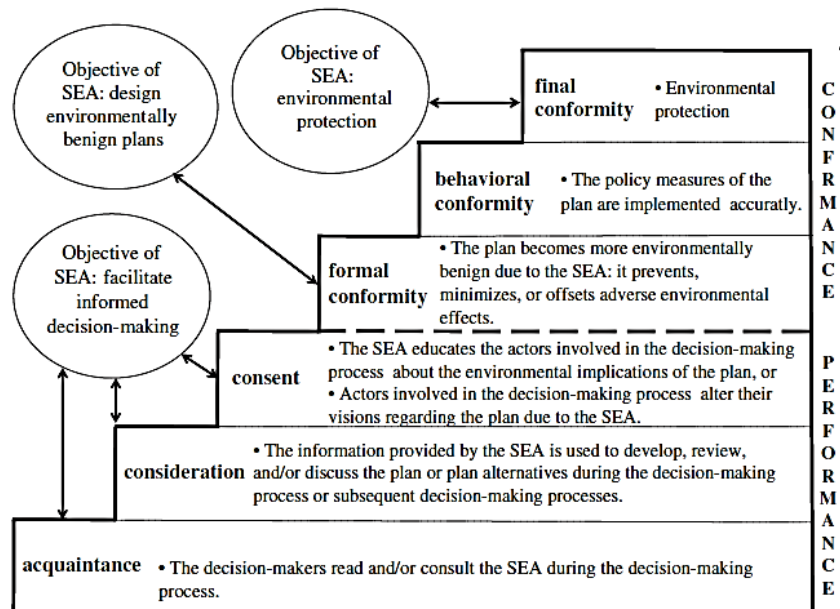


Figure 1 SEA Level of Effectiveness,

Source: van Doren et al. (2012)

To achieve the objectives, SEA can collect strategic initiatives from both, the ex-ante and the ex-post processes of SEA (Fischer, 2003). The ex-post process of SEA or SEA follow-up is ensuring whether the checks of assumptions and estimates the environmental, social, and economic systems are responded to the stimuli generated by the adopted strategies (Partidário, 2007). The SEA follow-up aims to reduce the uncertainties, the unexpected circumstances and keep the PPPs in line with SEA recommendations (Cherp et al., 2011). Or in other words, SEA follow-up is assuring whether SEA process are measured, implemented properly, worked effectively, and ensure that environmental benefits which expected are being achieved, and further, could provide feedback to improve future applications of the SEA (Marshall et al., 2005). See figure 2 below which shows the logic of strategic actions in SEA cycle.

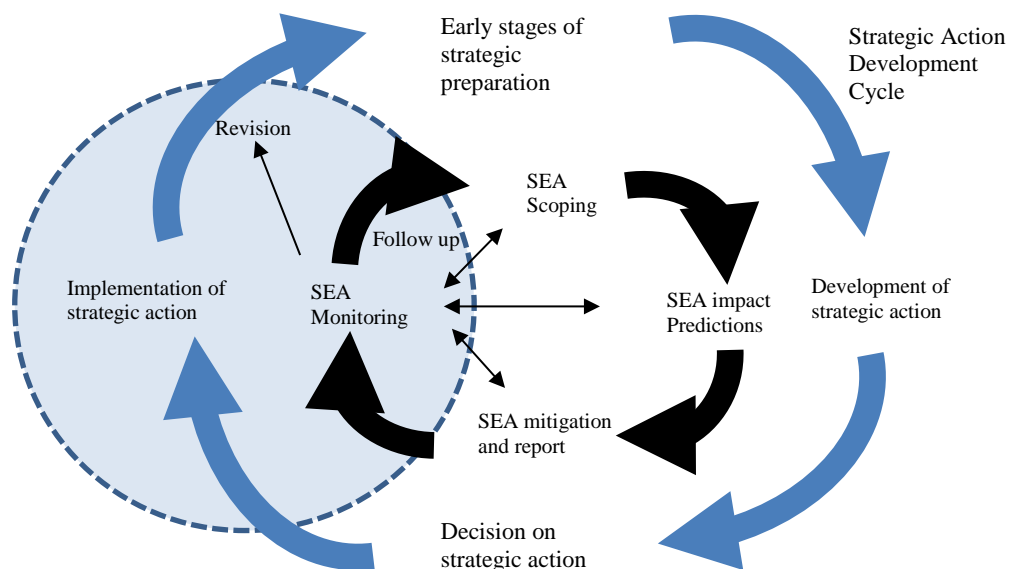


Figure 2 Strategic Actions in SEA Cycle

Source: Based on Hanusch and Glasson (2008) (Therivel, 2010)

Meanwhile, Gachechiladze-Bozhesku and Fischer (2012) elucidated about the benefits and barriers in implementing SEA follow-up. Some benefits that can be obtain through SEA follow-up are increasing capacity-building and management competence, developing links within and outside of a strategy, building an open and transparent communication and cooperation, learning and transferring of knowledge, controlling of a strategy to verify performance, providing flexible and adaptive decision-making, controlling of a strategy to verify conformance, increasing political commitment and natural resources protection. On the other hand, the barriers of implementing SEA follow-up are lack of resources, lack of legal requirements and formal provisions, lack of institutional commitment, lack of clear guidelines and methods, abundance of guidelines, lack capacities, confusion about follow-up, general ignorance towards the importance of follow-up, and confusion in the definition of SEA and consequently there is confusion about the need for follow-up (Gachechiladze-Bozhesku and Fischer, 2012).

SEA follow-up is needed to expand the focus of SEA from ensuring the environmental aspect in PPPs to more safeguarding sound patterns of activities arising from PPPs. Importantly, SEA follow-up depends upon perception of the overall purpose of SEA. If SEA primarily aims to influence the formal content of PPPs, then SEA follow-up may have relatively little importance. On the other hand, if the purpose of SEA is to promote strategic change towards sustainable development then follow-up may be viewed as essentials (Cherp et al., 2011).

Based on SEA follow-up concept (Arts et al., 2011, Partidario and Fischer, 2004), in practice, there are two distinguished follow-up. First type is the project based follow-up (EIA based) which is based on empirical evidence, particularly the environmental response to project operation. The second one is policy based follow-up (strategic based), where the impacts not only range from quite vague to very concrete, but also at different relevant tiers of decision making. In a strategic based, follow-up can only happen if a systematic approach is in place in order to enable adequate identification and management of multi-direction and multi-sectoral strategic impacts which is adjusted to the level of decision where impacts are expected. Furthermore, mitigation and compensation measures must also be strategic in nature, consistent with the level of assessment and the nature of the expected impacts. Therefore the success is not solely dependent on its application as a systematic evaluation process in a pre-decision phase, but also on external circumstances and on action in a post-decision phase.

Implementing SEA follow-up approaches will depend on whether they are linked to policy, plan, program or project and at which administrative level it will take place (Morrison-Saunders and Arts, 2004a). To cope with this matter, a tiering concept is introduced by Arts et al. (2011). In general, this concept accommodated a structured-hierarchical but flexible decision making tiers. The first tiering occurs at the same administrative level which is linking the policy-plan-program sequences at national, or at regional, or at municipal, or at local levels, or so called as explicit tiering. Second type of tiering occurs in different administrative levels or down to lowest level at project level, or implicit tiering, for instance a policy at the national level may influence a policy at the local level, or a policy at the regional level may determine the need for a program at the national level, but also a plan at the regional level may determine the need for a policy at the national level and/or a project at the local level. See figure 3 which illustrate the tiering concept.

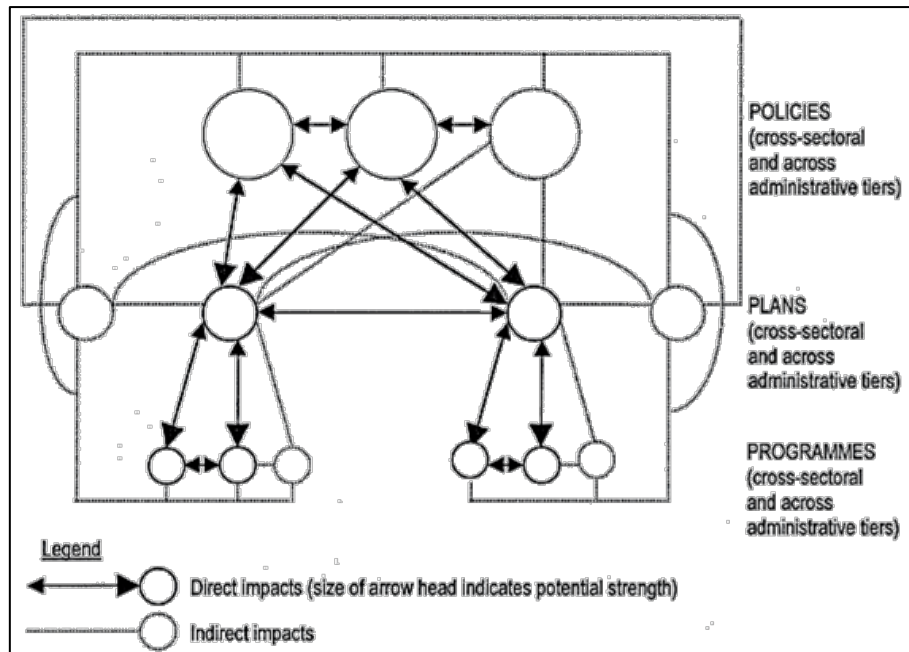


Figure 3 Multi-tier causal relationship SEA follow-up

Source: Partidario and Fischer (2004)

Next, in the SEA follow-up concept, Cherp et al. (2011) elaborated four key elements of SEA follow-up. They are monitoring, evaluation, management and communication. Monitoring means activities which observing the potential change from practical and conceptual objectives of SEA. In their study, monitoring divided into three types: monitoring environmental, socio-economic, and institutional (macro), monitoring implementation activities (micro), and monitoring other activities. Meanwhile, evaluation means making sense of the monitoring data and information. Adopting from EIA follow-up monitoring, some information like deviation between outcome and policies, conformance and performance will be collected in this element. Management, it will ensure that SEA and SEA follow-up recommendation are translated into decision and action which implementing the strategic initiative to protect the environment. While communication has objective to provide information about the actual impacts and conformance to those who are affected by or have statutory to oversee the development (Cherp et al., 2011). These elements actually reflect on what should SEA follow-up do to be more effective. Lastly, as stated in Morrison-Saunders and Arts (2004b), SEA follow-up is recognized in terms of goals ensuring conformance with what is set out in the policy, plan or program and goals dealing with the actual environmental performance for instance is on how actual harm can be minimized and benefits can be achieved.

And to be able in achieving the goals, some criteria SEA follow-up has been introduced by Cherp et al. (2011). Table 2 below shows the criteria of SEA follow-up from Cherp. And to some extent, it also still relevant to put van Doren et al. (2012) level of effectiveness for the purpose of SEA follow-up. Hence, in the organization learning process, the organization is challenged to follow SEA follow-up key elements, and achieve the SEA follow-up criteria.

SEA follow-up criteria
<ul style="list-style-type: none"> • SEA follow-up should be undertaken throughout the life cycle of the strategic initiative. • An SEA follow-up program should be elaborated and endorsed during the SEA process and before the strategic initiative is launched. • SEA follow-up should include monitoring, evaluation, management and communication components. • SEA follow-up should extend beyond mere monitoring and managing impacts of the strategic initiative and ensuring its conformance to the original plan. It should also verify goal-achievement, identify unforeseen circumstances and periodically validate the original assumptions of strategic initiative. • It should be integrated with implementation (in a broader sense) of the strategic initiative and tailored to specifics of such implementation. • Monitoring, evaluation and management of environmental implications of a strategic initiative may start during its implementation, even in the absence of SEA at an earlier stage.

Table 2 SEA follow-up criteria

Source: (Cherp et al., 2011)

2.3 Organizational Learning Stimulating SEA Capacity Building

Some scholars have studied the relationship between, organizational learning, capacity building and SEA like Jha-Thakur et al. (2009), Fischer et al. (2009), Jha-Thakur (2010), and Gazzola et al. (2011). Firstly, in Jha-Thakur et al. (2009), they studied four spatial plan SEAs from various administrative level of government organizations in the region of Brunswick (*Braunschweig*), Germany, which manage SEA and spatial planning. It found that there are two various form of learning; they are single-loop and double-loop learning. In single-loop, SEA is learned as specific knowledge acquisition, comprehension, application and analysis, while in double-loop, SEA is learned in wider synthesis and evaluation. Moreover, the study also found that learning particularly occurred at the individual level, attitudes and values of individuals have changed, while the organization started later on, all learning process were stimulated through SEA in spatial/land use plan making exercises.

Secondly, in Fischer et al. (2009), they explored in the context of regional government organizations which responsible on SEA and spatial planning of three regions, Brunswick City in Germany, Ravenna in Italy and Southampton City in the UK, the study investigated the extent to which SEA can facilitate learning at an organisational and individual level, and ultimately, achieve effectiveness. And the result was learning through SEA is a context dependent, different countries may require different skills of the practitioners involved.

Thirdly, in Jha-Thakur (2010), the research studied on relevant skills and knowledge areas of SEA players, users and doers for SEA. The players consist of organizations (government, non-government, community group, consultancies), individual (planner, government staff, policy maker, project manager, decision maker, specialist technical staff), and others (public, politicians, media). Meanwhile, the users were those who using the content of SEA reports to support decision-making in the development and implementation of policies/plans/programs. The doers were those who have tasked with developing and implementing the process for SEA, the collection and synthesis of evidence, development of recommendations, identifying the range of options, mitigation measures etc. And from the

research, it found that skills and knowledge were required for implementing SEA. Furthermore, it also found that the learning process was developed as a result of SEA, or learning through SEA. This study was taken by inviting participants from relevant organization which carrying SEA and spatial planning from Southampton in the UK, and Ravenna in Italy.

Fourthly, in Gazzola et al. (2011), the study went deeper by investigating whether external or internal conditions can facilitate internal organisational reforms and changes, trigger appraisal effectiveness, and facilitate organisational learning in the context of government organization of three different countries, UK, Germany and Italy. The study concluded that the external and internal context conditions for organisational working are valuable in understanding and enhancing an organisation's overall effectiveness in terms of its ability to foster and benefit from learning. Furthermore, the individuals that make up learning organisations and the support of those with power and authority is an essential dimension of learning. Individuals can thus play a useful advocacy role for more sustainability-orientated goals, inviting engagement, and demonstrating and communicating effectiveness through feedback.

From all researches above, it reflected that SEA could stimulate learning and enhancing the capacity of its individual, group, organization and even the environment where the appraisal is occurred. Meanwhile, SEA capacity building means the improvements of structures of governance and institutional frameworks for SEA, strengthening of organization that conducts SEA, and producing of guidance documents and training of individuals who perform SEA. The particular objective of capacity-building for SEA is to develop and improve its process and methodology. To do so, it involves a broad, long-term focus and thinking that informs professionals, decision-makers and the general public on the consequences and sustainability of strategic decisions (Partidário and Wilson, 2011). There are four important key drivers in building the capacity of SEA. Key driver means an essential driver in the process of creating organizational development capacity for SEA. Those key drivers are policy driver, institutional driver, technical driver, and financial and human driver. Each driver has its own particular capability issues (Partidário and Wilson, 2011). Connecting every element of organizational learning, organizational capacity building and SEA capacity building, see table 3, we can see there are some co-relation among them.

Organizational learning elements	Organizational Capacity Building Instruments	SEA capacity building key drivers	Issues
Organizations	Organizational,	Institutional driver	<ul style="list-style-type: none"> • institutional framework, relationships, interactions, mechanisms, • accountability, essential in decisions quality control, and lastly, • power relationship-sharing and strengthening power
Group		Institutional Development	Policy driver
	Financial driver		<ul style="list-style-type: none"> • availability of financial resources, • cost-effectiveness practices, and
	Technical driver		<ul style="list-style-type: none"> • cultural mind-set, • typical tools (planning, evaluation, decision), • necessity of assessment, both in substance and in process, • guidance, • communication capacities, • participation tools, dialogues, • consensus-building traditional knowledge - a pool of essential rules-of-thumb and good common sense
Individual	Human Resources	Human driver	<ul style="list-style-type: none"> • expertise and competence of human resources

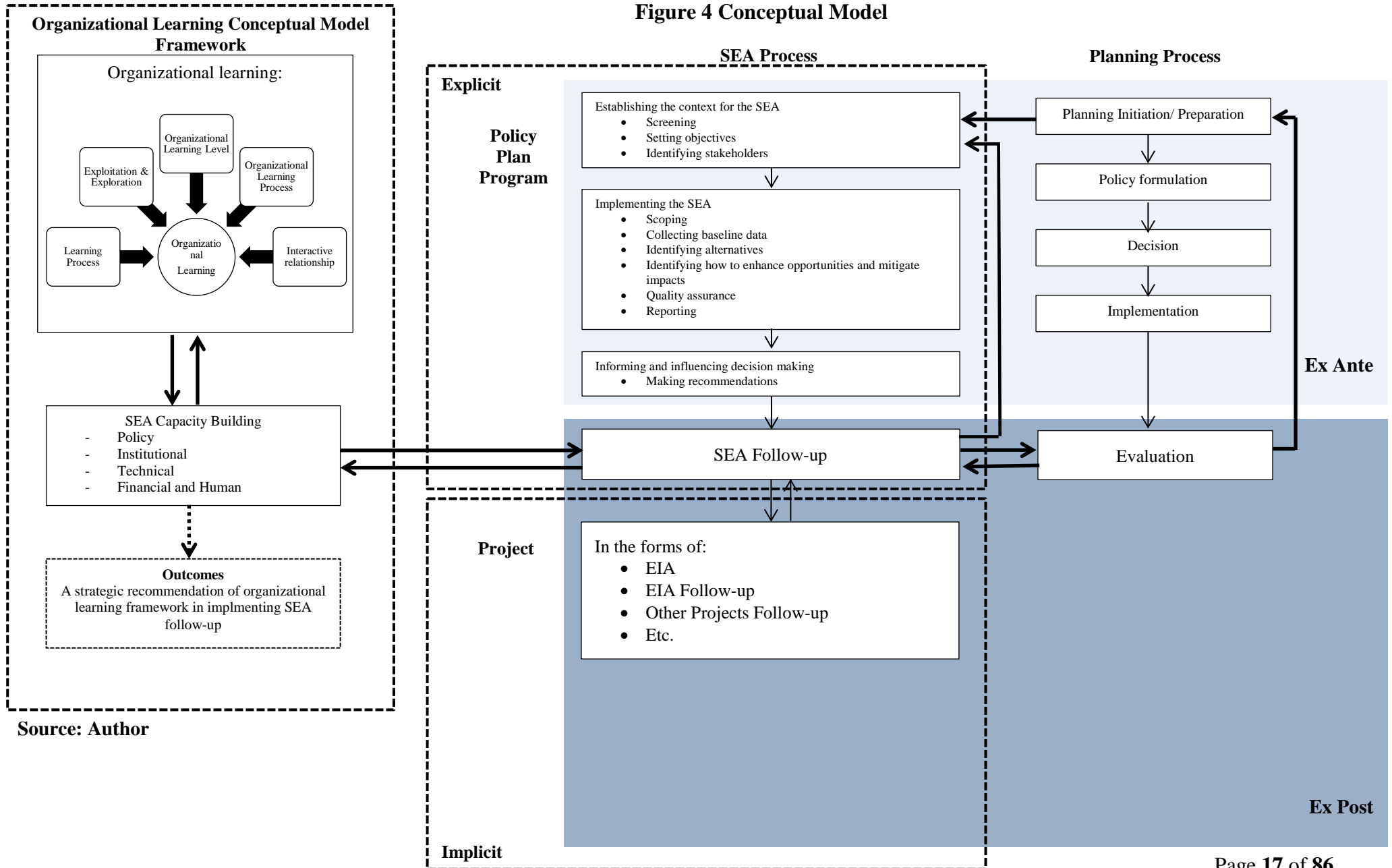
Table 3 Organizational learning and SEA capacity-building key drivers

Source: modified from Partidário and Wilson (2011)

At the end, to build a strategic recommendation of organizational learning framework in implementing SEA follow up, a conceptual model is built by combining four concepts, namely, organizational learning concept, SEA capacity building concept, SEA concept and SEA follow-up concept, see figure 4. Firstly, following organizational learning concept, theories of Argyris and Schön (1978) and Crossan et al. (1999), this study focuses on learning process, exploitation and exploration, organizational learning level, organizational learning process, and relation between cognition and action concepts. These concepts then will be linked with SEA capacity building concept, specifically theory from Partidário and Wilson (2011), which focusing on institutional, policy, financial, technical and human drivers. The objective is to find relevancy of organizational learning and SEA capacity building.

Secondly, in the SEA process, as we know that SEA, as an appraisal instrument to planning process, has strong connection with planning process. It could provide strategic initiative not only to evaluation stage at the planning process, but also within SEA process itself. However, the focus of study will only on SEA concept, not in the planning process. Studies of SEA, SEA follow-up and the benefit and barriers of SEA follow-up including tiering concept for the purpose of planning process are elaborated (Sadler and Dalal-Clayton, 2008, Cherp et al., 2011, Gachechiladze-Bozhesku and Fischer, 2012, Arts et al., 2011). This study draws the position of SEA follow-up in ex-post evaluation and the connection with the ex-ante evaluation in SEA process. This study also divides planning level, from strategic to operational to illustrate the position of tiering concept. Next, to provide illustration on relevancy of SEA and organizational learning concepts, this research also studies on Fischer et al. (2009), Jha-Thakur et al. (2009), Gazzola et al. (2011) researches. The objective is to find relevancy on, how the SEA follow-up process is influenced by key drivers of SEA capacity building, furthers by organizational learning.

Figure 4 Conceptual Model



Source: Author

CHAPTER 3: RESEARCH METHODOLOGY

To achieve the objectives of this research, several steps are taken. In this chapter, the research methodology of this thesis research will be elaborated in 3 parts. Firstly, theoretical framework is outlined. Secondly, it is then continued by description on how to collect data and information. Thirdly moves on to describe, how to analyze data and to implement of the concept for Indonesian context. The last part, figure 6 provides illustration of research framework.

3.1 Building the Theoretical Framework

This part serve as a basis for this thesis as it presents theoretical framework of organizational learning concept, organizational capacity building and SEA follow-up theories. Theories are built from several relevant theories, see table 4.

Topic	Description	References
Organizational Learning	<ul style="list-style-type: none"> • Exploration and Exploitation explanation • Organizational learning explanation • Organizational learning process explanation • Interactive Relationship between Cognition and Action explanation 	Organizational learning concept from Crossan et al. (1999), Argyris and Schön (1978)
Capacity Building	<ul style="list-style-type: none"> • Organizational capacity building explanation • Organizational learning and SEA explanation • SEA capacity building explanation 	<ul style="list-style-type: none"> • Organizational learning and SEA concept from Fischer et al. (2009), Jha-Thakur et al. (2009), Gazzola et al. (2011) • SEA capacity building from Partidário and Wilson (2011)
SEA	<ul style="list-style-type: none"> • SEA explanation • SEA follow-up explanation • Performing SEA follow-up explanation 	<ul style="list-style-type: none"> • SEA concept from Sadler and Dalal-Clayton (2008), etc. • SEA follow-up concept from Cherp et al. (2011) • Benefits and Barriers of SEA follow-up concept from Gachechiladze-Bozhesku and Fischer (2012) • Performing SEA follow-up concept from van Doren et al. (2012)

Table 4 Theoretical Framework References

Source: Author

3.2 Collecting Information and Empirical Data

This section follows on from previous section about theoretical framework. Before employing the aforementioned theories, it is necessary to outline how to collect information. This research aims to observe SEA follow-up in Indonesia and in the Netherlands, Canada and Ireland, countries which have implemented SEA follow-up. The observations pay particular attention to the practice of organizational learning, specifically for government organization context, organizations which are responsible for arranging SEA and planning. A case study approach is used, to see in practice how the organizational learning implemented, and how it could stimulate capacity building in implementing SEA follow-up in field. I approach four case studies, namely SEA-spatial planning plan in North Sulawesi Province, in Indonesia (Danida, 2011), SEA from A15 Rotterdam Maasvlakte-Vaanplein Project in the Netherlands (Natuur & Milieu, 2014), SEA for the National Capital Commission's planning in Canada (Gachechiladze, 2009), and SEA for Water Framework Directive (WFD) Monitoring Program in Ireland (EPA, 2012). These cases are chosen due to some considerations.

In SEA context, the SEA has strong connection from the strategic level to the project level. In SEA follow-up context, all countries have already implemented SEA follow-up, recently or for long tradition. Meanwhile from organizational learning context, all cases are involving various level of governmental organizations which responsible for arranging and implementing SEA and spatial planning. Information about these cases is collected from various resources such as previous researches, reports, newspapers, and other media. It is expected that problem identification will be formulated based on this information. From this step, the issues which related to organizational learning, capacity building and SEA follow-up expectantly can be well understood and at the end a strategic organizational learning framework could be built.

In conducting case studies, data is collected through some sources. Primary data is collected by conducting written and semi structured interview to relevant parties (Cohen and Crabtree, 2006). Semi structure interview is a method of interview where the interviewer follows the formal guide, but still able to follow topical trajectories in the conversation that may stray from the guide when it is appropriate (Cohen and Crabtree, 2006). Furthermore, Cohen and Crabtree (2006) explained that semi-structured interviews are often preceded by observation, informal and unstructured interviewing in order to develop a keen understanding of the topic of interest which is necessary for developing relevant and meaningful questions. This kind of interview is relevant and has advantages for this research because it allows the researcher and interviewees to prepare questions and answering during the interview. Furthermore, this kind of interview provides freedom to express for the interviewees in their own terms but still reliable and comparable data and information.

There are two parties, Indonesian participants and Dutch ones which will be involved in semi structure interview. From Indonesia, the interview involves Ministry of Home Affairs (MOHA), North Sulawesi Province government which comprise of North Sulawesi Province Development Planning Board (Bappeda), and Environmental Agency Board, and Danish International Development Agency (DANIDA) officials. While from the Netherlands, the

interview includes experts from NCEA (Netherlands Commission for Environmental Assessment). Actually, in the Netherlands' *Rijkswaterstaat* as SEA for A15 proponent and Ireland's Environmental Protection Agency as SEA for WFD were intended to be involved in this interview (See Appendix B), but due to the difficulties to obtain information, such as slow response and unfollow-up email, from the person who in charge and the time constraint, the interview then converted into study literature. Details about the participants in interview and the study literatures are presented in table 5.

Furthermore, secondary data is also collected in order to enrich sources of data. Researcher gathers data such as reports both published and unpublished, formal regulation, and newspapers articles concerning SEA follow-up process. In the case of Indonesia and Netherlands, this study relies on published government reports, formal regulation, newspaper articles, and official website articles. Meanwhile in the case of Ireland and Canada, researcher relies on published government reports, and academic journal papers, details of sources are presented in table 5. To ensure the validity of the secondary data, researcher establishes personal contacts to the authors of the works. Given the time constraint, researcher believes to have collected substantial materials in order to analyse the implementation SEA follow-up using the perspective of organizational learning.

Interview Stages	
SEA in Indonesia	
References	Description
MOHA official, Directorate Spatial Planning and Environmental Management and Facilitation – supervising organization	Semi Structure Interview with MOHA official in collecting information about MOHA supervision in SEA of North Sulawesi Province, focusing on the SEA processes supervision in North Sulawesi Province.
Bappeda official, Spatial Planning Division – authorized organization for SEA and Province Spatial Planning	Semi Structure Interview with Bappeda official in collecting information about how SEA in North Sulawesi Province has been implemented recently, focusing on the budgeting process, and the activities for SEA implementation in North Sulawesi Province.
Environmental Agency Board official, Environmental Control Division – Province environmental supervising organization	Semi Structure Interview with Environmental Agency Board in collecting information about how SEA in North Sulawesi Province has been implemented recently, focusing on the parties involved, and the activities for SEA implementation in North Sulawesi Province.
Danida-MOHA project official – funding organization	<ul style="list-style-type: none"> • Semi Structure Interview with Danida-MOHA official in clarifying and collecting information about how Danida supervision processes along with MOHA in SEA of North Sulawesi Province. • The information is also collected through Danida's supervision report, Title: "<i>Final SEA Report North Sulawesi Province</i>". Danish International Development Agency, DANIDA 2011 and has been clarified through Danida-MOHA project official.
SEA in the Netherlands	

References	Description	
Experts from NCEA	Semi Structure Interview with NCEA's experts in clarifying information on SEA and SEA follow-up in the Netherlands	
Academicicians and Practitioner		
Focus	Description	Sources
Early insight on SEA follow-up in the Netherlands	Collecting early insight on SEA follow-up in the Netherlands by clarifying information about how SEA and EIA applied in the Netherlands through in-depth interview.	Prof. Jos Arts, University of Groningen, the Netherlands
Early insight on SEA follow-up in Canada	Collecting early insight on organizational learning in related with SEA follow-up in Canada by collecting information on published article and journal through Semi Structure Interview.	Prof. Thomas Fischer, University of Liverpool, the UK
Early insight on SEA follow-up in Ireland	Collecting early insight on organizational learning in related with SEA follow-up in Ireland by collecting information on published article and journal through Semi Structure Interview.	Dr. Bobby Schijf, Netherlands Commission for Environmental Assessment, The Netherlands
Literatures Review		
Countries	Focus	References
SEA in Canada	SEA for The National Capital Commission's Planning	A research study from Maia Gachechiladze (2009), Title: " <i>Strategic Environmental Assessment Follow-up: from Promise to Practice. Case studies from the UK and Canada</i> " Doctor of Philosophy, Central European University, 2009, pp. 158-167
SEA in Ireland	SEA for Water Framework Directive	A government report from Ireland Environmental Protection Agency - EPA (2012), Title: " <i>Review of Effectiveness of SEA in Ireland - Key Findings and Recommendations</i> ", 2012
SEA in the Netherlands	A 15 Project Maasvlakte - Vaanplein	<ul style="list-style-type: none"> • A government website, Title: <i>A15: verbreden Maasvlakte – Vaanplein</i>, Rijkswaterstaat, 2010 • A government report, Title: <i>Evaluatie DBFM aanbestedingen</i>, Rijkswaterstaat, 2011

Table 5 List of Interviewees and Literatures

Source: Author

3.3 Analysing the Exploration of Organizational Learning Concept and the Possibility of Policy Transfer to Indonesians Context

After completing empirical data, this research elaborates findings from each of case studies from Indonesia, the Netherlands, Canada and Ireland. The elaboration focuses on SEA process, SEA capacity building, SEA follow-up and indications of Organizational Learning processes. Afterwards, I will explore the connection between organizational learning and capacity building concept in implementing SEA follow-up by investigating from SEA capacity building context and organizational learning context. Furthermore, I will identify key success from the studies. And then at the end, I will analyse on how to develop organizational learning for Indonesian context, see figure 5.

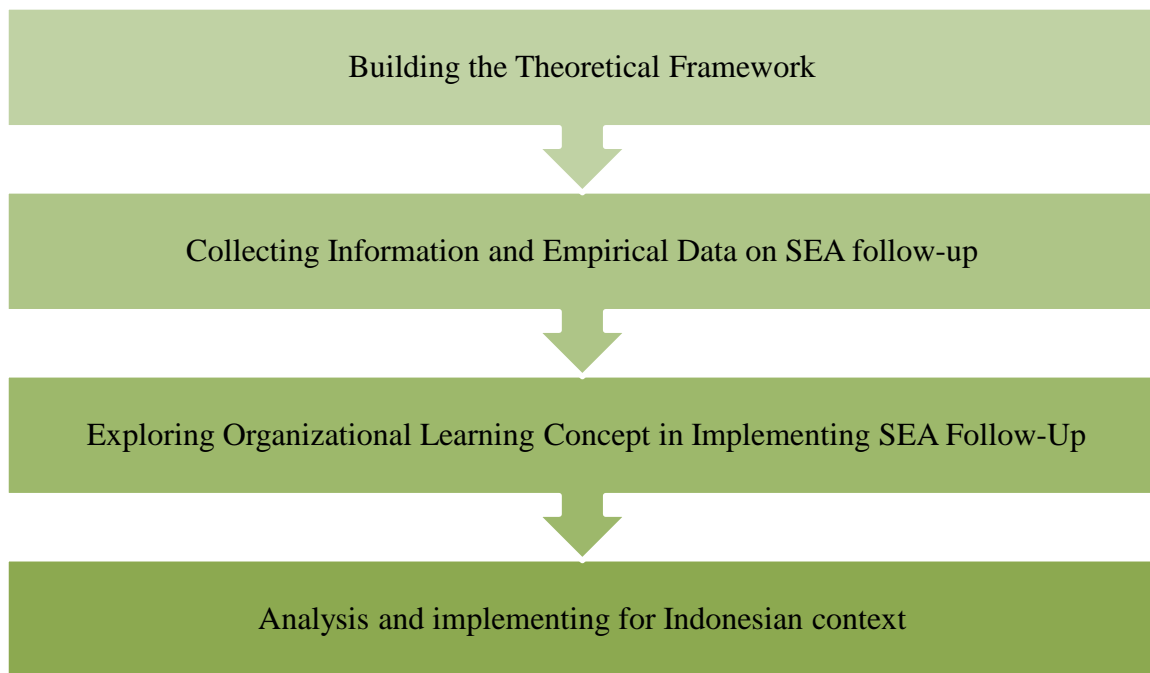


Figure 5 Flow Chart of Methodology

Source: Author

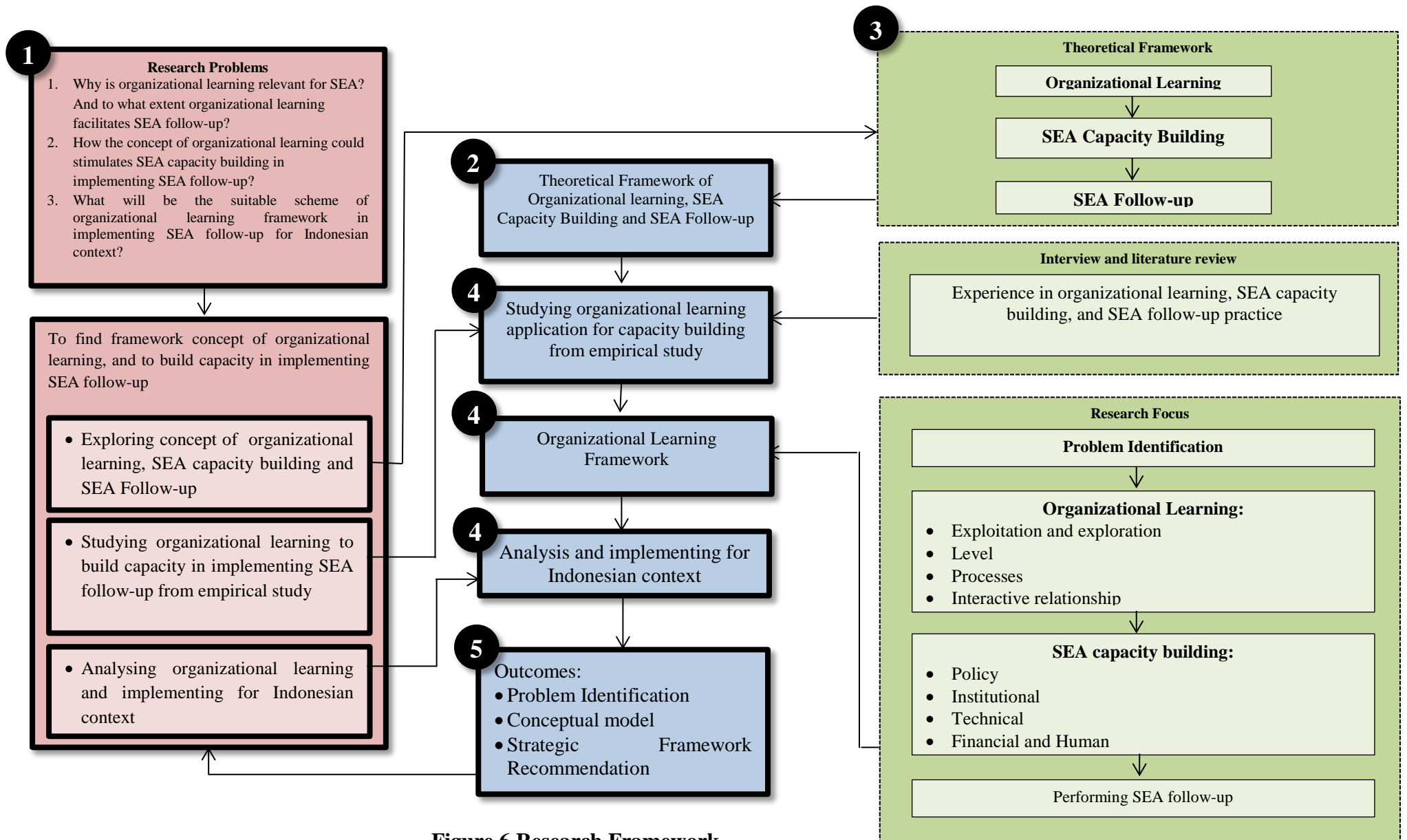


Figure 6 Research Framework

Source: Author

CHAPTER 4: RESEARCH FINDINGS

This chapter is divided into 3 sections. In the first section, 4.1 this study will describe the findings from four SEA cases, first is from Indonesia, and the rest are from developed countries which have already implemented SEA follow-up, namely the Netherlands, Canada and Ireland. Further, in 4.2 I will elaborate and compare organizational learning concept in implementing SEA follow-up from four case studies. Lastly, in section 4.3, I will analyse and create organizational learning framework for the context of organizational government of Indonesia which responsible for SEA and planning.

4.1 Organizational Learning and SEA follow-up from Four Empirical Studies

To achieve the aims of this research, four studies on organizational learning and SEA follow-up have been carried out. One case is a case of a developing country, namely Indonesia, in particular is SEA for Spatial Planning Plan in North Sulawesi Province. It is then followed three cases from developed countries which have implemented SEA follow-up. The cases are SEA for A15 Project Maasvlakte – Vaanplein, the Rotterdam in the Netherlands, SEA for the National Capital Commission's Planning in Canada, and SEA for Water Framework Directive in Ireland.

4.1.1 SEA for Spatial Planning Plan in North Sulawesi Province, Indonesia

Since 1996, Indonesian government has stipulated Strategic Environmental Assessment (SEA) as compulsory instrument which ensures whether environmental aspect has been considered and integrated into every strategic level of planning and decision making (Sadler and Aschemann, 2011). Today, the implementation of SEA has becoming more concrete by the establishment of environmental law 32/2009. This law urges the government whether in central, and/or local government to arrange Strategic Environmental Assessment (SEA) into its government policies, plans and programs (PPPs) (MOE, 2009). The general procedure of SEA is provided by Ministry of Environment in form of Government Regulation, unfortunately, until now this regulation has not been issued yet.

To obey this regulation, in mid of year 2011 North Sulawesi Province Government established SEA for Province Spatial Planning. The SEA was financially supported by the grant from Danish International Development Agency (DANIDA), and supervised by Ministry of Home Affairs Republic of Indonesia (MOHA). Meanwhile, the organization which responsible for this SEA arrangement project was the North Sulawesi Province development planning board (so called as Bappeda) (Danida, 2011). This board is a unit organization from provincial level government which has authority to develop, integrate and manage every sector planning in provincial level. This board has also responsible for the establishment of provincial spatial planning.

The North Sulawesi Province, located in the northern part of Sulawesi Island (see figure 7) had been chosen as MOHA-DANIDA project due to the urgency for the National Spatial Planning development program in 2013 (MOSS, 2013). However, until now, there is no clear

guidance or regulation on implementing SEA for spatial planning yet. Actually, the SEA implementation in North Sulawesi Province was intended to apply simultaneously with the arrangement of provincial spatial planning. Yet, in practice until 2014, the provincial spatial planning has not been issued; meanwhile, arrangement of SEA had finished since 2011. In SEA year 2011, North Sulawesi Province had some strategic issues from the environmental, social and economic aspect which are coast and islands protection area, watershed management, forest and land conversion, provincial boundaries, flood disaster risk management, transportation, biodiversity, environmental degradation and pollution, energy, social-cultural and natural protection. All these issues were agreed and proposed by all stakeholders who involved in SEA arrangement (Danida, 2011). At the end, all these strategic issues were expected to contribute to strategic inputs in the North Sulawesi Provinces spatial planning. However, there is a delay in the spatial planning plan arrangement. As a result, instead of contributing to strategic inputs, all issues are becoming the development boundaries for the province (Berita Manado, 2011).

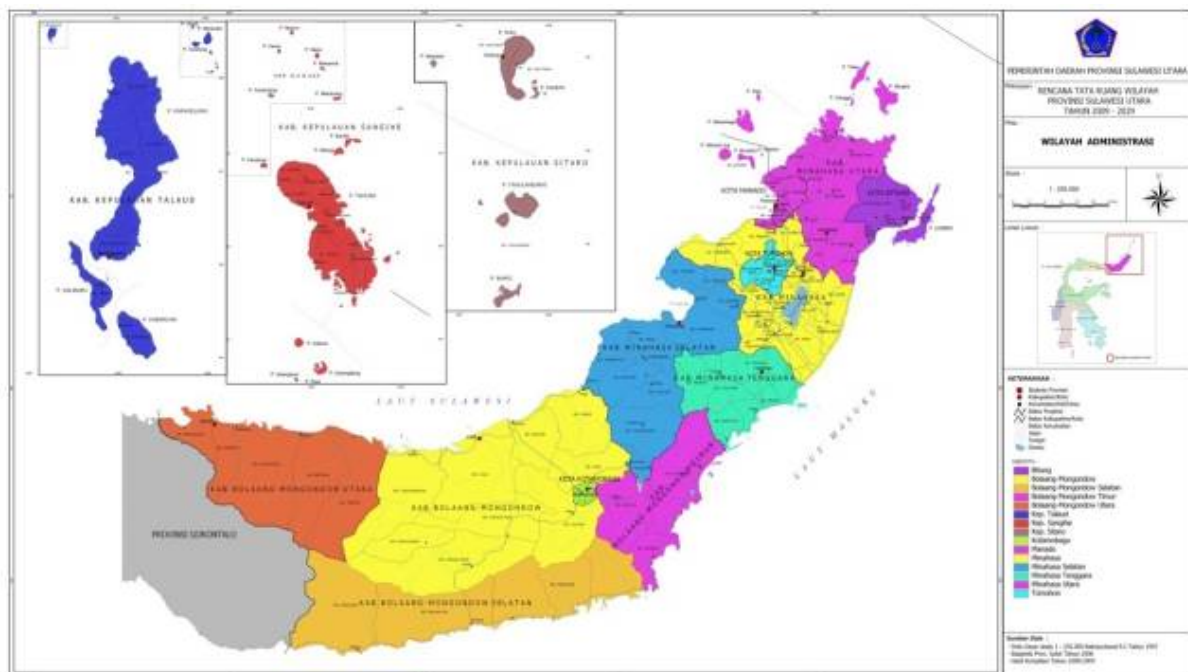


Figure 7 North Sulawesi Province

Source: Danida (2011)

As their first SEA, the Bappeda took responsibility for every activity of SEA process, institutionally, financially, and technically. Institutionally, the Bappeda collected information from related policies, plan, program and project which support the SEA activity in North Sulawesi Province. However, given the procedure regulation as the daughter regulation of Law 32/2009 has not been issued yet, technically, informal and bottom-up steps were taken by the Bappeda. Bappeda cooperate with central government to get supervision from MOHA-DANIDA’s project. Financially, the Bappeda official said that, *“It is a risk for province to implement SEA for spatial planning, since there is no [clear] regulation [yet] to guide the province, therefore we need central government to protect [supervise] us”* (See Appendix

C.4). After the province awarded SEA supervision from MOHA-DANIDA project, Bappeda started to initiate the SEA by issuing Governor Regulation for the Bappeda to support the SEA activity budget.

Following MOHA-DANIDA support and supervision, Bappeda started to invite stakeholders and ask for their involvement in the beginning of SEA activity, the screening process, see table 6.

	Organizations
Central government	Ministry of Home Affairs (MOHA) Ministry of Forestry (MOF) Ministry of Public Works (MOPW) Ministry of Defence (MOD) Ministry of Transportation (MOT) Ministry of Maritime and Fisheries Affairs (MOMFA) National Development Planning Agency (Bappenas) Police
Local Academicians	University of Sam Ratulangi in Manado, North Sulawesi
Local government (Province and Municipality/Regency)	1. Provinces: North Sulawesi Province, Gorontalo Province, 2. Regencies ¹ : Regency of Bolaang Mongondow, Regency of Bolaang Mongondow Selatan, Regency of Bolaang Mongondow Timur, Regency of Bolaang Mongondow Utara, Regency of Kepulauan Sangihe, Regency of Kepulauan Siau Tagulandang Biaro, Regency of Kepulauan Talaud, Regency of Minahasa, Regency of Minahasa Selatan, Regency of Minahasa Tenggara, Regency of Minahasa Utara, 3. Municipalities ² : Municipality of Bitung, Municipality of Kotamobagu, Municipality of Manado, Municipality of Tomohon

¹ Regency is a region which has characteristic of agricultural based, less dense population, and wide area. In government structure, this region is below the province level, but has the same level with municipality

² Municipality is a region which has characteristic of urban, dense population and less wide area. In government structure, this region is below the province level, but has the same level with regency

Private contractor, local community and NGO	Alderman, Inkindo, Walhi ³
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Table 6 Involved Stakeholders

Source: Danida (2011)

After finishing SEA activities series, the SEA provided some recommendations, which then legalized by the Provincial Government Regulation. The recommendations are firstly North Sulawesi spatial planning plan has considered aspects of the environment and sustainable development in its policies, plans and programs (PPPs). Though the planning is not explicitly explain on the environmental aspect, but it has already considered the aspects of the environment and sustainable development which written in the Direction Control of the Provincial Land Use chapter of the spatial planning plan. Secondly, the SEA asked that eighteen development programs require more attention in its implementation, and need more detail for mitigation efforts and formulated recommendations, due to the environmental implications. The eighteen development programs indicate primary and secondary impacts. The primary impact comprise of conservation land use change, the potential impact of the increasing beach activities accumulation in the coastal city. While the secondary impact consist of increasing in water demand, increasing of erosion and landslides disaster, degradation of water quality, air pollution, noise, solid waste, and uncontrolled urbanization (Danida, 2011). But, unfortunately, since the spatial planning plan has not been approved by the central government up until the beginning of 2014, these recommendations were hanging, temporarily. The delay of approval is mainly because there is disagreement between central government and provincial government about the total forestry area which includes as protection and conservation area (Liny Tambajong, 2013). The Environmental Agency Board official stated *“Even there is a delay on spatial planning plan; the recommendations of SEA still have opportunity to be implemented. Since the recommendations are focusing on the long-term objectives rather than short term”* (See Appendix C.4). And then, in the end of 2013, finally the problems have been solved, and the spatial planning established in the beginning of 2014 through the Provincial Regulation 1/2014 about North Sulawesi Province Spatial Planning. Importantly, the recommendations are included in the planning.

From researcher findings, practically, the Bappeda does not necessary to learn and build capacity specifically on implementing SEA follow-up because the law and regulations are not explicitly asked to do so. Instead of doing SEA follow-up explicitly, the follow-up activities will be merged with follow-up activities from other PPPs (Policies, Plans, Programs and Projects). In the North Sulawesi Province’s case, the Bappeda applies spatial planning follow-up which is asked in spatial planning law and regulation to be reviewed every 5 years, as MOHA official stated that *“to implement follow-up like monitoring and evaluation, the province could apply spatial planning follow-up which asked [by the law] to be reviewed for*

³ Inkindo (Ikatan Nasional Konsultan Indonesia) is a private consultant group association in Indonesia, related with contractor, and infrastructure development.

Walhi (Wahana Lingkungan Hidup Indonesia) is a NGO which actively campaign on environmental protection in Indonesia

every 5 years, and this becomes the duties of Bappeda North Sulawesi Province, under central government supervision” (See Appendix C.4). Accordingly, the process of learning occurs in spatial planning follow-up training and processes. In addition, from SEA processes in North Sulawesi Province, it indicates that in the level of effectiveness, SEA processes is at acquaintance level (van Doren et al., 2012), which is an organization just aware of SEA. Therefore to increase its capacity for follow-up, the Bappeda as proponent authorities, is so much depended on supervision from the central government. Lack of budget, provision and regulation, plus newly experience in SEA become the main reasons for North Sulawesi Province to preferably being supervised by the central government. Yet, the Bappeda admitted that its understanding on SEA becoming quicker after the SEA is implemented with spatial planning plan since the Bappeda is more understand in arranging spatial planning which is its main duties (Bappeda, 2011).

4.1.2 SEA for A15 Project the Rotterdam, the Netherlands

In 1987, the EIA tool was officially applied. In the EIA decree, part of the Act, not only project, but also certain plans and programs are specified which are subject to the procedure laid in the Act. These include national plans for waste management, electricity generation, water supply and regional land use plans for the location of major new housing, industrial or recreational areas. And then, in 2001, the European SEA directive (2001/42/EG) was transposed by amending the Environmental Management Act from 1987 on 28 September 2006 and by amending the relevant regulatory provisions of the EIA Decree. On 1 July 2010, the Dutch Environmental Assessment legislation was modernized. The objective of this modernization process is to enable customization by means of fewer and simpler yet more consistent rules that nevertheless remain focused on the environmental objective (NCEA, 2014). This is also in line with what Netherlands Commission for Environmental Assessment (NCEA) official has stated that *“SEA in the Netherlands is not a stand-alone procedure, with a separate series of follow-up activities. The SEA is integrated into decision-making on the plan, and any follow-up that takes place is attached to this decision-making, and is the responsibility of the competent authority for the plan [...]”* (See Appendix C.5). NCEA is an independent expert body that provides advisory services and capacity development on environmental assessment not only for the Netherlands government, but also for international cooperation and private sector (NCEA, 2014).

According to Sadler and Jurkeviciute (2011), the level of SEA application in the Netherlands is estimated at moderate to high level. Later, van Doren et al. (2012) also confirm the level in which observations were taken from three case studies in the Netherlands’ projects, namely The National Waste Management Plan, the SEA of the Third Structure Scheme Electricity Supply, and the SEA of the National Water Plan. They clearly stated that *“...all cases have, strictly speaking, attained the level ‘consideration’; the SEAs were used to develop, review, or discuss the plan. Yet, only one SEA (SEA of the waste management plan) was used to develop, review, and discuss the plan and plan alternatives”* (p.128, pp120-130). In the same vein, Prof. Jos Arts, in the early interview, also emphasized about the condition of SEA in the Netherlands in practice, where *“the level of performance of SEA is believed in a low level. Refers to van Doren et al. (2012), the level of performance will*

be in consideration-performance level with low level of involvement which is on the non-participation level (Arnstein, 1969)”. It means that SEA has been used as an appraisal instrument for planning process to monitor, evaluation, and follow-up the plan and plan alternatives.

Meanwhile, A15 Maasvlakte – Vaanplein (A15 MaVa) is a motorway project worth approximately €1.5 billion, connecting Rotterdam and the European hinterland. As the biggest contract of *Rijkswaterstaat*, its construction started in 2011, and expected to complete at the end of 2015, while the total project will end in 2035. *Rijkswaterstaat* is part of the Dutch Ministry of Infrastructure and the Environment and responsible for the design, construction, management and maintenance of the main infrastructure facilities in the Netherlands. The purpose of the project is to make the port area and surrounding residential areas accessible and safe. In total, there will be 85 kilometres in length with additional lane road infrastructure. The project comprise of 5 parts, specifically, Maasvlakte to Thomassentunnel, Spitsstroken bij Rozenburg, Nieuwe Botlekbrug, Head and parallel taxiways between Beneluxplein and Vaanplein, and Vaanplein and A29. In Maasvlakte to Thomassentunnel, the project will build an A-road with three lanes in both directions. In Spitsstroken bij Rozenburg, the project will widen from 2x2 to 2x3 lanes, connecting from Rozenburg to Spijkenisse. In Nieuwe Botlekbrug, the project will build new and wider bridge, allowing the increasing flow of shipping traffic on water and cars on the road. In the Beneluxplein and Vaanplein, the project will broaden the connection from Spijkenisse to Vaanplein, and adding three lanes on the main road and two lanes on the parallel taxiway. And then, in Vaanplein and A29, the project will extend the road by constructing of new crossovers and adding new exit way to Kilweg, see figure 8. To do the project, the *Rijkswaterstaat* cooperates with the A-Lanes A15 consortium, comprising Ballast Nedam, John Laing, Strabach and Strukton companies in 2010. Following the public private partnership scheme, cooperation between government and private companies, the DBFM (Design, Build, Finance and Maintenance) integrated contract is applied. In this case, the consortium will also be responsible for construction and maintenance of the new Botlek Bridge. (*Rijkswaterstaat*, 2010).

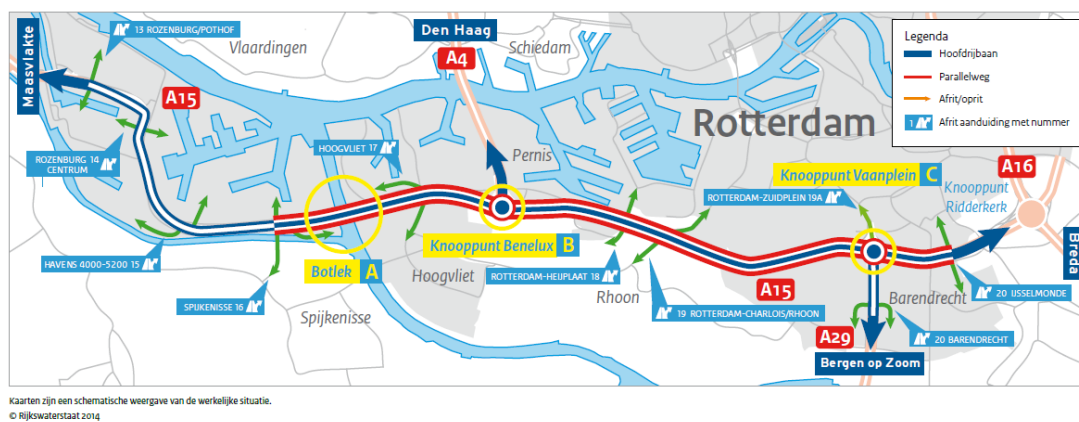


Figure 8 A15 MaVa Project

Source: *Rijkswaterstaat* (2010)

The SEA in A15 project is implemented following the Dutch Environmental Assessment legislation. In A15 project, there are several environmental issues which might rise during the project construction, like air quality, nuisance, and quality of the environment in surrounding project area. To tackle the issues, besides implementing the tiering between SEA and EIA, the government and consortium along with Traffic Management Company currently are doing some environmental protection efforts. For the tiering, the government publish a noise map for the project level to draw the noise prone area, following the EU direction on Noise Abatement act. Further in strategic level, they are integrating plans and policies from related and surrounding project area, such as transport policy, planning policy, economic policy, and port policy with environmental policy. Meanwhile in the project level, they are minimizing the inconvenience to local residents and users of the road and to ensure accessibility, such as in construction phase, the project combines work smart, put any activities that affect traffic flow mainly at night and run on weekends, and the Traffic Management Company takes measures to any residual discomfort (*Rijkswaterstaat*, 2010). All the steps were taken are relevant with what NCEA stated on tiering concept, *“If there are multiple SEA’s (tiering) then in the first SEA and plan the general [...] can be selected. In a second SEA and plan the specific locations [...] can be further developed. The second tier SEA can than further assesses topics that were identified in the first SEA. The same might happen if a plan and SEA are followed by implementation projects which require EIA. That certain environmental topic can be further addressed at the “next level down”. In this way follow-up is given to the SEA “higher up” in the planning tiers.”* (See Appendix C.5).

In 2011, monitoring and evaluation programs are taken by the Chief Engineer and Director Infrastructure Services of *Rijkswaterstaat (Hoofd Ingenieur-Directeur Dienst Infrastructuur (HID DI))*. From its report, the monitoring and evaluation programs for A15 focuses on 3 things, namely cooperation and role, minimize congestion implementation phase, minimize congestion maintenance phases. Different project might have a difference steps and focuses on monitoring and evaluation (*Rijkswaterstaat*, 2011). Meanwhile, the monitoring and evaluation programs procedure are following what the SEA regulation asked *“After adopting a plan subject to SEA the competent authority concerned must evaluate the actual environmental consequences resulting from the performance of the plan. The time periods for the start of the investigation and the way in which this will be performed will have already been determined for the plan or project”* and *“Not the actual SEA rapport or procedure, but the plan for which the SEA is made, is subject to evaluation”*(NCEA, 2014). This regulation reflects that the monitoring and evaluation programs are implemented following the plans, in which it is also supported by the NCEA experts, when they described that *“Concerning practice, follow-up is flexible and tailor-made, the competent authority decides how to follow-up. For example if in a SEA an important knowledge gap is identified [...] the competent authority decides what they will do with this finding and how they will give follow up. For example: a monitoring program, an obligation to do further research, an announcement that in future planning there will be extra attention towards this problem”* (See Appendix C.5).

4.1.3 SEA for the National Capital Commission's Planning, Canada

In 1990, Canada became the first country to introduce a formal system of SEA of government policies, plans and programs, separate from project level environmental assessment (EA). The SEA is supervised by CEAA, Canadian Environmental Assessment Agency. This is a federal body accountable to the Minister of the Environment. The Agency provides high-quality environmental assessments (EA) that contribute to informed decision making, in support of sustainable development. The Agency is the responsible authority for most federal EAs (Gachechiladze, 2009).

One of examples from the SEA implementation is SEA for the National Capital Commission's planning (NCC). The National Capital Commission is a crown corporation established in 1959 by the parliament of Canada to act as the Federal Government Planner in the National Capital Region (NCR). Its mandate is defined by the National Capital Act (1958, last amended in 1988) supervised by CEAA and includes preparing plans for and assisting in the development, conservation and improvement of the NCR, coordinating the policies and programs of the Federal Government in the NCR, approving the design of buildings and land use on the NCR. The NCR is formed by the cities of Ottawa and Gatineau which situated in the province of Ontario and Quebec respectively. It forms the fourth largest metropolitan area in Canada with a population of more than one million people (Gachechiladze, 2009). Its central part, known as the capital core area, is the administrative heart of Canada and hosts the majority of federal and provincial offices. The core area encompasses the downtown portions of Ottawa and Gatineau and extends over ten square kilometres on both sides of the Ottawa River, which serves as a boundary between two provinces, see figure 9. The NCC's planning mandate extends across the boundaries focusing on the Federal lands (Gachechiladze, 2009).

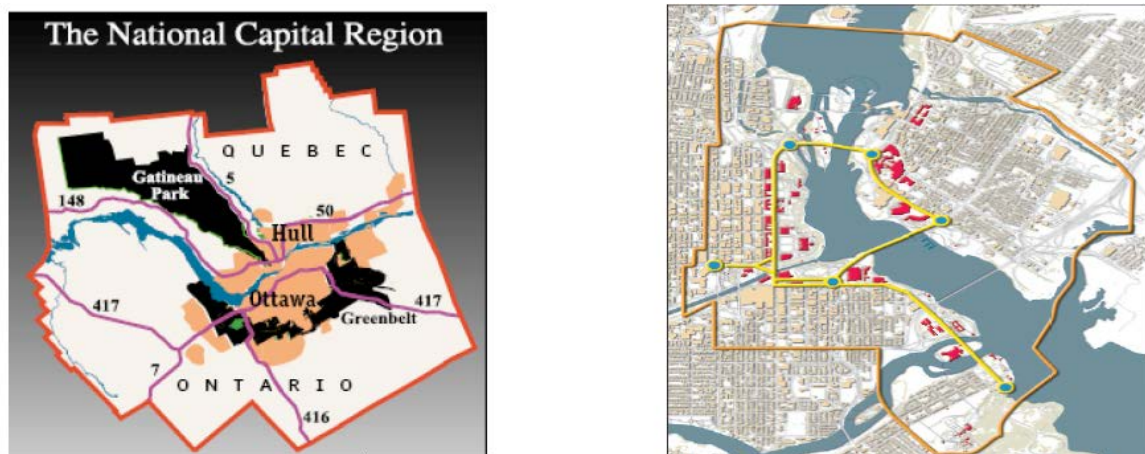


Figure 9 Schematic map of the NCR and Map of the capital core

Source: Gachechiladze (2009)

The NCC has developed a number of plans for the NCR at various temporal and spatial scales. The lead policy document for the Core Area is the Core Area Sector Plan (CASP) prepared in 2005. It aims to guide developments, programming, preservation, environmental

integrity, transportation, animation and architectural and design quality on the Core Area's Federal lands over the next 20 years. It is the final phase of a third-stage planning process coming after the Vision for the Core Area of Canada's Capital Region (1998) and the Concept of Canada's Capital Core Area (2000). During the planning process, the CASP underwent an SEA according to the NCC's internal EA policies (Gachechiladze, 2009). The SEA was conducted as a parallel process to plan development with the intent that information would feed into the planning process, ensuring that environmental considerations are built into planning actions for resulting strategies and projects. Overall, according to the NCC, the final CASP and subsequent planning initiatives were improved by the SEA. However, conducted parallel to plan development, the SEA results proved difficult to coordinate and integrate with the CASP plan development process (Noble, 2009).

The NCC has a clear hierarchy of land use planning, i.e., policy plans, master plans, sector plans and area plans, which systematically undergo SEAs according to the NCC's internal environmental management and EA policies. The NCC has been traditionally incorporating SEA into the PPP-making as per its internal EA Policy (1995), which commits the NCC to assess all activities/decisions in the spirit of the Canadian EA Act, the SEA Cabinet Directive and provincial SEA policy frameworks. The development of follow-up programs is part of this commitment, which creates favourable conditions for follow-up practice (Gachechiladze, 2009).

From study of Gachechiladze (2009), it reveals that SEA follow-up in NCC has a well performed in a clear statement of ownership and statuses of the CASP, follow-up implementers, timing and position of follow-up in relation to SEA and the CASP. However it perform less in timing and position of SEA follow-up in relation to other strategies and their EAs, acceptance of follow-up roles/responsibilities and formal networks, provisions and possibilities for capacity-building, transparency for follow-up, commitment of stakeholders and consideration of non-implementation of follow-up. The weakest performance is in the unsatisfactorily defined follow-up budgets including limited time, human and financial resources (Gachechiladze, 2009).

From researcher findings, the NCC as authorized organization which implements SEA has advantages by clear hierarchy of land use planning, and established policy framework for systematic SEA. Moreover, because of long tradition of SEA, strong political commitment and involvement from all stakeholders cement a good foundation. Additionally, the SEA follow-up is part of regional priorities program. Unfortunately lack on federal SEA regulation which could provide budget becomes the main challenge for NCC to implement SEA. Besides limited funds, the others NCC weaknesses are lack in enforcement and strong dependent on federal project level regulation, weak in compliance mechanisms, and absent in integration of SEA follow-up with existing monitoring system (Gachechiladze, 2009).

To tackle these problems, the NCC follows formal follow-up policies, such as awareness, integration, and recognition of the stakeholders' perspectives like network-led and supports the credibility of the CASP and follow-up as well as that of the NCC itself, to contribute for a better cooperation and presumably improve mutual trust among the stakeholders. As a result,

NCC decided to provide inter-organisational distribution of planning and SEA-related responsibilities. Therefore the conduit of SEA and follow-up follow federal and internal sustainability policies, as well as formal provisions for sustainable development and international best practices.

4.1.4 SEA for Water Framework Directive, Ireland

Strategic Environmental Assessment (SEA) directive came into force in 2001 through EU directive 2001/42/EC and was transposed into Irish law in 2004. It aims to provide for a high level of protection of the environment, and contribute to the integration of environmental considerations into plan preparation and adoption, with a view to promoting sustainable development (EPA, 2012). SEA practice in Ireland has similar benefits and limitations as in other European countries. From the report it explained that in order for SEA to be effective, it should follow some Irish Environmental Protection Agency (EPA) criteria, such as SEA should start as early as possible in the plan preparation process, effective, integrated and sustainability-led, provide sufficient, applicable, up-to-date and reliable information in a cost and time-efficient manner, identify and assess new and environmentally sustainable alternatives and justify the selection of the preferred alternative on environmental grounds, iterative, being part of an ongoing decision cycle, and inspire future planning (EPA, 2012 p. 11). In addition, SEA needs to be applied in a tiered manner taking into account other relevant plans in the hierarchy, and should also inform project environmental impact assessment (EIA) and, SEA should be flexible and adaptive to the plan-making process (EPA, 2012 p. 11).

Unfortunately, these criteria have not fully effectively implemented. Little improvement and unclear whether plans are being changed in response to the SEA with its appropriate assessment or the plans have already perceived as being sustainable. Thus the changed actually include within overall plan-making process. Fewer changes are made by SEA if the plans have already perceived as being sustainable, and sometimes SEA influence can differ for different environmental topics, for instance is the level of detail included in plans for assessing effects on water quality and biodiversity was greater than information addressed for protecting cultural heritage and landscape. This is often related to the expertise of the SEA team, whether guidance is available on that topic, and how available and up to date the baseline data are (EPA, 2012).

In EPA (2012) research, Rural Planning Services (RPS) and Western Regional Authority investigated 26 various kind of plans, from strategic level to project level. The plans consist of series of plans that link up in the hierarchy of plans, various plan sectors, i.e. wind, flood management, waste, water, etc., cross-border plans (Ireland and Northern Ireland), local, county and regional authority plans, national plans, plans which prepared by semi-state bodies, and, plans that have gone through the full SEA process. As a result, particularly in general, in many cases follow-up activity like monitoring programs were well related to significant effects and mitigation measures. The programs referred to existing data sources and the competent authority responsible for carrying out the monitoring. These are all aspects of good practice. However, monitoring proposals typically did not indicate the frequency of

reporting or who should carry out corrective action for unforeseen effects. Thresholds/trigger levels and timescales were not always provided in relation to targets. Overall, the main issue in relation to monitoring seems to be that it is not being undertaken for SEA. Monitoring takes place under national and local monitoring programs (i.e., by the EPA and local authorities). According to a report, it reveals that several monitoring programs are not commenced because the programs are relatively new. Additionally, monitoring had also not yet started for several older plans, primarily due to lack of funding and lack of resources (EPA, 2012 p.29).

An example of EPA local monitoring program is in Water Framework Directive (WFD) monitoring program, where the envisaged follow-up organizations responsible to provide data and information regarding the follow-up activities, the organization is not only the EPA, but also involving various organizations like government organization, private, environmental agency, NGO, state own company and include academicians, see the list of organizations in table 7. In monitoring activities, a good communications between the compliance monitoring and enforcement authorities and the ambient monitoring program is required, for example, a municipal Waste Water Treatment (WWT) plant is ‘under-performing’ so badly that the Programs of Measures (POM) requires it to be completely replaced with a new plant, a small number of samples may allow an assessment of the plant’s poor performance to be made. Excessively frequent monitoring is probably not useful when it is known and accepted that a replacement treatment plant is required and in the planning process or perhaps even under construction. A precaution should be taken when a monitoring program cannot capture the full value. Therefore, a responsive reporting is an issue to be managed by EPA. In their report, in regard to that condition, the Environmental Protection Agency in conjunction with the Local Government Computer Services Board and the River Basin Districts are currently developing an environmental data exchange network (EDEN) aimed at eliminating the difficulties encountered in the sharing and reporting of environmental data, see figure 10. The objective of EDEN is to apply technologies that enable data exchange via internet among environmental agencies. In addition, EDEN facilities of exchange of monitoring data which is arising from this WFD monitoring program (EPA, 2006).

Envisaged Organizations	
EPA	Central Environmental Agency
Local Authorities	Local Government
River Basin Districts (RBD)	Local Government
Department of Environment (DEHLG)	Central Government
Marine Institute	Central Government
Central Fisheries Board	Central Government
Private Laboratories	Private
Health Boards (Laboratories),	Central Government
Geological Survey of Ireland	Central Government
Department of Agriculture	Central Government
Forest Service	Central Government

Coillte Research Institutes	NGO
Universities	Academician
Ordnance Survey of Ireland	Central Government
Office of Public Works	Central Government
Electricity Supply Board	State own company

Table 7 Envisaged Organizations in WFD

Source: EPA (2006)

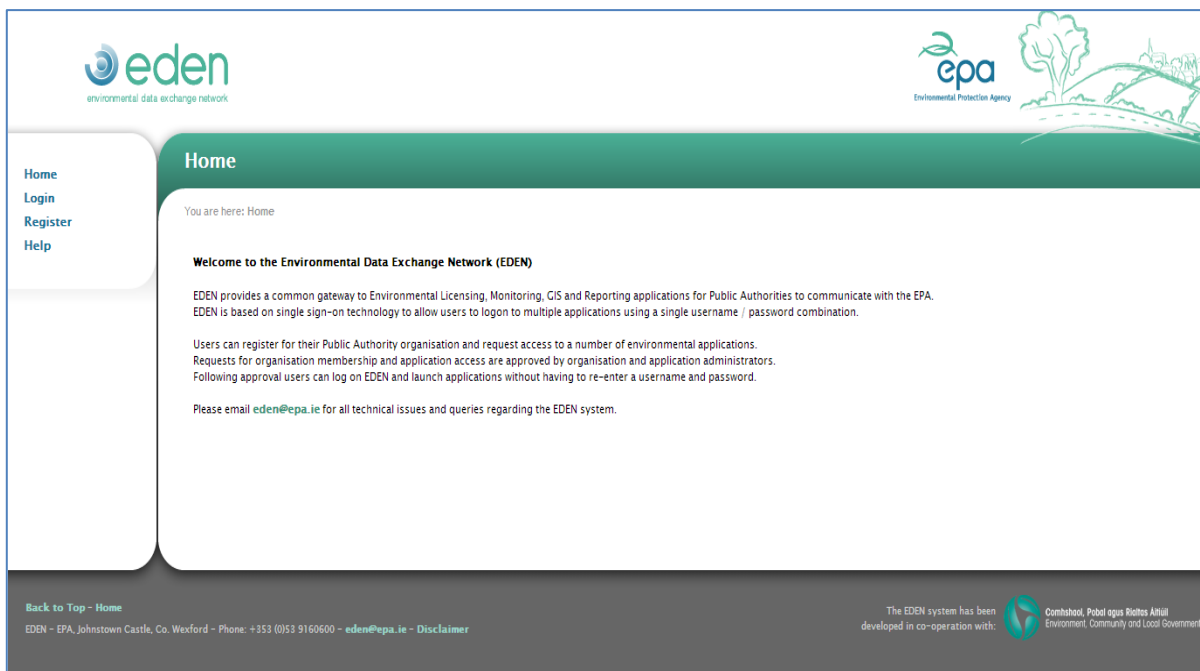


Figure 10 EDEN Information Exchange Systems

Source: www.edenireland.ie

As a result of investigation, European Commission suggested a need for greater integration between Annual Monitoring Reports and SEA, and a need for research on environmental standards to help ensure that critical environmental effects are taken into account. The European Commission study commented on the lack of national guidance on monitoring, particularly on monitoring indicators, see figure 11. Furthermore, the European Commission also identified the need for more guidance on how to develop a monitoring program to include thresholds/limits for intervention, realistic goals for monitoring, responsibilities, timeframes, etc. The case study review also demonstrated the need for national monitoring standards to be developed for land use plans, besides the WFD (EPA, 2012).

Next is lack on human capacity and awareness. To response on these matters, EPA has provided training information system through its website in www.epa.ie, and cooperates with United Nations University, Oxford Brookes University, and Global Virtual University (EPA,

2005). The European Commission asks EPA as authorized organization besides updating the guidance, providing training and increasing awareness are also recommended. Training and awareness is needed to raise the profile of SEA in Ireland to ensure that senior planning authority personnel and decision-makers are fully aware of the requirements and benefits of SEA. The following training and awareness are suggested by European Commission (EPA, 2012):

1. Develop and provide SEA and Appropriate Assessment (AA, under the EU Habitats Directive) training modules to promote integration between SEA and AA.
2. Develop and provide targeted SEA training for decision-makers, planners, engineers and public to raise SEA awareness and responsibilities.
3. Develop and provide training on the assessment of effects (short, medium and long term, cumulative, synergistic, permanent, temporary, direct, indirect, interrelationships, etc.), including use of Geographic Information System (GIS).
4. Convene a national SEA/AA conference every 2–3 years to exchange and promote best practice.
5. Convene regional/national SEA/AA Fora in association with Regional Planning Authorities (RPAs) for land use plans.

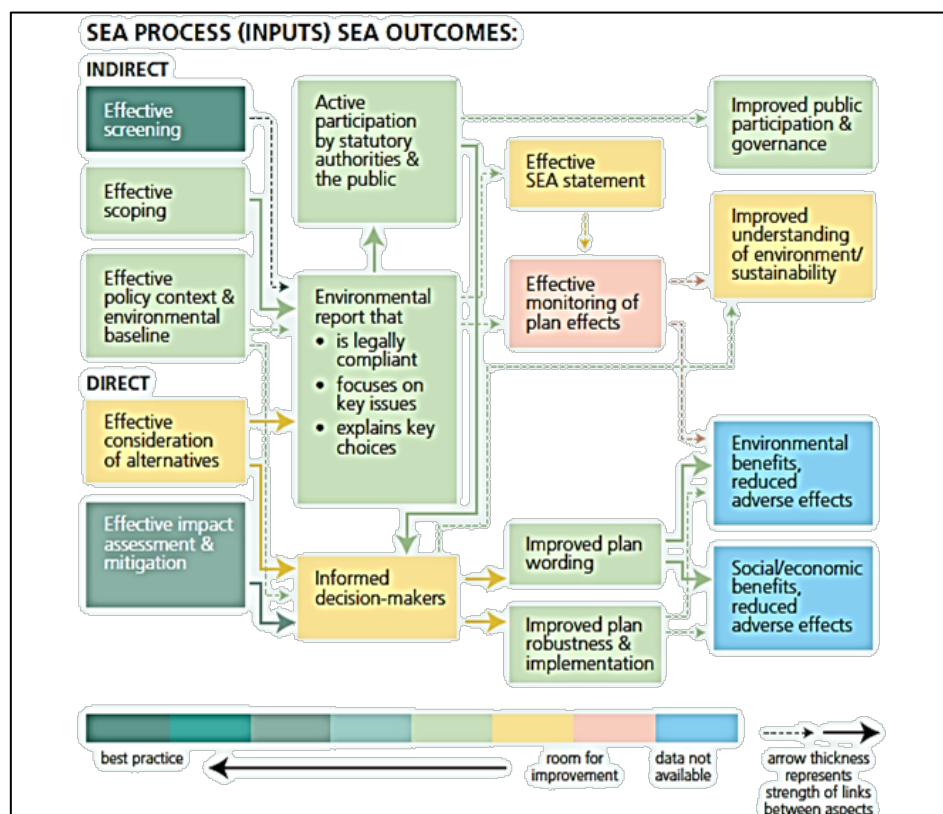


Figure 11 Overview of Effectiveness of SEA Inputs and Outcomes Report in Ireland

Source: EPA (2012)

4.2 Exploring Organizational Learning Concept in Implementing SEA Follow-Up

Following the previous section, in this section I will elaborate and compare from three main contexts which are SEA and SEA follow-up context, SEA capacity building context, and organizational learning context from four cases. Firstly is SEA and SEA follow-up context. At this part, I will outline on the law and regulation, authority which responsible for environmental issues, organization which responsible for initiating SEA and SEA follow-up, SEA level of effectiveness, SEA follow-up process and SEA follow-up elements. Secondly is SEA capacity building context. In this part, I will focus on four SEA capacity building key drivers, namely, institutional, policy, financial, technical and human drivers. Lastly is organizational learning context. At this part, I will elaborate the organizational learning elements such as learning process, exploitation or exploration learning, organizational learning level, organizational learning process, and relation between cognition and action.

4.2.1 SEA and SEA Follow-Up Context

From the findings, researcher found that in SEA follow-up context; firstly, all the SEA implementations in four countries are compulsory, obligated by the law, in order to achieve sustainable development goals. In two European countries, the Netherlands and Ireland, implementation of SEA follow-up is clearly stated in regulation following EU direction. Conversely, in Indonesia and Canada, SEA follow-up is not mentioned in regulation, the laws are more focus on ex-ante processes.

Secondly, in all countries, authority for environmental issues is under central government specifically at ministerial environmental level. While the organization which has responsible for initiating SEA and SEA follow-up is the proponent authority. The proponent authority organizations from four case studies are the Bappeda, *Rijkswaterstaat*, the NCC, and EPA for Indonesia, the Netherlands, Canada and Ireland cases respectively.

Thirdly, concerning SEA level of effectiveness from four case studies, this study could only investigate the case of Indonesia and the Netherlands. Each has acquaintance and consideration level for the SEA effectiveness in Indonesia and the Netherlands' cases, respectively. The case of Canada and Ireland could not be obtained due to difficulties to access relevant and reliable information.

Fourthly, most of SEA follow-up element which frequently used is monitoring and evaluation. While other elements such as management and communication (Cherp et al., 2011) are rarely to use. Laws and regulations contribute to the infrequently used of these elements as these are not in the requirements.

Lastly, all of SEA follow-up activity is implemented implicitly. This means that the follow-up is carried out in different level or in different tiers of SEA process (Arts et al., 2011). Laws and regulations contribute to the implicit process. This condition also has strong connection with the budgeting system. Actually, this is relevant with what Morrison-Saunders and Arts (2004a) stated, they said in practice it is difficult to implement SEA follow-up, since in strategic level SEA (policy, plan, program-SEA), it is probably not possible to perceive the full extent of potential implications, as it happens within more

complex systems. Therefore, an implicit follow-up, in project level will be more operational and do able. Relatedly, most of barriers in implementing SEA follow-up are dealing with lack of funding, lack of resources, lack of legal requirements and formal provisions. In general, the findings further support the study of Gachechiladze-Bozhesku and Fischer (2012) on benefits of and barriers to SEA follow-up.

4.2.2 SEA Capacity Building Context

From the capacity building context, researcher found that firstly, institutional driver, in general all countries have implemented multi-level governance and future oriented approach type (Jordan et al., 2005) for SEA processes from the beginning to the follow-up process. First, multi-level governance approach, in the Netherlands and Ireland, they get supervision from European Commission advisory. Meanwhile in Indonesia and Canada, the proponents like the Bappeda and NCC have supervision from their central governments. Shortly, all countries have supervision or advisory from the higher level organization, vertically. Theoretically, the benefit of this situation is possibility to provide positive displaced control and devolved localities (Jordan et al., 2005). Next, in Ireland, they recognized on future oriented approach (Jänicke and Jörgens, 2006) where the finding environmental solution process is done by involving and training their member through universities network, i.e. cooperation with United Nations University, Oxford Brookes University, and Global Virtual University. Meanwhile, the Netherlands has NCEA, an expert organization body which could provide governance cooperation by delivering advisory services and building capacity development on environmental assessment for not only the Netherlands government organization but also for other international countries organizations and as well as private organizations.

Secondly, in policy driver, two countries in Europe, the Netherlands and Ireland have its advantage from their comprehensive planning process, forced to have a high standard planning and budgeting system. In Ireland's case study, to have high standard planning system, they cooperate with Local Government Computer Services Board and the River Basin Districts to build EDEN information system which aim is to eliminate the difficulties encountered in the sharing and reporting of environmental data in follow-up process. Meanwhile, in the A15 MaVa the Netherlands, they have regulation on early market involvement to share responsibility between public and market (Lenferink et al., 2013), by implementing DBFM (Design Build Finance and Maintenance). The DBFM scheme ensures that the project will be stable, constructible, bankable, and maintainable due to the collaboration between governments and private in budget and responsibilities.

Thirdly, in financial driver, interestingly, all countries face the same challenges; lack of budget. But, in the meantime Ireland has tried to develop information system solution, the EDEN, which could tackle difficulties in communication and management. While in the Netherlands, as explained previously, they come with solution for monitoring and evaluation through Public Private Partnership integrated contract. This contract is asked by regulation in planning policy. This contract is implemented in project level follows DBFM integrated contract scheme, where monitoring and evaluation are included in maintenance phase

contract. In A15 MaVa, the construction phase will be finished in 2015, while the maintenance phase will start after the construction phase until 2035. During the period, the budget will be shared as contract between public and market.

Fourthly, in technical driver, Ireland has more advantages than others by having EDEN and online training information systems. The system in which can support in exchange information and data among stakeholders, and provide online training in order to solve the human incapacity and awareness problem. Consequently, these systems require a specific resource to maintain and manage its operation.

Lastly, in human driver, in Ireland, EPA has provided training information system through its website in www.epa.ie, and cooperates with United Nations University, Oxford Brookes University, and Global Virtual University, in order to reduce lack on human capacity and awareness. Meanwhile for others, this kind of system has not been implemented yet. In Indonesia knowledge sharing still exclusively occurs in central level government. On the other hand, the lower acts passively in knowledge by taking for granted. In other case studies, like in the Netherlands and Canada the human drivers are more in better way, since they have long tradition on SEA.

4.2.3 Organizational Learning Context

In organizational learning context, firstly, most of the studies indicate that learning process occur in single loop, except for Ireland. Single-loop means that learning form in which the members of the organization respond to changes in the internal and external environments of the organization by detecting errors which they then correct (Argyris and Schön, 1978). In this context, the single-loop learning is occurred in accordance with routine, repetitive work, where the goal is clear and has been determined to the goals set in strategic planning. In all cases, actually, SEA follow-up is applied in implicit way, integrating into PPPPs. The learning process occurred in order to respond on the existing PPPPs' follow-up with new SEA follow-up as the law and regulation said so. There is no a desire to correct the system, they have just followed order, except for Ireland's case. In Indonesia, the Netherlands and Canada, since the follow-up is implemented implicitly, the learning process will follow the existing routine PPPPs follow-up.

In difference, in Ireland the EPA as organization indicates a desire to look back on the mission, goals, and strategy of the organization from its regular basis by developing new information system (EDEN and training information systems). The EDEN is built in order to tackle the existing problems such as difficulties on communication, data inventories, and monitoring management. While, training information system is created in order to response the lack human capacity and awareness. This context is relevant with double loop learning process. Double loop is a learning form which occurs when error is detected and corrected in ways that involve the modification of an organization's underlying norms, policies, and objectives (Argyris and Schön, 1978). In this context, learning occurs when members of the organization test and correct the basic assumptions that support their core mission, policy, and strategy. Thus, it is relevant with Ireland context which concern on long term focus than just for short-term efficiency or only following routine activities.

Moreover, all case studies reflect that SEA is actually the one that improved capacity building and organizational learning, not vice versa. This is because the law and regulation have forced to all organizations to learn, to build their capacity and to implement SEA. This is relevant with what Jha-Thakur et al. (2009) have been researched. In addition, SEA has also strategic position for providing learning not only internally within the environmental agency, but also externally to other organizations which not directly responsible to environment but involve in planning practice. The organizations which involve in SEA processes usually are coming from wider and various sectors not merely from environmental sector. They have to learn in order to be able to cooperate with other stakeholders.

Secondly is exploitation and exploration. As mention in the literature review, a primary factor in system survival and prosperity is maintaining an appropriate balance between exploration and exploitation March (1991). However, this study indicates that in the implementation of SEA follow-up, exploitation learning is more preferable than exploration one. This reason comes because most of the cases tend to use refinement and extension of existing competences, technologies, and paradigms, which is more proximate, and predictable (March, 1991). For instance since there is no explicit regulation and provision in implementing SEA follow-up processes, all cases put monitoring into other existing PPPs. Except for Ireland where they have explored and taking the risk, out from the existing regulation, by experimenting new information system alternative, such as EDEN, to collect information and data.

Thirdly, concerning organizational learning level, all case studies indicate that learning occurs from organization as a whole to group or individual. Learning processes arise through introducing new system, structure, strategy and routine, since the SEA is obligated from the law and regulation. In Indonesia, after dissemination of this compulsory instrument, asked by Law 32/2009, the proponent authority organization learns from central government supervising and technical training and then sharing the knowledge to individual within the organization, then its spread to other related organization which involve with SEA (Danida, 2011). While in Ireland and the Netherlands similar process is also occurred, as SEA is statutory mandated by EU directive 2001/42/EC (EPA, 2012), the same situation occurred in Canada, when SEA is also obligated by the National Capital Act (Gachechiladze, 2009).

Fourthly is about organizational learning processes. All case studies indicate that the process of learning occurs in organization through rules and regulation. This is relevant to what Crossan et al. (1999) explained, they called as institutionalizing learning process. A learning process where learning occurs in organizational level because of mandated by rules and regulations, and individuals or groups within the organization then will be affected by these rules and regulations.

Lastly, does learning change behaviour or outcomes? Or vice versa, does the action provide knowledge or understanding? Researcher found that in the context of SEA all the case studies have received effectively new learning and implemented in their PPPs. However in the context of SEA follow-up, study indicates differently from case to case. Researcher will elaborate from the four elements of SEA follow-up, monitoring, evaluation,

communication and management. In Indonesia, the process of learning exist and effectively only within the monitoring and evaluation elements following the existing formal regulation in forms of other PPPs. While, in the Netherlands, monitoring, evaluation are flexible and tailor-made, the learning process occur when they are integrated into other PPPs. In Canada, the monitoring element is effective when it integrated into other PPPs, but other elements certainly need further research. In Ireland, the monitoring process is effective in other PPPs, but in the future the process learning of all elements could be accommodated by EDEN and training information systems. To illustrate, table 8 draws comparative study from all cases study.

	SEA for North Sulawesi Province, Indonesia	SEA for A15 Project Rotterdam the Netherlands	SEA for NCC CASP planning, Canada	SEA for WFD, Ireland
SEA				
• SEA Law	Law 32/2009 Environmental Protection and Management Act	The Environmental Assessment Modernisation Bill, 1 July 2010	Cabinet Directive 1999	EU 2001/42/EC
• Authority for environmental issues	Ministry of Environment	Ministry of Infrastructure and the Environment	Ministry of Environment, and Canadian Environmental Assessment Agency (CEAA)	Department of Environment, Heritage, and Local Government
• Organization which responsible for initiating SEA	Bappeda as proponent authority	<i>Rijkswaterstaat</i> as proponent	National Capital Commission (NCC) as proponent authority	Environmental Protection Agency (EPA) as proponent authority
• SEA level of effectiveness	Acquaintance	Consideration	n.a	n.a
• Organization which responsible for initiating SEA follow-up	Proponent Authority	Ministry of Infrastructure and the Environment	Proponent Authority	Proponent Authority
• SEA follow-up process	Implicit	Implicit	Implicit	Implicit
• SEA follow-up elements	Monitoring and Evaluation integrate with the other PPPPs follow-up system Other SEA follow-up elements are not found in regulation	Monitoring and Evaluation integrate with the other PPPPs follow-up system Other SEA follow-up elements are not found in regulation	Monitoring integrates with other PPPPs follow-up system Others not found	<ul style="list-style-type: none"> Monitoring integrates with other PPPPs follow-up system In the future, Monitoring, Evaluation, Communication, Management could be accommodated through EDEN system
SEA follow-up capacity Building				
• Institutional	Supervised by central government	Supervised by European Commission	Supervised by CEAA	Supervised by European Commission
• Policy	Follow-up as part of Spatial planning follow-up, There is a lack of provision and regulation	Follow-up integrate with other PPPPs follow-up system	Follow-up as part of planning processes	Follow up integrated into high standard of planning system
• Financial	There is budget problem	PPP through DBFM (Design Build	There is budget problem due to	There is budget problem

		Finance Maintenance) integrated contract	lack of regulation and provision	
• Technical	Just change to decentralized culture, lack of provision and regulation	No crucial technical problem found	There is limited time problem	Lack of resources, start developing EDEN system to solve the problem
• Human	Limited expertise, central dependent	Public awareness is high	Public awareness is high, but limited human resources	Lack human capacity and awareness
Organizational Learning				
• Learning process	Single loop	Single loop	Single Loop	Double Loop
• Exploitation and Exploration	More exploitation than exploration	Using both exploitation and exploration	More exploitation than exploration	Using both exploitation and exploration
• Organization learning level	Organization than shared to group or individual	Organization than shared to group or individual	Organization than shared to group or individual	Organization than shared to group or individual
• Organization learning process	Institutionalizing	Institutionalizing	Institutionalizing	Institutionalizing
• Relation between cognition and action	Effective on monitoring and evaluation element, Other elements not apply	Effective on monitoring and evaluation element, Other elements not apply	Effective on monitoring element Other element not apply	Effective on monitoring element Other element not apply

Table 8 Comparative Study

Source: Author

4.3 Analysis and Implementing for Indonesian Context

Departing from findings and explorations in previous sections, there are some critical points which can be assessed for Indonesian context, particularly for the organization such as Bappeda. This research observes the existing condition, and draws the opportunities to develop organizational learning in order to build organizational capacity. Thus, the organization could implement SEA follow-up.

In general, the four case studies share similar results concerning the organizational learning, except for learning process, exploitation and exploration, and relation between cognition and action. Firstly, learning process occurs in single loop process, except for Ireland. Secondly is on exploitation and exploration. Bappeda uses more exploitation than exploration, similar with Canada's case. This means that in Indonesia, the government tends to use the existing condition to develop its learning process, rather than to experiment a new policy. For instance in North Sulawesi's case, the Bappeda follows the existing spatial planning follow-up. Hence the learning process occurs by modifying the existing spatial planning follow-up. Lastly, in relation between cognition and action, the process of cognition and action seems will occur only in monitoring and evaluation. This is because the follow-up process follows spatial planning regulation. While in spatial planning regulation clearly stated that the follow-up consist of monitoring and evaluation process. It is similar with three other countries, namely, the Netherlands, Canada and Ireland.

On the other hand, other elements are quite similar, such as organizational level. In all cases, learning occurs in organizational level and then share to group or individual. Moreover, in organizational learning process, all countries have similar process which is institutionalizing. This occurs due to the fact that SEA is compulsory by the law and regulation in order to achieve sustainable development goals.

Regarding to above situation, I will draw the existing and the opportunities to develop organizational learning in order to build organizational capacity as illustrated in table 9. In detail, at the existing condition, first, study indicates that Bappeda is using single loop learning. Secondly, exploitation learning has more portion than exploration learning. Thirdly, level of organizational learning indicates that the focus of learning is on organization as a whole and then it will be shared to group or individual within the organization and other external organizations. Fourthly, it shows that organizational learning processes are more institutionalizing by ensuring that rules and procedures are applied. Lastly, relationship between cognition and action, to some extent, learning process is effective, only for the monitoring and evaluation process. .

In the future, in Indonesian context, if the existing conditions still exist, there would be any challenges in implementing SEA follow-up. Firstly, from the single loop learning context, as the purpose of this learning only prevent the routines so as the changes only occur when there is an error, there will be no change in fundamental design, goals or essential activities, it keeps as it is. This single loop learning process have several weaknesses, some researcher argue that single loop could not create more desirable social realities, change fundamental aspect of the organization, and create innovations (Greenwood, 1998, Argyris,

1976, Tagg, 2010). Secondly from the organizational learning where the exploration, individuals and groups, institutionalizing, and communication and management have less attention. These could bring barriers in implementing SEA follow-up, like abundance, and confusion about the need of follow-up (Gachechiladze-Bozhesku and Fischer, 2012). Additionally, this learning process could have impact from the weaknesses of other PPPs follow-up. It has potentially increasing conflict of interest, which could manipulate the use of SEA follow-up.

However, there are some opportunities for Indonesia to deal with those matters. First, an organization like Bappeda, actually, has ability to implement exploration learning process. Yet, there will be huge challenges which may appear in implementation such as the availability of budget and resources. These hindrances, particularly the budget, have a strong relationship with law and regulation. To tackle this matter a political action is certainly needed. Further, the political barrier then becomes hindrance in this situation. Therefore, implementation barrier are huge to apply exploration learning process in Indonesia, although the individual or group in the organization has technical ability.

Secondly, Bappeda has a wide opportunity to focus on individual and group learning. This due to the fact that individual and group learning, indeed play crucial role for learning processes (Argyris and Schön, 1978).

Thirdly, in the same vein with organization level, interpreting and integrating as feed forward learning have opportunity to be implemented for Indonesian context, this provide chance for group (sub-unit of the organization) to build its capacity (Crossan et al., 1999). Next, intuiting could be implemented for the coming years, since this learning process usually need experiences in order to have learning process. This could give opportunity for individual to build its capacity (Crossan et al., 1999).

Lastly, concerning relationship between cognition and action, there is an opportunity to learn effectively on communication and management elements. To sum up, a rigorous effort is needed to develop organizational learning in Indonesia. The Indonesian government must optimize some resources (e.g. human, policy and institutions) along with wider participant to find an effective way for exploring new innovation, involving more individuals, internal and external organization, and focusing on communication and management. Below is the organizational learning framework which is proposed for the context of government organization in Indonesia.

Organizational Learning Elements	SEA Capacity Building Key Drivers in Indonesia
Exploration and Exploitation	<p>Existing: Exploitation from the existing formal regulation</p> <p>Opportunity: Exploration</p>
Organizational learning level	<p>Existing: Organization than shared to individual</p> <p>Opportunity: Individual, group learning</p>

Organizational learning process	<p>Existing: Institutionalize</p> <p>Opportunity: Intuiting, Interpreting, Integrating</p>
Relationship between cognition and action	<p>Existing: Effective on Monitoring and Evaluation</p> <p>Opportunity: Communication and Management</p>

Table 9 Organizational Learning Framework, connection with SEA Capacity Building for Indonesian context

Source: Author

CHAPTER 5: CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

This study sets out to analyse the relevance of organizational learning and SEA capacity building for implementing SEA follow-up. The aim has been achieved through drawing conceptual framework theory of organizational learning in the context of SEA capacity building and SEA follow-up and investigating the practice of SEA follow-up in four different countries. The research concluded that organizational learning is relevant to build capacity in implementing SEA follow-up.

From the study, it reflects that SEA could support and improve for better understanding of organizational learning and capacity building. Actually, in the beginning, this research would like to study whether organizational-learning improves capacity building in implementing SEA follow-up, not the other way around, but practically this appeared to be difficult. This condition is happened because the implementation of SEA is compulsory, enforced by law and regulation. Hence, learning process occurs due to the fact that implementation of SEA is an obligation. Learning process starts from the organization which responsible for SEA and planning process, institutionalized, and then followed by group or individual learning, within or in other external organizations.

Although all cases showed that SEA follow-up is integrated into PPPPs, as a part of SEA processes, the follow-up has also strong connection in stimulating organizational learning and capacity building. This has been shown in all studies which all the proponent authorities are being supervised or cooperated with higher level organization after the PPPPs decisions has been decided to provide better understanding in follow-up processes. For instance in Indonesia, where the Bappeda requires supervision from the central government when Bappeda would like to implement further step of SEA on spatial planning plan.

SEA follow-up is implemented differently in each country. It is because there is difference in the planning scale and in the way in which SEA is conceptualised. Consequently it gives an impact to the development of SEA methodologies and turn to differences on how an organization learned from implementing SEA and its follow-up. The study showed that, mostly learning process occurs in single loop, except for Ireland which tends to do a double loop process. This is due to the practicability which is referring to follow the existing routine PPPPs follow-up, instead of developing in a new different policy. Regulation, budgeting system, limited resources and lack understanding which turn to lack of support from wider stakeholders are the hindrance which the most influential on this learning process. Ireland implements an out of the box information system, such as EDEN and training information system. Two kinds of information systems is built as a response to the lack in human capacity and awareness, this system expectantly could support follow-up process, such as monitoring, evaluation, communication and management. Concerning exploitation and exploration, the Netherlands and Ireland do not have any difficulties to implement both learning process. In the Netherlands, financially, it is supported by integrated

contract system which could support the project budget for the long term. While in Ireland, as mentioned previously, it is because of the ability to implement data and training information system. Meanwhile, for other elements, in general, all countries share the same situation. For instance are organizational learning level is on organization level and then shared to group or individual, and then organization learning process is on institutionalizing process, and for relation between cognition and action is mostly only implement monitoring, and evaluation.

The study shows that implicit SEA follow-up process is used than the explicit process. The follow-up process is integrated into other PPPs. It occurs because the organizations have to follow regulation. However, generally, there is no specific standard for implementing SEA follow-up. Furthermore, from the perspective of SEA capacity building drivers, we can see that, all countries share similar situation, except for the A15 MaVa in Netherlands' case which has integrated contract scheme for the financial driver. While in human driver, most of studies have long tradition of SEA, except for Indonesia which currently knowing about this instrument. Therefore in Indonesia, strong role of central government to supervise the SEA process becomes an important factor.

In the context of Indonesia, learning process occurs in single loop. Learning occurs from organization to group or individual, without change in fundamental design, goals or essential activities. Learning result only prevent routines activities work as usual. To create innovation and change for the organization and institution is difficult. The implementation barriers are huge, such as regulation, budget, limited human resources and importantly, public awareness. This brings challenges in the future, if the learning process and the system exist, it could create conflict of interest, and in the worst case SEA becomes neglected document, furthers the dysfunction of SEA and its follow-up itself.

From above, it reflects that, in the organizational government context, organizational learning is essential for implementing SEA follow-up. However, actually, organizational learning not only could stimulate capacity building in implementing SEA follow-up, but also vice versa; the SEA could also stimulate capacity building and organizational learning. In this study, we can see the role of law and regulation which forced to the organization so as SEA have to be implemented. Therefore, the organization automatically is also forced to build its capacity to implement SEA. Meanwhile, in difference with the SEA itself, the follow-up is applied in in implicit way, through other different PPPs follow-up, and without specific SEA process standard, this is because follow-up is more "governance approach" with "less regulatory" and more on "self-organizing". As a result, this condition also influences the organizational learning processes. Flexible, multi-level governance, from organizational to individual learning, but still following regulation are becoming the characteristic of learning process which found in this study.

Nevertheless, further research is required to investigate follow-up effectiveness, firstly because not all cases could be determined for the level of effectiveness, and secondly, only few elements of follow-up are implemented like monitoring and evaluation. Moreover, due to the time constraint and difficulties to dig more information and data through interview, some important aspect such as performance and conformance in SEA level of effectiveness could

not be illustrated. Whereas, I believe this aspect could reveal more information on the relationship between organizational learning and SEA through existing level of SEA implementation from each case studies.

Direct involvement and participation of researcher is certainly needed to see on how actually SEA follow-up, SEA capacity building and organizational learning processes are applied. Particularly on follow-up, communication and management element need an intent research to see in practice what actually applied and difficulties in implementing these two elements are. Meanwhile, on organizational learning, learning process in level of individual, and group are also need to have more attention to investigate. Given the limitation of the study, I suggest that further research is required to identify deeper on actual process.

5.2 Recommendations

Hence, to respond to those conditions, I recommend, firstly, other SEA follow-up elements besides monitoring and evaluation should be applied in SEA follow-up processes. It is because the use of other elements likes managing and communicating, theoretically, could provide advantages to achieve follow-up criteria such as ensuring that SEA has reach its objectives. Secondly, in organizational learning process, single loop learning process is applied commonly in most countries including Indonesia. To be able to innovate, and implement double loop learning, a big different change is required. To do so, rigorous efforts along with optimizing any resources, like human, policy, institutions includes regulation and networks are important in order to upgrade to double or deuterio learning. Specifically for Indonesian context, this research proposes an organizational learning framework which focusing on the existing and opportunity to build SEA capacity in implementing SEA follow-up.

Finally, there is still a long way before SEA follow-up could support sustainable society and ensure that SEA is on the right track. This research takes a step by studying on how the organizational learning connect with capacity building and then could facilitate in implementing SEA follow-up. This research revealed that not all elements in SEA follow-up are being used. Therefore, further research may need to look deeply, on how the relevancy of organizational learning with other elements of SEA follow-up, such as management and communication.

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Appendix A: Overview SEA in the Netherlands and in Indonesia

The tables below provide an overview of SEA is regulated in the Netherlands and in Indonesia, stakeholders which usually involves, and the sources of finances.

A.1 SEA in the Netherlands

	The Netherlands
Law and Regulations Hierarchy	<pre> graph TD EU[EU 2001/42/EC] --> EIA[EIA] EU --> NCA[Nature Conservation Act] EIA --> EIA_Dir[EIA Directive] NCA --> HD[Habitat Directive] NCA --> WFD[Water Framework Directive] </pre>
Law and Regulations	<p>EU Directive 2001/42/EC: SEA is obligatory for statutory or compulsory administrative plans:</p> <ul style="list-style-type: none"> • that form the framework for future decisions subject to EIA or, • that require an appropriate assessment on the basis of the Dutch Nature Conservation Act • SEA follow up consist of monitoring and evaluation elements, the implementation is delegated to the central state. <p>Environmental Impact Assessment Directive (85/337/EEC, amended by 97/11/EC)</p> <p>The Habitats Directive (92/43/EEC on the conservation of natural habitats and of wild fauna and flora)</p> <p>The Water Framework Directive (2000/60/EC)</p>
Stakeholder	<ul style="list-style-type: none"> • EU • National Government: Ministries → Policies • NCEA (optional for advisory) • Local Government: Regional (Plans) , and sub-regional (Programs)
Source of	<ul style="list-style-type: none"> • National budget

Finance	<ul style="list-style-type: none"> Local budget Project/private budget
Remarks	<p>The Environmental Assessment Modernization Law, 1 July 2010. The Dutch Environmental Assessment legislation has recently been revised.</p> <ul style="list-style-type: none"> A simplified procedure for projects (EIA) with limited environmental repercussions. A full-fledged procedure for complex projects (EIA), and for plans, programs and policies (SEA) <p>Note that ‘simplified’ does not necessarily stand for ‘easy’, as minimum requirements are in place. The type of permitting procedure determines whether the simplified or the full-fledged procedure applies to a project.</p>

A.2 SEA in Indonesia

	Indonesia
Law and Regulations Hierarchy	<pre> graph TD Law[Law 32/2009] --> GR[In Process] GR --> MOHA[MOHA Regulation] GR --> MOE[MOE Regulation] GR --> MPW[MPW In Process] MOHA --> LDP[Prov.,Mun/Reg Development Plan] MPW --> LSP[Prov.,Mun/Reg Spatial Plan In Process] </pre>
Law and Regulations	<ol style="list-style-type: none"> Law 32/2009 Environmental Protection and Management: <ul style="list-style-type: none"> SEA is compulsory for national, provincial and local government in making development plan, spatial plan, and/or PPP which has environmental risk potency, (> 5 years to 20 years coverage). SEA procedure follows EIA based SEA Further detail of SEA procedure will be regulated in Government Regulation Government Regulation: In process Ministry of Home Affairs regulation 67/2012, SEA guidance in formulating local development plan: <ul style="list-style-type: none"> Local Planning organization responsible for the formulating the SEA for local development plan SEA procedure follows EIA based SEA SEA follow-up consist of Monitoring, Evaluation, Management (coordination, supervision, technical guidance, facilitation and consultation) and Control elements, the implementation is delegated to the upper organization, like province level and/or ministry of home affairs.

	<p style="text-align: center;">Development Plan</p> <p>Development Plan is a plan for using and allocating existing resources in order to improve social welfare in a region and within a specified period. To support this plan, it requires development and spatial data information. And specifically for development data information, it will consist of regional administration; organization and management of local government; regional heads, local parliament, region, and regional civil servants; local finance; resource potential of the area; local regulations; population; regional baseline information; and additional data information related to the regional administration.</p> <p>4. Ministry of Environment regulation 9/2011, SEA general guidance:</p> <ul style="list-style-type: none"> • Procedure on integrating SEA to PPP • SEA Procedure • Technique and method to support SEA • SEA quality control
Stakeholder	<ul style="list-style-type: none"> • Government: <ul style="list-style-type: none"> ○ Central Government: Ministries ○ Local government : <ul style="list-style-type: none"> ▪ Provinces, Municipalities/Regencies Heads ▪ Local planning board ▪ Environmental office • Private • Society
Source of Finance	<p>SEA for local development plan:</p> <ul style="list-style-type: none"> • National budget • Local budget • Others

Appendix B: Overview of interviewees in the various case studies

The list below provides an overview of all those interviewed for the purpose of this study, a description of their positions at the time, and the organization they were working for when the interview was conducted.

B.1 Indonesia

Sondang L. Gaol	Ministry of Home Affairs official – Section head of environmental policy
Herman Kusoy	Bappeda, North Sulawesi Province Development Planning Board official – Division head of spatial planning
Tinny S. Tawaang	Environmental Agency Board official – Secretary Board
Amirudin	Danida official

B.2 The Netherlands

Prof. Jos Arts	Academician, University of Groningen, the Netherlands
The NCEA	
Rob Verheem	Director – NCEA
Bobbi Schijf	Technical Secretary International Cooperation – NCEA
Sibout Nooteboom	Technical Secretary International Cooperation – NCEA
Marja van Eck	Technical Secretary International Cooperation – NCEA
Ministry of Infrastructure and the Environment	
Danny Herschel	Medewerker Landelijke Informatielijn - Rijkswaterstaat

B.3 Canada

Prof. Thomas Fischer	Academician, University of Liverpool, the UK
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B.4 Ireland

Dr. Bobbi Schijf	Practitioner, the NCEA, the Netherlands
Ann Rochford	Programme Officer, Environmental Protection Agency, Ireland

Appendix C: Transcript of interview in the various case studies

Interview A – Early insight in the various case studies

C.1 The Netherlands

Participants:	
	1. Prof. Dr. Jos Arts – Academician and Expert
	2. Dr. Femke Niekerk – Supervisor
	3. Yudhi Timor Bimo Prakoso - Student
Place:	Mercator, Zernike Campus, RUG Groningen
Time:	Friday, 9 May 2014
Questions:	
	<ol style="list-style-type: none"> 1. Are there any SEA follow-up examples in the Dutch case? 2. If any, how does the organization, who responsible, preparing them self in following the mechanism procedure for doing SEA follow-up? 3. What are the problems in doing SEA follow-up? 4. How they manage for the problems in doing SEA follow-up? 5. How the stakeholder involve in SEA follow-up?
Answers:	
	<ol style="list-style-type: none"> 1. Yes, there are some SEA follow-up samples, such as: <ol style="list-style-type: none"> a. Case in EIA Follow-up book, Waste Management Plan of the Province of Limburg in North Holland, by Jos Arts (Arts, 1998) b. Case in chapter 10 of Handbook of EIA and SEA follow-up by Maria Partidario, Thomas Fischer and Jos Art (Partidario and Fischer, 2004) c. Road project at Rotterdam by Rijkswaterstaat in A15 project (?) 2. Base on regulation, SEA follow-up should be done after the decision of planning, the element of follow-up are monitoring and evaluation. But in practice, SEA follow-up is done in implicit approach by succeeding EIA follow-up way. 3. Problems in doing SEA follow-up is mainly because the rejection from the stakeholder because it will consume more budget, energy and efforts, therefore it is difficult to find an explicit follow-up since it is not easy to implement. 4. Managing the problems in doing SEA follow-up is by being pragmatic, depending on the context of planning, and usually succeeding EIA follow-up or in implicit way. 5. Stakeholder involvement in SEA follow-up, refer to van Doren et al. (2012) where the SEA in the Netherlands is on consideration-performance level, is also on the same stage. And therefore, the level of involvement of SEA follow-up based on Arnstein (1969) is on the non-participation level.
Information:	
	<p>Further Contact Persons:</p> <ul style="list-style-type: none"> • Sibout Noteboom

- Bobbi Schijf
- Rob Verheem
- Marie Hanusch
- Maia Gachechiladze - Bozhesku
- Martha Buitenkamp
- Marja Van Eck

Further Literatures:

- EIA Follow-up, on the role of Ex Post Evaluation in Environmental Impact Assessment, Arts (1998)
- Assessing Impact, Handbook of EIA and SEA follow-up, Morrison-Saunders and Arts (2004)
- Planning in Tiers? Tiering as a way of linking SEA and EIA, Arts et al. (2011)

Conclusion:

In practice, SEA follow-up in the Netherlands has not done in clear way. SEA follow-up is rather a further step of scoping from project stage of EIA, as an ongoing monitoring and evaluation process, or so called as implicit follow-up or tacit follow-up than an explicit follow-up. The resistance of doing follow-up is mainly because of the budget constraint, effort, and energy. And the level of performance of SEA follow-up is believed in a low level, refer to van Doren et al. (2012), it will be in consideration-performance level with low level of involvement which is on the non-participation level (Arnstein, 1969).

Remarks:

1. In general, SEA follow-up is not well explicit implemented in the Netherlands, to support this statement the FGD with experts will be needed, however to arrange a FGD will need an assistance and further support.
2. Some empirical case has already been done in Ireland, in attached, which conducted by Environmental Protection Agency of Ireland Government, however I have some constraints to arrange research in Ireland.

Further References:

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ARTS, J., TOMLINSON, P. & VOOGD, H. 2011. Planning in tiers? Tiering as a way of linking SEA and EIA. *Handbook of strategic environmental assessment*.—London, 415-437.

MORRISON-SAUNDERS, A. & ARTS, J. 2004. Assessing impact: handbook of EIA and SEA follow-up, Earthscan.

PARTIDARIO, M. R. & FISCHER, T. B. 2004. Follow-up in current SEA understanding. *Assessing Impact: Handbook of EIA and SEA Follow-up*, 224-247.

VAN DOREN, D., DRIESSEN, P., SCHIJF, B. & RUNHAAR, H. 2012. Evaluating the substantive effectiveness of SEA: Towards a better understanding. Environmental impact assessment review.

C.2 Canada

Participants:	
	Prof. Thomas Fischer, Academician and Expert
	Yudhi Timor Bimo Prakoso - Student
Place:	Email : fischer@liverpool.ac.uk
Time:	8 July 2014
<p>First Question:</p> <p>Dear Prof. Thomas B. Fischer,</p> <p>My name is Yudhi, currently I am a master student at Environmental and Infrastructure Planning at University of Groningen. Recently, I am researching on Strategic Environmental Assessment (SEA) follow-up. Do you have any information about SEA follow-up in UK or other countries? If you know and have information I also put a questioner on follow-up which you can fill in. Thank you for your kind help. Best Regards.</p> <p>Regards,</p> <p>Yudhi Timor Bimo Prakoso</p> <p>Questioner:</p> <ol style="list-style-type: none"> 1. Has SEA follow-up been implemented in your country? If not, why? And you can stop by answering this question only, If yes, how does the implementation mechanism? And please also indicate the name of organization and the Policy, Plan, or Program which implements SEA follow-up 2. If any, how and to what extent does the organization which arranges SEA follow-up, preparing them self to obtain knowledge in implementing SEA follow-up? 3. Are there any hindrances for the organization to obtain knowledge in doing SEA follow-up? What kind of hindrances? 4. And how the organization has to deal with the hindrances in doing SEA follow-up? 5. And what kind of stakeholder which involve in SEA follow-up? And how they related with the organization? 6. Has the SEA follow-up fulfilled these following criteria: (Yes/No) <ul style="list-style-type: none"> • SEA follow-up has undertaken throughout the life cycle of the strategic initiative (monitoring, evaluation, and management). • SEA follow-up program has elaborated and endorsed during the SEA process and before the strategic initiative is launched. • SEA follow-up has included monitoring, evaluation, management and communication components. • SEA follow-up has extended beyond mere monitoring and managing impacts of the strategic initiative and ensuring its conformance to the original plan. It also has 	

verified goal-achievement, identified unforeseen circumstances and periodically validated the original assumptions of strategic initiative.

- SEA follow-up has integrated with implementation (in a broader sense) of the strategic initiative and tailored to specifics of such implementation.
- Monitoring, evaluation and management of environmental implications of a strategic initiative may start during its implementation, even in the absence of SEA at an earlier stage.

If not, why?

7. In what level does SEA occur in this Policy, Plan, or Program?

- Acquaintance
- Consideration
- Consent
- Formal conformity
- Behavioral conformity
- Final conformity

First Answer:

Thank you for your email. Interesting questionnaire. – However, impossible to complete... There are all kinds of nuances in current practices and straightforward answers are not possible. – It would take me hours to complete this if I wanted to do it justice. Also, a lot of the terms you use are subject to different interpretations. So in order for this to work you'll need to prepare something more structured and tailor-made.

Second Question:

Thank you for your fast response and for your inputs, I somewhat agree with your opinion about questionnaire which I have corrected, in attached. Generally, I would like to know deeper in how does the organization learn in implementing SEA follow-up from various countries.

Second Answers:

You talk about a model for organisational learning. Are you aware of the attached papers in this context? – Also, I attach a paper on SEA follow up from 2012.

I'll also get you in touch with an MSc student of mine from Vietnam who's just started looking at follow-up in the UK. – Maybe you can co-ordinate your activities? – I'll cc Jos Arts in, just to make sure this is OK.

Best

Thomas Fischer

Further Literatures:

FISCHER, T. B., KIDD, S., JHA-THAKUR, U., GAZZOLA, P. & PEEL, D. 2009. Learning through EC directive based SEA in spatial planning? Evidence from the Brunswick Region in Germany. Environmental impact assessment review, 29, 421-428.

GACHECHILADZE-BOZHESKU, M. & FISCHER, T. 2012. Benefits of and barriers to SEA follow-up—Theory and practice. Environmental impact assessment review, 34, 22-30.

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- GAZZOLA, P., JHA-THAKUR, U., KIDD, S., PEEL, D. & FISCHER, T. 2011. Enhancing environmental appraisal effectiveness: Towards an understanding of internal context conditions in organisational learning. *Planning theory & practice*, 12, 183-204
- JHA-THAKUR, U., GAZZOLA, P., PEEL, D., FISCHER, T. B. & KIDD, S. 2009. Effectiveness of strategic environmental assessment-the significance of learning. *Impact Assessment and Project Appraisal*, 27, 133-144.
- JHA-THAKUR, U. F., THOMAS; GAZZOLA, PAOLA; KIDD, SUE; PEEL, DEBORAH; 2010. Exploring relevant skills and knowledge areas for Strategic Environmental Assessment. IEMA, The Environmentalist.

C.3 Ireland

Participants:	
	Dr. Bobbi Schijf – Practitioner, NCEA
	Yudhi Timor Bimo Prakoso - Student
Place:	Email : bschijf@eia.nl
Time:	26-31 May 2013
Questions:	<p>Dear Mrs. Schijf,</p> <p>How are you, finally, I meet you again through this email. I am Yudhi, Ministry of Home Affairs (MOHA) Republic of Indonesia's staff, just to remind you that we had met in Utrecht in 2010 when you delivered SEA for me and my other colleagues from Indonesia in NCEA office, in attachment I enclose you the photo which might remind you to the meeting. And not so long ago, I heard that you were visiting to Jakarta which discussed about the SEA progress in Indonesia and you were invited by the Ministry of Environment Republic of Indonesia (KLH) and Danida in the beginning of this year, unfortunately I cannot come but I have received all the materials and photo of you with my friends.</p> <p>Mrs. Schijf, as stated in my early discussion with NCEA, as you can see in the email below, currently I am also a double master degree student at ITB Bandung in Indonesia and RUG Groningen for environment and infrastructure planning and I am interesting with SEA follow-up as my thesis research. Accordingly, I am looking forward to know about SEA follow-up in developed and developing countries, specifically in Netherlands and in Indonesia. Therefore, I asked Mr. Harkema, whether there is any information about legal-formal, practice and lesson learn on SEA follow-up in Netherlands or not.</p> <p>In Indonesia, as you probably know that SEA development is quite impressive. Recently, we have already had SEA regulation for local development plan lead by MOHA, even the government regulation for SEA is unfinished yet. However, my biggest concern is on the following step after the SEA process has been done. For local development plan in Indonesia, SEA has been integrated into the local development plan regulation, hence the SEA follow up will be taken into the local development plan evaluation.</p> <p>How about in Netherlands?should you have any information regarding to the SEA follow-up it would be great for me. So, as I mentioned previously, I am looking forward to know the legal-formal, the implementation, the lesson learn (or the gap between the knowledge and implementation, or the gap between the regulation and the implementation) of SEA follow-up in Netherlands, but if you have any information on other developed countries, I would be very appreciated.</p> <p>Thank you and Best Regards</p>
Answers:	<p>Dear Yudhi,</p> <p>[Thanks for your email and for reminding me of our meeting back in 2010. In the picture you sent we can just see Joan Looijen peeking out from behind! I was recently in contact with her about a new SEA training activity for an Indonesian delegation focused on coastal management. The co-operation between our two countries on SEA is still very active.</p>

I completely agree with your description of the SEA developments in Indonesia: these are indeed impressive. Your research focus is certainly worthy of your attention. Last week I was at the IAIA conference, which was held in Calgary this year. Follow-up was an important theme there, I took in a lot of discussion on, for example, adaptive management post decision-making. You may want to check out the IAIA website, as the papers from the conference get uploaded.]

On Dutch practice concerning SEA follow-up, there is only one publication I can think of for you. In our 2012 Views and Experiences publication we report on an evaluation of a series of SEAs for water plans. This is an evaluation of a series of SEAs (not so much to guide plan implementation though) See the article on SEA for water plans here: http://www.commissiemer.nl/docs/mer/diversen/views_experiences_2012.pdf. Apart from that, I can concur with the answers that Sjoerd has provided: the management of environmental effects after a plan/programme is adopted, is generally integrated into general plan and environmental quality monitoring withing a jurisdiction. However, on a personal note I would add: we do not give this enough attention in practice, and the formal evaluation requirements are not often implemented. Internationally, there may be more interesting publications/countries to check out. One author to look out for on this topic is Jos Arts (see for example: Partidario, M.R. & Arts, J. 2005. Exploring the Concept of Strategic Environmental Assessment Follow-Up. *Impact Assessment & Project Appraisal* 23(3): 246-257.) Maria Partidario also addresses this topic quite explicitly in her latest SEA guidance. Sometimes follow up is addressed in country SEA evaluations, such as this one on Ireland: <http://www.epa.ie/pubs/advice/ea/SEA%20EFFECTIVENESS%20REVIEW%20MAIN%20REPORT%202012.pdf>

Hope that helps!

All the best,
Bobbi Schijf
Technical Secretary International Cooperation

Further Literatures:

PARTIDÁRIO, M. R. & ARTS, J. 2005. Exploring the concept of strategic environmental assessment follow-up. *Impact Assessment and Project Appraisal*, 23, 246-257.
EPA 2012. Review of Effectiveness of SEA in Ireland - Key Findings and Recommendations. Wexford.

Interview B – Answering the questioner in the various case studies

C.4 Indonesia

Participants:	
	Sondang L. Gaol - MOHA
	Yudhi Timor Bimo Prakoso - Student
Place:	Email : sondlumban@gmail.com
Time:	12 July 2014
Questions:	<p><i>Selamat sore bu Sondang,</i></p> <p><i>Apa kabar bu? bu maaf mengganggu mau tanya2 tentang KLHS SULUT, monitoring dan evaluasinya bagaimana tindak lanjutnya?</i></p> <p>Dear Mrs. Sondang,</p> <p>How are you, I have a question, do you have any information about the latest condition of North Sulawesi Province SEA activities? And on how the follow-up, the monitoring and evaluation are being implemented?</p>
Answers:	<p><i>Selamat sore Mas Yudhi, apakabar?</i></p> <p><i>Terkait KLHS sulut, dulu pertama sekali dikatakan bahwa rekomendasi yg ada sudah diterima dan diperhatikan, kemudian begitu terjadi banjir bandang yg melanda kota manado kita lakukan monev pada waktu kita ingin memverifikasi hsl klhs kebetulan klu gak salah dihasil Klhs tersebut jugs sdh meninggung2 soal antisipasi banjir (air) tapi kebetulan yg menangani KLHS sedang tidak ada ditempat, karena pada waktu itu klhs Tata Ruang tapi yg menangani tugas keluar sulut, salah satunya yg menangani adalah dinas Tata Ruang pak Herman, memang posisi beliau sdh mutasi ke bappeda tapi kebetulan beliau juga pas dinas, kami diterima oleh seorang pejabat yg kebetulan juga baru saja mutasi jadi tidak bisa mendapatkan informasi yg lengkap. Namun, apabila merujuk kepada rancangan permen PU tentang KLHS RTRW, sebetulnya monitoring dan evaluasi KLHS dilaksanakan mengikuti RTRW dimana akan dilakukan evaluasi setiap lima tahun. Hal ini sudah jadi tugas Bappeda bagian tata ruang dibawah arahan dari BKPRN.</i></p> <p>Regarding to SEA in North Sulawesi Province, in general, all recommendation have been accepted and appreciated. Until there was flood which inundated Manado, we visited there and clarified about the SEA recent activities particularly related with the flood. But, we couldn't meet with the person in charge, Pak Herman. At the end we only met with another staff who knows nothing about the SEA. However, actually to implement follow-up like monitoring and evaluation, the province could apply spatial planning follow-up which asked [by the law] to be reviewed for every 5 years, and this becomes the duties of Bappeda North Sulawesi Province, under central government supervision.</p>

Participants:	
	Herman Kusoy - Bappeda
	Yudhi Timor Bimo Prakoso - Student
Place:	Email : hkoessoy@yahoo.com
Time:	7 July 2014
Questions:	<p><i>Selamat sore Pak Herman Kusoy,</i></p> <p><i>Apa kabar pak? pak maaf mengganggu mau tanya2 tentang KLHS SULUT, monitoring dan evaluasinya bagaimana tindak lanjutnya?</i></p> <p>Dear Mr. Herman Kusoy,</p> <p>How are you, I have a question, do you have any information about the latest condition of North Sulawesi Province SEA activities? And on how the follow-up, the monitoring and evaluation are being implemented?</p>
Answers:	<p><i>Pro : p. Yudhi P.</i></p> <p><i>Kabar baik pak, KLHS saat ini masih berjalan dengan baik. Saat ini kami masih menunggu permen PU tentang KLHS serta PP KLHS untuk tindak lanjutnya. Selama kedua legal formal ini belum keluar kami mengikuti aturan yg berlkau, yaitu aturan tentang tata ruang utk KLHS RTRW. Adapun pelaksanaan KLHS seperti yang bapak ketahui bahwa kami merujuk pada UU Lingkungan dan permendagri. Selama belum ada aturan untuk mengatur provinsi..., kami tidak mau keluar dari jalur, kami perlu perlindungan, bimbingan dan arahan dari pusat mengenai pelaksanaan KLHS selanjutnya.</i></p> <p>Today we are still waiting for Government Regulation and Ministry of Public Works Regulation on SEA to implement the follow-up. In the meantime we follow spatial plan regulation for the SEA, although there are Environmental Law and Ministry of Home Affairs Regulation. It is a risk for province to implement SEA for spatial planning, since there is no [clear] regulation [yet] to guide the province, therefore we need central government to protect [supervise] us</p>

Participants:	
	Tinny S. Tawaang – Environmental Agency Board
	Yudhi Timor Bimo Prakoso - Student
Place:	Email : tinnyst@yahoo.com
Time:	7 July 2014
Questions:	

Selamat sore bu Tinny,

Apa kabar bu? bu maaf mengganggu mau tanya2 tentang KLHS SULUT, monitoring dan evaluasinya bagaimana tindak lanjutnya?

Dear Mrs. Tinny,

How are you, I have a question, do you have any information about the latest condition of North Sulawesi Province SEA activities? And on how the follow-up, the monitoring and evaluation are being implemented?

Answers:

Sore juga pk Yudhi, meskipun RTRW baru saja disahkan, rekomendasi KLHS tetap bisa dilaksanakn. Krn rekomendasi-rekomendasi yg dulu disusun sudah mempertimbangkan kepentingan jangka panjang. Sementara itu pak, sesuai evaluasi prov, dari 15 Kab / kota yg sudah memiliki KLHS RTRW Hampir semua kab / kota, evaluasi bahwa penyusunan tersebut masih ada yg tidak sesuai mekanisme, trus yg menangani penyusunan ada yg ditangani BLH n. Ada yg Bappeda. ut KLHS RPJMD blum ada yg menyusun, saran kalau bisak ada penegasan lagi dari Kemendagri, ut penyusunan KLHS lainnya yah,,, maaf pk sy tidak di di bid, yg menangani KLHS, sudah sekretaris BLH, tapi nnt sy bisak minta info k teman2 yg menanganinya, Tkasih

Even there is a delay on spatial planning plan; the recommendations of SEA still have opportunity to be implemented. Since the recommendations are focusing on the long-term objectives rather than short term. In the meantime, we had supervised SEA for 15 regencies/municipalities. Almost all SEA arrangement have weaknesses, because there is no clear mechanism on SEA, and the Environmental Agency Board is responsible for the SEA for spatial plan, while the Bappeda is responsible for the SEA for development plan. I suggest that central government, particularly MOHA, could provide supervision for SEA in other regencies/municipalities.

Participants:	
	Amirudin - DANIDA
	Yudhi Timor Bimo Prakoso - Student
Place:	Email : addodgbaddo@yahoo.com
Time:	7 July 2014
Questions:	
Selamat sore Mas Ado	
Apa kabar mas? Mas, maaf mengganggu mau tanya2 tentang KLHS SULUT, monitoring dan evaluasinya bagaimana tindak lanjutnya?	
Dear Mr. Ado,	
How are you, I have a question, do you have any information about the latest condition of	

North Sulawesi Province SEA activities? And on how the follow-up, the monitoring and evaluation are being implemented?

Answers:

Baik Mas, apa kabar?

Monev terakhir thn lalu, sempat ketemupak herman koessoy, kendalanya adalah RTRWnya hingga saat monev blm di setujui di Kemenhut, terkait pengajuan pelepasan lahan berdasarkan kondisi existing. Nanti saya kirim ya laporan dari danida

The last monev was last year and I met with Mr. Herman Kusoy. At that time there was still problem with the Ministry of Forestry on spatial planning, related with the existing area of protection forest. By the way, I will send you the report from DANIDA

C.5 The Netherlands

Participants:	
	1. Rob Verheem – Director
	2. Bobbi Schijf – Technical Secretary International Cooperation – NCEA
	3. Sibout Nooteboom – Technical Secretary International Cooperation – NCEA
	4. Marja van Eck – Technical Secretary International Cooperation – NCEA
	5. Yudhi Timor Bimo Prakoso - Student
Place:	Email : Bschijf@eia.nl
Time:	5 - 15 July 2014
First Question:	<p>1. Has SEA follow-up been implemented in your country? If not, why? And you can stop by answering this question only, If yes, how does the implementation mechanism? And please also indicate the name of organization and the Policy, Plan, or Program which implements SEA follow-up</p> <p>2. If any, how and to what extent does the organization which arranges SEA follow-up, preparing them self to obtain knowledge in implementing SEA follow-up?</p> <p>3. Are there any hindrances for the organization to obtain knowledge in doing SEA follow-up? What kind of hindrances?</p> <p>4. And how the organization has to deal with the hindrances in doing SEA follow-up?</p> <p>5. And what kind of stakeholder which involve in SEA follow-up? And how they related with the organization?</p> <p>6. Has the SEA follow-up fulfilled these following criteria: (Yes/No)</p> <ul style="list-style-type: none"> • SEA follow-up has undertaken throughout the life cycle of the strategic initiative (monitoring, evaluation, and management). • SEA follow-up program has elaborated and endorsed during the SEA process and before the strategic initiative is launched. • SEA follow-up has included monitoring, evaluation, management and communication components. • SEA follow-up has extended beyond mere monitoring and managing impacts of the strategic initiative and ensuring its conformance to the original plan. It also has verified goal-achievement, identified unforeseen circumstances and periodically validated the original assumptions of strategic initiative. • SEA follow-up has integrated with implementation (in a broader sense) of the strategic initiative and tailored to specifics of such implementation. • Monitoring, evaluation and management of environmental implications of a strategic initiative may start during its implementation, even in the absence of SEA at an earlier stage.

If not, why?

7. In what level does SEA occur in this Policy, Plan, or Program?
- Acquaintance
 - Consideration
 - Consent
 - Formal conformity
 - Behavioral conformity
 - Final conformity

First Answer:

Dear Yudhi,

I remember our earlier exchange on organizational learning late last year. Good to see that your research has moved forward. I will be co-ordinating our Commission response to the questions you have posed. Please note that your questionnaire will not be filled in separately by each of the four people that you have requested provide input, that would take too much time from our side. Instead I will be organizing one set of answers, most likely provided by 1-2 colleagues that work in the Dutch context.

Before moving forward, however, we will need some clarifications on your questions, and we need to set out some disclaimers:

· Please note that our organization is not itself “the organization who directly responsible in implementing SEA follow-up”. That means we have a limited insight into the SEA follow-up that takes place in Dutch practice. For questions 1 and 2 and 4-7 we will only be able to give a partial answer, based on those follow-up cases that we know about.

· In Dutch practice, follow-up will differ from case-to-case. Questions 8 and 9 seem to be intended to categorise the follow-up on SEA, in specific individual SEA/plan cases. We will not be able to answer those questions for Dutch practice in general, and I expect we do not have enough information to answer those questions for those follow-up examples that we know about. We may have to leave those questions open.

· Question 3 is asking after legislation. I assume you mean the Dutch legislation on SEA here?

We would appreciate it if you could respond to the above.

By the way, you are welcome to visit us here at the commission if you prefer. We can work through your questions face-to-face.

Regards,

Bobbi Schijf

Second Question - Clarification:

Dear Mrs. Bobbi Schijf,

Thank you for your kind support, First of all I would like to apologize for the unclear questionnaire, by not mentioning that the focus of my research which is on SEA for A15 project the Rotterdam Maasvlakte – Vaanplein, how the organization which responsible to this project is implementing SEA follow-up. The due date and my limitation to understand how the A15 project runs, and on other hand I also would like to know in general how the influence of the central government become the reason for this questionnaire weaknesses. Regarding to your question I would like to clarify, first, the first question is actually would like to know from NCEA information, how many and what kind of SEA follow-up which has been implemented in Dutch government officially, this question intends to know the tradition of SEA implementation in Dutch government. Secondly, the second question would like to know whether the SEA follow-up is implemented following government regulation or it is implemented in more flexible way, if it follows the government regulation, which regulation is followed and how, if it is in more flexible way providing some example could also be helpful, through this question, I also would like to know whether the organization (in general) implement the SEA in more command and control-technical, or in a communicative and flexible ways, of course this would be nuance and relative, but perhaps like the implementation of SEA for A15 project in Rotterdam could become an example in how it works since it has a strong connection from strategic to project level. Thirdly, related with the second question, the fourth question actually would like to know in practice the reason why SEA follow-up is very difficult to implement, this relevant with the research of Arts (1998), Cherp et al. (2011), and Gachechiladze-Bozhesku and Fischer (2012) in their research about the difficulties to implement SEA follow-up. And lastly, the seventh question would like to know, the positioning of the organization to other stakeholders which could influence its decisions. While for questions 8 and 9, it is right that the questions is intended for specific SEA plan, once again this is my mistake not to put A15 project of Rotterdam as my project research in the questionnaire. Thank you for your kind support and help, best regards

Yudhi

Second Answers:

Regarding SEA follow-up please note that our Commission is not in charge of follow-up. You can find more information on our role here:

<http://www.commissierner.nl/english/advice/adviseoneiaandsea1>.

This is important concerning your question on the A15 case. Please note that for this case we do not have the information you have asked for. You will need to get in touch with the competent authority for that case if you want to know more about the follow-up. The competent authority was the Ministry for Infrastructure and Water (that was the title at the time, it is now the Ministry for Infrastructure and Environment). Professor Jos Arts should be able to help you with that.

Please find below a first set of answers to the questions you have posed:

SEA in the Netherlands is not a stand-alone procedure, with a separate series of follow-up activities. The SEA is integrated into decision-making on the plan, and any follow-up that takes place is attached to this decision-making, and is the responsibility of the competent authority for the plan. Take for example a spatial plan. The SEA should support the plan decision and the competent authority will decide which subjects from the SEA (for

example knowledge gaps, monitoring of environmental parameters during plan implementation, etc.) will have a follow up. This follow-up will mostly be undertaken by the competent authority itself. There is no central place or database in the Netherlands which keeps track of this follow up, so unfortunately we do not have numbers for your research.

You also asked whether the SEA follow-up is implemented following government regulation or it is implemented in more flexible way, and if it follows the government regulation, which regulation is followed and how, and if it is more flexible to provide some example.

The requirement in the SEA legislation are quite straight forward. You can view an English version of these requirements here, under the heading “monitoring” (scroll down to about 3/4ths of the page): <http://www.eia.nl/en/countries/eu/netherlands/sea>

Concerning practice, we can answer that follow-up is flexible and tailor-made, the competent authority decides how to follow-up. For example if in a SEA an important knowledge gap is identified – think of negative impacts on bird colonies in a SEA for onshore wind near protected nature areas – the competent authority decides what they will do with this finding and how they will give follow up. For example:

- *a monitoring program;
- *an obligation to do further research;
- *an announcement that in future planning there will be extra attention towards this problem;

If there are multiple SEA’s (tiering) then in the first SEA and plan the general area’s for windfarms can be selected. In a second SEA and plan the specific locations of turbines and the griddesign of the farms can be further developed. The second tier SEA can than further assess topics that were identified in the first SEA. The same might happen if a plan and SEA are followed by implementation projects which require EIA. That certain environmental topics can be further addressed at the “next level down”. In this way follow-up is given to the SEA “higher up” in the planning tiers.

The NCEA usually does not have a role in SEA follow up. There is an exception. If the NCEA is asked to advice on SEAs or EIAs that come after a “higher level” SEA (in other words an SEA or EIA that is part of a series of tiered assessments and decisions) then our Commission will check important findings form the first SEA and their follow up. If these have not been sufficiently addressed - in the eyes of the NCEA experts – then we will ask attention for SEA follow up.

There is also one example where our NCEA has been asked to review the quality of a monitoring programme that was designed as follow-up to an EIA/gas extraction decision. You can find more information on this case in the article on page 26 here: http://api.commissiemer.nl/docs/mer/diversen/views_experiences_2009.pdf

You also asked us whether the organization (in general) that implements the SEA does so in a more command and control-technical way, or in a communicative and flexible ways. Again, every competent authority decides how they will implement results form a SEA. It will differ form case-to-case. We do not have a general answer.

You also asked why SEA follow-up is very difficult to implement. We would respond that it is not necessarily very difficult in the Netherland, it is common practice. In the Netherlands the necessary capacity and tools are in place. However, it will depend from case to case how much weight the decision-makers attach to the findings of the SEA.

Hope this helps you on your way,

Bobbi Schijf