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MSc Thesis

How to improve EIA system performance in low- and middle-income countries?

A stepwise approach for identifying context-specific needs

M.W.H. van den Berg - 3681173

Master Sustainable Development – Environmental Governance

Supervisors:
Dr. Hens A.C. Runhaar (Utrecht University)
Drs. Arend J. Kolhoff (Netherlands Commission for Environmental Assessment)

2nd reviewer:
Prof. Dr. Peter P.J. Driessen (Utrecht University)

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MSc Sustainable development – Environmental Governance

M.W.H. van den Berg – 3681173
M.w.h.vandenberg@students.uu.nl
Pasqualinistraat 4
5622 AW, Eindhoven

Universiteit Utrecht
Faculty of Geosciences

mer
Commissie voor de milieueffectrapportage

Supervisor:

Dr. Hens A.C. Runhaar

2nd reviewer:

Prof. Dr. Peter P.J. Driessen

Supervisor:

Drs. Arend J. Kolhoff

Number of ECTS: 45

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I can only hope this thesis will provide you with a fraction of the knowledge that I gained during the process of writing it.

Thijs van den Berg

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ABSTRACT

Environmental Impact Assessment (EIA) has seen a large development since its first implementation in 1969 as a policy instrument for informed decision-making and long-term sustainable development. However, the performance of EIA in low- and middle-income countries (LMCs) is often considered to be lacking due to lacking capacities of the actors. Capacity building intends to develop the actors' capacities, but often forgets to take the context into account. This results in EIA systems that do not fit the context and thereby do not meet the objectives of EIA. Current literature on EIA emphasises the importance of context on the performance of EIA, but does not describe how EIA systems should be adapted to the context.

This research aims to develop an analysing tool for EIA practitioners in LMCs and developing organisations working in LMCs to identify context-specific EIA capacities and mechanisms to secure these. A stepwise approach has been developed from the literature that should lead to the identification of context-specific capacities and securing mechanisms. The approach consists of nine steps that include:

1. Identification of EIA system performance;
2. Identification of the main actors in the EIA system;
3. Identification of the level of ownership of the main actors;
4. Identification of the relative influence of the main actors;
5. Identification of the actors' capacities that can be developed;
6. Identification of the actors' capacities that should be developed or secured;
7. Developing a strategy for capacity building;
8. Initiating capacity building; and
9. Evaluating capacity building.

These steps have been evaluated and refined using two focus discussions with representatives of EIA authorities from LMCs and experts in capacity building in LMCs from the Netherlands. The first discussion focussed on strengthening the reliability of the approach, while the second discussion provided for the practical applicability of the approach.

Although the primary aim of the stepwise approach is to enhance system development in LMCs, it is thought that it can be used for all EIA systems. The context matters for the outcome of the approach, but does not influence the steps in the approach. Moreover, the stepwise approach is thought to include all aspects of system development, as identified by Kolhoff et al. (2009; 2013; 2014), Lawrence (2013), and the UNDP (2009). Furthermore, in this research it has been suggested that securing mechanisms also determine system performance, as they ensure that capacities remain even when actors drop out of the system.

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LIST OF ABBREVIATIONS

CPI	- Corruption Perception Index
CSO	- Civil society organisation
DI	- Democracy Index
DTIE	- Division of Technology, Industry and Economics
EIA	- Environmental Impact Assessment
EIU	- Economist Intelligence Unit
EPA	- Environmental Protection Agencies
ETB	- Economics and Trade Branch
GCI	- Global Competitiveness Index
HIC	- High-income country
IAIA	- International Agency for Impact Assessment
IFI	- International financing institute
LMC	- Low- and middle income country
NCEA	- Netherlands Commission for Environmental Assessment
NEPA	- National Environmental Policy Act
NGO	- Non-governmental organisation
PAP	- Project affected people
TS	- Technical Secretary
UNCED	- United Nations Conference on Environment and Development
UNDP	- United Nations Development Programme
UNEP	- United Nations Environmental Programme
US	- United States

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1. INTRODUCTION

1.1. BACKGROUND OF THE RESEARCH & PROBLEM DEFINITION

Since its first implementation in 1969, Environmental Impact Assessment (EIA) has seen a large development in terms of effectiveness for guiding sustainable project development (Jay et al., 2007). Barker and Wood (1999) consider it *"a tool that seeks to ensure sustainable development through the evaluation of those impacts arising from a major activity [...] that are likely to have significant environmental effects."* Despite its development, *EIA performance* in developed countries – i.e. high-income countries (HICs) – is generally regarded reasonably well, but in developing countries – i.e. low- and middle-income countries (LMCs) – its performance is considered to be weak (Ali, 2007; Kolhoff et al., 2009; Wood, 2002).

EIA performance consists of two parts, (1) *procedural* performance – i.e. are the required EIA guidelines followed? (Sadler, 1996) – and (2) *substantive* performance. Substantive performance of EIA – achieving EIA objectives, both long-term (e.g. sustainable development and environmental protection (Cashmore et al., 2004; Kolhoff et al., 2009; Wood, 2003)) and short term (e.g. informed and accountable decision-making (Cashmore et al., 2004; Jay et al., 2007; Kolhoff et al., 2009; Marara et al., 2011)) – depends on the *capacities* of actors in the EIA system. Capacities are defined as *"[...] the ability of individuals, institutions, and societies to perform functions, solve problems, and set and achieve objectives in a sustainable manner"* (Kolhoff et al., 2009). While most research has focused on the procedural performance of EIA (Cashmore et al., 2004; Kolhoff et al., 2009), in LMCs mainly substantive performance of EIA is often poor and capacities are poorly developed or maintained and therefore in need of improvements (Kolhoff et al., 2014).

Although many reasons for lacking EIA performance exist, Kolhoff et al. (2009) argue that the absence of substantive performance of EIA in developing countries is mainly a result of a lack of the needed EIA capacities. Several authors have developed capacities that are thought to be of importance for EIA substantive performance (e.g. Ali, 2007; Kolhoff et al., 2009; van der Leest, 2013; van Loon, Driessen, Kolhoff, & Runhaar, 2010). Kolhoff et al. (2014), however, suggest *ownership* of the proponent is the most important capacity for substantive performance of EIA. They describe ownership as *willingness* and *means*, or, in other words, the will to achieve and the ability to achieve. Willingness is measured by the environmental values that the actors hold. Means are determined by the organisational, human, scientific, technical, and resource capacities. Since human, technical, and resource capacities are always limited, organisational capacities – mostly leadership and strategy – determine how they are used most efficiently.

Marara et al. (2011) argue that the lack of EIA capacities in LMCs stems from the fact that EIA systems in LMCs are often not adapted to the context. They state that, for example, donor requirements for development projects contributed to the widespread implementation of EIA in Africa. While the EIA systems that were implemented are functioning in western democratic countries, they are constrained by contextual factors – e.g. socio-economic and political situations (Marara et al., 2011) – in developing countries and lack the capacities that are needed for effective EIA. The context in which EIA in LMCs are functioning simply asks for different capacities (Kolhoff et al., 2009).

According to Kolhoff et al. (2014) there are three factors that describe context: (1) national and international actors, (2) the regulatory framework, and (3) project characteristics. Legal rights of actors determine whether or not actors can have an influence on the performance of EIA. EIA is more prone to corruption, for example, when civil society actors do not have guaranteed rights (ibid.). The (country-specific) EIA regulatory framework, on the other hand, can also directly determine the ambition of the EIA system. The higher the ambition, the more effective EIA will likely be. Moreover, project characteristics are important when many people are affected by the project, as there is more pressure from society itself (Kolhoff et al., 2014).

Kolhoff et al. (2013) argue that donor organisations – e.g. the World Bank and the United Nations Environmental Program (UNEP) – often think that *context* can be influenced, while the

common literature stresses the importance of context for the substantive performance of EIA (Arts et al., 2012; Marara et al., 2011). For example, Arts et al. (2012) argue that the interests, power positions, and openness of powerful decision-makers to environmental values and revisions of plans by local actors to a large extent determine the system performance. Instead of trying to change the context under which an EIA system should be functioning, contextual factors, as explained by Kolhoff et al. (2014), should thus be the starting point for EIA system development (Kolhoff et al., 2013).

While research has suggested that capacities are the driving force of substantive performance, it is not known what capacities are needed under which contextual settings. For example, although Kolhoff et al. (2009; 2013; 2014) have developed a set of needed EIA capacities, they lack describing under which contextual environment they hold. Lawrence (2013) therefore states there is a need for context-matching capacities. Moreover, when it is known what are the contextual settings and capacities that are needed, one still needs to know how these capacities can be secured in order to sustain substantive performance of EIA over a longer time span (Kolhoff et al., 2013). This indicates a need for research focusing on, what in this research will be called, capacity-securing mechanisms – i.e. EIA system functions that ensure that capacities are maintained even when actors might drop out of the EIA system.

However, to date an approach for identifying context-specific needs is lacking. The focus of this research will therefore be to construct an approach that can be used by EIA practitioners in LMCs or capacity building experts from HICs to identify where EIA system performance in the countries they work in is lacking and which capacities and securing mechanisms would enhance system performance under these contextual characteristics.

1.2. RESEARCH OBJECTIVE

The intention of this research is to construct an analysing tool for EIA practitioners in LMCs and developing organisations in HICs to identify context-specific capacities and securing mechanisms. It can therefore be best described as a design-oriented research (Verschuuren & Doorewaard, 2010), as the intention is to come up with a tool for overcoming a clearly stated problem according to EIA literature – lacking EIA performance in developing countries due to lacking context-specific capacities (e.g. Kirchoff, 2006; Kolhoff et al., 2009; Marara et al., 2011).

According to Verschuuren and Doorewaard (2010), such a research should *"formulate **recommendations** for a design, based on problem-analysis, a diagnosis, and an assessment of a first prototype of the design"* (ibid., emphasis added by author). Following Verschuuren and Doorewaard (2010), this research will not provide a fully developed approach for identifying context-specific capacities. This research will only lay a basis for such an approach. The aim is both to contribute to better insights on the capacities that contribute to substantive EIA as well as to enhance EIA system development in LMCs by providing donor organisations and EPA with insights on which capacities their efforts should focus.

1.3. RESEARCH QUESTIONS

The central research question of this research consist of two parts; the first is concerned with the capacities that are needed to enhance substantive performance of EIA in LMCs, and the second with the mechanisms that should ensure that these capacities will be maintained. It reads: *How can it be identified which actor capacities contribute to substantive performance of EIA in LMCs under what contextual settings and what mechanisms contribute to securing these capacities?* In order to arrive at an answer to this main question, several sub-questions have been posed:

1. What actor capacities are thought to contribute to substantive performance of EIA in LMCs?
2. What is thought to secure the capacities that improve EIA substantive performance in LMCs?

3. What steps would be needed to identify which EIA capacities and securing mechanisms are needed under what contextual settings?
4. How could the steps that are needed for determining which capacities and securing mechanisms are needed when be applied in practice?

The intention of these questions is first to get a better understanding on the aspects that contribute to EIA system performance by looking at what system performance entails. Second, it should be identified what is needed for identifying context-specific needs and the influence of the context on these steps.

Three steps have resulted in answering the above questions. First, an intensive literature study has resulted in context-specific capacities and securing principles for EIA capacity building in LMCs. In this phase of the research, current literature has been used to develop a first indication for an approach for identifying context-specific capacities and securing mechanisms that fit the context of LMCs. Second, the developed approach has been validated through a discussion with EIA officials working for EIA authorities in LMCs. The last step involves a discussion with EIA experts from the Netherlands working on capacity building in LMCs.

1.4. SCIENTIFIC RELEVANCE

As stated earlier, EIA are thought to be context-specific (Arts et al., 2012; Marara et al., 2011; Kolhoff et al., 2009). Previous research has mostly focused on which capacities enhance EIA substantive performance (e.g. Kolhoff et al., 2009; 2013; 2014), without linking the capacities to the context in which the EIA system is operating. This means there is a need for context-matching capacities (Lawrence, 2013, p. 423). This research will be part of a PhD research of Drs. Arend Kolhoff (Kolhoff et al., 2009; 2013; 2014), who has been studying the influence of context and capacities on EIA effectiveness in LMCs. This research links the contextual factors that he found are of importance for EIA substantive performance to EIA capacities by developing an approach that can be used by other scholars to determine context-specific capacities. Once it has been determined what capacities are of importance under which contextual settings, there is need for better understanding on how EIA capacities in LMCs can be secured (Kolhoff, 2015). By means of panel discussions and subsequent literature, this research will lay a basis for a tool that fills this gap in knowledge.

1.5. SOCIETAL RELEVANCE

EIA is a tool for policy-makers to take into account both environmental and social consequences of a project (Arts et al., 2012; Morrison-Saunders, Pope, Bond, & Retief, 2014). Especially in developing countries there is a need to incorporate social aspects into EIA (Wood, 2003). As EIA are transferred from HICs to LMCs, much of its effectiveness – and thereby societal benefits – is lost. Providing opportunities for increasing the, primarily, sustained substantive performance of EIA in LMCs will increase the benefits to society; not only for the short-term, but also for the long-term. It is thought that, for example, EIA professionals working in LMCs can make use of the outcomes of this research. Also the people that are affected by the consequences that a project can bring can be seen as relevant stakeholders, likewise the proponent of the project. A more effective and efficient EIA system will benefit them as well. Moreover, the intention of EIA is to mainstream concerns over environmental issues (e.g. Cashmore et al., 2004; Morrison-Saunders et al., 2014), which – if done effectively – will also benefit future generations.

1.6. APPLICABILITY OF THE RESULTS IN POLICY

The first aim of this research will be to develop an approach that can be used by EIA authorities in LMCs and EIA professionals of HICs working in LMCs to increase the substantive performance of EIA in these countries. To use their resources more efficiently, policy-makers can make use of the recommendations that stem from this research. If it is known what mechanisms secure EIA capacities in the long run, EIA professionals can target most of their efforts on these aspects.

Moreover, adding the influence of the contextual environment to the recommendations allows for a more precise overview of what capacities need to be supported under which circumstances and the securing mechanisms that support these capacities given the context.

1.7. READING GUIDE

This report starts with a literature review on EIA in LMCs and the factors influencing EIA performance in Chapter 2. Thereafter in Chapter 3, a first set-up of the approach is shown that follows from the literature review. After this first outline of the approach, the results from the two discussions are presented in Chapter 4. The implications of these results for the constructed approach are also shown in this fourth chapter. Finally, in Chapter 5, the main conclusions are presented together with the limitations of this research. Some recommendations for future research and the practical application of the approach are also presented in this final chapter. Appendices are added to report, which include a full report of the two discussions and an overview of the participants of this research.

2. DETERMINANTS OF EIA PERFORMANCE

2.1. EIA PERFORMANCE IN THE DEVELOPING WORLD

In 1969 EIA was implemented for the first time in the United States (US) in its National Environmental Policy Act (NEPA) (Petts, 2009). Since then it has been spreading over the world and at this almost all countries are either developing EIA or have EIA already embedded in their legislation (Jay et al., 2007).

However, in the developing world EIA systems have been implemented at a slower pace than has been the case for HICs (See Box 1; Petts, 2009). In these countries EIA is still a relatively new policy information tool (Petts, 2009; Wood, 2003). The 1992 United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro primarily initiated the expansion of EIA in LMCs by specifically mentioning EIA as a policy decision tool in its *Agenda 21* (Kakonge, 2006). At present, in almost all LMCs there is some kind of EIA regulations, or draft version of EIA (Dijkstra et al., 2014). The problem with EIA in LMCs, however, is that these countries often lack the finances, structure and resources necessary to perform (Abaza et al., 2004).

BOX 1: NATIONAL PRIMARY EIA LEGISLATIVE ACTION (FROM PETTS, 2009)[1]

1969.	USA
1970.	California
1973.	Canada
1974.	Columbia; New Zealand; Commonwealth of Australia
1975.	Thailand
1976.	France; Republic of Ireland; Venezuela
1977.	Philippines
1978.	Luxemburg
1979.	China
1981.	South Korea
1982.	Israel
1983.	Pakistan
1984.	Croatia; Japan; South Africa
1986.	Congo; State of Western Australia
1987.	Indonesia; Malaysia; the Netherlands
1988.	Mexico; UK
1990.	Algeria; Denmark; Guatemala; Norway; Romania; West Germany
1991.	Egypt; Luxemburg; Panama; Sweden; Tunisia; Ukraine
1992.	Belarus; Belize; Bulgaria; El Salvador; Estonia; Nigeria; Swaziland; Zimbabwe
1993.	Albania; Costa Rica; Honduras; Paraguay; Vietnam
1994.	Finland; Ghana; Hungary; Namibia; Nicaragua; Russia; Slovakia; Uganda; Uruguay
1995.	Armenia; Bolivia
1996.	Guyana
1997.	Hong Kong; Japan

[1] Some countries had ad hoc procedures or administrative arrangements prior to the primary legislation —for example, Germany adopted a cabinet resolution in 1985. Other countries currently have administrative procedures or ad hoc EIA arrangements.

At the time, EIA context was not regarded an important aspect for the performance of EIA and as such many EIA systems in LMCs are simply taken from good examples of EIA in HICs (Marara et al., 2011). The goal of EIA is to embed sustainable development goals in policy by providing information for decision-making at project-level (Runhaar et al., 2013). Its goal stems back from the 1960s ideal to rationalise decision-making (Jay et al., 2007). However, despite this common goal of EIA, a wide variety exists between EIA systems, their context and, as such, its performance (Petts, 2009; Wood, 2003). Especially in the developing world, EIA effectiveness is therefore questioned (Wood, 2003).

2.1.1. EIA OBJECTIVES

The objectives of EIA are often split into two categories: (1) short-term, and (2) long-term goals (e.g. Kolhoff et al., 2009). The long-term goal of EIA is, as said, to incorporate sustainable development in policy, so that future generations have similar opportunities as present generations (Jay et al., 2007). Short-term goals refer to EIA as a tool to reflect on policies, plans and projects as to what their impact would be on the environment (Kirchoff, 2006). These goals refer to EIA as a decision-making tool for informed decision-making (Kolhoff et al., 2009).

However, EIA in LMCs can have other goals as well according to Kakonge (2006). For example, EIA can stimulate good governance (Kakonge, 1998), or be seen as a tool to attract foreign investors (Kakonge, 2006). This differs from the purposes of EIA in HICs, where, as suggested, they are merely seen as a tool to promote sustainable development, or increase efficiency in decision-making. This difference in goals means EIA in LMCs should be addressed differently from those in HICs (e.g. Kakonge, 2006; Kolhoff et al., 2009; Marara et al., 2011). However, in this research the main long- and short-term objectives for EIA are being used as a reference for what entails good performing EIA. These will be most important for all EIA systems and are therefore central for this thesis.

2.1.2. EIA PERFORMANCE

The performance of the EIA system can be interpreted numerous ways, as there are many approaches to determine it (Sonderegger, 2012). Earlier it has been suggested that most research looks at procedural performance of EIA (e.g. Abaza et al., 2004), whereas it is the substantive performance of EIA that determines the actual outcome and impacts of the EIA (Kolhoff et al., 2009).

Moreover, there is also a difference between EIA *effectiveness* and EIA *performance*, while the two terms are often used interchangeably (e.g. Cashmore et al., 2009; Sonderegger, 2012). Sadler (2004) describes the two concepts as interlocking. According to him *"the notion of effectiveness refers to the manner of performance […]."* In other words, effectiveness is about the process (e.g. Abazza et al., 2004), whereas performance is about the achieved results (e.g. Kolhoff et al., 2009) and as such one could state that effectiveness is a precondition for performance.

This research looks at *substantive performance* of EIA *systems*, which is defined as the extent at which EIA objectives are reached. The EIA system comprises the rules applied to EIA, the actors that are affected by these rules and their capacities (Kolhoff et al., 2009). As said, the performance of EIA systems in the developing world is often lacking. This is due to several factors that influence EIA performance. *Context* has already been mentioned as being one of these (Kolhoff et al., 2009; Marara et al., 2011), but also the *actors* in the EIA system and their *capacities* have a large influence on EIA performance (Kolhoff et al., 2009). These aspects will be dealt with separately in the following sections.

2.2. ACTORS IN THE EIA SYSTEM

Every EIA system is dependent on the people working in or with it (Runhaar et al., 2013). Nowadays, EIA is viewed as a *"[…] collective process where different actors can deliberate and exchange their views and goals and their knowledge on the impacts of the proposed developments"* (Saarikoski, 2000). In this sense, each actor influences EIA with its values, beliefs and norms differently. Actors that think of EIA as an effective policy tool will benefit EIA performance, whereas actors that look at EIA as a hindrance will have a negative effect on it (Runhaar et al., 2013).

According to the literature (e.g. Dijkstra et al., 2013; Kolhoff, 2015; Kolhoff et al., 2013; Van der Leest, 2013), there are six actors that are thought to influence EIA performance:

1. EIA authority (e.g. EPA);
2. EIA proponent;
3. Donors;
4. Knowledge actors (e.g. consultants and universities);
5. Project Affected People (PAP);
6. Sector authorities.

2.2.1. EIA AUTHORITY

The EIA authority in this research constitutes the actor that is responsible for performing the EIA as well as for EIA follow-up – i.e. the process that comes after the EIA phase consisting of (primarily) monitoring and enforcement (Kolhoff, 2014; Kolhoff et al., 2014). Its primary role is to make sure that all guidelines are followed during the EIA phase and that proposed changes to a project are controlled and enforced (Marara et al., 2011). The EIA authority can thus be regarded as a key actor, as their role could ensure a high performing EIA system (Kolhoff et al., 2014).

2.2.2. EIA PROPONENT

The EIA proponent is the actor that is responsible for the project that is subject to EIA and is therefore also responsible for asking the EIA to be performed (Kolhoff et al., 2009; Runhaar et al., 2012). The proponent directly influences EIA performance – at both the system-, and project level – by adhering to, or disregarding, the proposed measures in the EIA (Stoeglehner et al., 2009).

An EIA proponent can be a private or public actor (Kolhoff et al., 2009). Its main influence on EIA performance is depending on its environmental values (Runhaar et al., 2012; Stoeglehner et al., 2009). The proponent is mostly only addressing the direct impacts from their projects, as the people affected by their project are mostly only aware of these. Indirect, or long-term effects such as air pollution are therefore often disregarded (Bansal & Roth, 2000; Kolhoff et al., 2014). An EIA should therefore address these long-term effects, as they would otherwise not be dealt with (Bansal & Roth, 2000).

2.2.3. DONORS

According to Kolhoff et al. (2009) *"[t]he influence of international donors on the development of an EIA regulatory framework has been considerable."* Donors – primarily international donors, and therefore referred to as international financing institutes (IFIs) in this study – provide for the money and resources that are often lacking in LMCs (e.g. Marara et al., 2011). By doing so, they can set standards for an EIA system that need to be outlined in law. If the donor country does not oblige to these standards, the IFIs have the power to withdraw their funds (Dijkstra et al., 2014). The consequences of this regime, however, have been that EIA systems in LMCs are not context-specific, but based on standards and procedures that work in HICs. For LMCs, however, these procedures are often too ambitious (Marara et al., 2011).

2.2.4. KNOWLEDGE ACTORS

Knowledge actors are mostly referred to as the actors that execute the EIA in name of the proponent or that facilitate trainings and education for EIA practitioners (Kolhoff et al., 2009). Examples are consultants, knowledge institutes such as the Netherlands Commission on Environmental Assessment (NCEA), and universities (ibid.). The role of knowledge actors is to foresee in adequate, up-to-date knowledge (Partidario & Sheate, 2013). Universities can, for example set-up curricula to ensure that future leaders have the knowledge and skills necessary to perform adequate EIA (Kolhoff et al., 2014). By doing so, knowledge actors contribute to the objective of informed and accountable decision-making (Partidario & Sheate, 2013; Sheate & Partidário, 2010). However, the potential influence of knowledge actors is often limited by the context in LMCs (Kolhoff et al., 2009).

2.2.5. PROJECT AFFECTED PEOPLE

Project Affected Peoples (PAPs) are those that are directly affected by a project's consequences (Van der Leest, 2013). However, in this study the affected population will be referred to as the *public*. This is because the impact of current EIA goes beyond the locally affected population or the locally affected people are often unable or unaware to stand-up for their rights (Doberstein, 2003; Kolhoff et al., 2009). Non-governmental organisation (NGOs) and civil society organisations (CSOs) are also part of this group as they represent local or global communities and groups that cannot stand-up for themselves such as animals and forests (e.g. Lloyd, 2005).

The role of the public is to ensure that environmental standards are met. They should function as a watchdog to prevent possible negative impacts from projects (Kolhoff et al., 2009). Another role of the public is to provide information (Doberstein, 2003). This is mostly through public participation. As Wende (2002) puts it: *"[t]he greater the participation of public […] the greater the extent to which general modifications are contemplated in decision-making."*

Unfortunately, public participation, or the opportunity for the public to appeal, is often lacking in LMCs, which limits their influence on EIA performance (Doberstein, 2003; Ebisemiju, 1993; Glucker et al., 2013; Kakonge, 1996; Nadeem & Hameed, 2008). The media can therefore also be used as a medium for providing information or ensuring the safeguard of environmental standards (Kolhoff et al., 2009).

2.2.6. SECTOR AUTHORITIES

Sector authorities play a vital role in EIA performance. Especially in LMCs, sector authorities – e.g. the ministry of economics – often influence the EIA authority (Marara et al., 2011; Kolhoff et al., 2011). This can have negative consequences when a (more powerful) sector authority overrules the EIA authority (Kolhoff et al., 2011). However, EIA performance can also be positively influenced (Saeed et al., 2011). In Pakistan, for example, the department of justice strengthened the EIA authority, which positively influenced EIA performance (ibid.). Unfortunately, according to Marara et al. (2011), other sector authorities often overpower the EIA authority by placing their interests over those of the EIA authority.

2.3. EIA ACTOR CAPACITIES

Capacities can be described as *"the ability of people, organisations, and society as a whole to achieve their objectives"* (Kolhoff et al., 2014). According to Van Loon et al. (2010) capacities can be divided into six categories:

1. Resource capacities;
2. Technical capacities;
3. Scientific capacities;
4. Human capacities;
5. Organisational capacities; and
6. Institutional capacities.

Institutional capacities, however, can be seen as part of organisational capacities, eventually dividing them into five categories (Kolhoff et al., 2014). When capacities are low, the performance of EIA is expected to be low as well (van der Leest, 2013).

There is one capacity that can be looked at as an overarching capacity, and which is of primary importance for EIA system performance: *ownership* (Kolhoff et al., 2014). All the above capacities will be dealt with separately below.

2.3.1. RESOURCE CAPACITIES

The first category, resource capacities, can be described as the staff, budget, or equipment that is needed for performing EIA. Or, in other words, *"[…] all the material and virtual stocks needed for [EIA]"* (Van Loon et al., 2010). They can be categorised in monetary and non-monetary resource capacities (Kirchhoff, 2006).

2.3.2. TECHNICAL CAPACITIES

According to Van Loon et al. (2010) technical capacities are often overlooked in EIA assessment techniques, while they are considered of significant importance for EIA substantive performance. Examples of technical capacities that are thought to enhance EIA performance are mostly about communication and information tools, such as the availability of computers, internet, or technical assistance panels (e.g. Jay et al., 2007; Nadeem & Hameed, 2008).

2.3.3. SCIENTIFIC CAPACITIES

According to Doberstein (2004; emphasis in original) *"EIA should be used as a **technical tool** to generate scientific information."* Scientific capacities refer to the role of science in EIA and can be split into four sub-capacities: (1) *accessibility*, (2) *publications*, (3) *sharing and cooperation*, and (4) *usefulness for environmental policy* (Van Loon et al., 2010). These sub-capacities refer to the availability of science, participation in science, the scientific network of EIA actors, and EIA as applied science (see Cashmore, 2004; Partidario & Sheate, 2013).

2.3.4. HUMAN CAPACITIES

Human capacities are about the number of staff, quality of the staff, involvement of staff, or in short: everything that has to do with human capabilities to perform EIA (Van Loon et al., 2010). Human capacities can have a major influence on the performance of EIA, since it is the people involved in the EIA process that have to perform EIA (ibid.). Unfortunately, according to Ostrovskaya and Leentvaar (2011) all above capacities are lacking in LMCs.

2.3.5. ORGANISATIONAL CAPACITIES

Because all other capacities are often lacking, out of the five categories, organisational capacities are thought to be the most important type of capacities (van Loon et al., 2010). They are thought of as the actors' position in the political arena and it's institutional structure (Wood, 2003). Examples of organisational capacities can be networking skills, internal communication, and leadership (e.g. Wood, 2003; Kolhoff et al., 2014; Van Loon et al., 2010). According to Wood (2003), a lack of organisational capacities result in EIA in LMCs to remain a top-down requirement, with lacking substantive performance as a result. Organisational capacities thus provide a basis for other capacities.

2.3.6. OWNERSHIP

As said, according to Kolhoff et al. (2014), there is one capacity that is most important for EIA substantive performance: *ownership*.

Ownership can be described as the commitment and means of actors in the EIA system to perform EIA (Kolhoff et al., 2014). Ownership as commitment – i.e. *"the will to…"* (Kolhoff et al., 2014 – can be categorised as an organisational capacity and determines an actors' willingness to

perform well, whereas ownership as means – i.e. *"the ability to…"* (Kolhoff et al., 2014) – can be part of resource, technical, scientific, or human capacities and relates to the actors' ability to perform well (Kolhoff, 2015). Ownership as "the ability to…" can therefore be seen as an overarching capacity.

The overarching nature of ownership stems from the fact that, according to Stoeglehner et al. (2009), ownership consists of three parts: (1) *ownership of values/concepts*, (2) *ownership of techniques/process*, and (3) *ownership of outcomes*. This means that, for a start, planners and decision-makers need to regard sustainability ideals as their own. Not, as is mostly the case, as merely guidelines that need to be followed. Ownership of techniques regards the willingness of actors in the EIA system to perform all required steps in the EIA process – i.e. the procedural performance of EIA. Procedural performance is thus a condition for ownership – and thus substantive performance – rather than that it is affected by ownership (Kolhoff et al., 2014). The latter part of ownership refers to the incorporation of sustainability principles – i.e. people, planet, profit (Elkington, 1998) – in the outcomes of EIA projects and reports (Stoeglehner et al., 2009).

Table 1 shows an overview of the capacities that actors need for good EIA performance and what they compel. These can be divided in sub-capacities and key capacities (see Table 1).

TABLE 1: OVERVIEW OF THE ACTORS' CAPACITIES FROM SPECIFIC TO BROAD CAPACITIES (FROM KOLHOFF ET AL., 2014; ADAPTIONS MADE BY AUTHOR)

Sub-capacities		**Key capacities**	
Organisational capacities	Willingness Leadership Networking Organisational learning	**Commitment** *"The will to…"*	***Ownership***
Human capacities	Number of staff Quality of staff	**Means** *"The ability to…"*	
Scientific capacities	Accessibility to scientific knowledge Quality of information Sharing and cooperation Usefulness of information		
Technical capacities	Technical tools		
Resource capacities	Funds Non-monetary funds		

2.4. EIA CONTEXT

First EIA scholars suggested that EIA systems are not depending on the context and that one perfect system could be designed and implemented under any circumstances (e.g. Ahmad & Wood, 2002; Barker & Wood, 1999; Glasson & Salvador, 2000). This meant that EIA effectiveness could be measured by means of generic principles and criteria, i.e. the procedural

performance of EIA. The process would influence the context, rather than the other way around. In this Utopian thinking, decision-making would be value-free and based on science and rational thinking (Lawrence, 2013).

However, in current literature it is emphasised that EIA performance is influenced by the context and that the context is continuously changing (e.g. Arts et al., 2012; Barker & Wood, 2001; Cherp, 2001; Ebisemiju, 1993; Kolhoff et al., 2009; Lawrence, 2013; Marara et al., 2011; Wood, 2003). Not only does the context influence the EIA system, but the EIA system also influences the context, which means that the EIA system and context need to be blended (Lawrence, 2013). Especially in developing countries context has a profound influence on EIA performance (Arts et al., 2012).

According to Lawrence (2013) there is a wide variety in the contextual environment, making EIA context hard to standardise. However, a distinction can be made between context factors at project-level and context factors at system-level. For example, according to Marara et al. (2011) EIA context can be best described as the socio-economic and political situation in which the EIA system is functioning. At the same time EIA in LMCs are subject to a lack of trained personal, under-funded structures relating to the environment (e.g. general, institutional, administrative, and managerial structures), centralised decision-making, weak enforcement of legislation, unstructured legislation, etc. (Doberstein, 2003). This can be considered as a lack of EIA capacities (Kolhoff et al., 2009). System-level context factors therefore influence project-level context factors. The difference between is shown below.

2.4.1. EIA CONTEXT FACTORS AT PROJECT-LEVEL

According to Kolhoff et al. (2014) three main contextual factors determine the performance of EIA:

1. Internal and external actors;
2. The regulatory system; and
3. The project's characteristics.

2.4.1.1. INTERNAL AND EXTERNAL ACTORS

As suggested, the main actors in the EIA system comprise the EIA authority, EIA proponents, the public, IFIs, and knowledge actors (see Arts et al., 2012; Dijkstra et al., 2014; Kolhoff et al., 2009; 2013; 2014; Van der Leest, 2013). Of these, the EPA – or EIA authority – and EIA proponent are considered to have the biggest influence on EIA performance (Kolhoff et al., 2014).

Actors can have a big impact on the performance of EIA primarily by their norms, values and beliefs. Each actor has his own notion of EIA and will therefore have a different influence on the EIA system. Following this line of reasoning, instead of directly influencing EIA performance, actors have a direct impact on ownership (Kolhoff, 2015). Especially the EIA authority and EIA proponent can influence ownership, but also other actors such as civil society representatives or donor organisations influence ownership (Dijkstra et al., 2014). EIA in which external actors are involved often show more ownership than those where this is not the case (Kolhoff et al., 2014; Arts & Faith-Ell, 2010; Kakonge, 1996, 2006; Shepherd & Bowler, 1997; van der Leest, 2013).

The difference in EIA systems is a result of which actors are actively present in the EIA domain (Kolhoff, 2015). As suggested, a situation where donor organisations (i.e. International Financing Institutions (IFIs)) are part of the EIA differs from a situation where this is not the case (Dijkstra et al., 2014). In a different context, different actors will be missing or added to the EIA. This thus influences the performance of the EIA in general (Kolhoff et al., 2013).

2.4.1.2. THE REGULATORY SYSTEM

The second contextual characteristic that Kolhoff et al. (2014) distinguish is that of the regulatory system. This can be best described as rules, and the mechanisms that support the enforcement of these, laid out in law (Black, 2001). Specified to EIA regulation, one could thus say that the regulatory system specifies what the objectives, ambitions and structure of the EIA

system are. It determines the tasks, responsibilities and formal role of actors in the EIA system (Kolhoff et al., 2009).

2.4.1.3. PROJECT'S CHARACTERISTICS

Kolhoff et al. (2014) point to a project's characteristics as a third contextual factor influencing the performance of EIA. This factor can differ in terms of its proponent (which can be private or public), its external support (with or without), and the scale of the project (its impact on the country's economy, or social consequences) (ibid.). This factor, however, is project-specific rather than system-specific. Although it is suggested that project-level learning might foster system-level development (De Jong et al., 2012), actors in the EIA system can be of little influence on the projects that are being build and therefore subject to EIA. For this reason, the primary indication of the context can be best determined by looking at the level of institutionalisation and differentiation as suggested by Grindle (2007).

2.4.2. EIA CONTEXT FACTORS AT SYSTEM-LEVEL

The above three factors are influence by the political environment in which the EIA system is functioning. According to Marara et al. (2011) the political environment, together with the socio-economic situation, is the most important context factor determining EIA performance. The socio-economic situation in LMCs can be best described by a lack of resources and therefore a lack of environmental awareness. People in LMCs are busy with surviving, rather than with environmental problems (Glucker et al., 2013). A distinction in the socio-economic situation is therefore unlikely to show significant differences and therefore not useful. Contrarily to the socio-economic situation in LMCs, the political environment is thought to differ significantly between countries (Grindle, 2007).

According to Grindle (2007), the political environment can be categorised by looking at the level of institutionalisation. She argues, *"[…] states differ in terms of their institutions, organisation and legitimacy"* (ibid.). Following this line of reasoning, the level of institutionalisation can be used to divide EIA systems as well. Ghana, for example, exemplifies a political system that is more institutionalised than that of Georgia; while in Yemen hardly any governmental institutions are functioning (Kolhoff et al., 2013).

Based on the level of institutionalisation – i.e. the extent to which rules are formally formulated in law and practice (Bitondo & André, 2007) –, Grindle (2007) distinguishes five types of institutional systems: (1) *collapsed states*, (2) *personal rule*, (3) *minimally institutionalised states*, (4) *institutionalised non-competitive states*, and (5) *institutionalised competitive states*.

The main difference between these types of states, besides the level of institutionalisation, can be found in the level of stability and legitimacy of the government (ibid.). This refers to what is called the level of differentiation of political systems – i.e. are the political institutions in a country really different or are they actually the same (Buzan & Albert, 2010)? This actually refers to whether or not multiple parties are allowed in the political domain, and if so, whether they are really allowed to engage in politics and decision-making. This can thus be best described as the level of democracy in a country. In fact, one could state that differentiation is best represented in a competitive environment. However, this does not mean that competitiveness should exist between parties. It could also be the case that competitiveness exists within a party (Gindle, 2007).

By differentiating between the level of institutionalisation and differentiation in a country, a distinction can be made in the contextual environment. Figure 1 visualises this distinction.

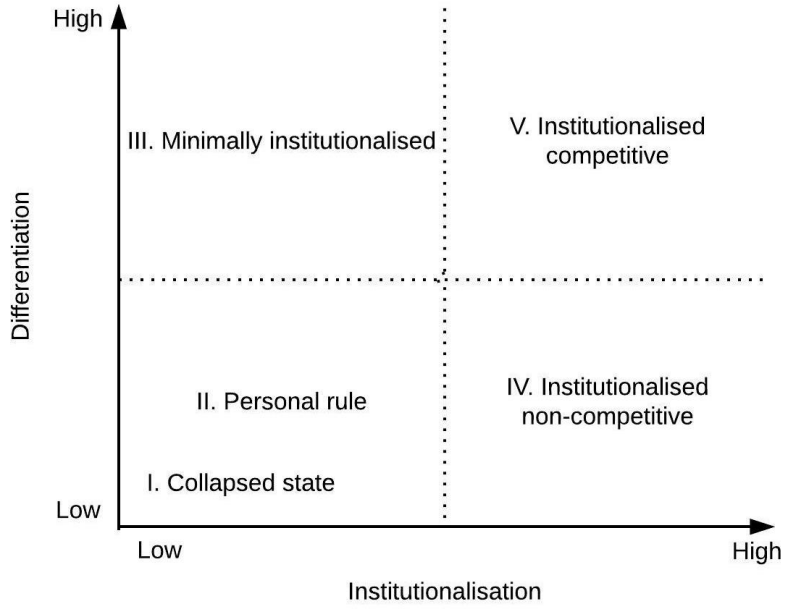

FIGURE 1: CATEGORISATION OF CONTEXT

The categorisation of Grindle (2007) suggests a steady incline in political systems from 1 to 5. However, the transformation of states is not linear and should also not be interpreted as such. For example, Kolhoff et al. (2013) mention the decline in legitimacy of the government of Yemen, which transformed from a personal rule to a collapsed state after the civil war in 2011. As such, the distinction made by Grindle (2007) does not add a value to which state is better than the other, but rather categorises it by the level of *differentiation* and *institutionalisation*.

2.5. CAPACITY BUILDING STRATEGIES

As suggested, the performance of the EIA system is depending on the capacities of the actors in the EIA system. It is possible to increase the performance of EIA by increasing the actors' capacities.

The development of capacities is in the literature often described as *capacity building*. Capacity building refers to the process for *"building abilities, relationships and values that will enable organizations, groups and individuals to improve their performance and achieve their development objectives"* (UNEP et al., 2006). According to Eade (1997 emphasis in original), *"capacity building is **an approach to development** not something separate from it."* Relating to EIA, it refers to maintaining, developing and creating capacities that are needed for improving EIA performance (Lawrence, 2013; Kolhoff et al., 2014). Whilst these capacities are likely to develop without interventions, capacity building facilitates and speeds up this process (Kolhoff et al., 2013).

The UNDP (2009) has developed a method for capacity building for organisations focusing on developing countries. However, according to Lawrence (2013), capacity building for EIA is different from capacity building for organisations in the sense that it targets a policy tool. The UNDP (2009) capacity-development cycle targets a specific situation that should be enhanced and uses policy tools – such as EIA – to develop this situation. According to Lawrence (2013) capacity building for EIA should comprise several aspects that differ from other capacity building approaches. For this reason, both Lawrence's criteria for EIA capacity building and the UNDP capacity-development cycle are described below.

2.5.1. CAPACITY BUILDING ACCORDING TO LAWRENCE (2013)

While it is thought to enhance performance, the concept of capacity building is often considered too broad and usually limited to training of personnel (Potter & Brough, 2004). According to Lawrence (2013), capacity building should therefore be seen as a cyclical process. He distinguishes five themes in the process, which he defines as: (1) *definition & distinction*, (2) *applied what, when & where,* (3) *for whom & by whom,* (4) *for what purpose,* and (5) *by what means*. These five themes are constantly interacting with one another. They should therefore be evaluated after every step in the development cycle (ibid.).

2.5.1.1. DEFINITION & DISTINCTION

According to Lawrence (2013) actors in the EIA system should come to terms about the intentions of EIA and the ideas they want to implement by the EIA system. As said, each actor has his own idea of what EIA might compel (Runhaar et al., 2012). All actors should thus be open about their intentions and objectives to make sure that capacity development is effective (Lawrence, 2013).

2.5.1.2. APPLIED WHAT, WHEN & WHERE

The second aspect that Lawrence (2013) refers to can be best described as the context in which capacity development takes place. He emphasises that the context determines the strategy that should be applied to the development process.

2.5.1.3. FOR WHOM & BY WHOM

Lawrence (2013) describes two different parties: (1) the *target*, and (2) the *supporting and facilitating* party. The first constitutes the affected population and the actors involved in performing the EIA. The latter group consists of aid organisations, knowledge centres, and professional organisations. Both parties have to be represented for effective capacity building (ibid.).

2.5.1.4. FOR WHAT PURPOSE

According to Lawrence (2013), the first objective of any EIA capacity building initiative is to enhance the performance of EIA in general. This is what he calls the *primary* objective. *Intermediary* objectives are the driving force of the first objective. These can be human resource development, enhanced networking skills, or transferred skills and knowledge (ibid.). In short the intermediary objectives are the development of actors' capacities.

2.5.1.5. BY WHAT MEANS

The fifth aspect of Lawrence (2013) focuses on the strategies that could be applied to reach the desired goals and objectives of the capacity-development program. It should therefore be assessed what capacities are lacking and which of these would contribute to meeting the objectives (ibid.).

2.5.2. THE UNDP CAPACITY-DEVELOPMENT CYCLE

The UNDP (2009) uses similar criteria for the development of their capacity-cycle (see Figure 2) as Lawrence (2013). The difference between those of Lawrence (2013) and the UNDP capacity-development cycle (2009) is that the latter can be seen as a method for improving capacities, while the first only defines which aspects should be taken into consideration when a capacity-development plan is constructed. One step in the UNDP capacity-development cycle can therefore contain multiple aspects of Lawrence (2013).

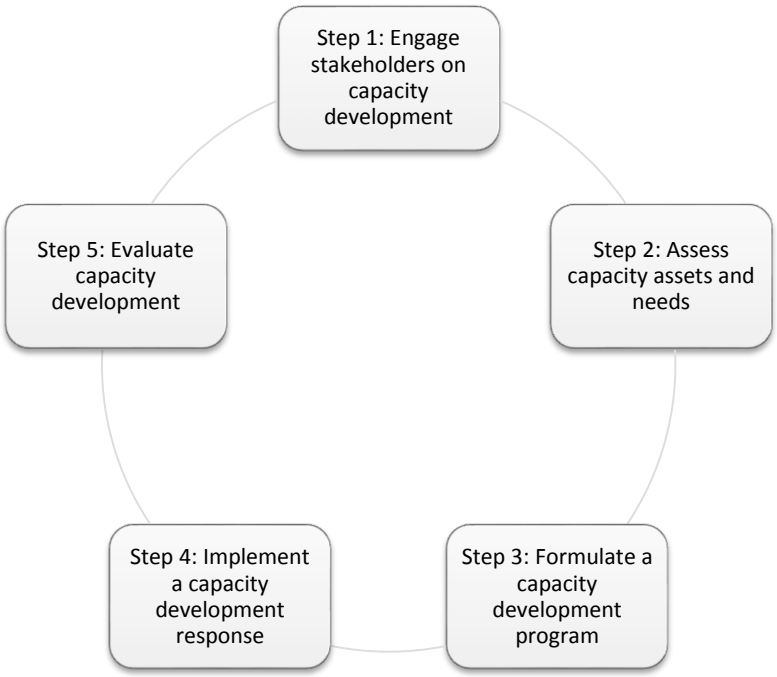

FIGURE 2: CAPACITY DEVELOPMENT CYCLE (FROM UNDP, 2009)

2.5.2.1. STEP 1

As the UNDP (2009) describes it, the capacity cycle starts with actors talking to each other and streamlining their intentions, ideas and values. This already involves people in ensuring that the eventual performance will be enhanced and increases the level of ownership of the involved parties (ibid.).

The difference between the capacity development aspects of Lawrence (2013) and the cycle of the UNDP (2009) is, the first recognises that not all stakeholders will be involved in the development process from the start and that it needs to be assessed who should be taken in and who should be left out (theme 3 of Lawrence (2013)), while the latter assumes involvement of all necessary parties from the beginning.

By looking at the level of institutionalisation, as suggested earlier – see Grindle (2007) –, it can be determined what actors are most likely to have an influence on the performance of a system and should thus be involved in the capacity building process. This could thus be used as an indicator on which actors to target.

2.5.2.2. STEP 2

During the second step of the capacity development cycle, it needs to be established what makes current performance lacking and how it should be enhanced (UNDP, 2009). Capacity development usually pops up when performance is lacking (Lawrence, 2013). The problem is determining where it is lacking and what can be done about it. Where should the actors cooperate? How can they guide the capacity building process? When has the capacity building process been performed adequately? These are questions that need to be answered (ibid.).

For the purpose of assessing which capacities need to be developed, the UNDP (2009) refers to the capacity assessment process, which is similar to Lawrence's (2013) fourth aspect: for what purpose. It is developed around three steps: (1) *mobilise and design*, (2) *conduct the assessment*, and (3) *summarise and interpret results*. The first step is to look at existing capacities on which the to be developed capacities can be built upon. No matter how underdeveloped an EIA system, there will always be capacities that can be built upon (Grindle, 2007). The second step is to identify manageable goals by comparing existing and desired capacities (UNDP, 2009).

According to Potter and Brough (2004), a hierarchical distinction can be made between capacities. For example, before one starts developing human capacities (e.g. training personnel), it is first needed to develop organisational capacities. This way a hierarchical pyramid can be developed that shows what capacities should be focused on (Figure 3) (ibid.).

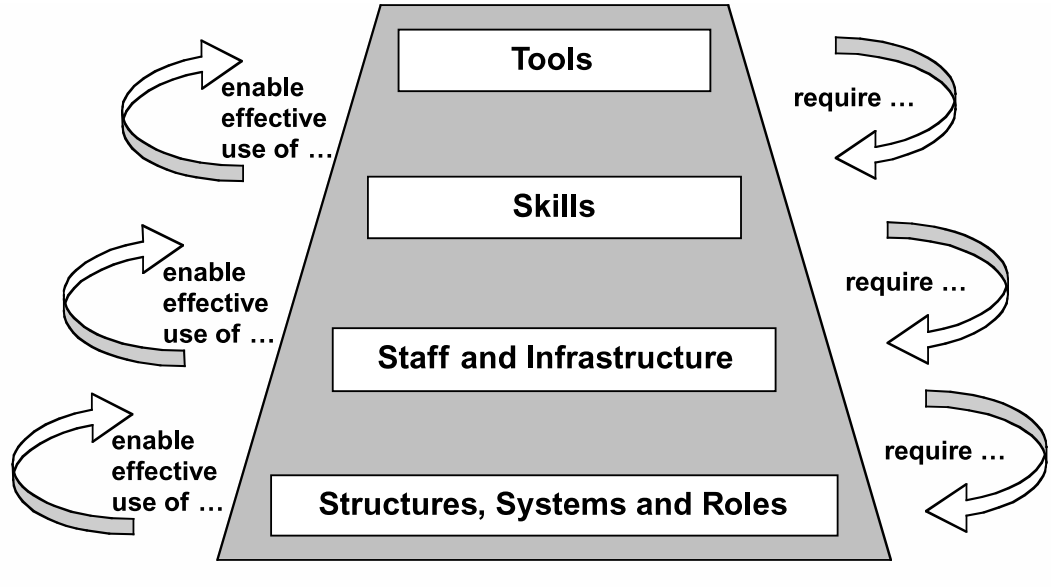

FIGURE 3: CAPACITY PYRAMID (FROM POTTER & BROUGH, 2004)

2.5.2.3. STEP 3

The third step in the capacity assessment process is to interpret the difference between the desired and existing capacities (UNDP, 2009), and is thereby similar to the fifth aspect of Lawrence (2013). During this step it needs to be determined how the desired capacities can be enhanced by means of the existing capacities (UNDP, 2009). Good examples are an increase of ownership through networking, communication technologies, and direct participation of interested and affected people, or increased skills through certification of EIA professionals (Lawrence, 2013).

According to Van Loon et al. (2010) capacity building will only be effective if all lacking capacities will be dealt with at once. Targeting individual problems only cause other problems to arise and as such don't stimulate EIA performance (ibid.). However, as suggested by the hierarchical pyramid of Potter and Brough (2004), it is best to start with a solid foundation – e.g. the regulatory framework (Kolhoff et al., 2009) – and build the other capacities on these.

2.5.2.4. STEP 4 AND 5

Step four and five are the actual implementation and evaluation of the in step 3 developed plan (UNDP, 2009). These steps also involve an *exit strategy*, which shifts external responsibilities to internal parties. Although external intervention is thought to increase the effectiveness of capacity building programmes, lacking an exit strategy might be counterproductive, as the external party becomes more of a burden (ibid.).

2.5.3. POSSIBILITIES FOR CAPACITIY BUILDING

Several intervention possibilities can be identified based on the pyramid developed by Potter and Brough (2004). It is thought that for good EIA performance there needs to be a solid basis for its existence. This existence is based on the organisational capacities of an organisation; primarily on the level of ownership of the key actors in the system and the legal framework. After all, if ownership is lacking, substantive performance of EIA will likely be lacking as well,

while the legal framework provides each party with the means to make the EIA more effective (Dijkstra et al., 2014; Kolhoff et al., 2014).

According to Cherp and Antypas (2003), developing effective EIA and a solid legal framework can be managed best through an inclusive process involving international and domestic experts and stakeholders by means of *trial and error*. Ineffective EIA, on the other hand, are developed by a select group of experts in a short time span. However, this process is based on the willingness – and thus ownership – of actors (with different interests) to cooperate and thus depending on these actors' capacities. In this case, the question thus is: how can ownership be developed?

When ownership is low, the focus needs to be on ownership-enhancing capacities, although this depends on the context (see Dijkstra et al., 2014; Kolhoff et al., 2014). According to Kolhoff et al. (2014) the EIA authority has no influence on substantive performance when ownership of the proponent is low. Although increasing ownership of the proponent by external interventions is difficult (e.g. Kolhoff et al., 2014) it is thought that funding can contribute significantly to ownership of – primarily – the proponent (Dijkstra et al., 2014). Kolhoff et al. (2014) found similar results and state that – contrary to the EIA authority – international financing institutions (IFIs) have a large influence on ownership of the EIA proponent. If this is the case, involving IFIs in the EIA process can have a significant impact on ownership of the proponent and therewith the substantive performance of EIA (Dijkstra et al., 2014).

Dijkstra et al. (2014), however, emphasise that while funding enhances ownership of the proponent, it can also cause governments in LMCs to depend too much on external parties. They warn that the most important cause of lacking EIA performance in LMCs is that most EIA are supply driven. Instead of merely act as funders, IFIs should thus focus on cooperation between both parties and adjust their efforts to the context (Arts & Faith-Ell, 2010; Dijkstra et al., 2014; Kakonge, 2006).

Actively involving and informing IFIs is thus of utmost importance and can only be reached by increasing the capacity *networking* of the EIA authority (Kolhoff et al., 2014). According to Sonderegger (2012) networking – together with ownership, leadership, and power – can be seen as one of the four most important organisational capacities. According to Van der Leest (2013), networking is *"the ability to uphold relationships relevant for achieving goals."* It is important for maintaining and developing relations with actors in the EIA process (Kirchhoff, 2006) and increasing the authority's power position through leadership (Sonderegger, 2012).

Although ownership of the proponent needs to be developed before that of the EIA authority can be enhanced, increasing ownership of the proponent is likely to only cause short-term benefits for EIA performance. Increasing ownership of the EIA authority, however, is thought to enhance substantive performance in the long run as well (Kolhoff, 2015).

According to Kolhoff et al. (2014), the easiest approach to increasing ownership of the authority is by increasing the capacity *means*, or *resource capacities* as Sonderegger (2012) calls them. Resources can be best defined as *"the ability to mobilize monetizable assets to achieve goals"* (Van der Leest, 2013) and thus also depends on the organisations leadership. In LMCs, however, resources are often lacking (e.g. Glasson & Salvador, 2000; Kolhoff et al., 2009; Marara et al., 2011).

Although it is thought that the hierarchy which Potter and Brough (2004) emphasise with their pyramid does reflect the needs for improving EIA systems, the fact that resources – which are almost at the top of the hierarchical pyramid – can be used to improve the bottom of the pyramid reflects the interdependence of the capacities. One cannot exist without the other. This is in line with the statement of Van Loon et al. (2010) that developing a single capacity is unlikely to have an influence on the performance of a system.

To develop the resource capacities, two strategies can be applied: (1) by simply increasing the number of available resources, or (2) using current resources more effectively. In the first case, networking is thought to increase the resources that are needed for effective EIA, as mostly external parties and the EIA proponent are the ones that are necessary for increasing the resources available for EIA in LMCs. When ownership of the proponent is high, they will have to

provide for sufficient resources. Moreover, better coordination of donor policies is a must for effective EIA (Doberstein, 2003; Wood, 2003).

The latter strategy points to establishing an efficient unit that is responsible for monitoring EIA procedures (Kolhoff et al., 2014). A simplified screening procedure, for example, will increase the EIA's effectiveness (Wood, 2003). This option is more likely to lead to an increase of ownership of the authority, but it depends on the capacity *leadership* of the EIA authority (Kolhoff et al., 2009). Leadership is thought of as *"the process through which leaders influence the attitudes, behaviour, and values of others towards organisational culture"* (Kolhoff et al., 2009). In LMCs leaders of EIA are facing political pressure, as they have to deal with development interests more than their counterparts in HICs have to deal with (Marara et al., 2011). Especially those responsible for the screening, scoping, and reviewing of EIA are prone to these pressures (Kolhoff et al., 2009).

Apart from a situation in which ownership or organisational capacities are lacking, it can also be the case that these are already high. Despite the fact that an increase in ownership of the proponent is still likely to result in an increase of substantive performance (Kolhoff et al., 2014), in this case rather than developing ownership-enhancing capacities, (substantive) performance-enhancing capacities should be evolved.

As Potter and Brough's (2004) pyramid shows, after organisational capacities have been developed, human capacities should be developed. This can be done through training and investing in courses for future EIA professionals at knowledge institutes such as universities (e.g. Jay et al., 2007; Morgan, 2012).

However, for EIA to be fully performing each actor in the system needs to fulfil its role. This also means that there should be a solid legal framework that gives each party the ability to correct one another when they do not apply the rules outlined in law. EIA authorities need to adopt their policies as to provide a legal basis for CSOs or NGOs to intervene in the EIA process (Jay et al., 2007; Marara et al., 2011).

For the proponent it is important to be open for changing the project and respect lawfully correct decisions (Kolhoff et al., 2009). Moreover, they should allocate enough funds to carry out the EIA and give the authority the necessary information (Wood, 2003). Knowledge organisations, on the other hand, need to increase their knowledge capacity (Jay et al., 2007; Kolhoff et al., 2009), while civil society organisations (CSOs) need to guide the EIA process and make sure that guidelines are followed (Kolhoff et al., 2009).

A schematic overview of the intervention possibilities is presented below.

2.5.3.1. INTERVENTION POSSIBILITIES

Figure 8 shows intervention possibilities given the level of ownership of the key actors. The starting point for capacity development can be: (1) ownership of both key actors is low, (2) ownership of one of the key actors is low, or (3) ownership of both key actors is high. In the first two situations it has been suggested that ownership of one of the key actors should be improved by means of the strategies outlined in section 2.5.3., while in the latter case other capacities should be focused on as has been displayed by Potter and Brough (2004).

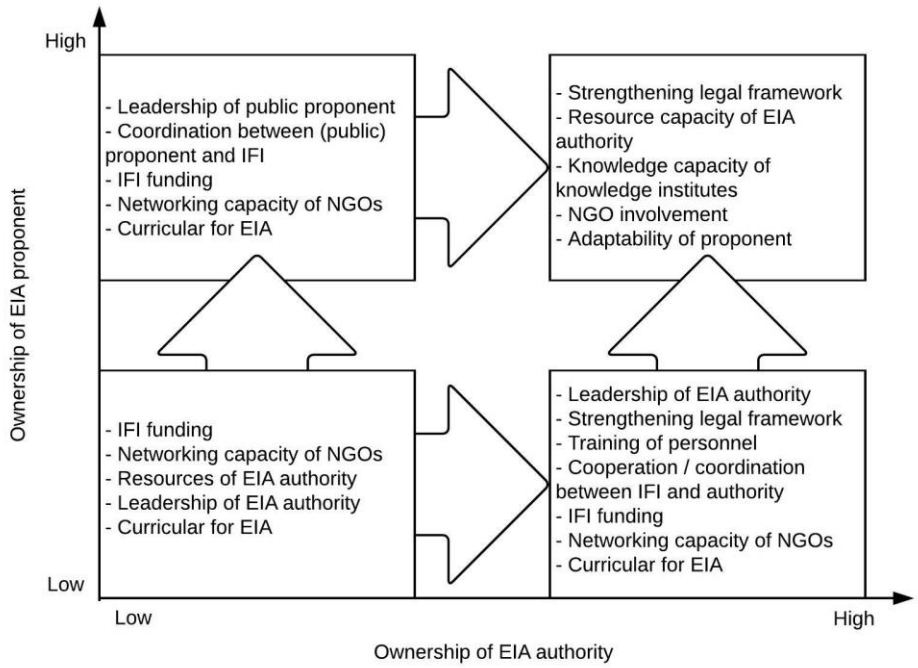

FIGURE 4: PERFORMANCE-ENHANCING CAPACITIES FOR THE KEY ACTORS GIVEN THE CONTEXTUAL BACKGROUND[2]

The categorisation of these intervention possibilities is based on the literature. When the intervention strategy for improving substantive performance of the EIA system – note that this goes beyond EIA performance of a certain project – should focus on increasing the level of ownership of the EIA authority whilst the level of ownership of the proponent is already high, one could, for example, focus on the leadership skills of the public proponent. Note that it states *public* proponent since it has been noticed that especially the public proponent influences EIA performance – being it either negatively or positively – and that only this type of proponent can be influenced (Kolhoff et al., 2014).

Moreover, the figure does only show some options that could lead to better performance of the EIA system. It does not compel a full list of opportunities. These are the ones that have proven to work on other occasions and that are most often described in literature. However, in practice or in a different context other options might prove more efficient or better suitable.

2.6. SECURING EIA CAPACITIES

> "TO BE SUSTAINABLE, CAPACITY BUILDING NEEDS TO BE PATIENT AND FLEXIBLE. IT IS NOT A SHORT CUT TO DEVELOPMENT, OR A QUICK FIX WAY TO MAKE AN ORGANISATION 'SUSTAINABLE'. BEHIND EVERY APPARENT PROBLEM LIES A DEEPER ONE. TAKING A CAPACITY-DEVELOPMENT APPROACH MAY MEAN STARTING SEVERAL STEPS BEHIND THE 'OBVIOUS' POINT OF ENTRY IN ORDER TO AVOID GENERATING RESISTANCE" (EADE, 1997).

The reason for the above quote is to show that there is a step in capacity development that is often overlooked. According to Potter and Brough (2004) capacities can only be build if lower

[2] The arrows in the diagram show an increase of ownership of either the EIA authority or EIA proponent. The boxes show what is needed given the level of ownership of the key actors.

capacities have been developed. However, what if these capacities diminish during the process of capacity development and the basis for development is gone?

For sustained EIA substantive performance there is a need for processes that secure the actors' capacities. These are what I call the *capacity-securing mechanisms* – mechanisms that maintain capacities and facilitate the development of a learning organisation or system that aims to improve performance (Kolhoff, 2015). They can be linked to what in literature is called *organisational learning* (e.g. de Jong et al., 2012; Lopes, 2003; Wiseman, 2007), but differ in the sense that securing mechanisms are driving organisational learning.

Organisational learning can be described as the process in which multiple parts of organisations or systems maintain themselves and adapt to the external context (Gazzola et al., 2011). It is thought to be a driving force for long-term effectiveness (Liao & Wu, 2010). In fact, capacity-securing mechanisms can therefore be best described as the adaptability – or adaptive management (Lawrence, 2013) – of an organisation. Namely, according to Sonderegger (2012), adaptability is a capacity, but it is much more of a securing mechanism, as – according to her own description – it is described as the ability to adopt alternative strategies (ibid.).

As described earlier, different types of capacities can be distinguished that can be hierarchically categorised (Potter & Brough, 2004). For sustained EIA performance, a similar viewpoint should be taken. Without a solid foundation, capacity building will not be very effective. As the process of capacity building develops over a long time span, the capacities at the bottom of the pyramid need to be secured before the others can be developed. If not, the basis for the capacity building program might be gone when the program has finished. Securing capacities should therefore take place at three levels: (1) individual (or actor), (2) institutional (or system), and (3) societal (Lopes, 2003). Once the societal level has been reached, capacities are much more likely to maintain even when influential actors have been long gone (Hope, 2011).

2.6.1. SECURING CAPACITIES AT THE ACTOR LEVEL

However, for every level different mechanisms will be needed that help secure them. For example, at the actor level Jay et al. (2007) suggest that the provision of training secures the knowledge of important actors, as well as their skills, which in turn improves EIA performance (Kirchoff, 2006; Jay et al., 2007; Wood, 2003). An example of a training facility that secures the potential of leadership is to create the opportunity for future leaders to gain knowledge on the organisation through some kind of traineeship. As such, training can be a useful tool for securing EIA capacities, even for mature systems, at the individual or group level (Jay et al., 2007).

Moreover, indirect learning is thought to secure continuous learning and the adaptability of organisations (De Jong et al., 2012). Through indirect learning – system-level learning through project-level interventions (ibid.) – performance can be enhanced even when ownership (or willingness) of the key actors is low (ibid.), although it can be expected that indirect learning is still depending on a person's own capabilities (Noe et al., 2013). With help of donor organisations, indirect learning processes can be initiated (de Jong et al. 2012; James & Wrigley, 2007). Securing mechanisms at the actor level thus focus mostly on securing knowledge and human capacities.

2.6.2. SECURING CAPACITIES AT THE SYSTEM LEVEL

At the organisational level, securing mechanisms should focus on structures and values rather than individual knowledge (Lopes, 2003; Hope, 2011). Adapting a shared vision can be seen as such an example (Doberstein, 2003).

However, the most important securing mechanism is the process of embedding what individuals have learned into the organisation through the process of *institutionalisation*. According to Wiseman (2008), *"institutionalisation is the process of ensuring that routinized actions occur."* Institutionalisation is supposed to embed all that already exists in an organisation into its structure (Wiseman, 2007). Any organisation holds knowledge on a certain topic and institutionalisation is supposed to secure this knowledge in the roots of the organisation. This

would involve structures, procedures and strategies that are in line with the knowledge of institutional knowledge carriers, and, as such, constitutes the basis of the pyramid (Wiseman, 2008).

The difference between institutionalisation and organisational change (e.g. adaptability or capacity development) is that the latter is an on-going process, whereas the first constitutes a solid state (Wiseman, 2007). Securing the capacities should be made measurable and as such be translated to a preferred state (Doberstein, 2003). This state should then again be clearly defined and institutionalised in order to be able to assess whether or not capacity building has succeeded (James & Wrigley, 2007).

2.6.3. SECURING CAPACITIES AT THE SOCIETAL LEVEL

Capacity building has succeeded and is secured when the highest level of change is reached: *society* (Hope, 2011). However, changing a person's believes, values, or skills, is already a difficult task, so changing society's values should not be taken lightly (James & Wrigley, 2007). A method that Wilkins (2003) suggest is the creation of discourse. Subjectivity is often viewed as a negative aspect of EIA, but Wilkins (ibid.) views it as something that secures EIA performance.

Discourses – i.e. *"[…] exchanges of views amongst people […]"* (Wilkins, 2003) – change the way people view their surroundings and, in the case of EIA, the importance of the outcomes of a certain project. If EIA are used to create discourses, the performance of EIA can be guaranteed through *social learning* – process that changes awareness and values of society (ibid.). Morgan (2012) stipulates that public participation would increase the likelihood of social learning. However, in LMCs public participation is generally not working or adding to EIA performance (Glucker et al., 2013). As such, other options should be looked at.

According to Mathur et al. (2008) social learning is fostered by stakeholder engagement. Stakeholder engagement would ensure organisations to oblige to their mandate and at the same time initiate learning between organisations. All engaged stakeholders would have to continuously reflect on their values, believes, mandate, and actions (ibid.).

In the case of EIA this would mean that external actors could be seen as a securing mechanism for EIA performance in general. Earlier it has already been suggested that donor involvement increases ownership of the EIA authority (Dijkstra et al., 2014). It could thus be stated that donor involvement is a securing mechanism, even though it does not secure values at the societal level.

However, for donor involvement to be effective, capacity development should be looked at as a multi-dimensional process, and far from straightforward (Dijkstra et al., 2014). *"This means that external agents need to focus on enhancing the quality of existing and potential relationships within civil society, not just increasing the number of local organisations or implementing **partners**"* (Eade, 1997; emphasis in original). Donors should thus focus at the opportunities that arise for a specific EIA system, meaning that securing-mechanisms are also context-specific.

A mechanism that could secure capacities at the societal level can be found in EIA follow-up (Marshall et al., 2005). Capacity building in itself does not secure capacities. This is done in the phase after (James & Wrigley, 2007).

According to Marshall et al. (2005) three actors can be identified that are important for EIA follow-up: (1) proponent, (2) EIA regulator (mostly EIA authority), and (3) civil society. Once the latter takes part in assuring EIA guidelines are followed and the proponent perform all follow-up activities – i.e. monitoring, evaluation, management, and communication (ibid.) – it can be stated that capacities have been secured at the highest level: *society*.

2.6.4. EXAMPLES OF SECURING MECHANISMS

The NCEA (2014) distinguishes six system functions that can be considered as a first set of securing mechanisms as they focus on maintaining a specific standard of capacities. The system functions need the cooperation of multiple actors and can therefore be considered securing mechanisms at the organisational (i.e. system) level. They consist of:

1. Provide regulatory framework for EIA & decision-making;

2. Raise awareness and commitment for EIA, including funding;
3. Provide EIA education and professional training;
4. EIA helpdesk;
5. Monitor implementation of EIA instrument;
6. Enable professional exchange on EIA.

Each of these will be described below. At the end an overview will be shown in which the securing mechanisms will be linked to the capacities.

2.6.4.1. EIA REGULATORY FRAMEWORK

The first system function can be considered very basic, but is very important for EIA system performance. The regulatory framework can be too ambitious (e.g. Marara et al., 2011), or not clear enough (e.g. Ali et al., 2007). The regulatory framework determines the roles, mandates and possibilities of the actors (Kolhoff et al., 2009) and is therefore thought to be the most important securing mechanism.

2.6.4.2. AWARENESS AND COMMITMENT

The primary focus of this system function is expressed in structural funding for the EIA system (NCEA, 2014) and will therefore be named as such in this research. Funding can increase the willingness of actors to meet the EIA objectives (Dijkstra et al., 2014) and at the same time provides for human and technical capacities.

2.6.4.3. EDUCATION AND TRAINING

Training has already been mentioned beforehand as a securing mechanism, but also education can be seen as a securing mechanism. Education can consist of a curriculum on EIA at a teaching institution such as a university (NCEA, 2014). It is thought to secure the willingness of future EIA professionals, besides the obvious knowledge capacities (ibid.).

2.6.4.4. EIA HELPDESK

A helpdesk can ensure the quality of EIA by sharing knowledge and cooperating with different actors (NCEA, 2014). At the same time, an EIA helpdesk could store information so that it will not get lost (ibid.).

2.6.4.5. EIA SYSTEM MONITORING

Regular system monitoring ensures that the EIA system is updated every few years, which means that it can be strengthened every few years (de Jong et al., 2012). This provides for adequate leadership and learning opportunities (NCEA, 2014).

2.6.4.6. PROFESSIONAL EXCHANGE

According to the NCEA (2014) a platform should be provided for on which EIA professionals can share knowledge and ideas. This will secure existing knowledge, as well as provide for new knowledge (ibid.).

2.6.4.7. OVERVIEW OF THE SECURING MECHANISMS

Table 2 shows an overview of which securing mechanisms secure what capacities. Once it is known which capacities and securing mechanisms *can be changed*, it should be looked at which *should be developed*. Based on the above, the system functions that the NCEA has developed have been linked to the capacities that they are thought to secure (see Table 8). This way it can be determined which capacities should be developed; Namely, the ones that are not yet developed and which are lowest on the hierarchical pyramid.

TABLE 2: OVERVIEW OF THE SECURING MECHANISMS FOR THE SUB-CAPACITIES

Sub-capacities		**Securing mechanisms/NCEA system functions**					
		Structural access to funds	Support & Helpdesk	Training & Education	Exchange	System monitoring	Regulation
Organisational capacities	Willingness	X		X	X		X
	Leadership			X		X	X
	Networking		X		X		X
	Organisational learning			X	X	X	X
Human capacities	Number of staff	X					X
	Quality of staff			X	X	X	X
Scientific capacities	Accessibility to scientific knowledge		X	X			X
	Quality of information		X	X	X		X
	Sharing and cooperation		X	X	X		X
	Usefulness of information			X			X
Technical capacities	Technical tools	X					X
Resource capacities	Funds	X					X
	Non-monetary funds	X					X

However, as is the case with capacity building, securing EIA capacities is also bound to a hierarchy of needs. One cannot start with securing EIA follow-up if the capacities that are needed for EIA are not secured (Kolhoff, 2015).

Moreover, it should be mentioned that although securing mechanisms are important for EIA performance, they only have an indirect influence on substantive performance as they are only sustaining the capacities that allow for effective EIA. As is the case with capacities, capacity-securing mechanisms also depend on the context, as this specifies which actors should be informed or addressed, or what legal opportunities to interfere all actors have.

Lastly, the above list of securing mechanisms is based on current knowledge on the topic, but due to limited research on the topic these have been selected. Further research could provide for other securing mechanisms.

2.7. SYNTHESIS

The above has shown how the objectives of EIA can be met and how EIA system performance is determined. Whilst the objectives of EIA might differ, good performing EIA systems depend on the context and the capacities of the actors. However, the context cannot be changed, which means that – for EIA system performance to enhance – the actors' capacities need to be strengthened. This can be done by capacity building initiatives that include multiple actors.

However, capacity building should focus on context-specific capacities, which are yet to be determined. Existing capacity building processes only focus on methods to develop capacities without taking the context into consideration. Moreover, they do not consider securing the capacities that have already been developed. For this reason a stepwise approach has been developed that looks at the process of identifying context-specific capacities and securing mechanisms. This will be described in the next section.

3. IDENTIFYING CONTEXT-SPECIFIC NEEDS FOR CAPACITY BUILDING

3.1. A FIRST STEP TOWARDS A STEPWISE APPROACH FOR IDENTIFYING CONTEXT-SPECIFIC NEEDS

From the above, a stepwise approach can be developed for identifying context-specific capacities and securing mechanisms that foster (context-specific) performance enhancing capacity building of EIA in (mainly) LMCs. As shown, the most important aspects for EIA performance are (1) the context, (2) the actors in the system, and (3) the actors' capacities.

For system performance to enhance, it has to be known where EIA performance is lacking (Doberstein, 2003). EIA systems differ per country and system performance will also differ per country. For this reason it has to be assessed what aspect of the EIA system should be targeted for capacity building and which actors are responsible for that part of the system (Lawrence, 2013). This helps to use time and resources for improving the EIA system more efficiently.

Not only the actors in the EIA system are of importance for the system's performance, but also their capacities (Kolhoff et al., 2009). Before it has been shown that one capacity overarches all other – i.e. ownership. The level of ownership of the actors is therefore thought to be very important for EIA system performance (Kolhoff et al., 2014). Not only is it important for system performance, but also for capacity building. Ownership of the actors comprises the ability *and* willingness of actors to perform (ibid.). Especially the latter is of importance for capacity building. If actors are not willing to perform, capacity building will not have the needed effects (UNDP, 2009).

Furthermore, it has been shown that a hierarchy exists for capacities (see Potter & Brough, 2004). Based on this knowledge it might be expected that capacities need to be build according to this hierarchical pyramid. If one were to start at the top, capacity building is unlikely to be effective. Since the developed capacities will differ for each context, it should be assessed what capacities can be build on given the context. The same goes for the securing mechanisms. One should start with securing already developed capacities if capacities at the bottom of the pyramid are not yet secured. Which capacities can and should be developed or secured is determining the capacity building strategy.

From these insights, eight steps for performance development can be distinguished:

1. Identify the EIA system performance;
2. Identify the actors in the EIA system;
3. Identify the level of ownership of these actors;
4. Identify the capacities that can be developed;
5. Identify the capacities of the main actors that should be developed or secured;
6. Develop a strategy for implementation;
7. Initiate the capacity-development program;
8. Evaluate the capacity-development program.

In this thesis only the first five steps will be elaborated upon as the final steps have already been written a lot about in the EIA literature and touches upon a different field of research. Examples of intervention possibilities – step 6 and 7 – have been given in section 2.6. (See also Cherp & Antypas, 2003; Dijkstra et al., 2014; Jay et al., 2007; Kolhoff et al., 2009; Marara et al., 2011). Each of the above steps will be outlined below.

It should be noted that although the steps towards context-specific capacities and securing mechanisms will be similar for all EIA systems, the methods that are used for determining the main aspects for each of the steps differ for every context. The context is always guiding the approach in the sense that the outcomes will differ for every situation.

Moreover, four assumptions – which have been taken from the literature – have led to the above steps, naming:

1. In every country there is some kind of EIA system at present (e.g. Dijkstra et al., 2014);

2. Performance of the EIA system is low to moderate, or the potential of the EIA system is underutilised (e.g. Kolhoff et al., 2009);
3. There is at least one actor that is capable to improve EIA performance (e.g. Kolhoff et al., 2009); and
4. EIA system development is an autonomous process that can be enhanced by capacity development (e.g. Grindle, 2007).

Each of the above steps that are at the focus of this research – step 1-5 – has been outlined below for a better understanding on what the steps encompass. The operationalization of these steps is dealt with in section 3.2.

3.1.1. STEP 1 – IDENTIFY EIA SYSTEM PERFORMANCE

The intention of this first step is to identify where EIA system performance is lacking. The EIA system comprises all actors that have an official role in the EIA process – including EIA follow-up – and the regulatory system. As a result, EIA system performance is the extent at which the actors in the EIA system are meeting the objectives of EIA (Kolhoff et al., 2014). What the objectives are is depending on the context and should be agreed on with the different actors (UNDP, 2009). However, the EIA objectives should always include the general short- and long-term objectives of EIA – informed decision-making and environmental protection/sustainable development (Kolhoff et al., 2009). These objectives are therefore the focus of this approach.

3.1.2. STEP 2 – IDENTIFY THE ACTORS IN THE EIA SYSTEM

As said, the identification of actors is an important aspect of a capacity development approach, as it is often unclear who has a (formal) role in the EIA system given the context (Lawrence, 2013). The second step in the approach thus focuses on answering the question: Which actors can be identified?

Seven actors have been identified earlier (see section 2.2.). During this step it should thus become clear to what extent these seven actors are thought to influence EIA performance given the circumstances. It is therefore best to let the driver of change value the importance of the actors for EIA system performance.

The driver of change is the actor initiating the capacity development program. Although it is most likely that this will be one of the key actors – i.e. the proponent or EIA authority (Kolhoff et al., 2014) – this will not always be the case. It would be most effective to have a group of actors that engage in changing the EIA system (Dijkstra et al., 2014).

3.1.3. STEP 3 – IDENTIFY THE LEVEL OF OWNERSHIP OF THE ACTORS

Actor-involvement on its own is not enough for system performance to enhance. These actors also need to be willing to develop the EIA system's performance in meeting the objectives of EIA (e.g. Dijkstra et al., 2014; Kolhoff et al., 2013). The third step thus focuses on which actors show the will to improve EIA system performance.

"The will to" has been identified as part of the capacity ownership. Ownership itself is hard to measure. One can easily say that they want EIA system performance to improve, but whether they mean it for real cannot be determined. The outcomes of ownership are therefore more easily measured. In this study it is assumed that ownership is expressed in the time, effort and money that the actors are willing to invest in enhancing system performance. This way it can easily be determined who is committed to meeting the EIA objectives.

3.1.4. STEP 4 – IDENTIFY THE CAPACITIES THAT CAN BE DEVELOPED

Before it can be assessed which capacities should be developed, it is first necessary to look at the capacities that can be developed. Ownership, for example, consists of two parts: *the will to*, and *the ability to* perform. According to Kolhoff et al. (2014) the will to – consisting of organisational capacities such as leadership-, willingness-, and networking capacities (see Table 1, p. 20) – cannot be changed. A capacity development program targeting these is unlikely to succeed.

Moreover, before it has been shown that capacities need to be secured before others can be developed. If lower-level capacities on the hierarchical pyramid of Potter and Brough (2004) have not yet been secured, higher-level capacities cannot be developed.

3.1.5. STEP 5 – IDENTIFY THE CAPACITIES OF THE MAIN ACTORS THAT SHOULD BE DEVELOPED OR SECURED

This final step is to look for capacities that should be developed or secured given the specific context in which the capacity development program is initiated. These will thus be depending on the context and the main actors identified in the second and third step. Letting the main actors value the main capacities identified in earlier sections should lead to identification of the capacities that are lacking. However, before this can be done, the main actors need to be asked which capacities they think are most important for system performance in their country.

It should be noted that a distinction needs to be made between capacities and securing mechanisms. The assumption is that the securing mechanisms of basic capacities – see the hierarchical pyramid of Potter and Brouth (2004) – need to be developed before one can start building on these capacities.

3.2. OPERATIONALIZATION OF THE STEPS IN THE STEPWISE APPROACH

A first set-up of the approach for identifying context-specific capacities and securing mechanisms has been outlined above. However, it should be determined how all steps can be measured. This will be done below.

3.2.1. STEP 1 – HOW TO IDENTIFY EIA SYSTEM PERFORMANCE

There are several ways to determine EIA performance. For example, Kolhoff et al. (2013) determined EIA performance by looking at the positive project design changes by means of case studies. However, this method is very time consuming and requires all involved parties to cooperate. It is therefore unlikely that this method can be used under all circumstances.

For this reason a different method will be used for determining system performance. This method involves several steps and focuses on the two main objectives of EIA – informed decision-making and long-term sustainable development:

1. Identify the percentage of EIA by-pass;
2. Identify the percentage of EIA rejected;
3. Identify the percentage of EIA inspected; and
4. Identify the percentage of EIA enforced.

The first step is to get a perception of the number of projects that, according to the law, should be subject to EIA, but in practice is not. In other words, the intention is to get a perception on the percentage of by-pass. This can be done by asking several different actors in the system – e.g. EIA authority, CSOs, several proponents, and consultants – to estimate the number of environmental permits that are handed out without an EIA being performed while this should have been done. Low performing EIA systems would have a by-pass above 10%, moderate performing EIA system between 5-10%, and high performing EIA below 5% by-pass.

The second step is to determine the number of EIA that are rejected. The assumption is that at least 10% of the EIA that are performed should reject the project as it is (Kolhoff, 2015). The lower the percentage of rejections, the lower EIA performance. This step can be performed by means of hard figures, provided by the EIA authority, on the number of rejected EIA in comparison to the number of started EIA. It will provide insights on the quality of the EIA process. Low performing systems will have 0-5% of the total number of EIA rejected, moderately performing EIA systems 5-10% and high performing EIA 10% or more.

The first two steps in determining system performance are about the EIA process itself – i.e. screening, scoping, EIA execution and reviewing (e.g. Glasson et al., 2013; Kolhoff et al., 2014; Petts, 2009; Wathern, 2013). The third step focuses on EIA follow-up – i.e. permitting, compliance monitoring and compliance enforcement of EIA (e.g. Kolhoff et al., 2014; Marshall et

al., 2005). During this step, one should determine the number of projects that are in need of control compared to those that are actually monitored. The assumption is that 100% of EIA that have passed and of which the projects are constructed should be monitored. Low performing systems will have up to 50% of EIA inspected, moderately performing systems 50-90% and high performing systems 90-100%. To determine the percentage of inspected EIA one should look first at the number of projects that are being built, and which have gone through the EIA process, and secondly at the number of projects under review. The EIA authority should be capable of providing these two figures.

The last step in determining system performance is about the projects on which EIA outcomes should be enforced compared to the actual enforcement of EIA outcomes. In low performing EIA systems 0-25% of the total EIA will be enforced, for moderate performing EIA this will be 25-50% and high performing EIA systems more than 50%.

The outcome of the analysis will show a gradual decline in EIA performance. It is thought that this helps to determine where system performance is lacking and, as such, will provide insights on the phase – and the actors that are responsible for system performance during this phase – on which capacity development programs should focus.

3.2.2. STEP 2 – HOW TO IDENTIFY THE ACTORS IN THE EIA SYSTEM

The second step involves the identification of the actors that are actively present in the EIA system. A first step in identifying the actors is by looking at the regulatory framework. The official roles and mandates should be determined in law (Kolhoff et al., 2009).

Two actors will always be present in the system: the authority and proponent (Kolhoff et al., 2014). The second step therefore involves asking these two actors if there are other actors involved in the EIA system that have not been mentioned in EIA regulations. This way one can account for limitations in the EIA regulations. In the third step one should compare the actors that have been mentioned with the seven actors listed above. The key actors can be asked why they think there are actors missing if there are differences between the two lists. This can either be because of limiting factors in the context – e.g. a state where NGOs are not permitted – or because of unawareness of the key actors. The context cannot be changed, whereas unawareness can be changed. It is therefore important to assess whether these missing actors are a result of unawareness or context.

It should be noted that whether or not certain actors are part of a system does not determine its performance. The actors are part of the EIA system and it should therefore be assessed which are part of the EIA system given the specific context. However, it does not always mean that a system in which all seven actors are represented performs better than one in which only five out of seven actors are represented.

3.2.3. STEP 3 – HOW TO IDENTIFY THE LEVEL OF OWNERSHIP OF THE ACTORS

Ownership is described as the ability and willingness of actors to fully perform according to the limitations of the EIA system and context. Whether the actors are performing to the possibilities of the EIA system is determined in the first step of the approach. This third step should therefore look at the willingness of the actors.

The willingness of the actors to contribute to EIA system performance is expressed by their attitude towards the capacity building program. If actors are willing to invest time, money and resources in developing the EIA system, their willingness is high. If not their willingness is low. If the actors are only willing to cooperate if other actors provide for monetary and other resources, their willingness is moderate.

3.2.4. STEP 4 – HOW TO IDENTIFY THE CAPACITIES THAT CAN BE DEVELOPED

As said, in this step it should be assessed which capacities have been secured. It is thought that the best method for doing so is by looking at the securing mechanisms that have been identified. Earlier it has been shown which securing mechanisms secure what capacities. It can thus be

assessed which of these are in place. This shows on which capacities can be built. Furthermore, it has been suggested that the securing mechanisms depend on the context. As said, in LMCs capacities are often lacking and actors should therefore look at opportunities to use their resources as efficient as possible. One could therefore assign ambition levels to the securing mechanisms that could be enhanced when the system and the actors' capacities develop.

For example, to what extent the regulatory framework is working depends on how well the regulatory framework is formulated, but also on the actors' capacities. Public participation is often lacking in LMCs due to the context, while this should be included in the regulatory framework according to good practices (e.g. Van der Leest et al., 2013). The function of the regulatory framework is to determine the roles, functions and responsibilities for the actors in the EIA system (Kolhoff et al., 2009), which could thereby secure several of the capacities (see Table 2 on p. 21). However, if the regulatory framework is based on good practices and does not account for the context, it will not be functioning (Marara et al., 2011). The ambition level is then again expressing the possibilities given the context and the level of institutionalisation of the EIA system. This is shown in Table 3. One can build on the capacities if the securing mechanisms are at least low to moderate.

TABLE 3: AMBITION LEVELS FOR THE IDENTIFIED SECURING MECHANISMS[3]

System functions	Ambition-level		
	Low	Moderate	High
Regulation	Regulatory framework is still in development. Not all actors are involved in the EIA process.	Regulatory framework has been developed. Not all actors are involved, or the roles of the actors are not clearly formulated. Possibilities for improvement.	Regulatory framework is clearly formulated and addresses all necessary aspects. Standard is very high and can be considered a best-practice example.
System monitoring	System monitoring at a random basis. No standards or guidelines on when this should be done.	System monitoring happens every 5-10 year. Clear guidelines on what should be monitored.	System monitoring happens every 3-5 years. Clear guidelines on what should be monitored.
Professional exchange	No formal institute organising EIA practitioners' meeting. Meeting at random basis once a year.	Formal institute that is depending on funding from external partners. Meeting happens at least every 6 months.	Formal independent EIA institute that organises regular meetings and functions as knowledge platform.
Training & Education	Only training of EIA professionals. No formal EIA curriculum on universities.	University teaches about EIA, but no full curriculum on EIA.	Full (credited) curriculum on EIA at university-level.
Support & Helpdesk	EIA helpdesk is part of other helpdesk. One should pay for advice. Often of low quality.	Independent helpdesk. One should pay for advice, which is often of poor quality.	Independent helpdesk that can be accessed by everyone for free. Good quality information.
Structural access to funds	Legal framework does not provide for structural funding. Lacking funds prevent good functioning or hiring of external experts.	Legal framework provides for structural funding, but this is not enough for functioning of EIA authority or hiring of experts.	Legal framework provides for structural funding, which is sufficient for functioning of EIA authority and hiring of experts.

[3] Based on Nooteboom et al. (2015) and Kolhoff (2015).

3.2.5. STEP 5 – HOW TO IDENTIFY THE CAPACITIES OF THE MAIN ACTORS THAT SHOULD BE DEVELOPED OR SECURED

As said, which capacities should be developed is based on the hierarchical pyramid of Potter and Brough (2004). This means that first the organisational capacities and resource capacities should be developed. Human capacities should be developed if the organisational capacities are developed and secured. Thereafter follow the scientific and, at last, technical capacities.

It can be assessed to what extent the capacities have been developed by looking at several criteria that have been listed in Table 4. This table provides information on when the capacities are low, moderate or highly developed. It depends on the context to what extent the capacities can be developed.

TABLE 4: DEVELOPMENT LEVEL OF THE ACTORS' CAPACITIES[4]

Actors' capacities	**Development level**		
	Low	Moderate	High
Organisational capacities	There is no clear vision and strategy of the EIA system. Leadership is questioned and there is no transparency in decision-making.	Vision and strategy have been formulated, but are not updated. Leadership style is top-down and undemocratic.	Vision and strategy have been formulated and are updated every few years. Clear leadership with connections at all levels.
Human capacities	Human resources are lacking. There are not enough personnel to perform all tasks. The quality of the personnel is lacking. There is no commitment to meet EIA objectives.	There are not enough personnel to perform all tasks. The quality of the personnel is sufficient. There is some commitment to meet EIA objectives, as long as funding is provided.	Quality and availability of personnel is sufficient. There is commitment to meet the EIA objectives.
Scientific capacities	Science is not available for all EIA actors. Knowledge is not shared and there is no cooperation between actors. Scientific knowledge is therefore hardly applied in practice.	Science is hardly available for all actors. There is some cooperation between actors. Scientific knowledge that is applied in practice is not up-to-date.	Science on EIA for almost everyone available. Cooperation between actors allows for scientific knowledge to be applied in practice.
Technical capacities	Very basic communication technology (e.g. phone). No digital environmental data system. EIA not accessible in data system.	More advanced communication technology (e.g. email). No digital environmental data system. EIA hardly accessible online.	Advanced communication technology (e.g. Skype). Digital environmental data system applied and accessible online.
Resource capacities	Funding is not sufficient for performing all tasks. Office resources and EIA execution resources are not enough to provide for all necessary EIA.	Funding is hardly sufficient for performing everyday tasks. Office resources and EIA execution resources are enough for performing 75% of required EIA.	Enough funding and resources to perform all required EIA.

[4] Based on Van Loon et al. (2010).

3.3. EXPLICATING THE APPROACH

The above approach has been designed to accommodate an interactive process in which multiple actors and stakeholders can take part to jointly provide for a better EIA system. Although the approach is especially developed to increase EIA system performance in LMCs it is thought that the approach can be used on all types of EIA systems ranging from those that are considered as best-practice examples to those that are considered lacking EIA systems.

The operationalization of the steps has been a result of a comprehensive literature review as well as discussions and cooperation with an expert in the field of capacity building in LMCs from the Netherlands. The differentiation between low, moderate, and high levels of development or ambitions is thought to sufficiently divide the different systems. Increasing the opportunities would make the approach more complex without making it explicitly more robust. The robustness of the approach lies more in the different steps and methods that have been used to identify these. Whether others share the same vision is assessed in two intense workshops with EIA experts from LMCs and with practitioners from the Netherlands that develop and implement EIA capacity building initiatives in LMCs. It is thought that this will provide insights on the perception of people working in different contexts on how EIA systems can and should be developed. This will help to strengthen the approach.

4. EXPERIENCES WITH APPLYING THE STEPWISE APPROACH

4.1. FURTHER STEPS IN THE RESEARCH

Further steps in this research are based on strengthening the approach. Although the approach has been formulated by means of an intensive literature review, this does not include the views from experts working with EIA on a day-to-day basis. As said, the approach has therefore been tested by means of two intense discussions with EIA experts from LMCs and EIA practitioners from the Netherlands working on capacity building programs in LMCs. This is in line with suggestions from Hirschemöller and Cuppen (2015), who suggest that tools for policy development should be formulated according to four steps:

1. Problem conceptualization;
2. Sharing and exploring ideas and experiences;
3. Assessing intervention perspectives; and
4. Decision-making.

The first step has already been taken by means of the literature review and the above stepwise approach. The second step involves the first discussion. The intention of the first discussion therefore was to gain insights on the perspective of key actors on capacity development in their countries. It therefore focused mostly on the basic information on which the steps had been based, such as the actors, capacities, and context of the EIA system. This strengthens the steps in the approach and increases its reliability (Hirschemöller & Cuppen, 2015).

Based on the third step, the second discussion focussed on the practical side of the approach and on practical experiences with capacity development in LMCs. The intention is to validate the steps in the research and determine if the methods for completing them are applicable in practice. This should increase the practical applicability of the approach (Hirschemöller & Cuppen, 2015).

The two discussions will be dealt with separately in the sections 4.2. and 4.3. The implications that these discussions have for the approach will be dealt with in the section following the results (see section 4.4.).

Before the results are discussed it should be noted that, although the participants of the discussions do not fully represent all EIA professionals, it is thought that the research population does provide for a solid basis for testing the approach that can be used for further research. However, because the research population is not randomly selected, the eventual outcome of this research is only an indication for a method to identify context-specific needs.

4.2. FIRST DISCUSSION – EIA EXPERT MEETING

The intention of the first discussion was to explore insights on the views of one of the key actors in the EIA system: The EIA authority. The EIA authority has been identified as a key actor in the EIA system (see section 2.2.), meaning that their view on EIA will be of crucial importance for EIA system performance. Unfortunately, for this research it was not possible to include the EIA proponent as well. The EIA proponent constitutes a group of actors that changes for each EIA that has to be performed. For this reason it has been decided that only the EIA authority will take part in the discussion.

Below, the format of the meeting is first described before the participants' profiles and results are presented.The results are split in three sections. First it is described how the participants responded to the questions. Then it is shown what have been negative and positice experiences with the approach. At last the implications for the stepwise approach are discussed.

4.2.1. SET-UP OF THE MEETING

For the first discussion a *focus group discussion* has been used. According to Kitzinger (1994), *"Focus groups are group discussions organised to explore a specific set of issues […]."* The discussion is focussed in the sense that it is organised around a single topic or a set of debatable questions (ibid.). The topics that were addressed in the organised discussion group were developed around a *questionnaire* that had been filled out by the same participants as took part in the discussion before participating in the discussion.[5]

The answers that the participants filled out in the questionnaire where presented to the same participants in the panel discussion. The participants where then asked to shed light on the differences in answers presented to them and the influence they perceive these differences can have on the performance of the overall system performance.

The combination between a questionnaire and panel discussion is thought to strengthen the validity of the results (Boeije & Hart, 2009). As said, the questionnaires will be used as input for the discussion. Personal communication with the respondents after filling in the questionnaire will enhance the reliability of the answers given by them, while structuring the information beforehand will increase the validity (Edwards et al., 1990). The panel discussion allows for interaction and thus more input from others, which is thought to diminish the bias (Doumont, 2010). Moreover, with a good selection strategy, it covers a wide array of views on different EIA systems (Nair et al., 1992). The information that can be distilled from a panel discussion gives a good overview of what EIA authorities perceive to be of importance for the substantive performance of EIA and thus connects literature to practice.

The selection of the participants for the panel discussion as well as those for the questionnaire is based on recommendations from an expert in the field of EIA in LMCs from the Netherlands. The group of participants consists of people working for an EIA authority in a LMC and who took part in the IAIA 2015 conference in Florence. Even though bias can be expected, it is thought that this selection strategy gives the most viable outcomes since the topic is prone to socially desired answers and the anticipated unwillingness of participants to talk openly about, for example, corruption. In this case, the need for trust between the participants and the researcher needs to be high for the most valid results (Verschuren & Doorewaard, 2010).

The panel discussion had been performed at Wednesday April 21st from 12.30 pm till 14.30pm. This is due to the fact that it has been held on the 2015 conference of the International Agency for Impact Assessment (IAIA). This is the largest annual conference in the field of EIA and with many high-ranking (international) EIA professionals attending the conference, the likelihood of having a balanced and well-informed group of individuals is largest on this occasion.

4.2.2. PARTICIPANTS' PROFILES

In total 22 participants of twelve countries agreed to participate in the questionnaire and first discussion. One representative called in sick, bringing the total to 21 participants of eleven countries. Of these, the participants of six countries filled out the questionnaire, naming Georgia, China, Namibia, Suriname, Sudan, and Taiwan. Table 2 and 3 show the countries that were represented and some basic information about their EIA system.[6]

For illustrative purposes the participants have also been placed in the grid that shows the context according to Grindle's (2007) categorisation (see Figure 5). This is important for reflecting on the context. As suggested, the outcomes of the stepwise approach are depending on the context and the context should therefore always be kept in mind. The differentiation in contexts helps to reflect on the implications that the results from the first discussion might have on the stepwise approach. However, it should be noted that the division does not show all aspects of the context. It is only a visualisation of the most important context-factor: the political environment.

[5] See Appendix 1 for an example of the questionnaire.
[6] See Appendix 2 for a full overview of the participants of the first discussion.

TABLE 5: PARTICIPATING COUNTRIES AND BASIC INFORMATION ON THEIR EIA SYSTEM (PART I)

Country		First EIA	Current legal framework	Competent authority	EIA/year	Source
Africa	Mozambique	1997	1998; EIA Regulations, 2004; EIA Procedures	Ministry for the Coordination of Environmental Affairs	n.d.	Henriques et al. (2008); NCEA (2015a)
	Namibia	1998	2008; Environmental Management Bill	Directorate of Environmental Affairs	1200	Roux (2003); Tarr (2003); Ruppel & Ruppel-Schliting (2011)
	Nigeria	1992	1992; EIA Directive 86/1992, 1994; EIA Procedure	Federal Environmental Protection Agency; Federal Environmental Protection Council	55	Lee and George (2013)
	Sudan	2001	No legal guidelines, 2001; Environmental Protection	Higher Council for Environmental and Natural Resources	10	NCEA (2015b)
	Tanzania	2004	2005; National Environmental Impact and Auditing Regulations	TANAPA; TANESCON	80 – 100	Lee and George (2013); NCEA (2015d)
	Uganda	1995	1998; Environmental Impact Assessment Regulations	NEMA	460	Kahangirwe (2011)

TABLE 6: PARTICIPATING COUNTRIES AND BASIC INFORMATION ON THEIR EIA SYSTEM (PART II)

Country		First EIA	Current legal framework	Competent authority	EIA/year	Source
Asia	China	1979	1989; Environmental Protection Law	National Environmental Protection Agency	200	Lee and George (2013)
	Taiwan	1994	1994; EIA Law	Local Environmental Protection Bureau; National Environmental Protection Agency	100	Lee and George (2013)
	Lebanon	2011	2012; EIA Decree	Ministry of Environment	n.d.	El-Jisr et al. (2012)
Europe	Georgia	1996	1996; Law on Environmental Protection, 2007; Permit for Impact on the Environment	Ministry of Environment	90	Kolhoff et al. (2013)
Latin America	Suriname	-	No legal framework, 2009; Generic Guidelines on EIA	NIMOS	8	NCEA (2015c)

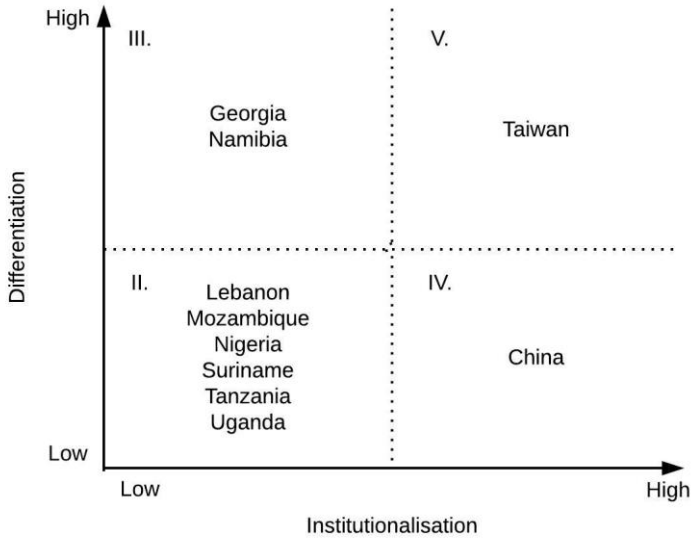

FIGURE 5: PARTICIPANTS DIVIDED BY CONTEXT[7],[8],[9]

The figure shows that most participants can be categorised as category II states (personal rule; see section 2.4.). One falls out of the figure as they are categorised as category I. In these countries there is hardly any basis for capacity development (Grindle, 2007).

The distinction in systems for each of the participants is based on the criteria that Grindle (2007) uses in her dissertation – ranging from category II (personal rule) to V (institutionalised competitive). She refers to a difference in legitimacy of the government for each of the described systems. For this reason the Corruption Perception Index (CPI) 2014 has been used. This index shows how corrupt and accountable the public sector of a country is perceived to be by analysts, business people, and corruption experts (Transparency International, 2015). It is thought that this index is relevant for EIA in these countries as well, as it is part of the public sector.

Another indicator for Grindle's (2007) division of states is that of its level of differentiation, which has been described as the level of democracy in a country (ibid.). For this reason, the CPI has been combined with the Democracy Index (DI) 2014 of the Economist Intelligence Unit (EIU) to get the total level of differentiation. The DI measures the level of democracy in a country at a certain point in time by looking at the electoral process, civil liberties, government functioning, political participation, and political culture (EIU, 2015). Combined the CPI and DI show the level of differentiation in a country.

As suggested, there is another aspect that Grindle (2007) uses to define the differences between the types of governments: the level of institutionalisation. To determine the level of institutionalisation two other indicators have been used. The first is the Global Competitiveness Index (GCI) 2014-2015. This index measures national competitiveness by looking at the micro- and macroeconomics of a country (Schwab et al., 2014). Competitiveness is described as *"[…] the set of institutions, policies, and factors that determine the level of productivity of a country"* (ibid., pp. 4). As such, the GCI can be seen as a useful tool for measuring the institutionalisation of a country.

The GCI compels 12 pillars of which some have no direct link with institutionalisation. For this reason one of the pillars of the GCI has been used as an extra indicator for the level of

[7] Sudan is missing in this graph as they are categorised as a category I country. This means that capacity development is unlikely to result in a better performing EIA system.
[8] No distinction has been made within the four shown categories. The countries in the respective categories have been listed alphabetically.
[9] See Appendix 3 for a full overview of the criteria on which figure 5 has been based.

institutionalisation, naming *Institutions*. This way the institutional aspect has a bigger influence on the division of the states than the other pillars. Only taking the institutional pillar, however, does not reflect all aspects of Grindle (2007) and would limit the categorisation to only one aspect of institutionalisation. It is therefore used in combination with the total GCI-score.

4.2.3. RESULTS OF THE FIRST DISCUSSION

In this part of the thesis the results of the first discussion will be presented in three steps. First, the answers from the participants will be discussed. These will be structured according to the stepwise approach. Second, the experiences with the stepwise approach will be discussed. Last, the implications for the approach are discussed.

4.2.3.1. PARTICIPANTS' RESPONSES TO THE STEPWISE APPROACH

STEP 1 – EIA SYSTEM PERFORMANCE

The hypotheses were that high performing EIA systems would: (1) hardly approve any projects without an EIA (max. 10% of total number of projects is approved without EIA preceding the decision), (2) always follow the steps according to the law, and (3) always follow the environmental standards that have been legally adopted.

The questionnaire provided for the data that was needed to determine system performance. For illustrative purposes the first hypotheses has been outlined in Figure 5. This figure shows the example of Georgia. The figure shows the lacking performance of the Georgian EIA system in the red-white parts. High performing EIA would have no projects executed without EIA and a higher number of rejected projects. Note that a distinction has been made between the EIA phase and the phase after EIA, which has been named EIA follow-up – consisting of the inspection and enforcement phase. In the latter period, a high functioning system would have all projects inspected and a high number of projects enforced

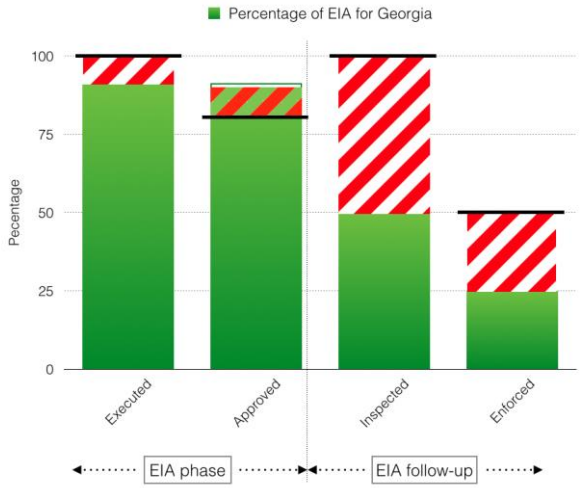

FIGURE 6: EXAMPLE OF DIMINISHING EIA PERFORMANCE FOR GEORGIA

The participants had no remarks on the method that had been used to determine system performance. They suggested that in their respective countries the EIA system either had more than 10% of the total amount of projects implemented without an EIA being performed, or that legally required steps were not always followed (see Table 7).

TABLE 7: INDICATION ON LEGALLY REQUIRED STEPS IN EIA AND IMPLEMENTED STEPS IN PRACTICE

Legally required steps in EIA	Georgia	China	Namibia	Suriname	Taiwan	Uganda
Mitigation measures	Always	Always	Always	Not legally required	Always	Always
Alternatives in project design	Not legally required	Sometimes	Not legally required	Not legally required	Sometimes	Often
Alternatives in site or location	Always	Sometimes	Always	Not legally required	Sometimes	Sometimes
Alternatives for routing (in case of linear infrastructure)	Always	Sometimes	Not legally required	Not legally required	Sometimes	Often
Compensation measures	Always	Often	Always	Not legally required	Often	Always
Inform public during scoping	Always	Always	Always	Not legally required	Always	Sometimes
Inform public during reviewing	Not legally required	Always	Always	Not legally required	Always	Often
EIA authority needs to answer comments	Always	Sometimes	Sometimes	Not legally required	Not legally required	Always
EIA authority needs to publicly justify EIA decisions	Not legally required	Sometimes	Sometimes	Not legally required	Always	Sometimes
Opportunity for appeal by the public on one or more of the EIA decisions	Always	Sometimes	Always	Not legally required	Sometimes	Sometimes

STEP 2 – THE ACTORS IN THE EIA SYSTEM

In the questionnaire the participants were asked to indicate the actors they think are important for the performance of the EIA system. They were asked to rank 7 different actors that, according to the literature, are thought to have the biggest influence on EIA performance. None of the respondents came up with his/her own actor(s), while there was room for adding more to the list. From this it reads that the most important actors – without indicating which is more important than the other – in the EIA system are: (1) IFIs, (2) the EIA authority, (3) public proponents, (4) private proponents, (5) sector authorities, (6) knowledge actors, and (7) the public.

As said, each respondent prioritised the actors according to the situation in their own countries. Although there was some variety in the given answers, the main conclusion that can be drawn is that the EIA authority and the proponent (either public or private) have the biggest influence on EIA performance. In less developed EIA systems, IFIs are also considered to have a large influence on EIA performance. Whether or not this influence is negative or positive does not follow from the answers. The actor that is considered to have the lowest influence on EIA performance is that of the knowledge institutions (for all answers see Table 8).

TABLE 8: PRIORITISATION OF ACTORS ACCORDING TO THE PARTICIPANTS[10]

Actors	Georgia	China	Namibia	Suriname	Taiwan	Uganda
International financing institutes & donors	1	6	7	1	7	2
Private proponent	2	1	1	3	5	3
EIA authority	3	3	1	2	1	1
NGOs & public	4	4	4	4	4	5
Sector authorities	5	5	4	5	3	7
Public proponent	6	2	1	6	2	4
Knowledge actors (e.g. consultants)	7	7	4	7	6	6

Although the importance of the actors seems similar, their roles can differ. Especially the role of IFIs differs per context. An example of a country that lets IFIs follow their own procedures is Surinam. They state that the procedures of IFIs are sometimes more stringent than the ones from the country itself, as they do not have a full EIA system yet. To accommodate learning and to make sure that the best possible outcome is guaranteed, they have IFIs follow their own procedures. In this case, the role of the IFIs is different than when they operate in a country that has a more developed system. In that case, according to the respondents, they merely serve as financers.

[10] The numbers represent the position that has been given to each of the actors. One is highest and seven is lowest.

Also the role of the public proponent has proven to be different in certain scenarios. From the literature it read that public proponents have a bigger influence on EIA performance than private proponents (e.g. Kolhoff et al., 2013), but according to most of the respondents that filled out the questionnaire, the private proponent has a bigger influence on EIA performance than the public proponent.

During the discussion it became clear why. While in some instances EIA are circumvented by the public proponent, in other, the rules are more stringent than with a private proponent. One of the respondents suggested for example, *"they [the public proponent] want a speed-up of the process"*, or *"some [public] projects are not submitted"*, while another remarked: *"the rules for the government are more stringent."* This suggests that the public proponent was in general considered to have a large influence, but that it depends on the willingness of the actor whether this influence is negative or positive.

The private actor on the other hand has little influence on the EIA process. When the authority makes sure that all steps in the EIA process – including EIA follow-up – are met, the private proponent will have to comply with the EIA decisions. As such, in this case it depends on the EIA authority if EIA performance will be high.

STEP 3 – OWNERSHIP OF THE ACTORS

During the discussions the participants went with the idea that the willingness of actors is very important for their possible influence on EIA. However, they could not state how this would influence EIA performance, or how this could be measured. They suggested that actors that are *not* willing to participate in EIA are mostly negatively influencing EIA. These actors mostly have more resources than the actors that are willing to invest in EIA. This provides that they have more power and influence.

For example, according to one respondent the private proponent has more money available and as such is capable of generating more public awareness. If the private proponent is concerned with the environment and the local people, they have more means to include public opinions in the decision-making. This respondent from Nigeria stated:

> "SOMETIMES WITH PRIVATE PARTIES, THERE WILL BE MANY PUBLIC PARTICIPATION. THIS MAKES THE EIA MORE EFFECTIVE."

So, the private proponent can have a large influence on EIA performance, but only when it is willing to invest in the process. An example that had been given was the increasing awareness of commercial banks, which only give loans if projects meet their requirements. However, if the private actor is not willing to invest, it is up to the EIA authority to ensure that the proponent follows the rule of law.

STEPS 4 AND 5 – ACTOR CAPACITIES

Steps 4 and 5 have been combined, as it appeared that the participants had little knowledge on the capacities that can be strengthened. They noted that all identified capacities are important and should be developed, but they could not say what was needed for their development. For example one participant from Lebanon suggested:

> "I CANNOT SAY WHICH CAPACITY IS MORE IMPORTANT THAN THE OTHER. THEY ARE ALL EQUALLY IMPORTANT TO ME."

However, in the questionnaire the participants were asked to prioritise the actors' capacities.

The twelve capacities that needed to be prioritised consisted of the six (sub-)capacities outlined in section 2.2. The six securing capacities were added to these – in Table 6 the securing

mechanisms are in *italic*. It strikes that the participants mostly ranked the securing mechanisms lowest (for all answers see Table 9). This means that, in their view, they are deemed to have least influence on EIA system performance in their countries. The meaning and usefulness of the system functions have been further discussed in the NCEA meeting (see section 4.3.).

For a large part the participants agreed with the hierarchical pyramid of Potter and Brough (2004). The capacities they ranked highest are concerned with the roles (e.g. vision), structure (e.g. leadership) and system in itself (e.g. the regulatory framework). Technological tools, on the other hand, were deemed less important. Although these answers are not similar for all respondents, they are mostly in line with what has been discussed before.

TABLE 9: PRIORATISATION OF CAPACITIES ACCORDING TO PARTICIPANTS[11]

Capacities	Georgia	China	Namibia	Suriname	Taiwan	Uganda
Leadership	1	2	1	3	2	2
Regulatory framework	2	3	1	1	1	1
Staff	3	6	1	7	4	3
Vision	4	4	1	2	3	9
Knowledge	5	11	1	8	6	7
Funding	6	10	1	11	10	4
Training	7	9	1	5	7	6
Exchange	8	8	12	6	12	11
Networking	9	1	9	9	9	5
Monitoring	10	7	1	10	5	10
Helpdesk	11	5	9	4	8	12
Technology	12	12	9	12	11	8

Moreover, the participants noted that it depends on the context which capacities are most important. Better said, according to one participant from Nigeria, "*the need for capacities enhances as the system develops.*" When asked which capacities are most important the respondents answered that all are equally important, but that the needs enhance over time. Those who answered the questionnaire reflected this in their answers.

The differences in answers stem from a difference in priority. For example networking was only considered important when there is a need for coordination between authorities. This is usually the case when procedures need to be integrated. This is only possible when there is a system that is functioning to its potential and the potential needs to be enlarged.

However, whilst the discussion supported the idea that a different context asks for different capacities, it did not become clear which capacities are needed when. A different approach is thought to gain more insights into this matter. However, due to limited time, this research will focus on the data that could be derived from the literature study.

[11] The numbers represent the position that has been given to each of the actors. One is highest and twelve is lowest.

4.2.3.2. EXPERIENCES WITH THE STEPWISE APPROACH

The discussion provided some difficulties. As said, before the discussion a questionnaire had been sent to the participants of the discussion. Despite their agreement to participate in both the discussion and questionnaire, only six countries returned the questionnaire. This makes it hard to interpret the results, as there might be differences in how the participants viewed main concepts. This came forward during the discussion, as some participants reformulated the concepts. For example, while talking about the importance of actors for EIA the participant from China suggested:

> "IMPORTANCE IS SOMETHING DIFFERENT THAN INFLUENCE. THE INFLUENCE OF CERTAIN POSITIONS IS DIFFERENT FOR EIA THAN THEIR IMPORTANCE."

For some part this can be explained by the fact that four people represented Nigeria, while there was only one representative of Lebanon, Namibia, or Sudan. Also the fact that some did not understand the questions, or did not take the time for the questionnaire played its part, even despite the possibility to respond to the questions one-on-one. None of the respondents had chosen the latter option.

Moreover, the discussion regarding the lacking performance of EIA in LMCs has proven to be one on delicate grounds. Two respondents – from two different countries – asked for a one-on-one discussion, while one country did not take part in the discussion at all. During the discussion, however, it became clear that most countries recognise that EIA in their countries are often only used as a formal procedure that needs to be fulfilled, rather than as a tool for providing more sustainable projects.

For example, one of the participants stated that: *"there is a tendency to stop EIA once it is known what it means for businesses"*, while another one suggested that: *"EIA is only a formal route".* These remarks highlight the fact that EIA might not meet the expectations of the EIA professionals regarding informed decision-making and also do not contribute to sustainable development in the long run. This is important to notice, since this suggests that the objectives of EIA are likely not being met.

Moreover, during the discussion it appeared that the role of the different actors is not always clear. For example, while the participants are aware of the fact that IFIs have to follow the rules outlined by the country's law, they sometimes bypass these laws. This can be part of a strategy, but it can also be because of other reasons that have not become clear – the participant with knowledge on this regard did not want to answer the question.

Furthermore, it should be remarked that it appeared as if some participants were giving answers that they thought the author wanted to hear. This should therefore be taken into consideration for the next discussion.

Lastly, during the first discussion with EIA experts working for EIA authorities in LMCs it became clear that the approach is considered quite complex and could therefore need the help of EIA capacity building experts to facilitate the process. These experts would need to have considerable information about EIA capacity development and the influence of the context on EIA systems. They could then also function as a bridge between the involved actors to make sure that all understand the approach similarly.

4.2.3.3. IMPLICATIONS FOR THE NEXT PHASE IN DEVELOPING THE STEPWISE APPROACH

Taking into account the above experiences with the approach, in the next phase of this research the participants should be selected according to their knowledge on capacity development. The above suggests that capacity development needs to be guided by professionals to overcome misconceptions in the approach. Moreover, the concepts need to be better explained during the discussion. This will avoid misinterpretation and provide for more information from the discussion group.

Furthermore, it is suggested that some actors are more important for EIA performance than others. This means that a priority should be determined for the actors in the EIA system. If resources are scarce, the focus can be on the more important actors in the system. Moreover, it should also be determined which actors are working against EIA performance and how this can be prevented. The participants mentioned that – especially in less institutionalised states – there are more influential actors that try to by-pass EIA.

4.3. SECOND DISCUSSION – EIA PRACTITIONERS MEETING

The third step in constructing the approach consists of a discussion with employers of the NCEA who perform capacity building programs in LMCs. The intention is to get a practitioners point of view on the approach and the theories and assumption that are behind it. Moreover, the practitioners will have a better understanding on methods to derive the necessary information for the approach, which was lacking in the previous discussion.

4.3.1. SET-UP OF THE MEETING

The intention of the second discussion was to gain insights on the applicability of the stepwise approach. Also during this step a focus group discussion was used as the primary data collection method. The results from the questionnaire and first discussion had been used as input for the NCEA meeting for more in-depth understanding on some issues that emerged during the first discussion.Interaction between the participants is necessary in order for them to come up with new ideas and methods for gathering the necessary information (Hirschemöller & Cuppen, 2015). It is thought that sparring between the participants will result in a better overview of the benefits and possible shortcoming of certain methods (Nair et al., 1992).

The participants for the second discussion have been selected based on their knowledge of and practical experience with EIA systems in LMCs. For practical purposes, only employers of the NCEA have participated in this research due to time and geographical constraints. Moreover, the NCEA has a unique position in the area of EIA and is widely known for its work in LMCs (NCEA, 2011).

4.3.2. PARTICIPANTS' PROFILES

The NCEA is the Dutch EIA authority. Their international department has a legal status as an independent advisor for foreign governmental organisations responsible for EIA (NCEA, 2014). The participants of the second discussion all work at the international department of the NCEA as either Senior Technical Secretary (six participants) or Junior Technical Secretary (one participant). Apart from one Senior Technical Secretary, these are all the people actually working on strengthening EIA systems in LMCs for the NCEA. They all have experience with working in LMCs ranging from two to twenty years of experience.

4.3.3. RESULTS OF THE SECOND DISCUSSION

The results of the second discussion will be structured similarly to those of the first discussion. First the participants' responses to the questions will be discussed for each of the steps in the stepwise approach. Thereafter the experiences with the stepwise approach will be discussed. Lastly the implications for the stepwise approach are determined.

4.3.3.1. PARTICIPANTS' RESPONSES

STEP 1 – EIA SYSTEM PERFORMANCE

The participants noted that the method for identifying system performance should be better elaborated. According to them the method mixes up EIA and the projects that are subject to EIA. Those are two different things that should be separated. According to them a good performing EIA system distinguishes between projects that are subject to EIA and those that are not. This

means that an additional step should be added to the first method of identifying system performance.

Moreover, the participants also think that for the first step it might be best to ask for a perception on the percentage of by-pass for EIA, although one participant mentioned that it could be possible to get clear figures on these numbers if the actors are willing to archive this information. However, the other participants noted that it is unlikely that this will be the case in LMCs.

Furthermore, the participants also suggested that a combination of methods would enhance the reliability of the approach.

STEP 2 – THE ACTORS IN THE EIA SYSTEM

Moreover, the participants agreed with the identified actors, but remarked that they also notice that commercial banks are becoming more important actors in the EIA system. Besides, they emphasised that some actors have a direct influence on EIA system performance, while other actors can have an indirect influence. One of these actors can be the judiciary and the media. While the latter can be sorted under a representative of the public, the first constitutes a new actor in the EIA system. Also the president, or leading individual, has been named as a key actor, as he/she can have a primary role in EIA performance in LMCs.

In contrast to what the participants at IAIA suggested, the proponent is considered to have little influence on the EIA system. The participants of the NCEA meeting mentioned that the proponent should be looked at as a group of actors rather than an individual actor and can therefore not be influenced. Individual proponents can be influenced, but not as a group. If ownership of one proponent is high, the EIA for that specific project can be improved. However, this is of little influence for EIA system performance.

STEP 3 – OWNERSHIP OF THE ACTORS

Before EIA system performance can be improved, it needs to be evaluated which actors can take part in the process. The NCEA looks at ownership as "the will to…" – what they call commitment – of the actors. According to the participants the level of ownership can be determined by looking at the extent to which actors are willing to invest time, money, and resources in the development process.

In previous research ownership had been identified as a key capacity for the main actors. However, according to the participants at the NCEA meeting ownership is only a precondition for the possible influence of the actors in the EIA system, but does not determine the *actual* influence on the performance. To what extent the actors in the EIA system can influence the system's performance is in the end determined by the actors "will to" AND their relative position in the EIA system.

STEP 4 – ACTORS' CAPACITIES THAT CAN BE DEVELOPED

In contrast to what has been suggested earlier, the participants noted that all capacities can be influenced, including the organisational capacities. Some capacities are more easily adapted than others, but in the end all can be changed. An example that the participants mentioned is the capacity networking. Networking can only be changed through an actor's leader. If leadership is lacking, networking can hardly be changed. In case leadership capacities are developed, networking capacities can be developed as well. This thus reflects the idea of building capacities according to the pyramid of Potter and Brough (2004).

The idea of securing mechanisms was new for the participants, but sparked enthusiasm amongst the participants. They stated that they could use the idea for their own development programs and suggested that the system functions they distinguish (see section 2.6.4.) could be seen as mechanisms that secure actors' capacities at system level. Although there are also securing mechanisms at the actor level, the system functions secure capacities between different actors in the system. If one actor falls outside the system, others can fill in the gap.

STEP 5 – ACTORS' CAPACITIES THAT SHOULD BE DEVELOPED

The participants also suggested that the development of the system determines which capacities should be developed, although all capacities and system functions are considered equally important in the eyes of the participants. This is in line with what has been found during the IAIA conference.

4.3.3.2. EXPERIENCES WITH THE STEPWISE APPROACH

Overall the participants understood the intentions of the stepwise approach and the four assumptions that facilitate it, although one participant suggested that a different term should be used for the autonomous process of change of the EIA system. However, this participant agreed with the fact that the EIA system is changing without interference from external or internal drivers of change.

Furthermore, according to the participants, the objectives of EIA differ per country, while for the stepwise approach it has been stated that objectives of EIA are assumed to be informed decision-making and long-term sustainable development. This should therefore be made clearer, since the participants were not aware of this assumption for the stepwise approach.

Moreover, the participants had troubles with the identified capacities. They suggested re-evaluating the identified actors' capacities by means of the NCEA's approach. However, they got along with the idea after explaining the idea of securing mechanisms and the assumption of a hierarchy in capacities.

Lastly, the second discussion proved to be more lively and provided for better insights to develop the stepwise approach than the first discussion. This is partly because of adaptions made due to the last discussion. However, the participants of the second discussion proved to have a better understanding of capacity development and what is required for good performing EIA systems.

4.3.3.3. IMPLICATIONS FOR THE APPROACH

The participants suggested adding a step to the method for identifying system performance, which helps to identify the number of projects that should be subject to EIA and those that only need an environmental permit. For this purpose they suggested to use a decision tree starting with the number of projects that need environmental permitting and end with the projects that need enforcement of EIA decisions. This way it should clearly show the decreasing performance of the system. The decision tree should facilitate the process of identifying what information is needed and how this information can/should be gathered.

Furthermore, one assumption should be added to the stepwise approach, naming: the primary objectives of EIA are always informed decision-making and long-term sustainable development. Moreover, the participants mentioned that an additional step should be incorporated in the stepwise approach. Next to identifying ownership of the actors, the relative level of influence should also be identified.

A last remark reflects the need for a capacity development expert. As said, the last discussion resulted in better outcomes due to better understanding of the participants. It is thought that this is also needed for performing the eventual stepwise approach.

4.4. ADAPTIONS TO THE STEPWISE APPROACH

The purpose of the above has been to increase the validity and reliability of the data and to refine the approach so that practitioners working on capacity development programs can use it. The main data can be considered qualitative, which means that it cannot be generalised. The data was analysed by categorising the data and gradually combining the categories until they cannot be combined any longer. This method fits with that of the *Qualitative Content Analysis* described by Mayring (2000). The data that was derived from this analysis was then used in

comparison to the literature study. The combined results were than used to refine the approach presented in chapter 3. The implications for the first five steps are shown below.

4.4.1. STEP 1 – IDENTIFY EIA SYSTEM PERFORMANCE

The participants of the NCEA meeting noted that it should be better elaborated. For this reason a decision tree has been constructed (see Figure 5), which should function as a method for determining system performance.

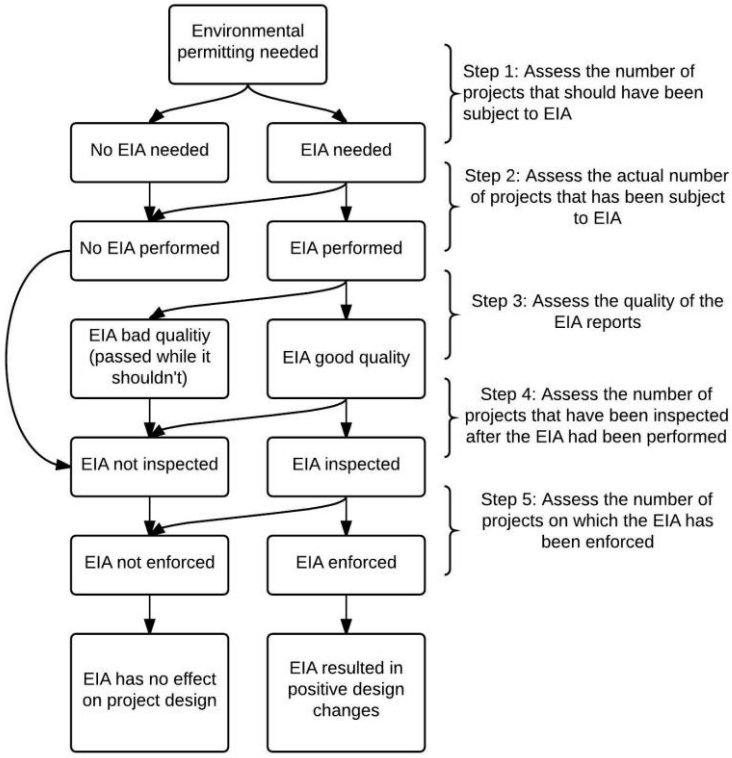

FIGURE 7: DECISION TREE FOR EIA SYSTEM PERFORMANCE

By means of the steps outlined in figure 5, it can be identified what information is needed for evaluating system performance. For the first step one should look at the number of environmental permits given out in one year. By asking several actors in the EIA system, it can be determined what percentage of these permits these actors think should have been subject to EIA. By looking at the actual number of EIA performed in a year (step 2), it can then be assessed to what extent EIA has been by-passed.

Step 3 is to assess the quality of the EIA itself. What is the number of EIA that passed while they should not have passed? That is the central question in this step. This can either be assessed by looking at the quality of EIA reports, or by asking the perception of several actors in the EIA system. It is depending on the context what method can be used best, but a combination of methods is preferred.

Step 4 and 5 are similar and look at the EIA follow-up. In this phase EIA should be monitored and enforced. The EIA authority is responsible for making sure that the EIA proponent is doing what is intended.

4.4.2. STEP 2 – IDENTIFY THE ACTORS IN THE EIA SYSTEM

According to the participants of the first panel discussion, the political situation in a country determines for a large part which actors can have an influence on EIA. However, it also depends on the willingness of the primary actors whether or not the EIA system will be functioning. For example, one representative of Lebanon suggested that:

> "TAKE FOR EXAMPLE A DICTATORSHIP. IF THE DICTATOR IS VERY CONCERNED WITH THE ENVIRONMENT, AND HE WANTS THE ENVIRONMENT OF HIS COUNTRY TO BE THE BEST, HE WILL HAVE A HIGH EIA. AND THE OPPOSITE, IF YOU HAVE A DEMOCRATIC COUNTRY WHERE THERE IS NO OWNERSHIP FOR THE ENVIRONMENT YOU WILL SEE THAT NOTHING WILL WORK."

This means that these participants mostly agreed with Kolhoff et al. (2013) that ownership is the most important actor capacity when it comes to EIA. The participants of the NCEA meeting, however, suggested that the actual influence of an actor relative to the other actors is even more important. Actors that have a lot of influence can even by-pass the EIA system in total. One respondent of the NCEA meeting stated:

> "IT HELPS A LOT IF YOU KNOW THE PRESIDENT OR IF YOU ARE MARRIED TO HIS DAUGHTER."[12]

It is thought, however, that an actors' influence is mostly determined by its position in the political arena and can therefore hardly be changed. An additional step (outlined below) should therefore be added to the approach that identifies each actor's position in the political arena.

4.4.2.1. STEP 2B – IDENTIFYING AN ACTOR'S POSSIBLE INFLUENCE

A first step in identifying the possible influence of each of the actors has already been taken during both discussions. It has been suggested that there are three levels in which an actor can influence EIA system performance. The EIA authority and proponent are the key actors that facilitate the EIA. Furthermore, there are actors that directly influence the EIA process and as such have a direct influence on system performance. The third group of actors indirectly influence EIA performance. Figure 6 graphically displays the outcome of the discussions.

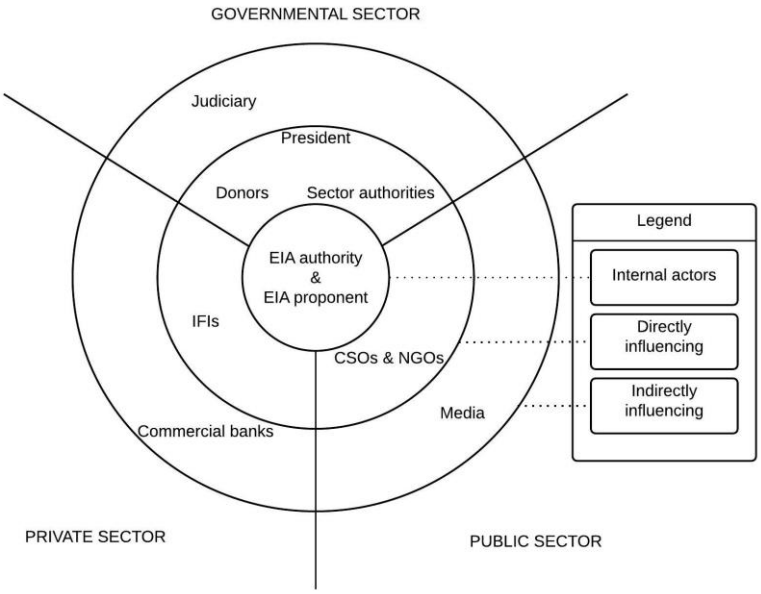

FIGURE 8: ACTORS' INFLUENCE ON EIA SYSTEM PERFORMANCE

[12] This quote has been translated from Dutch.

However, while the above figure shows the potential influence of the actors, the actual influence is depending on the context. A possible method for how this can be assessed is explained in section 4.3.3.1.

4.4.3. STEP 3 – IDENTIFY THE LEVEL OF OWNERSHIP

Considering that ownership can be seen as the most important capacity for EIA substantive performance that can be changed, it can be argued that capacity building initiatives should be focused on building ownership (Kolhoff, 2015). However, it is likely that the level of ownership will differ, as has been shown in the case of the public proponent during the discussion, or that it will change over time, meaning that an analysis of the level of ownership of the actors in the system should be part of the approach.

According to the participants at the NCEA meeting, ownership can be determined by looking at the motivation of actors to participate in capacity development programs. One participant stated:

> "IF YOU WANT TO PUT EFFORT IN ACHIEVING RESULTS, THERE IS OWNERSHIP. A VERY CLEAR SIGN OF OWNERSHIP IS IF PEOPLE ARE WILLING TO INVEST SCARCE RESOURCES IN DEVELOPMENT OF THE EIA SYSTEM."[13]

Ownership should thus be looked at as the willingness to invest time, money and resources in the performance of the EIA system. This means that actors that are only involved in one EIA (e.g. proponent) should invest time, money and resources in that specific EIA. This could foster system development through indirect learning (de Jong et al., 2010).

4.4.3.1. IDENTIFYING THE RELATIVE LEVEL OF INFLUENCE

Different actors should be included depending on the level of ownership of the EIA authority. There is no use in targeting the EIA authority when ownership is low. Likewise, higher level and sector authorities have proven to influence EIA decision-making as they, for a large part, determine the context (e.g. Kolhoff, 2014; Kolhoff et al., 2013). As shown, if ownership of higher-level authorities is low, it will be unlikely that the EIA authority is able to enhance performance (see also Kolhoff et al., 2013).

According to the participants of the NCEA meeting, ownership is a enabling factors of the relative influence of the actors. Ownership of all possible actors should therefore be considered in comparison to the level of ownership of the EIA authority to determine the relative level of influence. After all, the EIA authority – together with the EIA proponent – is the key actor in the centre of the EIA system (see section 4.4.2.1.).

However, according to the participants at the NCEA meeting, the proponent should not be considered as a primary actor and can therefore not be influenced. One of them stated:

> "THE EIA AUTHORITY CAN BE CONSIDERED A FACTOR THAT CAN BE INFLUENCED IN A CERTAIN COUNTRY, BUT THE PROPONENT CANNOT. ONE PROPONENT CAN HAVE A HIGH LEVEL OF OWNERSHIP, WHILE ANOTHER WILL HAVE A VERY LOW LEVEL OF OWNERSHIP. THEY SHOULD THEREFORE NOT BE SEEN AS ONE."[14]

Since the relative influence of the actors in the EIA system is determined by ownership of the authority, three situations might exist. The first is a situation with low ownership of the EIA authority. In this situation the authority is not willing to invest time, money and resources in the

[13] This quote has been translated from Dutch.
[14] Idem.

development of the EIA system. The second situation is one in which ownership of the EIA authority is moderate. It is willing to invest time, money and resources in capacity development, but only when other actors are willing to do this as well. The last possible situation is one in which the EIA authority is willing to invest time, money and resources in developing the EIA system at all costs. These situations are outlined in the Table below (Table 7).

TABLE 10: ACTORS (POSSIBLE) RELATIVE INFLUENCE ON SYSTEM PERFORMANCE

Actors (possible) relative influence on system performance	**Ownership of the EIA authority**		
	Low	Moderate	High
International financing institutes & donors	High	Moderate	Low
Public proponent	High	High	High
Private proponent	High	Low	Low
EIA authority	Low	Moderate	High
Sector authorities	Moderate	Low	Low
President	High	High	High
NGOs & public representative (e.g. media)	Moderate	Low	Low
Knowledge actors (e.g. consultants, universities)	Low	Low	Low
Judiciary	-	-	-

The differentiation in the table is based on the input from the two discussions. The proponent and authority are the most important actors based on the literature (e.g. Kolhoff et al., 2013) and what has been discussed during the IAIA conference. However, this also showed that it is thought that mostly the behaviour of public proponents is of importance as, contrary to the private proponent, their behaviour can be changed. For this reason this type of proponent is thought to be more important. However, the participants thought that high ownership of private proponents could positively influence performance of EIA, especially when ownership of the authority is low.

According to the above, in every situation there is room for capacity building, even when ownership of the key actors – i.e. EIA authority and proponent – is low. This is due to the fact that the development of the EIA *system* is the initial goal of capacity building by means of the described method. This means that long-term strategies could also be applied, whereas this would not be the case when individual EIA *projects* would be enhanced. Of course, the eventual outcome of capacity development at the system level will be that the performance of EIA projects will increase as well. The other way around could, however, apply as well. As suggested, indirect learning could provide for system level learning through project level interventions (De Jong et al., 2012).

During the discussion, the participants had been asked if they agreed on this method of actor identification. Although they agreed, from these answers it reads that the influence of the actors in the diagram differ per setting. For example, in an advanced system IFIs likely will have a limited influence. The participants from China concluded:

> "IFIS DON'T HAVE A LOT OF INFLUENCE BECAUSE THEY FOLLOW THE RULES AND LAWS OF CHINA. WHERE THE MONEY COMES FROM DOESN'T MATTER."

Whereas those of Suriname responded:

> "WE DON'T HAVE AN ENVIRONMENTAL LAW, BUT WE HAVE A DRAFT FRAMEWORK. BECAUSE EIA IS NOT MANDATORY AND THEY [IFIS] HAVE THEIR OWN STANDARDS, WHICH ARE HIGHER, THEY WILL FOLLOW THEIR STANDARDS."

It has therefore to be noted, that the actors that are present in the EIA system might differ per context. For example, in a personal rule state it could be that NGOs have no role as they either don't exist, or are linked to the person/party at the head of the government, whereas in another situation NGOs or the public might have a big role as a watchdog. Before initiating a capacity development programme, the context should thus be evaluated.

Moreover, for the judiciary no indication on their relative influence has been given. This actor is therefore left blank.

For the stepwise approach this means that for low ownership of the EIA authority IFIs, both the proponents, and the president are the most influential actors. With moderate ownership of the EIA authority the president and public proponent are considered most important. With high ownership of the authority the proponent, authority, and president are most important. This step should be validated in further research.

4.4.4. STEP 4 – IDENTIFY THE CAPACITIES AND SECURING MECHANISMS THAT CAN BE CHANGED

As suggested earlier (section 2.6.), interventions should target those capacities that are not (yet) developed in the EIA system, and a hierarchy exists for capacities that need to be developed first. However, we have also come to the conclusion that capacities need to be secured by so-called capacity securing mechanisms in order to prevent the pyramid from collapsing. The participants of the first discussion confirmed this as they stated that *"capacities enhance"* while the system develops and agreed that capacities should be maintained over a longer time span. This does not mean that the lower capacities are less important for system performance. One participant of the IAIA meeting responded to the question to determine what capacities are most important:

> "I CANNOT SAY WHICH ONE IS MORE IMPORTANT THAN THE OTHER. THEY ARE ALL EQUALLY IMPORTANT TO ME."

This also came forward during the NCEA meeting as the participants stated:

> "WE [THE NCEA] DO NOT DISTINGUISH BETWEEN CAPACITIES. ACCORDING TO US [THE NCEA] THEY ARE ALL IMPORTANT."[15]

However, during the second discussion the participants mentioned that there is a difference between, as one participant called them, *"enabling conditions"* – which are named *system functions* by the NCEA – and actor capacities. These are enabling that actor capacities can be developed. The system functions that the NCEA distinguishes might therefore be seen as securing mechanisms.

Furthermore, the hierarchy that exists for capacities also seems to exist for these securing mechanisms. The securing mechanisms seem to depend on the development of the system. The

[15] This quote has been translated from Dutch.

more developed a system, the higher the developed capacities are on the hierarchical pyramid. This means that the securing mechanisms are also higher on the hierarchical pyramid.

Although there was some discussion on this fact, as the participants noted that this was a very new way of thinking, in the end they agreed with securing mechanisms supporting actor capacities and the hierarchy that should be determined. One participant noted:

> "THIS IS VERY INTERESTING FOR FURTHER RESEARCH. YOU SHOULD RESEARCH THE CHANGING NEEDS OVER TIME."[16]

While another remarked:

> "IF THERE IS NO MONEY AVAILABLE, YOU WILL HAVE TO START SOMEWHERE. THOSE ARE LIKELY THE MOST IMPORTANT ASPECTS OF THE EIA SYSTEM."[17]

Based on these insights it is suggested that the hierarchical pyramid from Potter and Brough (2004) can be used as a tool for determining the capacities and securing mechanisms that can be developed. One cannot go further up the pyramid if the capacities preceding the capacities that are ought to be developed are not yet secured. The capacities that *can* be developed are the ones that are supported with secured capacities that are lower on the hierarchical pyramid.

4.4.5. STEP 5 – IDENTIFY THE CAPACITIES AND SECURING MECHANISMS THAT SHOULD BE DEVELOPED

As said, the hierarchy of capacities determines the capacities that can be developed. The capacities that should be developed depend on the level of institutionalisation of the EIA system. The more advanced the system, the higher the capacities on the hierarchical pyramid. The participants had no remarks on this step in the stepwise approach. It is therefore suggested to use the stepwise approach as initially designed.

4.5. WRAP-UP OF THE RESULTS

To wrap up, instead of the five steps that made up the stepwise approach, six steps can be identified before the actual implementation of the capacity development program. These six steps read:

1. Identify EIA system performance;
2. Identify the actors in the EIA system;
3. Identify the level of ownership of the actors in the EIA system;
4. Identify the relative influence of the actors in the EIA system;
5. Identify the capacities that can be changed; and
6. Identify the capacities of the main actors that should be developed or secured.

It is thought that the, in this chapter, identified stepwise approach should again be tested and applied in practice. This would strengthen the approach and overcome possible flaws in the methodology. Moreover, for further testing it is advised to focus on EIA experts that have experience with capacity building. During this research their understanding of the topic proofed to be very important for the development of the approach.

[16] This quote has been translated from Dutch.
[17] Idem.

5. CONCLUSION AND REFLECTION

5.1. CONCLUSIONS

The intention of this research was to construct an analysing tool for EIA practitioners in LMCs and developing organisations from HICs to identify context-specific capacities and securing mechanisms. The main research question therefore was: How can it be identified which actor capacities contribute to substantive performance of EIA in LMCs under what contextual settings and what mechanisms contribute to securing these capacities? It therefore looked at the capacities that were thought to contribute to EIA substantive performance. Then it was determined what secures these capacities. After that it was determined what steps would be needed to identify what capacities and securing mechanisms would be needed when. Thereafter it was determined how these steps could be applied in practice.

The result of this thesis is a stepwise approach for identifying context-specific capacities and securing mechanisms for capacity development for EIA systems in LMCs. Capacities are defined as the ability of actors to achieve their objectives (Van Loon et al., 2010). Securing mechanisms are the processes that maintain capacities and provide for a learning organisation.

In the literature it has been suggested that the context influences EIA system performance (e.g. Arts et al., 2012; Jay et al., 2007; Kolhoff et al., 2009; Marara et al., 2011). This means that capacity development should be tailored to its specific context. So far, however, the debate has mostly focused on the suggestion that EIA systems need to be adapted to the context without indicating how this could be done. The approach is focussed on bridging this gap in literature and aims to function as a tool that helps policy-makers (such as the EIA authority) and developing organisations (such as donors) to develop context-specific EIA systems while using their (limited) resources most efficiently. It is thought that this ensures that EIA systems can be developed or adapted according to the context.

The eventual approach consists of nine steps:

1. Identify the EIA system performance;
2. Identify the actors in the EIA system;
3. Identify the level of ownership of these actors;
4. Identify the relative influence of the actors;
5. Identify the capacities that can be developed;
6. Identify the capacities of the main actors that should be developed or secured;
7. Develop a strategy for implementation;
8. Initiate the capacity-development program;
9. Evaluate the capacity-development program.

This thesis has only focused on developing the first six steps of the approach. Enough has been written about strategies for developing specific capacities (e.g. Cherp & Antypas, 2003; Dijkstra et al., 2014; Jay et al., 2007). These scholars were mainly lacking to describe the process of identifying what should be developed.

The stepwise approach was initially constructed based on an intensive literature study and primarily uses hypotheses derived from Kolhoff et al. (2009; 2013; 2014), criteria that Lawrence (2013) suggests should be part of an EIA capacity development program, and the UNDP (2009) capacity development cycle. Kolhoff et al. (2009; 2013; 2014) have identified which aspects determine EIA system performance, while Lawrence (2013) emphasises that capacity development should be based on the context in which it is done. The UNDP (2009) has developed a capacity development process that does not specify for EIA systems and the context in which they are operating. The combination of the three sources is thought to combine all necessary aspects for a good analysing tool; one that addresses all aspects influencing EIA performance (context, actors and the actors' capacities), adapted to the context, and inclusive.

Furthermore, the steps in the approach have been tested and refined through two discussion groups with members of EIA authorities from LMCs and EIA capacity building experts from a

Dutch developing organisation; the Netherlands Commission for Environmental Assessment (NCEA). During these focus discussion groups the steps in the approach were evaluated. The first discussion primarily focused on validating the hypotheses on which the steps had been based, while the second discussion looked at the practical applicability of the approach to refine the steps and methods used to determine the steps.

This has resulted in the following conclusions. Firstly, although the primary aim of the approach is to enhance system development in LMCs, it is thought that it can be used for all EIA systems. The context matters for the approach, but does not influence the steps of the approach. For example, the context influences the actors that are actively present in the EIA system and their relative level of influence compared to the other actors (e.g. Dijkstra et al., 2014; Kolhoff et al., 2014). The identification of actors is part of the approach and can therefore be applied to all contexts. However, the context should always be kept in mind. This will have an effect on the actors in the system, the influence these actors have, and their capacities. Moreover, as the intention is to identify context-specific needs there will be no clear-cut method for developing EIA systems. The eventual outcome of the approach will be tailored to the specific context at hand, which is in line with what should be the case according to several scholars (e.g. Kolhoff et al., 2009; Marara et al., 2011).

Secondly, the stepwise approach provides for a structured and interactive process that incorporates all aspects of system development. In this research it has been suggested that securing mechanisms also determine system performance, as they make sure that the actors' capacities will remain for a longer time span, even when certain actors drop out of the system, while it is shown in literature that primarily the context, the actors in the EIA system and the actors' capacities determine EIA system performance (e.g. Ahmad & Wood, 2002; Kolhoff et al., 2009; Marara et al., 2011; Zhang et al., 2013). The securing mechanisms provide for a more solid basis to build capacities on. The concept of securing mechanisms has proven to be new for the participants and in literature although some authors (in other non-EIA related fields) have reflected on sustainable organisational capacities (e.g. Folke et al., 2002; Grindle & Hilderbrand, 1995; Hunter, 2006), and sustainable or lasting capacities (e.g. Abdulhak, 2009; Fukuda-Parr & Lopes, 2013). As the participants of both discussions thought that capacities should be secured and enhanced, the concept of securing mechanisms should be further investigated.

Based on the stepwise approach, there seems to be a hierarchy for the needed capacities that is linked to the context. The more institutionalised the EIA system, the higher the capacities and securing mechanisms are placed in this hierarchy. The stepwise approach uses the hierarchical pyramid of Potter and Brough (2004) as a benchmark for which capacities are placed higher than others. Further research could elaborate on this approach.

Moreover, primarily the governmental system is considered to be of importance for the context and thereby influences EIA performance and the needed capacities most. For example, participants from China – an example of an institutionalised country – indicated that they focus on different capacities than Suriname – a less institutionalised country. This research used the categorisation of Grindle (2007) who divided countries by their level of institutionalisation and differentiation (or democracy); a method with which the participants could agree. It is thought that primarily the level of institutionalisation has an influence on the needed capacities and securing mechanisms, which is in line with earlier findings from Kolhoff et al. (2013). Also Kovalev et al. (2009) found for the Russian EIA that the level of democracy has had a great influence on the performance of EIA. Future research should therefore focus on the link between the level of democracy and institutionalisation and the needed capacities and securing mechanisms. Such studies could further foster system development in different contexts.

Overall it can be concluded that it is thought that the earlier described steps can be seen as a stepwise approach for determining context-specific capacities and securing mechanisms. Further research is needed to further refine and develop the approach. This can be done by applying it to case studies or presenting it to a different panel. This will diminish possible bias from the author and provide for a more reliable approach.

5.2. LIMITATIONS TO THIS STUDY

Although it is thought that the developed stepwise approach is derived from supporting evidence, some limitations need to be emphasised. A first limitation is the research population. The participants of the two discussion groups have not been randomly selected. Instead, their selection was based on their attendance of the IAIA conference in Florence (first discussion) and connection with the consulted expert (first and second discussion).

Only attendants of the IAIA conference participated in the first discussion, as this conference provided for multiple foreign EIA authority representatives to be able to participate in the research. Although this has increased the number of participants that could participate in the research, it has also resulted in an overrepresentation of African countries, whereas (Eastern) European and South- and Middle American countries where underrepresented. This was mainly due to lingual constraints, as last year's conference was held in Chilli with several Spanish sessions, while this year the conference was fully in English. This could have resulted in bias of which the author is unaware.

However, the fact that eleven countries were represented should have resulted in a good overview of the view of EIA authority representatives on the stepwise approach. Moreover, the position of the expert that helped selecting the participants made participation possible of people that would likely otherwise not take part in this research. Moreover, the second discussion provided for some reflection on the first discussion. The participants of this discussion have had a long history with capacity development and could therefore provide significant insights on the approach. Unfortunately, the results that follow from this research are not representative for all LMCs and should therefore be further researched.

Another limitation comes from the unwillingness of participants to talk openly about limiting factors of their EIA system. This might therefore have resulted in socially desired answers. An indication is the fact that only half of the participants that participated in the first discussion also filled out the questionnaire. Moreover, during this discussion several participants mentioned that they would rather have a face-to-face conversation. This could have resulted in some bias, which should be considered during further research on this topic. Using a triangulation of methods can for example prevent this (Verschuuren & Doorewaard, 2010).

Furthermore, it should be mentioned that the first set-up of the approach was based on a literature review and intensive discussions with one expert on EIA. This could have resulted in bias of which the author is unaware. This bias has been diminished somewhat through the two discussion, but further testing of the stepwise approach would strengthen the approach even more. This could be done by presenting the stepwise approach to another discussion panel or by applying it on practical example of capacity development.

5.3. RECOMMENDATIONS

For future research it is recommended to evaluate the approach with different experts and actors to overcome possible bias from the author. During the first discussion with EIA experts working for EIA authorities in LMCs it became clear that the approach is considered quite complex and could therefore need the help of EIA capacity building experts to facilitate the process. These experts would need to have considerable information about EIA capacity development and the influence of the context on EIA systems.

For this research a discussion was the best method for collecting data, as the questionnaire posed several problems. A possible solution for future research could be to approach each of the participants separately. This is, however, very time consuming and therefore less suitable. Furthermore, a discussion allows for interaction between participants, which has, during this research, proven to foster new ideas and insights that would otherwise not have come forward (Hirschmöller & Cuppen, 2015).

Moreover, applying it to examples of capacity building can further strengthen the stepwise approach. This way it can be identified if the stepwise approach results in different capacities that should be built than other approaches of capacity development (such as the UNDP (2009) capacity development cycle). This could identify possible flaws in the approach that have been

overlooked by the author. Applying it to case studies could also provide for insights on the extent to which certain context characteristics explain the necessity of certain capacities. During this research it seemed as if EIA systems of more institutionalised countries are in need of different capacities than those of less institutionalised states. Examples of this can be found in statements from a participant of a institutionalised country (China), who stated:

> "THE REASON I VALUED [NETWORKING] LIKE THIS IS BECAUSE, COMPARED TO THE OTHER COUNTRIES IN YOUR FORUM, CHINA HAS A VERY LONG HISTORY WITH EIA. RIGHT NOW WE [THE CHINESE GOVERNMENT] WANT TO STREAMLINE THE PROCEDURES FOR ENTREPRISES. NOT ONLY FOR EIA, BUT FOR OTHER METHODS AS WELL."

This statement shows that a securing mechanism (professional exchange or networking) that is high on the hierarchical pyramid is very important for China, while this was not the case for the other countries that are less institutionalised. This could be further explored by means of case studies.

Further recommendations regard the usefulness of the approach. For EIA authorities in LMCs the approach can be used to identify how they can use their resources most efficiently. It is recommended to take a holistic approach to the stepwise approach and look for methods that fit the context to determine the steps in the stepwise approach. This way it could foster the identification of influential actors given that context. This is necessary since the EIA authority is to some extent depending on the cooperation of other actors. The seven actors listed in this research can be used for a first determination of who to include.

Lastly, for donor institutions or capacity building organisations it is very important to keep the context in mind in which they are operating. Each context will provide for a different outcome of the approach. Moreover, the view on EIA is also likely to differ for each different context. Participants from Nigeria, for example, emphasised that they think the need for EIA is decreasing. One of them stated:

> "OVER THE YEARS WE HAVE SEEN THAT THE AWARENESS OF EIA IMPLEMENTATION HAS GROWN SO MUCH THAT, EVEN IF THERE IS NO ENFORCEMENT, THE PROPONENTS WILL WANT TO IMPLEMENT THE PROJECTS TO EIA."

It is important to keep this in mind, as it will determine the possible influence that EIA can have under those circumstances.

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APPENDICES

APPENDIX 1 – QUESTIONNAIRE FOR FIRST DISCUSSION

Information for interviewees

Information on the research

After 15 years having worked for the Netherlands Commission for Environmental Assessment as an advisor to EIA authorities in 10 low and middle income countries (LMCs) I noticed that (i) the effectiveness of EIA in LMCs varies from very low to moderate and (ii) the potential to improve EIA effectiveness in these countries is underutilized. I decided to start a PhD research to answer the following question:

→ How to improve EIA effectiveness in LMCs?

EIA effectiveness has been defined as to what extent the EIA objectives are achieved. The research has primarily been executed in the following countries: Georgia, Ghana and Yemen, and resulted in a number of published papers.

Expert panel at IAIA

At the IAIA conference in Florence, I would like to discuss the preliminary findings of this research with you and a small panel of other high level experts during a meeting on **Wednesday 22 April, 12.30–14.30 hours,** location: Affari 4th Floor at the conference centre. The aim of this meeting is to answer the following questions:

A. What is the level of effectiveness in your country?
B. Which actors influence EIA effectiveness?
C. Which capacities of the main actors influence EIA effectiveness?
D. How can EIA effectiveness be improved?

In order to get the maximum out of this workshop I have prepared a questionnaire with only seven questions. I would like to ask you to fill in this questionnaire yourself or during a telephone call or skype session with me and that takes about 15 minutes. Your participation concerning filling in the questionnaire and attending the workshop is of crucial importance and very much appreciated. What is in it for you:

- an interesting discussion with colleagues on a relevant topic;
- new insights on how to improve EIA effectiveness;
- your contribution and name will be acknowledged in the paper and PhD research;
- a free hard copy of the Thesis and a small present form The Netherlands.

Arend Kolhoff MSc
Senior Technical Secretary, Netherlands Commission for Environmental Assessment (NCEA)
akolhoff@eia.nl

Dr. Hens Runhaar
Associate Professor, Utrecht University
H.A.C.Runhaar@uu.nl

Prof. Dr. Peter Driessen
Professor of Environmental Governance, Utrecht University
P.Driessen@uu.nl

Thijs van den Berg
MSc student, Utrecht University
m.w.h.vandenberg@gmail.com

Questionnaire

Please keep in mind when filling in the questionnaire:

1. The answers are applicable for your country.

2. ` In a number of countries a distinction is made between two categories of EIA for projects:
   a. Full fledge EIA and;
   b. Preliminary EIA or Initial Environmental Examination.
   In this questionnaire please focus **ONLY** on full fledge EIA.

3. Please use my definition of EIA effectiveness: to what extent the EIA objectives are achieved.

4. In total you need to answer 7 questions.

Personal information
Country where you work in the field of EIA
Present employer and position
Years of experience with EIA

EIA effectiveness

1. Please answer the following questions for projects that legally require an EIA.	
a. Number of projects that legally require an EIA but that are implemented without an EIA. (Please give an estimation). b. Number of projects rejected by the EIA authority due to EIA. c. Number of projects for which an EIA is executed and approved by the EIA authority. d. *Use the answer of the above question c. as starting point for this question*. For how many of the projects, for which an EIA is executed and approved by the EIA authority, is an environmental permit or license controlled by an environmental inspector(s)? e. *Use the answer of the above question d. as starting point for this question.* For how many of the projects, for which an environmental permit or license is controlled by an environmental inspector(s), is incompliance followed by enforcement?	*Please give an indication of the numbers for an average year:*

Please continue to the next page for Question 2.

2. Which EIA issues need to be considered according to the law and are applied in practice?						
Issues:	*(Firstly, put an X in one of the cells)* **Legally Required**		*(Secondly, in case of Yes, put an X in one of the cells)* **Applied in practice**			
	Yes	*No*	*Never*	*Some-times*	*Often*	*Always*
Mitigating measures						
Alternatives of the project design						
Alternatives for the site or location						
Alternatives for routing in case of linear infrastructure (e.g. roads, pipelines)						
Compensation measures (when relevant)						
Public needs to be informed during scoping						
Public needs to be informed during reviewing						
EIA authority needs to answer comments						
EIA authority needs to publicly justify EIA decision						
Opportunity for appeal by the public on one or more of the EIA related decisions by the EIA authority						

3. What is the present situation in your country?						
Issue	*(Firstly, put an X in one of the cells)* **Legally adopted**		*(Secondly, in case of Yes, put an X in one of the cells)* **Applied in practice**			
	Yes	*No*	*Never*	*Some-times*	*Often*	*Always*
Environmental standards	*X*					*X*

Actors influence on EIA effectiveness

4. What is the influence of the following actors on EIA effectiveness?

(Please prioritise from 1 to 7: 1 is most important, 7 is least important)

	EIA authority
	EIA proponent – private sector
	EIA proponent – public sector
	Sector authorities
	Public / NGOs
	Knowledge institutions (e.g. University, consultancy firms)
	International financing institutions (IFIs) such as the World Bank, Asian Development Bank or bilateral donors such as DFID, USAid
	Other: …

5. International finance institutes (IFIs) and most bilateral donors have their own EIA regulation.

When IFIs or bilateral donors are involved in a project requiring EIA, do they follow the EIA procedure of your country?

(Please select one answer by making it bold)

A. Never
B. Sometimes
C. Often
D. Always

Actors' capacities

6. What aspects do you consider as **MOST** important for effective EIA.

(Please prioritise from 1 to 12: 1 is most important, 12 is least important)

	Leadership or commitment of the EIA authority
	Vision/strategy of the EIA authority
	A clear regulatory framework
	Number and quality of staff available at EIA authority
	Availability of up-to-date scientific knowledge
	Tools such as computers and cars available for staff of EIA authority
	Funding of tasks of the EIA authority
	Coordination of EIA authority with other authorities
	Professional exchange on EIA
	EIA education and professional training
	Monitoring and evaluation of the EIA instrument
	Advice on EIA procedure and practice (helpdesk)
	Other: …

7. Do you perceive a difference in EIA effectiveness where an external party (such as the World Bank of a bilateral donor) is involved in the EIA process compared to a situation where this is not the case?

- o No
- o Yes - What difference? More qualitative EIA report

APPENDIX 2 – LIST OF PARTICIPANTS OF THE FIRST DISCUSSION

Country	Position	Status
Europe		
1. Croatia	Ministry of environment and protection: Deputy head SEA department	**Not present**
2. Estonia	Ministry of the Interior: Advisor to the Minister	Not present
3. Georgia	Ministry of Environment	**Present (2x)**
4. Poland	Ministry of Environment	Not present
5. Romania	Ministry of environment, Water and Forests: Counsellor for Impact Assessment Unit	Not present
6. Turkey	Ministry of Environment and Urbanization: Quality and control manager	**Not present**
Africa		
7. Kenya	National Environmental Management Authority: Senior staff member	Not present
8. Mozambique	Ministry of Land, Environment and Rural Development (MITADER)	**Present (not spoken)**
	Ministry of Land, Environment and Rural Development (MITADER)	**Present (not spoken)**
9. Namib	EIA reviewer, Southern African Institute for Environmental Assessment	Not present
	Ministry of environment and tourism: Chief Development Planner Directorate of Environmental Affairs	**Present (asks for individual conversation)**
10. Nigeria	Federal Ministry of Environment: Deputy director (Environmental Assessment Department)	**Present**
	Federal Ministry of Environment	**Present**
11. Sudan	Ministry of environment, Forestry & Physical Development: Secretary	**Present**
12. Tanzania	National Environment Management Council; Director Environmental Impact Assessment (DEIA)	**Present**
	Senior Environmental Officer, National Environment Management Council	Not present
13. Uganda	NEMA; Director Environmental Monitoring & Compliance	**Present**
Latin America		

14. Cuba	Ministry of Science, Technology and environment	NR
15. Peru	Ministry of Environment: Deputy minister	NR
16. Surinam	NIMOS; Ministry of Environment: Senior staff member	**Present**
	NIMOS; Ministry of Environment: Senior staff member	**Present**
Asia		
17. China	Ministry of Environmental Protection: Appraisal centre for environmental & engineering	**Present**
	Ministry of Environmental Protection: Environmental Development Center	**Present**
18. India	Member EIA review panel	**Not present (due to sickness)**
19. Lebanon	Ministry of Environment: Head of the Service of Environmental Technology	**Present (Asked for individual conversation)**
20. Myanmar	MOECAF: Director General, Environmental Conservation Department	Not present
21. Taiwan	Environmental Protection Administration	**Present**
	Environmental Management Association	**Present**
Totaal 10+1		***21 partcipants +*** ***2 observing status and 4 Nigeria*** ***5 + 1 (Georgia) questionnaires***

APPENDIX 3 – OVERVIEW OF THE CRITERIA FOR ASSESSING THE POLITICAL ENVIRONMENT FOR THE PARTICIPANTS OF THE FIRST DISCUSSION

Index		**Taiwan**	**China**	**Georgia**	**Namibia**	**Lebanon**	**Mozambique**	**Nigeria**	**Suriname**	**Tanzania**	**Uganda**	**Sudan**
CPI	Rank[18]	35	100	50	55	136	119	136	100	119	142	173
	Score	61	36	52	49	27	31	27	36	31	26	11
DI	Rank[19]	35	144	81	73	98	107	115	53	86	96	153
	Score	7,65	3,00	5,82	6,24	5,12	4,66	4,02	6,77	5,77	5,22	2,54
Differentiation		**High**	**Low**	**High**	**High**	**Low**	**Low**	**Low**	**Moderate**	**Low**	**Low**	**Very low**
GCI (Total)	Rank[20]	14	28	69	88	113	133	127	110	121	122	n.d.
	Score	5,25	4,89	4,22	3,96	3,68	3,24	3,44	3,71	3,57	3,56	n.d.
GCI (Institutions)	Rank[10]	27	47	48	50	139	127	129	104	93	115	n.d.
	Score	4,8	4,2	4,2	4,2	2,7	3,2	3,0	3,4	3,5	3,3	n.d.
Institutionalisation		**High**	**High**	**Moderate**	**Moderate**	**Low**	**Low**	**Low**	**Low**	**Low**	**Low**	**n.d.**
Grindle (2007)		***V.***	***IV.***	***III.***	***III.***	***II.***	***II.***	***II.***	***II.***	***II.***	***II.***	***I.***

[18] Out of 175 countries. See Transparency International (2015) for more information.
[19] Out of 168 countries. See EIU (2015) for more information.
[20] Out of 142 countries. See Schwab et al. (2014) for more information.

A product from:

Thijs van den Berg