Environmental Assessment Tools as a Framework for Decision-making: A Comparative Study between EIA Theory and Practice in Cameroon and Sweden

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Abstract

There is now a global interest in the use of environmental assessment tools such as Strategic Environmental Assessment (SEA) and Environmental Impact Assessment (EIA), for which a considerable amount of research has been undertaken into their theoretical development. In addition, there is a growing need to adopt the Life Cycle perspective in order to get a broader understanding of the upstream and downstream consequences of decision-making. Unfortunately, however, implementation aspects of these tools have not sufficiently matched with issues that have been developed in the theory. This thesis attempts to highlight this issue by comparing practices in Cameroon with Sweden in order to pinpoint main constraints in Environmental Assessment Practices (EA). EIA constitutes special focus, with SEA and the concept of LC thinking being included as necessary complement. The method employed is essentially document-based, involving the collection of theoretical information and evidence from three areas of institutional framework for supporting the practice of EIA in both countries, notably, the existing regulatory and administrative setting; process and procedural aspects of the tool; and approach to decision-making including public perception and participation in environmental issues. The results show that although the Swedish system is not completely in line with the theoretical demands, it serves important lesson for its Cameroonian counterpart. Essentially, progress in Cameroon is still hampered by ineffective institutional capacity for good governance and lack of genuine political will. This is brought about by misperception surrounding the link between environmental protection and economic growth in private sector investment toward poverty alleviation. Also undermining the process is inadequate public engagement in a highly centralized decision-making approach. Lack of trust in public institutions in Cameroon is also the main reason why people don’t get involved. As a suggestion to bridging the dichotomy between theory and practice in Cameroon based on lessons from Sweden, this thesis concludes with a few recommendations for improvement.

Keywords: Environmental Assessment; Decision-Making; Comparative Assessment; Theory; Practice; Political will, Improvement.
Acknowledgement

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Writing a successful thesis work not only requires sustained effort and enormous sacrifice on the part of the student, but also the willingness of the supervisor as well as other goodwill persons to contribute their personal knowledge and insight. Therefore, I am immensely grateful to my supervisor, Sara Tyskeng, for her constant support and guidance throughout this thesis work. I also acknowledge the extraordinary comments and input from Anna Björklund and Björn Frostell, which have helped to improve the quality of this work. Björn actually initiated this thesis work to be carried out at the department of Environmental Strategies Research, where I have learned new things from very experienced people.

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<td>ESA:</td>
<td>Environmental System Analysis</td>
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<td>EA:</td>
<td>Environmental assessment Tools</td>
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<td>EIA:</td>
<td>Environmental Impact Assessment</td>
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<td>SEA:</td>
<td>Strategic Environmental Assessment</td>
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<td>LCA:</td>
<td>Life Cycle Assessment</td>
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<td>LCM:</td>
<td>Life Cycle Management</td>
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<td>LCC:</td>
<td>Life Cycle Costing</td>
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<td>CBA:</td>
<td>Cost Benefit Analysis</td>
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<td>EMS:</td>
<td>Environmental Management System</td>
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<td>KTH:</td>
<td>Royal Institute of Technology</td>
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<td>IE:</td>
<td>Industrial Ecology</td>
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<td>FMS:</td>
<td>CDDSEnvironmental Strategies Research</td>
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<td>ST:</td>
<td>Sustainable Technology</td>
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<td>SD:</td>
<td>Sustainable Development</td>
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<td>UNEP:</td>
<td>United Nations Environment Programme</td>
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<td>WCSD:</td>
<td>World Commission on Sustainable Development</td>
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<td>WSSD:</td>
<td>World Summit on Sustainable Development</td>
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<td>IAIA:</td>
<td>International Association for Impact Assessment</td>
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<td>OECD:</td>
<td>Organization for Economic Cooperation and Development</td>
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<td>WB:</td>
<td>World Bank</td>
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<td>EIS:</td>
<td>Environmental Impact Statement</td>
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<td>PPP:</td>
<td>Policy, Plan and Programmes</td>
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<td>SETAC:</td>
<td>Society for Environmental Toxicology and Chemistry</td>
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<td>ISO:</td>
<td>International Standardization Organization</td>
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<td>EU:</td>
<td>European Union</td>
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<td>IAP2:</td>
<td>International Association for Public Participation</td>
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<td>RA:</td>
<td>Risk Analysis</td>
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<td>MFA:</td>
<td>Material Flow Analysis</td>
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<tr>
<td>NGO:</td>
<td>Non Governmental Organization</td>
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<td>ICT:</td>
<td>Information and Communication Technology</td>
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<td>MiNEP:</td>
<td>Ministry of Environment and Nature Protection</td>
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<td>NEMP:</td>
<td>National Environmental Management Plan</td>
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<tr>
<td>ICE:</td>
<td>Inter-ministerial Council for the Environment</td>
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<td>NCCE:</td>
<td>National Consultative Committee for Environment &amp; Sustainable Development</td>
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<td>CPU:</td>
<td>Commonwealth Press Union</td>
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<td>SEPA:</td>
<td>Swedish Environmental Protection Agency</td>
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<td>SNRA:</td>
<td>Swedish National Road Administration</td>
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<td>LIP:</td>
<td>Local Investment Programmes for Ecological Sustainability</td>
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1. Introduction

1.1 Background
In the face of mounting evidence pointing to the unsustainable way in which the earth’s resources are being used, there is every reason to worry about the state of our global environment today. Rapid deforestation, freshwater shortages, species extinction, pollution, climate change, and energy related problems are just some examples. There is no question that human activities in realization of development projects e.g. projects for national resource exploitation, infrastructure development, the construction of gas/oil pipelines; dams; roads; buildings and city expansion projects are impacting enormous destructions on the ecosystems. Even worse if the above development initiatives take place in regions and countries where existing legal and regulatory frameworks for environmental protection are weak.

In order to reverse these rather worrying trends, mankind has embarked on a relentless and concerted effort within the framework of sustainable development (SD). As a matter of facts, the requirement to conduct an environmental assessment on the above mentioned human development projects is today no longer a matter of opinion or speculation. In particular, if such an assessment involves a high profile project or activity with potential to cause significant environmental and social damage. This requirement is clearly stated in Principle 17 of the Rio Declaration: “Environmental impact assessment, as a national instrument, shall be undertaken for proposed activities that are likely to have significant adverse impact on environment and are subject to decision of competent national authority.” (Rio declaration, 1992). Such development initiatives, by their nature, have enormous influence on environmental quality, but also on the quality of life. Therefore, decisions that are taken on these issues are naturally a matter of great concern to key stakeholders, particularly the general public.

Environmental assessment (EA) tools as part of ESA tools as a whole owe their existence to the need to render the decision processes more participatory, effective and efficient. The goal is to eliminate or at least minimize as much as possible the environmental or social adversities from major human activities. Underscoring the importance of Environmental assessment tools is the notion that they serve as a framework to guide decision – making and actions by providing relevant and structured information of different kind (Höjer et al., 2008). These quality information and facts are necessary for analyzing, assessing and identifying environmental impacts of different systems, thus, leading to better formulation and selection of environment and development policies in decision-making process.

Unfortunately, however, the extent to which implementation aspect of these tools is undertaken with respect to issues that have been developed from the theoretical standpoint has been questioned. These questions are in relation to the constraints that impede the successful implementation of EA tools within a country (e.g. Alemagi et al, 2007) and between countries (e.g. Wood, 1995; Ahmad and Wood, 2002). The extent of these constraints varies between countries and mainly constitutes regulatory and administrative frameworks, process and procedures, decision-making structure as well as mechanism for public involvement. Moreover, environmental management issues are quite challenging due to their complexity and multiple actors (Mysiak et al., 2005). This diversity of actors and subjects involved along with national priorities sometimes result in competing and conflicting priorities. This may even be more problematic when it comes to some developing countries where the decision-making processes are intertwined with issues of corruption, fraud, transparency and lack of accountability.
This thesis attempts to examine the framework that has been put in place to promote implementation EA, with special focus on EIA and SEA tools in the two countries. Through this comparison, it will then be possible to highlight major factors that impede actual implementation of EA tools in Cameroon. The rationale for a comparative study is based on Lundquist’s idea (1978, cited in Wood, 1995), that: “Comparative studies of national approaches to solving environmental problems have often led to valuable and practical suggestions to improve the effectiveness of the national processes examined.” Furthermore, the UNEP EA training resource manual notes that one very important aspect of successful environmental assessment practices is the active integration of country’s experience in environmental management as well as experience from other countries that are successful in implementation (UNEP, 1996). In fact, the necessity to amend the EA process in order to incorporate feedback from previous experience is one of the 14 set of evaluation criteria for a good performing EA process (Wood, 1995).

1.2 Thesis Specifications

1.2.1 Aim of the Thesis

The aim of this thesis is to compare theory and practice of EA tools in Cameroon and Sweden, with special regard to EIA and SEA. This comparison is done in order to encourage a comprehensive adoption of EA tools in decision-making processes, ensuring their effective use in achieving SD.

This is done by:

- A thorough description of the theoretical bases for the tools in question;
- Analyzing the present decision situation and institutional framework that support the use of tools in both countries;
- Listing the advantages and disadvantages of the tools as well as a possibility for combination of different tools for improved decision-making;
- Stating the level of public awareness and public perception of environmental issues and EA in particular.

1.1.2 Research Question

The question to be answered relates to identifying what are the main constraints to the practice of EA in Cameroon?

1.1.3 Thesis Delimitation

Although this thesis highlights two environmental assessment tools, the principal focus of the comparison is on environmental impact assessment (EIA) rather than strategic environmental assessment (SEA) on grounds that SEA practices are not yet fully operational in Cameroon. The discussion about the practice of EIA is taken up in chapter 4. The concept of life cycle thinking has also been included but as a necessary approach in combination with the assessment tools. In connection to chapter 4, issues of relevance are institutional arrangements that promote EIA practice in both countries. These include legal and administrative frameworks, process and procedures, approach to decision-making including the level of public perception and participation.
1.3 Current Studies of EA in Theory and Practice

A vast amount of currently available academic literature in the field of EA is a clear reflection of its importance as an on-going research field for attaining sustainable development. A large amount of the literature is focused on how EA tools can be used for better environmental decision – making. A fundamental bottom-line on the use of EA tools is that they provide decision-makers with relevant knowledge and alternative future possibilities about proposed activities, as to whether such activities are ecologically sustainable or not. By virtue of their ability to describe different environmental impacts in the future, recent research work conducted by Höjer et al. (2008) explores the connections between scenario types, techniques and tools for EA, arguing that scenarios can be used to improve the usefulness of these tools. Along similar lines of reasoning, Duinker and Greig (2007) advocate bringing scenario analysis into EIA practices in assessing cumulative effects of large development projects, arguing that it helps to improve the quality and utility of EIA in pursuit of sustainable development. However, it is important to mention that scenarios are often influenced by drivers of change, some of which cannot be predicted with absolute certainty. Therefore, the possible future events develop from the use of EA and Environmental System Analysis (ESA) tool in general may not actually reflect the reality.

EA tools are part of a broad spectrum of ESA tools now available to aid decision-making. With this broad spectrum, it is worthwhile knowing which tool best fits which situation. Finnveden and Moberg (2005) have noted that the choice of which ESA tool is appropriate to a specific situation is a matter about the tool’s distinguishing qualities or features, which include 1) procedural or analytical; 2) the types of impacts included in the study; 3) the object of study; and 4) whether this study is descriptive or change – oriented. This characterisation brings out a better understanding of the relationship among tools and between tools and object of study. The result is that different tool fit different objects and therefore cannot be used interchangeably. Based on their study, EIA and SEA have been cited as suitable tools for policies, plan, programme and project as an object of study. Interestingly, other studies have pointed out to the fact that organizing and deploying tools and methodologies in assessment is still not clear-cut in literature (De Ridder et al., 2007; Wrisberg et al., 2002). The argument for this opposing viewpoint is that there is lack of real guidance, especially methodological and analytical guidance on what tools can be used for what situation, at least from a theoretical standpoint. De Ridder et al. (2007) then proposes a framework for tools selection through which tools are matched to specific task, as well as a justification of their use. Although incomprehensive, this framework provides useful information that help bridge the gap between tools and task to be performed.

Additionally, most of the literature survey revealed detailed work on specific tools like life cycle assessment (LCA), strategic environmental assessment (SEA), and environmental impact assessment (EIA). These are the tools among ESA tools that make up the lion share in the academic literature that the author came across. Interestingly, EIA and SEA, which constitute the subject of this thesis, are procedural tools. For both SEA and EIA, public involvement constitutes an important aspect of the tools. Understandably, the need for enhanced public participation is quite prominent and recurrent (O’Fairchaillaigh, 2010; Cooper & Elliott, 2000). This is often a reflection of the type of context in which the decision is made. Context itself is an issue that has been recurrent in the discussion of the different tools in the theoretical literature. For instance, Contextual issues are aspects that have been repeatedly stressed and recommended by the impact assessment research community (Hilding-Rydevik & Bjarnadottir, 2007). Runhaar (2009) notes that in order to better understand the contribution of SEA to decision – making, more attention needs to be directed to both the contextual as well as policy discourse analyses within which SEA operates. This may include the institutional framework, scientific knowledge and technology,
policy planning, and democracy. Context can vary from place to place and from country to country.

In connection to SEA, there is a huge disagreement among scholars and practitioners about issues relating to theory and methodologies, as to which one lags behind the other (Bina, 2007). Such disagreements highlight the need for further studies to be carried out. On the other hand, concerns have been raised about scarcity in the literature exploring practical application of some tools. In this regard, Chaker et al. (2006) attempts a comparative overview of SEA systems in 12 selected countries base on their legal, procedural and institutional background. Their conclusion points to the need for developing countries to capitalize on international experience due to limited resources and SEA expertise, and that there exist no single optimal way of implementing SEA, the choice depends on context, legal and regulatory framework and government approach in each country. Sweden is one of the 12 selected countries.

Unlike SEA, there is somewhat a general consensus on basic intentions and core elements of EIA, though adapted to different circumstances and contexts as well (Jay et al., 2007). EIA is adopted in most countries and supported by legal framework. However, the existence of common legal requirement fails to match with harmonized practice in most EU states such as in France and the UK (Glasson & Bellanger, 2003). Differences in interpretation of issues involved have been cited as being at the root of this dichotomy (ibid). Similarly, institutional factors alongside procedural, legal, human capacity and organizational factors have already been cited in earlier research work to constitute some key barriers to practical applications of EIA in Cameroon (Alemagi et al., 2007). Similar questions have also been raised about impact assessment procedures in Sweden, whether such assessment frameworks actually promote sustainable development (Nykvist & Nilsson, 2009).

While there is considerable amount of literature in EA tools, comparative studies in matters of theory and practice between nations is still quite rare to come by. In view of this insufficiency, this thesis work attempts to bridge the gap by building upon existing knowledge and results from similar studies on the topic to paint the picture in two different countries: Sweden and Cameroon.
2. Methodology

2.1 Document-based Research

In order to answer the research question about the extent of EIA practices in Cameroon and Sweden in relation to the theory, this thesis relies on a vast reservoir of secondary data collected from Journals and articles at the university library database and the library catalogue. This database presents a valuable source of information relating to the subject of interest. With this in mind, the author took special care in selecting renowned and frontline academic Journals that have made significant contribution in relation to practical and theoretical aspects of EA tools. In particular, the *International Journal of Environmental Assessment Policy and Management* (Imperial College Press); *Environmental Impact Assessment Review-EIA* (Elsevier); *Impact Assessment and Project Appraisal* (The Journal of IAIA); and *International Journal of Life Cycle Assessment-LCA* (Springer, Berlin), will be explored.

Books by Wrisberg et al. (2002), Dale & English (1999) and Christopher Wood (1995) etc alongside government agencies homepages, international agencies like the United Nations Environment Programme (UNEP), and credible internet sources will constitute other important primary source of information. Critical examination of evidence relating to the internet sources will be made given that this source of information can sometimes be misleading. Input material from the internet were found by simply performing a search on Google search engine, with key words like environmental assessment tools, practical implementation of impact assessment tools in Cameroon or Sweden, etc.

2.2 The Analysis & Comparison of EIA & SEA Practices in Cameroon & Sweden based on Personal Experience

For the analysis and comparison of how EIA and SEA are approached in practice in both Cameroon and Sweden, qualitative interviews would have provided important research method for confirming information that has been gathered from the theoretical documents, with interviewees able to reveal their personal experiences from their own perspectives. Thus, the conclusion drawn may be limited by its reliance primarily on theoretical literature. Time too has been a major limiting factor in terms of covering more issues. To overcome this limitation, a critical perspective was embraced as well as drawing own personal views and conclusions in some areas. In terms of personal views, they constitute an important input to the results and analysis, as the author has lived most of his life in Cameroon and have some experience of how things are done in Sweden. To support and complete the author’s personal experience as the main source in the Cameroon case, and to reveal the practice of the Swedish EIA system, supplementary literature has been sought e.g. reviews and reports of earlier projects and authorities such as the World Bank (2008) assessment reports.

Reviews and reports from earlier projects along with some major events and debates in connection to economic development, environmental and social protection in the country present a good opportunity to assess authority including public view and perception, as well as level of engagement in sustainability issues. A case in point is the social, environmental, and economic debates that marked the build up to the construction of the largest energy infrastructure development project in sub-Saharan Africa in 2004: the Chad-Cameroon Oil Pipeline Project. Some implementation flaws in Cameroon impact assessment efforts experienced during the commissioning of this high profile infrastructure project: for instance, huge problems with EIA monitoring and control, issues of institutional democracy and governance (IAIA Conference Proceedings, 09).
3. An Overview of Environmental Assessment Tools

3.1 Rationale for a system perspective

De Neufville (1990 cited in Buen, 2008) defines systems analysis as "the use of rigorous methods to help determine preferred plans and design for complex, often large-scale systems. It combines knowledge of the available analytic tools, understanding of when each is more appropriate and skills in applying them to practical problems—both mathematical and intuitive as in all planning and design." It is often useful to break down a system into its constituents and study them as individual entities. This reductionist approach to study has been dominant in scientific study for quite some time. The idea behind reductionism is that a better understanding of how the sub-systems work reflects the working of the whole system put together. This approach, however, does not consider the interactions between sub-systems or constituent parts under study. Even more, the characteristics displayed by a sub-system may have little or nothing in common with the whole system put together.

There is no question that we live in an interconnected world and the environmental issues we face are themselves interconnected, transcending disciplines, and are multidimensional in character. This raises questions about knowledge availability, uncertainty, and complexity of underlying issues (Sexton et al., 1999). The question about how to deal with this growing uncertainty and complexity of modern society in order to improve management of its different parts has rendered the traditional reductionist approach inadequate. This paved the way for a system thinking to paint a big picture of a complex problem. A system analysis, as a scientific approach to study, improve understand and the ability to deal with this growing complexity in the decision-making process. A way of achieving the analysis of the system being studied is with the use of tools like LCA, EIA, SEA, CBA etc. It is to be understood why the multidisciplinary field of environmental system analysis, of which environmental assessment is part, readily embodies the system approach aim at shedding light and bringing different perspectives to increasingly complex environmental issues. Of course, the term ‘analysis’ in system analysis means breaking down into constituent parts in order to get a better understanding of each part but, more importantly, taking into consideration interactions with other parts of the same system being studied-sets of interacting entities.

Thus, a system analysis may be considered as a tool on its own, applicable to different problem areas including environmental problems, thus, the phrase environmental system analysis. Burström (2000 cited in lecture notes, 2008) defines environmental system analysis as a systemic analysis of interactions between technical, economical, social and ecological elements and processes, especially for assessment of human activities, processes and products from an environmental and sustainability point of view.

3.2 EA and Sustainable Development

By definition and as a planning tool for decision-making, EA is absolutely important for attaining sustainable development. Sustainability itself as a concept is quite useful here because it is founded on a system perspective, covering the environmental, economic, and societal aspects. The concept also embodies matters relating to institutional building and democracy, and it is now popularly appraised within the different sectors of the society. Democracy, thus, is a key element of SD. Indeed, the need to strengthen institutions and governance within the framework of democracy has never been so urgent, especially for a developing country like Cameroon. EIA and SEA’s abilities to foster the institutional building and participation of various stakeholders by providing a platform on which different opinions are expressed can only drive this democratic process further (Alshuwaikhat, 2005).

The World Commission on Environment and Development defines SD as follows:

Environmental Assessment Tools as a Framework for Decision-making: A Comparative Study between EIA Theory & Practice in Cameroon & Sweden
...meeting the needs of present generation without compromising the ability of the future generation to meet their needs... (WCED, 1987).

Thus, SD seeks to put environment and development issues, which have often either been ignored or given little attention, firmly into economic and political agenda. According to the resolution adopted by the World Summit on Sustainable Development (WSSD) held in South Africa in 2002 and known as the Johannesburg declaration, there are three dimensions of sustainable development: 1) the Ecological Dimension; 2) the Economic Dimension; and the Social Dimension (WSSD, 2002). These three pillars, as they are sometimes called, are inter-connected and mutually reinforcing. For instance, the economic and social dimensions are both sub-systems of a much larger ecological dimension. Therefore SD cannot be achieved by focusing solely on one of them. The struggle therefore is to keep the size of the former within the ability of the later to sustain it (Constaza et al., 1997). Only with this understanding in mind can better environmental decision-making, policies and strategies be formulated toward a sustainable society.

**Item 31** of the Johannesburg Declaration states that in order for goals of SD to be achieved, a more effective democratic and accountable international institution and multilateral institution are needed (ibid p.10). It goes without saying that Democracy is an important guiding principle for sustainable development. While there may be no absolute objective way of laying out a single framework for gauging democratic quality, Diamond et al (2004) defines a good democracy as democracy that accords its citizens ample freedom, political equality, and control over public policies and policy makers through the legitimate and lawful functioning of stable institutions. He claims that the result of such a regime will be (1) good governance (2) facilitate associations among citizens and communities with the possibility to enjoy extensive liberty and political equality, (3) that government's performance can be judged through mechanisms such as elections (p.3). A flourishing democracy eliminates the possibility of wars, disasters, and instability, which might, one way or the other, compromise sustainability efforts.

### 3.3 EA as a Category of ESA tools

The field of environmental system analysis tool is quite vast. A great number of tools have been developed for different purposes based on a specific environmental problem. It can be understood why an attempt to categorize these tools may not only be a good starting point for describing the different tools, but it may as well be a difficult task to perform. It can also help to improve understanding of the tools. Perhaps this difficulty is partly due to the similarities that exist among tools and their role. The focus of this section is to attempt an overview of tool categories based on a wider literature survey.

**Fig. 1** below shows a suggested framework for categorizing tools for sustainability assessment' based mainly on the temporal focus of the tool along with the object of focus of the study (Ness et al., 2007). As a result, the different tools have been placed under three main categories: indicators/indices, product-related assessment, and integrated assessment tools along with monetary valuation tools.

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1 The term sustainability assessment (SA) reflects the adoption of different forms of assessments in impact assessment (IA); integrating environment, social, and economic dimensions. It is sometimes referred to as integrated sustainability assessment (ISA) (see IAIA, 2009).
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This categorization share some aspects with other frameworks for characterization. Finnveden and Moberg (2005) have described some key characteristics that EIA tools have notably procedural/analytical qualities, impact types, the object of study and whether the tool is used in descriptive or change-oriented studies. However, they noted that most of the tools are flexible in their character, thus, making it possible for one tool to appear in different tool group.

Some other studies have categorized tools into a group of seven based on common characteristics and common roles in integrated assessment (De Ridder et al., 2007). The different groups included: 1) assessment frameworks; 2) participatory tools; 3) scenario analysis tools; 4) multi-criteria analysis tools; 5) cost benefit and cost effectiveness tools; 6) accounting tools, physical analysis and indicator set; and 7) model tool.
In contrast to above categorization, Wrisberg et al. (2002) simply sum up ESA tools into two main categories based on their focus: procedural and analytical (see fig. 2). Procedural tools, which include for example SEA; EIA and environmental management systems (EMS), are involved in procedures to guide the process of implementing environmental decision. Analytical tools, which include LCA, life cycle costing (LCC), and cost benefit analysis (CBA), are concerned with technical information as to the consequences of a particular choice by modelling the system in a quantitative and qualitative manner.

In the light of the above categorization, it is clear that the typology for analysing tools is not yet fully conceptualised. Although each tool has its characteristics which make it fits specific environmental issues, there is no clear-cut connection between a particular methodology or a particular tool and a specific problem for which the tool is most appropriate and the fact that no single tool can uncover all the problems necessary for decision-making (Wrisberg et al., 2002).

There are also other important points to note with respect to the above categorization (Deridder et al., 2007): 1) each categorization is far from complete and therefore it can be possibly done otherwise, which is probably why there are many different ways of categorizing tools; 2) some tools can fit into more than one group depending on categorisation method adopted; 3) the tools are not exhaustive as they are many others not covered. Some tools are not covered in some categorization method.

3.4 Environmental Impact Assessment (EIA)

The International Association for Impact Assessment (IAIA) defines impact assessment (IA) as “the process of identifying the future consequences of a current or proposed action. The ‘impact’ is the different between what will happen with the action and what will happen without it.” Impact assessment can therefore be very broad, covering health (health IA), social (social IA), environment (environmental IA), all of which may be carried out
independently or in some kind of combine manner (integrated sustainability assessment, ISA).

Initially, the use of the term ‘environment’ in environment IA was solely connected to impacts making reference to the biophysical component, hence, the use of the term environmental impact assessment. Today, however, focus has shifted to include not only biophysical components, but also physical-chemical, biological, visual, cultural and socio-economic of the total environment. This shift in perception is significant and reflects the idea of holism or system view adopted within environmental system analysis- the notion that different components of a system do not exist as stand-alone entities but rather as a set of interacting components. This system view provides comprehensive results in relation to environmental effects of all components, instead of focusing only on a single part.

In this regard, the definition of EIA adopted by the (IAIA, 2009) reflects this totality in environmental components as follows: “the process of identifying, predicting, evaluating and mitigating the biophysical, social and other relevant effects of development proposals prior to major decisions being taken and commitments made.” Many other definitions of EIA do exist but share a common ground. For example Erickson (1994) defines EIA as “the process of identifying and evaluating the consequences of human actions on the environment and, when appropriate, mitigating those consequences.” Through appropriate, up-to-date engineering and management techniques, human effort in EIA is currently geared on minimising impacts or mitigating the changes cause to the above components.

3.4.1 International Effort in EIA

Due to its importance, EIA has long drawn interest from national and international community alike. Currently, a number of international organizations foster the use of EIA as tool for SD. They include among others the Organization for Economic Cooperation and Development (OECD), the World Bank (WB), the United Nations Environment Programme (UNEP), the International Association for Impact Assessment (IAIA) and the European Union through European Directive on EIA along with some international conventions on EIA. The OECD, through its development assistance committee (DAC), has established that the following elements need to feature if any EIA practice is to be considered as ‘good’ in a development project (OECD, 1992):

- Environmental aspects must be fully integrated in project selection, design and implementation and administrative responsibility for at least for the projects identified by the 1985 OECD council recommendations;
- EIA should address all the expected effects on human health, the natural environment and properties, as well as social effects, particularly gender specific and particular group needs, resettlement and impacts on indigenous people resulting from environmental changes;
- The EIA should consider alternative project design (including the ‘non-action’ alternative) as well as required mitigation and monitoring measures;
- In conducting EIA of projects, donors should use the standards that will achieve the minimum level of “acceptable” non mitigated negative effects and maximise the positive effects;
- The utility and relevance of EIA depends critically on country environmental surveys and strategies (on which DAC has established a companion set of “good practices”) they should be taken into account wherever available;

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2 Projects listed in 1985 council recommendation are under the following headings: those which cause substantial change in renewable resources use; farming & fishing practices; exploitation of hydrological resources, infrastructure; industrial activities; extractive industries; waste management and disposal.
• Active arrange including access to information should be made wherever possible to obtain the views of the affected indigenous population on projects which could have significant environmental effects;
• The EIA should enable a clear statement of beneficial and adverse environmental and social effects and risks of the project to be made;
• Off-site effects, including Tran boundary, delayed and cumulative effects, should be assessed, environmental aspects of assisted projects should be clearly determined;
• The EIA must be considered, together with screening and scoping;
• Government of developing countries bear the ultimate responsibility for the state of the environment in their respective countries and for the design of the development projects. However, when trans-boundary and international issues affect the environment in developing countries, the government causing this problem should bear the responsibility for solving these environmental problems in respective developing countries.

These 10 elements share many things in common with the 14 set of evaluation criteria that Wood (1995, p. 12) suggests for testing the performance of any EIA system. In his case, the EIA system in question include the USA, the UK, Canada, Netherlands, Common wealth of Australia, western Australia and New Zealand, and California. The 14 evaluation criteria include among others 1) must the relevant environmental impacts of all significant actions be assessed?; 2) Is the EIA system based on clear and specific legal provisions?; 3) Must EIA reports meet prescribed content requirements and do checks to prevent the release of inadequate EIA reports exist? 4) Must the EIA system be monitored, if necessary, be amended to incorporate feedback from experience? 5) Must consultation and participation take place prior to, and following the EIA report publication? 6) Must the finding of the EIA report and the review be a central determinant of decision on the action? 7) Must the EIA report be publicly reviewed and proponent responds to the points raise?

The UNEP on its parts uses environmental impact assessment training resource manual, which is a generic tool kit available for use by trainers across a variety of countries, especially those in developing countries. It aims to overcome the problems associated with the use of EIA in some areas in order to increase its popularity (UNEP, 1996). As for multilateral development banks such as the WB, it is of special interest here because it has developed its own procedures and is actively involved in financing development projects in Cameroon. The WB has an established procedure for carrying out EIA in development projects in borrowing countries such as Cameroon, but the borrowing country bears the responsibility of carrying out the EA itself. According to the WB operational policy (OP) for environmental assessment, the Bank can use a number of its EA instruments including EIA depending on the type of project³ (World Bank OP 4.01, 1999).

Category ‘A’ projects are high risk projects, with multidimensional environmental concerns. After the borrowing country has completed its EIA exercise, the WB then undertakes a review on the findings and recommendations of the EIA to determine if they meet the Bank’s policy requirement before such a project is financed. In this sense, the use of EIA is applied on projects as a condition for financial aid in developing countries like Cameroon. The country is in desperate need of the money provided by the Bank and will therefore do everything to get it. This in turn means that the WB can employ its financial status as an instrument to get borrowing countries actually implements EA. But the Bank itself must be a model and have a realistic commitment for environmental protection in relation to project financing. The content and scope of an WB EA report for a category ‘A’

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³ WB projects are classified into one of four categories after screening: category A, B, C and FI. This categorization is based on the type, location, sensitivity, scale and nature of magnitude of potential environmental effects.
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3.4.2 EIA Procedure

According to IAIA (2009), the EIA process should provide for: 1) screening to determine whether or not a proposal is subject to EIA, and if so at what level of detail; 2) scoping: to identify the issues and impacts that are likely to be important and to identify terms of references for EIA; 3) Examination of alternatives: to establish the preferred or most environmentally sound and benign options for achieving propose objectives; 4) impact analysis: to identify and predict the likely environmental and social and other related effects of proposal; 5) mitigation and impact management: to establish measures that are necessary to avoid, minimize or offset predicted adverse impacts, and where appropriate to incorporate these into environmental management plans or systems; 6) Evaluation of Significance: to determine the relative importance and acceptability of residual impacts (i.e. impacts that cannot be mitigated); 7) Preparation of environmental impact statement (EIS) or report: to document clearly and impartially impacts of the proposal, the proposed measures for mitigation, the significance of effects and the concerns of the interested public and the communities affected by the proposal; 8) review of the EIS: to determine whether the report meets its terms of reference, provides a satisfactory assessment of proposals and contain the information required for decision-making; 9) decision-making: to approve or reject the proposal and to establish the terms and conditions for its implementation; 10) Follow-up or implementation & monitoring: to ensure that the terms and conditions of approval are met, to monitor the impacts of development and the effectiveness of mitigation measures, to strengthen future EIA and applications and mitigation measure, and where required, to undertake environmental audit and process evaluation to optimize environmental management. The above processes and procedures in EIA are summarized in fig. 3 below, where it can be seen that public involvement may begins as early as the screening phase right through to the implementation and follow-up. This is not often the case in most project implementation of the EIA process.

3.4.3 Institutional & Regulatory Framework for EIA

EIA first had its legislative basis in the United States. Since then, the process has evolved and spread through many other countries. Although none of these countries operates the original EIA procedures found in the US NEPA, its basic intentions and principles remain the same (Jay et al., 2007). Indeed, it has been adapted to suit the need and circumstances in the different countries. Each country that embraces EIA principles and where EIA is practiced has some form of legislation that serves to make its use mandatory in the decision-making process for high profile development projects. In some of these EIA systems, analysis of impacts is limited to the biophysical environment while in some cases, social and economic impacts must be included in the development proposals (IAIA, 2009).

The European Union EU Directive 85/337/EEC is a good example of a legislative framework setting mandatory policies in EIA practices in the European Union of which Sweden is a member. However, the scope and method of implementation are matters for each member state to decide (Glasson et al., 2003). This large measure of flexibility in the use of EIA raises questions about diversity in interpretations and, thus, the need for
harmonization in EIA systems. In response, the European Commission has since then acted on the proposal to amend the Directive 85/337/EEC, provide more details procedures as well as taking the above mention issues into considerations (European Commission, 1994).

Countries are therefore required to have a clear legal framework and guidelines for EIA to demonstrate their interest in implementation. But merely having a legal framework and guidelines in place does not guarantee that such will be applied to the letter. This could be the case for government systems where power is over centralised, access to information is rare and accountability is doubtful.

3.4.4 Characteristic Features of EIA:
EIA often targets potential environmental and social impacts from a specific project where it is applied. By nature, thus, EIA is a **predictive or forecasting** tool (Höjer et al., 2008)). Also, the fact that EIA targets potential social and environmental effects from a specific project at a specific point in time means that EIA is not only **focus-oriented** but **site-specific and time-dependent** as well (Wood and Ahmad, 2002; Moberg, 2006). However, EIA systems today turn to move toward a more extended temporal and spatial considerations. After the global adoption of EIA principles, certain projects (such as category ‘A’ projects under WB classification) must be subject to the use of EIA by law, in which case, EIA is **mandatory** for such projects. The fact that the original EU Directive on EIA for example gives member states the allowance to adjust EIA practice to their specific circumstances means EIA practices are largely **flexible** and the tool is said to be **adaptive**. EIA can be seen as an **evolving** tool, both as an art and science, with initial focus on methods and impact prediction shifting to matters relating to improvement the procedures of application especially in developed countries (Pett, 1999). Also, the original intention to deal mainly with the biophysical component of the environment has changed. Nowadays, the EIA system has extended its boundary to cover also social and economic factors in assessment process-making it an **integrative** tool. As part of...
this principle, EIA often employ the use of other tools such as CBA, SEA and LCA depending on the situation and data requirement.

Input information and data for successful implementation of EIA come from a wide range of stakeholders, who in principle are part and parcel of the EIA process. This makes EIA a participatory tool (Wood and Ahmad, 2002), aiming for a more transparent decision-making process through public access to available information. The process employs acceptable methodologies and techniques to reach appropriate levels of environmental and community well-being in decision-making. In this regard, EIA is applied in a rigorous and for a well defined purpose. These characteristic features of EIA constitute its basic principles.

3.5 Strategic Environmental Assessment (SEA)

Therivel et al. (1992, quoted in Risse et al., 2003) define SEA as follows: “formalized, systematic and comprehensive process of evaluating the environmental impacts of a policy, plan or program and its alternatives, including the preparation of written report on the findings of that evaluation, and using the findings in publicly accountable decision-making.” SEA emerges from the demand to apply IA of strategic level of decision-making such as policies, plans and programmes. Thus, SEA unlike EIA assesses environmental and social impacts but on policies, plans and programmes (PPP) instead of project as object of focus (Vicente and Partidario, 2006). So, SEA is some kind of a foundation for EIA, formed in responds to the need for strategic decision-making that EIA could not deal with. This automatically makes SEA mandatory for plans and programmes leading to projects for which EIA will be applied. This also means that SEA is normally to be conducted prior to EIA and at an early stage and much high level in decision-making. Some questions have been raised about the timing of SEA, as to whether it should be operational at the onset of preparation of plans and programmes or just before adoption or submission to legislative procedures? (Risse et al., 2003). At this earlier stage, very limited information is usually available from the project and this may imply a high degree of uncertainty in possible outcome. For example, insufficiency in data and information at the early stage means SEA assessment only show general trend for environmental and social impacts (Jeswani et al., 2010).

However, it is important that SEA plays its role successfully in order to have a positive effect on the subsequent stages of the EIA project. In order for SEA to take it rightful place in decision-making and with a meaningful role, it needs frameworks for supported. An example is the regulatory framework Directive 2001/42/EC on the assessment of effects of certain plans and programmes on the environment adoptable by member states of the EU (Risse et al., 2003). Again, this directive in respect of different contextual issues prevailing in different countries leaves the choice of method to members’ states. In many other countries such as Cameroon, the legal basis for SEA is not yet operational.

It is to be understood why just like EIA, there have been contextual and methodological developments in SEA practices. Based on contextual issues, various SEA procedures and process have been tried in various countries. Since context varies, some authors have argued in favour of adapting SEA implementation to reflect context where it is applied e.g. (Hilding-Rydevik & Bjarnadottir, 2007). On an earlier study but based on the same line of reasoning, Fisher & Gazzola (2006) point out the following criteria for effective SEA practice from a contextual point of view: 1) the existence of an established institutional framework for the effective consideration of the ‘environment’ in PPP making including an awareness for ‘environmental’ problems as well as the existence of sustainable development framework that provides for SEA objectives; 2) the existence of effective cooperation and public participation in PPP making; 3) the existence of an effective project EIA system within which SEA can be tiered.

The Directive spells out SEA general processes as follows: screening, scoping, writing environmental report, reviewing the report, decision-making on whether to accept, amend or
reject the strategic proposal, and monitoring (Risse et al., 2003). According to the Directive, some steps that take place throughout the process like public participation and integration into the planning process are mandatory.

It is clear that public participation is a major pillar in the SEA process. The fact that SEA is stakeholder-driven (Chaker et al., 2006) ensures access to relevant information to the PPP making process. Just like EIA, SEA is integrated and focus-oriented on main issues of sustainability, aiming for sufficient, reliable and usable information for decision-making in a cost and time efficient manner. One important feature of SEA is its accountability (Alshuwaikhat, 2005) in decision-making, being subject to checks and control from independent authorities in order to justify the extent to which sustainability aspects are taken into consideration in decision-making. SEA is an iterative process that ensures that results from its assessment are within reach of major stakeholders and early enough in order to have an influence on the decision-making process. As a tool for decision-making, SEA complements EIA which is focused on a specific project. Unlike EIA, SEA covers almost every sector of human activity and is automatically required for plans and programmes which are prepared for towns and country planning, land use, transport, energy, waste management, water management, industry, telecommunication, agriculture, forestry, fishery, and tourism.

3.6 The Concept of Life Cycle Thinking

The concept of life cycle thinking is part of a much broader Life Cycle Management (LCM) system for collecting and disseminating information about the economic, social and environmental aspects of a product throughout its life cycle and value chain. The basic tenet here involves organizations and companies thinking outside their usual boarders (UNEP, 2007). In this way, a company get a better understanding of the nature of environmental and social impacts of its activities outside the usual company boundaries and an organisation or a government sees the aftermaths of its policies and actions. In this way, a shift in problem from one phase to another is avoided and a comprehensive adoption of environmental issues is ensured.

The good think about this concept is that it is adaptable to specific situation in an organization irrespective of size. Therefore, even in small and poor countries the concept can be put into use. However, it requires commitment both from top management and other key stakeholders. This means collaboration and communication to all stakeholders in the value chain as the organization extends its scope. As Thabrew et al. (2009) has indicated, the concept of life cycle thinking can be use to improve collaboration in a joint project as well as use to analyse upstream requirements and downstream consequences of decisions.

Government strategies and policy development in matters relating to e.g. the energy sector, water use, waste management, infrastructure development, technology and decisions about consumption can benefit from the concept in terms of evaluating and assessing alternative means of actions or possibilities for improvements for a particular course of action.

This concept is gaining importance both in company and other in organizations. The importance of adopting the LC perspective in business and government policy making is reflected in a number of international initiatives for raising its awareness and for capacity building, as well as for improving transfer of information, fostering partnership and improving understanding. At international level, effort is led by the Society for Toxicology and Chemistry (SETAC) and UNEP division of Technology, and Economics (UNEP, 2004). The United Nations Environmental Programme (UNDP), which is present in most countries, champions the course for LC thinking in assisting governments around the world to access environmental information. As a matter of facts, the UNEP and the Society for Environmental Toxicology and Chemistry (SETAC) launch an international initiative known as the life cycle initiative, within the framework of international life cycle partnership to among others provide reliable information in accessible manner and to ensure worldwide
3.7 EA Tools and Stakeholder Participation

Public participation is vital in environmental assessment and decision-making processes. This view is reflected in Principle 10 of the Rio Declaration on Environment and Development, which is one of the outcomes of the United Nations Earth Summit in Rio de Janeiro (Rio Declaration, 1992). This principle stresses the need for concerned citizens at relevant levels to have access to environmental information held by public authorities about activities in their communities, and the opportunity to actively participate in the decision-making process. It is therefore to be understood why the need for enhance public participation in the use of EA tools e.g. EIA and SEA has constantly been stressed in the academic literature.

According to Kennedy (n.d.), research has shown for example that the credibility of EIA rests upon the provision of information and meaningful involvement of public. The argument is that private citizens and citizen groups are often more knowledgeable concerning development sites and potential environmental impacts to them. The question is just how well can the public be made to actively take part or have a meaningful involvement at all levels of the decision process? There is still a huge disagreement about how to deal with this issue (Cooper & Elliot, 2008; Doelle & Sincair, 2006). Important to note is the fact that meaningful public involvement here goes beyond the question of ‘whether or not’ to ‘how much’ and to ‘what extent’ the public should be involved (Kennedy, n.d.). In this regard, it is important within the EIA system in each country to decide how the public participate and provide useful information and best means for giving the public information in return. The International Association for Public Participation (IAP2) has spelt out the goal of public participation as follows: 1) inform the public by providing balance objective information to make easy understanding of problems and solutions, 2) consult with public for feedback, 3) involves the public by working directly with them throughout the process to ensure that their concerns and aspirations are fully understood, 4) collaborate through partnership with public in decisions involving the development of alternatives and possible solutions, and 5) to empower by placing final decision-making in their hands. These goals are achieved by means of techniques for collecting and giving information such as website, fact sheets, focus groups, surveys, public meetings, workshops, citizen advisory committees, consensus building, citizen juries, ballot, and delegated decision (IAP2, 2007).

EIA and SEA systems require public participation. The government can ensure legitimacy and transparency in the process by facilitating information flow and communication between it and the public. One aspect of SEA assessment process is to enhance transparency and communication and ensure confidence of public in government authorise (Risse et al., 2003). This is also an important principle of democracy which in turn promotes sustainable development. In the context of development project for example, a great number of key players may include developers, local environmental committees, and environmental experts group, NGOs, private citizens, media, various community groups and associations and even experts at specialized university departments along with the government itself. In most countries, some of these groups are weakened by a number of factors which deprive them of their normal involvement in activities in the community. Meaningful stakeholder participation will require that these groups, especially local community, be empowered. In which case, they actually have capability to influence the decision process.
### Table 1: Reasons for public participation in EIA

O’Faircheallaigh (2010) has summarized the important role that public participation can have in the case of EIA for example, mainly as an important input to decision-making and as public involvement in decision-making and an attempt to change the distribution of power in society as reconfigure decision-making. These are summarized in table 1.

![Table 1](image)

3.8 The Synergy between Tools:

In the face of the strengths and weaknesses of each tool (see table 2 below), it can be understood why no single tool is most likely to address all the problems that a situation may demand. Identifying strengths and weaknesses can provide basis for how tools complement each other and hence the possibility of combining them for decision-making from a local authority context (c.f Emilsson et al., 2004). So, in order to make up for the weaknesses of a particular tool in a specific situation and avoid problem shifting to other areas, a combination of tools is often recommended. Interestingly, the topic on the benefits of combining different tools for solving different environmental problems has been the focus of a number of studies (e.g. Emilsson et al., 2004). The benefits comes from exploring the fact that while some tools are specially adapted to certain kinds of decision-making, others facilitate decision-making at several levels, and information from such tools serve as important input for other tools (ibid).

### Table 2: EIA and SEA- Strengths & Weaknesses

<table>
<thead>
<tr>
<th>Tool/Description</th>
<th>Advantage</th>
<th>Disadvantage</th>
</tr>
</thead>
</table>
| EIA Procedural assessment method | - Compares trade-offs and alternatives and considering goals of sustainable development.  
- Encourage public involvement by providing knowledge and ideas to project in the planning and decision phase | - insufficient data implies uncertainty of results  
- more qualitative/subjective  
- site specific  
- no clear idea on cumulative impacts  
- only involved in project activity not strategic level of decision-making  
- No standardise procedures-open to various interpretations  
- method for public information  
- value-laden  
-difficulty to compare impact |

*The pros and cons of tools listed in table have been gathered from different theoretical literature*

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Due to its strategic nature and application at high level in decision-making, the importance of SEA has been stressed in literature. The use of SEA is nowadays recommended for projects were EIA is to be applied (e.g. the EU SEA Directive). SEA therefore serves as a good foundation for EIA since it starts to consider effects of action as early as possible in PPP, thus, bridging the gap that existed between projects and PPP in the use of EIA. This means that important decisions that could be taken before a project are given due EA consideration in the formulation of PPP. SEA thus is deeply rooted in EIA and are mutually reinforcing. For instance, SEA principles strengthen EIA as a tool and improve its usefulness as decision-making. This is achieved through increased transparency, as a result of increased documentation and an increased dialogue with stakeholders throughout the planning process. Of course, stakeholder-driven, accountability, and participation are some of key characteristic features of SEA described in the previous section. In this respect, it is therefore important to strengthen the strategic dimension of SEA in meeting its role and purpose.

SEA processes even act as a framework in which different other tool can play a supportive role for some analytical tools like Life Cycle Assessment (LCA) (Moberg, 2006). Such analytical tools, in addition to procedural tools like EIA and SEA, are imperative in providing useful information and thus constitute an important part of tool set in combination with the assessment framework or assessment method (Jeswani et al., 2010). Nilsson et al. (2009) have suggested a tool kit for integrated use within three stages of SEA follow-up in strategic decision-making: scoping, analysis and learning. However, tools must be appropriately selected to match each other in a situation if they are to have a synergetic effect. There are four main criteria for combining tools (Jeswani et al., 2006): 1) The complexity of the evaluation; 2) The spatial specification-site specific versus non-site specific; 3) Impact types considered; 4) Attaching monetary values. When tools are used in combination, they have a synergetic effect and therefore generate a win-win scenario.
3.9 EA Tools and Decision-making Process:

As environmental consciousness rises, so too is the need for environmental information brought about through pressure from civil society groups (environmental NGOs, public bodies’ e.g. national agencies; consumers’ demand as in green purchasing; etc. This in turn brings pressure to bear on the need for supply of environmental information. Demand must be matched with its supply (Wrisberg et al., 2002). In relation to environmental assessment, good decision-making depends on the ability of EA tools to supply quality, up-to-date, relevant data and information.

The role of information availability in decision-making is not to be overemphasized. Therefore, it is important how different demands of information can be linked with different supplies of information to support decision-making. In this light, the UNEP notes that “environmental assessments are key vehicles for promoting the interaction between science processes and the various stages of the policy and decision-making cycle” (http://www.unep.org/themes/assessment/). An increasing amount of information and data (both qualitative and quantitative) is now produced from the use of EA tools. Therefore, a mechanism for ensuring enhanced management of such information and data should be considered. In this regard, information and communication technology (ICT) and knowledge management are relevant instrument, particularly in the planning processes.

As already stated, the purpose of EA tools such as EIA and SEA is to supply the decision-makers with all quality information and data they need for analyzing, assessing and identifying environmental impacts of different projects in order to make an environmentally sound decision. To get a better understanding of how each tool or tool set can be linked to a specific decision situation, one need to understand how the tool was developed, its characteristic features and its nature. These aspects have been dealt with in the previous sections of this thesis. On the other hand, the decision itself needs to be understood in terms of its different dimensions. This may include, among others, answering questions about important substantive aspects connected to the environmental decision (Sexton et al., 1999; Wrisberg et al., 2002). The object under analysis and the context in which the decision is made are some of the important factors that count in linking tools to specific decision situation. The decision process is shown below in figure 4.

![Figure 4: EA as part of the Decision-Making process. Adapted from UNEP training resource manual](image-url)

Decisions more often take place within a political sphere of influence. Thus, at the interception between information supplied by EA tools and the decision-making process, is a wide range of stakeholders holding different political opinions, values, and perceptions of...
environmental problems. This implies that the outcome of the decision-making process is a function of not only the kind of information supplied by different tools, but also the kind of actors concerned. Decision-making becomes a political choice of analysis between different alternative directions. Sexton et al. (1999) observe, “Good decisions require more than good analyses and good intentions they require judicious blending of facts and values to make informed judgments about critical trade-offs” (p. 3). However, a number of questions may be posed: can we trust those making the decisions as well as the assessment and evaluation processes? How much is adequate information and to what extent can EA tools supply them? How can this diverse information be communicated and disseminated to decision-makers and stakeholders including the general public?

Both of the compared countries, Cameroon and Sweden, are different in political, cultural and administrative arrangement as well as different level of experience with the EIA practices. They also have different national priorities, and therefore operate their EIA systems in completely different context. As Fuller (1999) notes, no single quality or effective EIA system does exist. Each is a product of social, political and economic context in which it operates (p. 55). Against a backdrop of contextual differences, though, there are still elements or principles of EIA that make it a sound practice wherever it is practiced. As far as performance of EIA systems is concerned, both countries will be assessed on the basis of the relevant issues from theoretical literature already discussed in previous sections, notably, the 14 set of evaluation criteria that Wood (1995, p.12) suggests, and the 10 relevant elements necessary for a ‘good’ EIA practice suggested by the (OECD, 1992). These all form part of established institutional arrangements for promoting EIA in both countries. In particular, legal, procedural, and administrative setup as well as approach to decision-making, public perception and participation will be in focus. The performance of the two systems is compared to theoretical aspects of EIA and the result is summarised in table 3 below.

One of the fourteen evaluation criteria for a good performing EIA system is the effective implementation of SEA. The implementation of this tool is still not fully embraced in Cameroon and in Africa as a whole. However, some elements of it do exist and it is important to encourage it as a necessary complement to EIA. While most of the developed countries have adapted the SEA system, developing countries have only a limited experience linked to the requirements of institutions such as the World Bank (Dalal-Clayton and Sadler, 2005). However, due to commitments made for realising the vision of the New Partnership for African Development (NEPAD), the process is being developed in some countries and the African development bank has some guidelines for SEA (IAIA, 2009).

The regulatory framework laying down the groundwork for environmental assessment in Cameroon came into force just recently, in 2005. Clearly, Cameroon has been quite late in introducing necessary frameworks for EA and at present, the system is still under development. Until early 1992, interest has mainly been on economic growth and poverty alleviation. This implies that experience on EIA processes is still in its infancy. Perhaps this explains why published literature on EIA system in Cameroon is quite rare to come by. Therefore, most of the information concerning EIA practice is based on the publications of the WB, which has a long involvement in financing projects in Cameroon. On the other hand, Sweden has a long-standing history of both national and international sustainability effort e.g. it hosted the UN Conference on Human Environment in Stockholm in 1972. As a matter of facts, SD is stated as an overarching policy objective and has been elaborated on in many strategic documents (Nykvist and Nilsson, 2009).

4.1 Policy, Legal and Administrative aspects of EIA in Cameroon:

The existence of an established institutional framework is absolutely necessary for successful implementation of EIA processes. Following the Earth Summit in Rio de Janeiro in 1992, Cameroon began to put in place institutional arrangement for environmental management with the creation of the ministry of the environment and forests (MINEF) in 1992. The ministry has the responsibility of formulating appropriate environmental policy and strategies. Later on, a National Consultative Commission for Environment and Sustainable Development was created in 1994 in order to get more and more stakeholders involved in environmental management. The first visible effect of these new institutions, in particular the
ministry, was the elaboration of the National Environmental Management Plan (NEMP) (World Bank, 2008).

Over the years, the ministry in charge of the environmental has undergone transformation in appellation and organization to reflect the country’s increasing commitment in matters of SD. For instance, MINEF was later changed to the current ministry of environment and nature protection (MinEP) in 2004. The creation of this new ministry is a direct result of the provisions of a framework law on environmental management earlier adopted in 1996: law No. 96/12 of 05th August 1996 (the environmental code). In accordance with this framework law, MINEF acts as the country’s environmental regulator on matters such as environmental assessment (EA), environmental management plans (EMP), and environmental auditing. Here, the first signs of the Cameroon’s interest in EA practices became visible, at least on paper. In other words, this framework law No. 96/12 fully instituted the practice of EIA pending Decree of implementation. However, some elements of EIA practices had existed before in Cameroon. Example includes law No. 1994/01 of 20 January 1994 relating to integrated natural resource management; laying down forestry, wildlife and fisheries regulation (Alemagi et al., 2007). Indeed, forest management had earlier been the centre of attraction in environmental management, Cameroon being part of the Congo Basin—the second largest contingent of forest in the world after the Amazon in Brazil (WWF, 2007).

In order to achieve its regulatory and other functions, the ministry is assisted by an Inter-Ministerial Committee for the Environment (ICE) as well as five other departments: department of environmental policy development; department of monitoring of the conservation and promotion of natural resources; department of norms and environmental inspection; department of studies, projects and cooperation; and the department of general affairs (MiNEP, 2009). The department for environmental policy and development is responsible for managing environmental assessment process through one of its three internal units, known as the office for environmental assessment. Decree of implementation No.2005/0577/PM of 23ed February 2005 in view of law No.96/12 lays down the modalities for conducting an EIA (MiNEP, 2005). Thus, the practice of EIA actually took effect in 2005 soon after this decree. Since then, the office for EA has processed 68 reports of which 54 are EA (see fig. 6). Inadequate personnel, technical skills and financial resources are just some of main problems that the EA unit grapple with. Therefore, the government Decree No. 2008-064 of 04th February 2008 creating a National Environmental and Sustainable Development Fund as provided for in the environmental management law 96/12 was a welcome boost. Its purpose among others is to raise fund to support the actions of relevant ministry, support research and education in SD, encourage local initiative on environmental protection and SD, etc. (Cameroon Environmental Code, 1996; WB, 2008, p. 24).

![Figure 5: number of EA report (2005-2008), source: World Bank.](image)

However, most of EIA so far have been carried out on internationally financed projects, particularly the WB financed projects, thus, raising the question about whether the practice of EIA is as a response to a genuine political will for environmental protection or a mere need to fulfill conditions for development assistance agencies?
An accompanying decree of implementation came into force 9 years after a framework law on environmental management in Cameroon was adopted in 1996. A ministerial Order No. 069/MINEP of 08th March 2005 mindful of the Prime Ministerial Decree No. 2005/0577/PM of 23ed February 2005 details issues pertaining to process and procedures for carrying out EIA as well as different categories of projects for which EIA is mandatory (MinEP, 2009). According to the ministerial order, two types of EIA are carried out in Cameroon depending on the project category—simple EIA and a detailed EIA. Stipulation of Article 6 of the decree prescribes two types of project category, category 1 requiring a simple EIA study and category 2 requiring a detailed EIA study (Alemagi et al., 2007). The categories of project span a range of sectors including petroleum, mining, agriculture, forestry, urban sanitation, industry, transportation and construction.

Usually, the competent environmental authority, (MinEP in the case of Cameroon), draws up the guidelines with the information that an EIS should contain. The proponent either from the private sector or a government agency, or private citizen bears the cost and the responsibility to supply an EIS just like it is the case in Sweden (article 17, law No. 96/12). As far as a detailed EIA study is concerned, the following are required in the content of the EIA report (ibid): 1) a summary of the study in a non-technical language, simple and understandable, and publish in the country’s two official languages: French and English; 2) A description and analysis of the initial state of the site and its physical, biological, human and socio-economic environment (baseline environment); 3) A description and analysis of all the components as well as natural and socio cultural resources likely to be affected by the project, including reasons for choosing the site; 4) A description of the project; 5) The presentation and analysis of the different alternatives; 6) The reason for choosing the project amongst other possible solution; 7) The identification and evaluation of the possible effects of implementing the project on the natural and human environment; 8) An indication of the envisaged measures for avoiding, reducing, eliminating; or compensating the detrimental effects of the project on the environment together with an estimate of the corresponding cost; 9) A program for the sensitisation and information including minutes of meetings held with the public, NGOs, syndicates and other organised groups affected by the project; 10) An Environmental Management Plan (EMP) comprising surveillance mechanisms and the environmental follow up of the project and, where necessary, a compensation plan; 11) The terms of reference of the study including the bibliographic references.

The different steps in Cameroon EIA procedure could be grouped under five main headings, from project initiation to final decision by the competent authority (see fig. 6 below):

- Environmental impact initiative: two project categories, A & B;
- Environmental impact study: Screening, scoping, compilation of an EIS;
- Decision-making and authorisation: review, participation;
- Auditing for operating industries and establishments pre EIA; and
- Environmental management plan (EMP) and follow-up: Monitoring and evaluation;

As already mentioned, the proponent has the responsibility of initiating an EIA study for a project from the competent authority. An EIA process is formally initiated from the time the proponent submits a letter of intent. Following the response from the authority in charge, the proponent may seek the services of a competent body such as a consultant for carrying out the environmental impact study. This is in some respect similar to the Swedish system. However, specialised nationally operating consultancies are completely lacking. As a consequence, foreign consultancy firms, most commonly French firms are often employed.
According to the United Nations Environment Programme Training Resources Manual for EIA, one sign that a country is making progress in application of EIA is that the country gradually moves towards self-sufficiency in EIA, relying less on outside experts. Where outside experts need to be engaged, the opportunity must be taken to transfer expertise to local personnel (UNEP, 1996).

**Screening & Scoping:** Two main categories of projects for which EIA are applicable are determined. Therefore, when a project is started the competent administration gives it view in relation to the terms of reference as to the project category, kind of analysis etc. As far as scoping is concerned, the legislation in paragraph 3 of article 7 falls short of clarity. It simply makes some mentions of it as follows: “From the date of receipt of the project file, the Administration in Charge of the Environment shall give its advice on the terms of reference in 20 days.” However, according to Alemagi et al., (2007), there are no sectoral guidelines for determining sector projects and it is even possible for a project to go on without formal decision from the authority as to the project category and kind of analysis expected.

**Project Design:** Full implementation of EA process is central to the project design with specification of different measures necessary to avoid negative impacts including alternative measure and why they have been left out. Very often, there are no elements of EIA during feasibility studies where it is suppose to have most impact on the project. In such case, poor timing means that EIA appears towards the end of the activity, thus, having only little or no impact on the design phase.

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**Figure 6: Cameroon EIA Process and Procedure, Source: (Alemagi et al., 2007)**

**Baseline Data:** The government assumes mitigation cost due to lack of reliable baseline to specify investor’s obligations. However, article 19(2) of law 96/12 requires a baseline for all projects sites and their environment but often not implemented by investors. UNEP training

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**Environmental Assessment Tools as a Framework for Decision-making: A Comparative Study between EIA Theory & Practice in Cameroon & Sweden**
resource manual suggests developing a library of environmental assessment (EA) reports, collecting examples of good practices and learning from them, establishing environmental awards in workplace, and maintaining a database of information collected during an EIA among others (UNEP, 1996).

**Review:** Review for preparation of environmental assessment and audit and EMPs by Inter-Ministerial Committee on Environment within the ministry for a period of 90 days (WB, 2008). The IMC is the body that delivers a final opinion on EIA review prior to ministerial decision. This takes place after a special team comprising members from competent authority and ministry in charge of the environment have deliberated. The IMC itself is made up of members from different government ministry having connection to the project in question one way or another. Given the increasing requirement for EA review, questions may be raised about a comprehensive review that meets standards from a department plagued with understaffed personnel, financial insufficiency, and inadequate technical competence. Competent personnel are vital for a successful EIA process. In an event of a badly reviewed EIA report, the consequence on the decision-making will be severe. Given the important part that review plays in an EIA system, international standards require an independent review panel to advice, assist and review assessment produce by the project developer. The existence of such an independent authority shows commitment and interest in the process (Fuller, 1999). Unlike in a number of developed countries where this exists, it is often lacking in developing country (Clarke, 1999). In the absence of an independent panel of review, the possibility of undue political influence in the process is not far-fetched.

**Monitoring & Follow-up:** For the effectiveness of the EIA process and its mitigation measures to be well understood, and therefore the influence that the EIA system makes on an action, monitoring and follow-up must be well undertaken. Monitoring and evaluation are permitted in Decree No. 2005/0577/PM by relevant government services. Petts (1999) notes that follow-up is lacking in most systems.

**Public Participation:** Public participation is a contentious issue in developing countries (Clarke, 1999). It is required by standard EIA procedure that decisions be transparent and broad base. Article 9 of the law regulating environmental protection in Cameroon makes provision for broad base public participation. It states ‘decisions concerning environmental protection must be taken only after consultation with relevant sector of activity and groups or after public debate where the project or action is of general interest’ (Cameroon Environmental Code, 1996). Article 72 further emphasis the need to get people more effective during consultation meetings with reference to statements like ‘free access to environmental information’, ‘production of environmental information’, ‘sensitization’, ‘training’, ‘research’ and ‘environmental education.’

The law thus obliges the project proponent to make an evaluation of opinion of the population and the community concern about the project through consultation and public meetings. Date, venue, purpose and schedule for the meeting are specified prior to the actual meeting. When this process of establishing an EIS is over, the public is again consulted by a mixed team drawn from the competent authority and the authority in charge of the environment. Only this time, contact with the public is more of verification of whether information on EIS matches with public views. In Cameroon, the means by which information is passed on the public is through public meetings and seminars making use of the public audio visual and print media by competent authorities, in particular the ministry in charge of the environment and the ministry of information. Unfortunately, these means of passing information currently suffer from public trusted due to bribery and corruption (Ndangam, 2009).

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5 Original text in French, translated into English by author.
Due to lack of trust in Cameroon public institutions, people’s enthusiasm in organized public meetings is low. Accountability and transparency in decision-making process is only ensured through effective and efficient public involvement where their interest and concerns are reflected in the decision-making. As fig. 6 shows, the timing of public participation is insufficient. This is an important principle of democracy which the Cameroonian authorities have often indicated their strong adherence to, at least on paper and in public speeches. Out of personal experience, many Cameroon are doubtful about this. For the participation process to be meaningful, the public should have a better grasp of the issues as take and information clearly communicated to them. Poverty, illiteracy, complexity in technical documents and language barrier in lack of translation of text from French into English hampers the process.

4.1.2 Decision-Making and Public Perception

Although the adoption of the environmental management law has facilitated, to some extent, the inclusion of environmental issues in decision-making, genuine political commitment from main actors in addressing main issues remains to be seen.

As shown in fig 6 above, decision-making is one of six steps in Cameroon EIA process, and many different decisions are made all along the EIA process but the minister in charge of the environment makes the final decision as to whether the proposal should be undertaken or not, taking to consideration the opinions of the IMC. Thus, the power in controlling and operating the EIA system lies mainly with the IMC and the minister in charge, who resides in Yaounde—the nation’s political capital. It is with this ministry that an EIA screening and what should be covered (scope) are decided. It houses the main government agency in implementing an EIA. In consideration of the advice of the IMC, the minister of the environment and nature protection makes the final decision. Decision-making structure is more hierarchical and takes place under undue administrative procedures and highly centralized system of decision-making. Administrative bottlenecks couple with over centralization make the decision process unreliable, especially if it involves people with bad intent. Petts (1999, p. 5) notes that “even with strong supporting political and administrative structures, the quality of any particular EIA relies as much upon the quality of the individuals who undertake it as to the adherence to any particular procedure or application.” This implies that having people with bad intent or selfish pursuit is tantamount to bad decision-making.

In accordance with fig. 6, there are three possibilities in the decision: 1) the project is rejected or ban from being carried out with no provision for appeal; 2) conditional ruling pending amendments; and 3) approval. Should the proposal be approved by the minister, a certificate of environmental conformity is issued to the proponent to mark the commencement of work on the site. According to the law, the final decision as to whether to approve the project or not is taken a maximum of 4 months after the date of initiation of an EIA, otherwise the proponent could proceed with the project.

Effective decision-making suffer from the fact that most people have a rather poor understanding and concern for environmental issues and environmental education is not sufficient enough to raise the level of awareness needed. This has a direct effect on the way people perceive environmental issues. The media probably have the most powerful influence on many people’s thought and actions. Over the years, many people have tended to dissociate themselves and often do not believe information from Cameroon state-run media. The argument is that they fail to be completely objective in reporting state issues. This is because the state run media are not independent from state influence and more often twist the truth to the interest of the ruling government. Not surprisingly, in its last three rankings, the Commonwealth Media Freedom Rankings places Cameroon around the bottom area of the table (CPU Media Trust, 2002). This ranking is based on the world media freedom index.
As a result, private media tend to be an option for many, even though they too are grappling with insufficient financial resources and corruption (Ndangam, 2009).

4.2 Policy, Legal and Administrative aspects of EIA in Sweden:

Sweden’s environmental policies focus on the 16 environmental quality objectives for a sustainable society that the country set for itself through its national parliament. The Swedish Environmental Protection Agency, Naturvårdsverket, is charged with the responsibility of seeing to it that these objectives are achieved (Swedish EPA, 2009). The overall goal of government environmental policy in the 16 quality objectives is to avoid passing on major environmental problems of today’s generation to the next generation of Swedes without solving them (problems of intergenerational equity). The ministry of the environment is the overall authority responsible for meeting these government policy objectives (Ministry of the environment, 2006).

Thus, the ministry of the environment and the Swedish Environmental Protection Agency (SEPA) are the two authorities responsible for environmental issues, with SEPA acting as the central government authority created to take care of administrative issues as well as policy interpretation, supervision and control. This means that major initiatives for environmental policies formulation and action plan proceed from governmental agency. Being an agency, SEPA is answerable to the government and not to the ministry of environment (Kronsell, 1997). It would appear that in Sweden, SEPA role in environmental matters is more influential and determinant than the ministry.

The EU EIA Directive took effect in Sweden in 1994 but later underwent changes to reflect the revisions of the EU Directive (Hilding-Rydevik and Wärnbäck, 2009). These changes form part of an extensive reform of the environmental code that came into force in 1999. Outside the EU EIA Directive for development projects, Sweden had long-time experience with EIA practice e.g. the EIA implementation into the Road Act of 1987 (ibid). The environmental code constitutes the fundamental piece of legislation for promoting sustainable development, and the reform was aimed at overcoming the shortcomings of the previous environmental legislation. In chapter 6 of this code, the EU Directives that regulate EIA and SEA are incorporated as part of the environmental code (Swedish Environmental Protection Agency, 2007). Inadequacy in legal basis, provision and guidelines in the SEA system led to the bill in 2004 and subsequent ordinance for adopting necessary amendments for the implementation of the EU SEA Directive: e.g. amendments to the 1999 Environmental Code and the 1987 Planning and Building Act (Chaker et al., 2006).

SEA is to cover plans and programmes but no specific provision on which plans/programmes will fall under the new requirements (those specified by the EU Directive). On an administrative scale, SEA is applied on regional, national or local level (ibid) but it is not clear whether local planning authorities must comply with the same directive when they are preparing development documents. As Chaker et al. (2006) note, this process is still under development e.g. the authority responsible for conducting and reviewing SEA are still not fully determined and also issues like scoping and types of impacts.

4.2.1 EIA Procedure in Sweden

According to the environmental code, the project developer is responsible for carrying out the assessment leading to the environmental assessment document. The proponent, thus, bears most of the responsibility for the EIA process such as scoping, preparing the EIS and making arrangements for public participation (Johansson and Hedlund, 2006). The proponent also designs the EIA process with limited influence from the authority except input from public and reviewers and bears the cost of carrying out the EIA. This means that the proponent and consultant are two influential actors in the EIA process. Section 4 also
requires the developer to undertake consultation with the county administrative board and affected individuals, in good time and at appropriate extent before preparing an EIS. During this time, issues about information relating to the site, the extent, and nature of planned activity as well as anticipated environmental impacts are declared. After that, the county administrative board then decide as to whether the proposed activity has a significant environmental impact (decision cannot be appeal) in which case an EIA procedure is required. The location, scope, design and environmental impact of activity and the content and structure of EIS are made known by to the general public, municipalities, other government agencies and organisation likely to be affected.

Section 7: content of EIS: 1) a description of the activity or measure with details of its location, design and scope; 2) a description of the measures being planned with a view to avoiding, mitigating or remediying adverse effects, for example action to prevent the activity or measure leading to an infringement of an environmental quality standard referred to in chapter 5; 3) the information that is needed to establish and assess the main impact on human health, the environment and management of land, water and other resources that the activity or measure is likely to have; 4) a description of possible alternative sites and alternative designs, together with a statement of the reasons why a specific alternative was chosen and a description of the consequences if the activity or measure is not implemented; and 5) a non-technical summary of the information specified in points 1-4.

According to the Swedish National road administration Impact Assessment handbook, the basic methodology for impact assessment in the road sector include collection of basic information through consultation; analysis of requirements-basis for analysis of change; impact assessment process; compilation synthesis e.g. compiling comparison between alternatives and also requirements for follow-up; and presentation (SNRA, 2002).

Screening and Scoping: Screening is pretty straight forward for annex I projects under the EU EIA Directive but annex II projects is at the discretion of member state. Screening process is more about whether the project will involve significant impacts or not. Due to the fact that the screening phase is not clearly defined, many EIA have been carried out in a single year (Bruhn-Tysk and Eklund, 2002). According to Lindblom and Rodehn (2008, cited in Wärnbäck and Hilding-Rydevik, 2009), more than 1600 of such impact assessments are undertaken in Sweden each year.

The Swedish EIA is adjustable to different stages, with varying focus and scope. Within the road sector for example, EIA activities are used at the levels of initial studies, feasibility studies and the design plan with different EISs written to handle the respective impacts. The scope and intensity of work on EIA activities differ among these three stages (Swedish National Road Administration, 2002). Some degree of scoping thus takes place at the different stages, focusing on specific issues of the stage. For example the EIA for design plan highlights the environmental impacts of a selected design and how EIA work has influenced the road design. The idea is to start EIA early in planning and focusing on the most important issues on that particular stage.

Alternatives: Selection of environmentally benign solution is based on the presentation and comparison of alternatives. In a study to investigate the quality of EIA practice in Sweden, the following comments were made about alternatives (ibid): “The aim of an EIA is above all, with the EIA as a ground, to choose alternative. This is not the case in practice. The alternatives are already decided. And the Swedish National Road Administration and the Swedish Railroad Authority carry out very professional and good EIS but it feels like that they first decide how it will be and then carry out the EIS.” However, the same inquiry reveals that the overall aim of integrating environmental consideration is positive. In Sweden it is required for impacts to be described so that alternatives can be compared and then placed in order of precedence with respect to each type of effects e.g. within the road sector.
However, some studies have shown serious flaw in the Swedish EIA system in dealing with alternatives (see Bruhn-Tysk and Eklund, 2002).

**Mitigation:** Existence adequate legal provision for mitigation measures. Mitigation measures on how to overcome possible environmental problems must be described in the EIS as specified by the EU EIA Directive.

**Review:** The decision-maker also has the power of review (Hilding-Rydevik and Wärnbäck, 2009). Example is the County administrative board for the review and approval of EIAs of roads and railways and municipalities responsible for review and approval of EIAs/SEAs for Detailed Development Plans and SEAs for Comprehensive Plans. The review ensures that the document provides enough information for decision-making and also ensures that the EIA process has been carried in accordance with regulations in force. Chapters 2 and 3 of the environmental code relates to consideration and satisfying environmental quality norms. However, evidence has shown that project review constitutes a major weakness in EIA systems in both developed countries and developing countries (Clarke, 1999). Usually, the presence of an independent review panel is evident of country commitment to consolidate EIS reporting for subsequent decision-making.

According to the Vägverket (the Swedish National Road Administration), provision for EIA quality assurance is firmly in placed and applied. In this regard, VVFS 2001:18, Section 15 stipulates that: “Before EIA is delivered for approval to the county administrative board involved, the road managing authority shall check that the quality is good. Using controls it is ensured that the EIA, together with other project documents, gives the examining authority the required guidance as regards 1) Choice of environmentally sound solutions and contribution to environmental goals being fulfilled, 2) what the important circumstances and environmental impacts are, 3) presentation and comparison of all relevant alternatives, 4) how rules for consideration and environmental quality norms have been satisfied, in accordance with Chapters 2 and 5 of the Environmental Code, 5) Work with EIA, and that it has been carried out in accordance with regulations in force.” (SNRA, 2002).

**Public Participation:** Public participation and consultation serve as external support in the EIA process. A study carried out about the quality of EIA process in Sweden since its adoption reveals some interesting issues about public participation and choice of alternative (Johansson and Hedlund, 2006). The study highlights some problems with public participation but that the aim of giving the public a chance to influence the process through their participation is most cases often fulfilled. I.e. the overall picture is positive. Within the road sector for example, the environmental impact report is required to be publicly displayed in an easily accessible place subject to stakeholders and public opinion (Hylmö and Skärbäck, 2006). Public comments are taken into account in the EIR through special hearings, involving both public and other interested parties like the national road administration.

**Monitoring/follow-up:** Within the environmental follow-up of road projects, the Swedish National Road Administration has developed methods for making follow-up programmes and follow-up results more accessible for external interest as well (SNRA, 2002).

4.2.2 Decision-Making and Public Perception

The Swedish law on environmental management places the responsibility of managing and documenting environmental assessment process on the project developer, who may employ the services of competent body such as a consultant to fulfil its responsibility. When the EIS report is complete, it is then submitted to the decision-maker who then decides whether such an assessment meets legislative requirement or not. Authorities with the power to review these impact assessment reports in order to see if they contain enough information for decision-making also have the power to make decisions. They include: environmental courts, county administrative board, the Swedish road administration, Swedish national rail administration, the government and municipalities (290 in Sweden) (Hilding-Rydevik and
Warnbäck, 2009). As soon as the EIS is approved, the proponent then gets some kind of a ‘receipts’ (Johanson and Hedlund, 2006).

Judging from the approach of the decision-making process, environmental control takes place within a more decentralized structure. Power and control over decision-making is spread to the different regions and localities of an organization in a decentralized system, giving people the opportunity to take part in it. This is very much evident in Sweden where collaboration, cooperation and consensus-building have laid a platform on which the interests and concerns of all sectors of society are reasonably taken into consideration in decision-making and policy formation (Kronsell, 1997). Of course, some form of centralized decision-making may exist even within the best of decentralized system, but the central idea is to get people more and more involved in environmental decision-making process. As part of this effort, responsibility for dealing with environmental problems was increasingly handed over to the different municipalities, commonly known as the ‘Komuns’ (Bergström and Dobers, 2000). To put it in Kronsell’s (1997, p. 52) own terms “…extensive decentralization has increased the responsibility of municipalities for implementing environmental policies.” Through the different municipalities, the government’s plans for sustainable development are carried out as responsibility is shared through the society from the central authority to the municipalities, from the municipalities to the companies and local businesses, and from the companies to private citizens (ibid). Open consultation with the public and policy of inclusion in decision-making has been stressed in the theory as important requirement in environmental assessment process.

Inasmuch as environmental protection requires a shared responsibility across the different sectors of society with a more decentralized decision-making process, the capability of individuals within the local communities need to be built and be strongly motivated with resources readily available. One way that the Swedish central government distributes resources to local authorities for environmental work in order to enhance the capacity of the local community in dealing with sustainability issues is through the introduction of the Local Investment Programme for Ecological Sustainability (Bakar and Eckerberg, 2007). This programme provides a means by which the government plans for sustainable development are translated, changed, and localized through society (Bergström and Dobers, 2000). Change in the sense that the needs and aspirations of the locality need to be taken into consideration but keeping in mind the general objectives for SD and central government policy.

Sweden’s interest in environmental protection and SD has led to the development of a set of institutions and legislations. The putting in place of these institutions reflects the changing perception of environmental problems and solutions since 1960 (Kronsell, 1997). An example of this changing perception is the move from nature conservation aspects of environmental management to pollution prevention. Increasingly, environmental problems perceived as global rather than a local isolated phenomenon. Environmental problems are even taken further to a personal and even political level, where individual action could have a political consequence (ibid, p.45). They are debated as an important issue in electoral campaigns. In this sense, environmental management places emphasis on individuals at local levels as agents of change. Institutional affiliation and trust in information directly influence people’s perception. Information is one of four instruments use in Sweden to influence people’s behaviour toward more environmentally friendly attitudes by raising awareness, knowledge transfer and best practice (EPA, 2007). Thus, awareness in environmental problems is high and people perceive it as part of daily life. As a result, it can be easy to get people engaged in a solution to the problem.
5. Results and Analysis

This thesis attempts to highlight flaws in environmental assessment in Cameroon in a comparative evaluation with the Swedish system. The results are summarized in table 3 below. The YES/PARTIAL /NO answer indicated on the table is in relation to what is required in theory. Based on this evaluation, one could say that EA practices is still not taking place fully. Of course, the extent of implementation varies from country to country. It goes without saying that Cameroon requires more improvement on its system.

Improvements are required at four levels of EA related problems: centralised approach to EA decision-making; ineffective institutional capacity building and democracy (Fonchingong, 2004); procedure related issues such as review, quality of EIS report etc (Alemagi et al., 2007). The unwillingness of the authorities to deal with some of these issues has already been mentioned in previously published reports. Examples include huge problems with EIA monitoring and control, as well as issues of institutional democracy and governance experienced during the commissioning of the Chad-Cameroon oil pipeline project (IAIA Conference Proceedings, 09).

Concerning these aspects of EA, a firm commitment from the powers that be is needed in order to realize them. In the authors view, a good status in democratic practices is a realistic starting point. Most countries, such as Sweden, that have a good EIA system, also have a good functioning democratic process. As discussed in the theoretical part of this thesis, democracy is a guiding principle of sustainable development. A democracy that is marked with issues of corruption, ethnicity, inclusiveness, and accountability is unlikely to provide an enabling environment for EIA practices to flourish. Some sources (e.g. Makun, 2002; Fonchingong, 2004) have pointed to this non-democratic top down and non-participatory way as a stumbling block to Cameroon’s major engagements. The lack of a political commitment to drive effort in EA is perhaps the reason why nearly all EIA conducted in recent years are on internationally financed projects as a condition for loan. Whereas all the EIA conducted are supposed to be based on clear and specific legal provision in accordance with Wood’s evaluation criteria, the World Bank (2008) assessment of existing institutional and regulatory framework based on the 1996 environmental management law is that it is ‘too weak’ and of ‘considerable risk.’

The lack of political will is fueled by fear and ignorance in misperception of EIA as anti-development and a threat to private sector investment (Kakonge, 1999). This lack of interest in environmental assessment issues is deeply rooted in the way the problem is perceived and defined. This implies that the way the problem is perceived affects the outcome of the accompanying decisions, and as Vincent (2006) points out ‘every decision is preceded by the perception of a given problem.’ Also, Kronsell (1997) puts it that: ”it is important how problems are perceived because this informs and influences the strategies employed to solve these problems.” Cameroon being a developing country that longs to eradicate poverty, it sometimes seems that projects may not be stopped for any reason. This misperception of EA is value-laden and deeply rooted in the context in which EA takes place. It is therefore being influenced by contextual factors like individual’s cultural background and emotional feelings; educational background; attitude to the environment; institutional affiliation and trust in information (Cothern, 1996, p.43). All of these constitute the context in which the assessment process takes place in Cameroon, which in reference to the literature review (see Runhaar, 2009; Jay et al., 2007), influence the contribution of tools to decision-making. Thus, perception and context are somewhat related in this case, and are defining the way the assessment process is undertaken.

Basically, three reasons account for the above identified flaws and therefore the divergence of EIA practice from theory in table 3: first, there is a clear lack of political will among the
powers that be; and second, the attitude of the authority in charge have resulted in serious deterioration of public trust for national institutions. This lack of trust has rendered the putting in place of the much needed state-of-the-art platform for cooperation and collaboration and for engaging different stakeholders far-fetched. In a survey conducted by the Economic Commission for Africa under the African Governance Report (2005), Cameroon features bottom in household opinion that local associations are being consulted for anything either by local government or by the central government (p. 120). This lack of cooperation and consultation can clearly be seen between research institutions and universities as well as between the different institutions for environmental management, which already are experiencing inadequate and poorly trained personnel. According to the 14 evaluation criteria for a good performing EIA system (Wood, 1995), consultation and participation must take place prior to and following the publication of EIA report. In the absence of trust in public institutions and an effective collaboration framework between the different sectors of the society, it is difficult for consultation and participation to effectively take place. It should be noted that the existence of effective cooperation and public participation in PPP decision-making is one of the three criteria that Fisher and Gazzola (2006) note are necessary for effective SEA practices from a contextual point of view. Furthermore, institutional capacity building in continuing research and training activities for practitioners, have been mentioned in the theoretical literature as key approaches for strengthening practice and procedures in EIA (Jay et al., 2007).

As previously mentioned, EA procedural flaws and undue centralisation hamper the EA system in Cameroon. The issues of over centralization of power and procedural flaws in EIA practices in Cameroon have already been pointed out in an earlier study by Alemagi et al. (2007). The big issue is that inasmuch as this over centralization in the EIA process fails to ensure independence of the judiciary (African Governance Report, 2005, p.204), it does not adequately address currently low public participation. Public participation is a fundamental aspect of decision-making process just as much as independence of the judiciary guarantees fairness and checks and balances in decision-making. This is a good example of weak institutional capacity for good governance, which support the effectiveness of EIA system. The bottomline is that environmental issues and environmental impact assessment in particular have to compete in a context largely dominated by fear and misperception, cultural values, individual attitude, level of education, and the need to alleviate poverty through economic growth in private sector projects. In such a context, choosing and implementing the most environmentally preferable alternative or even declaring a proposal null and void on grounds of its environmental and social unsoundness could easily be traded with economic growth in private sector investment. In the face of this and other contextual factors under which decision-making takes place, it could be said that environmental management here involves trade-offs. Yet, the core idea behind sustainability involves the trade-off for sustainable well-bing. In this light, the above three pillars: social-environmental-economic are considered to be mutually compatible. In a situation where environmental and social concerns including the plight of indigenous people fail to grasp enough attention, then sustainability is poorly interpreted. This interpretation of sustainability is in line with the notion of ‘weak sustainability’, where the overall capital stock (either man-made e.g. realization of projects, human e.g. knowledge and skills, and natural capital e.g. fresh water) is run down on grounds that the degraded capital such as the natural resource can be substituted for by the economic investment in man-made capital such as the road or construction of a dams etc. It is opposed to ‘strong sustainability’ which should be encouraged. The notions of ‘weak’ and ‘strong’ sustainability have been largely elaborated by Pearce (1992) and Pearce and Atkinson (1993). Along this line of reasoning, projects for poverty alleviation and economic investment initiative that do not sufficiently preserve the natural capital fall under weak sustainability.
In Sweden, on the other hand, there are clear national commitments in SD work reflected in legal, policy statements and stated guidelines (Hilding-Rydevik and Bjarnadottir, 2007). According to the OECD criteria, the utility and relevance of EIA depends critically on country environmental surveys and strategies, which so far is absent in Cameroon. SEA guidelines and practices are still under development but gradually moving from policy development and policy selection to enhanced SEA implementation, mainly promoted by the adoption of the EU SEA Directive. This is the case also in other European countries (Ehrhardt & Nilsson, 2006). In Sweden, the proactive behaviour of companies and business, a cultural tradition of collaboration and cooperation between businesses and research, and a strong political will (Wrisberg et al., 2002) provides a suitable context not only for the practice of EIA but other system tools like SEA and LCA.

Table 3: Practical issues of EIA in Cameroon and Sweden

<table>
<thead>
<tr>
<th>Theoretical requirement from literature</th>
<th>Practice in Cameroon</th>
<th>Practice in Sweden</th>
</tr>
</thead>
<tbody>
<tr>
<td>i. Authority for environmental issues:</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>ii. Legal provision for EIA:</td>
<td>YES. Simple or detailed EIA</td>
<td>YES</td>
</tr>
<tr>
<td>iii. Mandatory compliance:</td>
<td>YES but poorly managed.</td>
<td>YES adjustable depending on project category</td>
</tr>
<tr>
<td>iv. Specification on time:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2) Process &amp; Procedure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>i. Explicit screening &amp; scoping:</td>
<td>PARTIAL. Flawed legal provision divergent in practice</td>
<td>YES. Comprehensive scoping (3 stages), but problematic screening</td>
</tr>
<tr>
<td>ii. independent panel of review:</td>
<td>NO</td>
<td>NO</td>
</tr>
<tr>
<td>iii. Plan for mitigation:</td>
<td>YES general requirement in EIA</td>
<td>YES</td>
</tr>
<tr>
<td>iv. Monitoring &amp; control:</td>
<td>PARTIAL. Lack specific procedures</td>
<td>YES. follow-up programs and follow-up results e.g. the SNRA</td>
</tr>
<tr>
<td>v. No. of IA undertaken/yr:</td>
<td>54</td>
<td>1600 small &amp; simple EIA documents</td>
</tr>
<tr>
<td>vi. Consideration of alternatives:</td>
<td>PARTIAL. variation in practice, ‘no action, alternative flawed</td>
<td>PARTIAL, baseline data poorly addressed</td>
</tr>
<tr>
<td>vii. Quality control Assurance:</td>
<td>NO</td>
<td>YES, EIA quality appraisal, guide &amp; checklist e.g. SNRA</td>
</tr>
<tr>
<td>viii. Addressing the CE of impacts:</td>
<td>NO</td>
<td>NO</td>
</tr>
<tr>
<td>3) Decision-making</td>
<td>Hierarchical over centralised,</td>
<td>More decentralised control strategy, broad based participatio</td>
</tr>
<tr>
<td>i. Approach to decision-making:</td>
<td></td>
<td>PARTIAL</td>
</tr>
<tr>
<td>ii. Provision for appeal:</td>
<td>NO</td>
<td>YES more often</td>
</tr>
<tr>
<td>iii. Reflect result of consultation:</td>
<td>NO not often the case</td>
<td>YES</td>
</tr>
<tr>
<td>iv. Linkage to decision-making</td>
<td>NO</td>
<td>YES. Consultation and consensus-building</td>
</tr>
<tr>
<td>v. Cooperation &amp; Collaboration:</td>
<td>NO.</td>
<td></td>
</tr>
<tr>
<td>4) Public Participation</td>
<td>YES. Divergence in practice</td>
<td>YES. Consultative &amp; inclusive</td>
</tr>
<tr>
<td>i. Provision for Public participation:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ii. Mechanism for public participation:</td>
<td>PARTIAL hampered by lack of trust</td>
<td>YES</td>
</tr>
<tr>
<td>iii. Communication &amp; Information flow:</td>
<td>NO. Inadequate comm. System,</td>
<td>YES</td>
</tr>
</tbody>
</table>

The theoretical requirements are derived from a number of literature sources
iv. High awareness of environmental problems: **NO**

v. Public perception of the problem: **NO** Fragmented view

vi. Investment in R&D for SD: **NO**

5) Use of other system tools for improving EIA Efficiency
   i. Formal provision for SEA: **NO**
      YES, not exclusive to SEA, some sectoral legislation
   
   ii. Experience with using SEA: **NO**
      Greatly Limited.
      YES.

   iii. Use of LC thinking & LCA: **NO**
      YES broadly applied in practice

6) Adherence to basic Condition Supporting an EIA system
   i. Political commitment: **NO** weak due to misperception
      YES.
   
   ii. Capacity Building: **PARTIAL**
      YES

   iii. Adequate technical basis, data & information:
      **NO**. poor access to info, no professional
      Recognition nor research & training
      YES, access to info, EIA
      has professional recognition, Research and training

iv. Leaning from own & other's experience:
   **PARTIAL**

v. Democracy & good governance: transparency & accountability:
   **PARTIAL**, grapples with corruption
   **YES**
   Accountability and transparency problems
6. Discussion

In this report, the essence of comparing theory and practice of EA highlights some constraints in the use of EA tools. The Swedish EIA systems is without doubt more developed and serves as a source of inspiration to EA effort in Cameroon, plagued with enormous problems (see results). But in order to be of any help, one needs to first understand what factors underpin Sweden’s reputation in EA and environmental protection as a whole? First, there is a strong political will and commitment in environmental protection (Wärnbäck and Hilding-Rydevik, 2009); second, a large fraction of the population demonstrates a strong sense of environmental consciousness and interest in environmental protection. This enthusiasm in matters of national life to some extent is boosted by an atmosphere of trust that exists between the government and the governed. Arguably, the level of trust in public institutions is high. Information is one of four instruments used in Sweden to influence people’s behaviour toward more environmentally friendly attitudes by raising awareness, knowledge transfer and best practice (EPA, 2007); third, a significant part of environmental problems today is mainly created as a result of companies’ activities, so any meaningful solution to environmental problems must actively involve companies as major actors. The proactive behaviour that companies and businesses have adopted towards environmental issues is a force to reckon with; fourth, high investment in research and development. As a matter of facts, Statistics Sweden (SCB) reports that Sweden’s investment for R&D in relation to its GDP is highest among the OECD countries (SCB, 2009); fifth, there exists a strong cultural tradition of collaboration between business and research and other relevant institutions. As earlier mention, trust brings about a positive, reliable and strong relationship between business and public administration and other sectors of society; sixth, a flourishing democracy supported by strong institutions, with highly decentralised environmental control strategies.

These factors put together not only define the context within which EIA practices are taking place in a flourishing manner, but also enable the development and practice of other tools like LCA, SEA, which complement EIA as a tool. If the above listed contextual factors are anything to go by, it goes without saying that current practices in Cameroon need an extensive overhaul. It is clear from the Swedish point of view that EA practices require a concerted effort. While this fact remains indubitable, a consensus may not always be reached. Nonetheless, the inclusion of different opinions ensures that future conflicts between different sectors of society can be avoided. As the results show, ineffective public participation in environmental assessment processes in Cameroon is an issue that needs to be addressed. The idea of engaging everyone generates various interpretation of the world from different perceptions, values and interest that people hold in a society. For instance there could be environmental NGOs or even political activists, who may hold opposing view points with respect to those held by the government-the main actor.

However, for citizens and individuals with environmentally oriented view points to fully take part in democratic debates in relation to environmental issues, it is important that they should have a better grasp of the issues that underline environmental problems. In the case of EA, education of the masses and public awareness about the issues at stake is important in order to get them engaged. Constant access to adequate but up-to-date information is crucial in the same way as continuing change in institutional arrangement to reflect the dynamic nature of the EIA process itself (Fuller, 1999). That is why in Sweden, much research is devoted to EA issues and resources are deployed toward building capacity and bringing up-to-date information. One way that a country shows itself committed to these issues is through developing its human capability and investing in research and development. In general, individual capabilities in environmental issues need to be developed and be used. In his work on Capacity Building, Clarke (1999, p. 36) notes that “capacity development
involves not only training and appointment of additional staff but also requires that skilled people be used effectively, are motivated to perform tasks and are retained within the organization needing their skills.” For skill people to be used effectively, in the author’s view, they need to be chosen on the basis of their career and ability to perform the said task. More often the case, the tendency is for this possibility to be jeopardized by corrupt practices within the different institutions in Cameroon (African Governance Report, 2005). The result is that a square pet is fitted in a round hole and vice versa. It is hard for such a system to yield any meaningful results. That is why a comprehensive change in mentality and behaviour is needed, more importantly from those with power to make decisions in environmental issues. Inexperience staff working in impact assessment departments is tantamount to poor quality of EIS reports and review, which in turn have a negative effect on the overall EIA process and the decision-making process in particular. Since the finding of the EIA report and the review must be a central determinant of decision on the action, According to Wood evaluation criteria for a good performing EIA system, this can be damaging. The need for a strong connection between information and decision-making is one key criterion for a good performing EIA process discussed in the theoretical literature.

The question about the extent of public involvement is as important as the question about how to interact with the public. In this connection, the vibrant public and private media in Cameroon could play an important role in raising awareness and communicating to the public on different matters arising. The media should rise to the challenge just as it is the case in Sweden, where the local media impacts the shaping of municipal policies and contributing to the discourse of public accountability (Hanberger, 2008). This may be difficult in Cameroon where the mass media operates in an environment in which their rights are more like to be violated by the government (African Governance Report, 2005). It is even more important that the government plays a leading role by creating an enabling environment where actors from all levels freely participate and be listened to in terms of discussing and exchanging knowledge on sustainable development issues. It is within this kind of setting that a useful dialogue and open debate for a more sustainable future is generated. This kind of attitude adopted by the government will, to say the least, bring enormous satisfaction and benefit, as well as a sense of belonging for all. Interestingly, the environmental arena in Sweden is characterized by this kind of open, free and engaged debates. From the Cameroon point of view, the government institutions and the state media have lost significant trust from the public. Therefore, it is important for a high degree of trust to be reinstated if any successful dialogue between all interested parties is to start.

Inasmuch as it is important to initiate this kind of open debates where different opinions and views are generated, it is even more important to have these views reflected in the decision-making, otherwise the whole process of bringing people together is not worth anything more than just a window dressing. In other words, the idea of doing things out of a mere formality must give way to reality.

In connection to the decision-making process, choosing and implementing the most environmentally preferable alternative or even declaring a proposal null and void on grounds of its environmental and social unsoundness with respect to economic factors is a matter of trade-offs. How to balance this trade-off is without doubt a major challenge for Cameroon that have economic factors top on the agenda. Some scholars as well as practitioners in the field have observed that when environmental protection concerns are poised in a struggle with economic factors, they more often end as losers (Kronsell, 1997; Kakonge 1999). While this applies to both developed and developing countries alike, it is proving even truer for developing countries like Cameroon. In this context, certain projects may simply just go ahead irrespective of the outcome of the EIS, and efforts in EA more often a matter of formality. Behind this attitude is the lack of political will from the authorities in environmental protection that has already been pointed out.
In the wake of this discussion, it goes without saying that the system in Cameroon needs to be improved upon even though there have been some progress. Today, environmental assessment tools are increasingly acknowledged in providing a suitable arena for bringing citizens to participate in planning and decision-making (Olsson et al., 2009; Lee, 2006). This thesis work presents a number of environmental assessment tools as a framework for decision-making. These tools, EIA and SEA, are geographically oriented-SEA largely regional and EIA projects oriented. By their very nature, they ensure that environmental and social concerns are central part of the decision, they strengthen the democratic process of engaging people of different views, and ensure accountability and transparency in decision-making. The need to think within the life cycle perspective has never been so important and strategic as the concept itself increasing become part and parcel of the way environmental problems are handled today. In the process, therefore, it is important to adopt LCA and LC thinking in order to foster the international perspective. The application of the concept in planning not only offers a way of incorporating various stakeholders in the decision-making process, but also a way of visualizing and understanding the upstream and downstream consequences of decision-making (Thabrew et al., 2009). The importance of adopting a system perspective can be seen in the fact that the evaluation criteria of a good performing EIA involve some elements of a system perspective. Item 2 and 1 respectively relates to this (see p.16).

In addition, these tools can serve as a platform for providing the necessary cooperation, collaboration and building consensus among the different groups and stakeholders at all levels of the society that have so far been disconnected from the decision-making process. Thus, EIA and SEA play a mediator role where many people hold diverse views. In this way, there is added value in the democratic process as the communication process between the different sectors of society is enhanced.

Just like it is important to stress the need for applicability of assessment tools for improved decision-making, it is also important to evaluate or assess the kind of impact that these tools have make on projects, policies, programmes, and decision process in the past. ‘Assessing the impact of impact assessment: Impact assessment for informed decision-making’, That was the theme of an international conference organised by the International Association for Impact Assessment (IAIA) at the Hague in 2002 (IAIA Conference 2002). Such an assessment can reveal areas of weaknesses or identify factors that impede their efficient applicability, offering opportunity for improvements. This may also provide a good ground for learning from past experience and incorporating experiences from other countries that have been successful. This is required according to Wood (1995) evaluation criteria for a good performing EIA system. One of possible area of improvement in impact assessment (IA) could be in the use of combined EA tools for better decision making as already discussed in the preceding section.
7. Conclusion and Recommendations

This thesis aims to assess the extent of impact assessment practices in Cameroon and Sweden in relation to the theory, and to identify some major constraints in Cameroon from a comparative study with the Swedish system. Based on impact assessment effectiveness criteria developed in the literature, which have been highlighted in Table 3, one could say that while the Swedish impact assessment system is more developed and comprehensive than its Cameroonian counterpart, both systems still have not fulfilled all required criteria. The table is not comprehensive, though. While there have been a number of studies that have been carried out critical of the Swedish impact assessment system such as its inability to effectively incorporate cumulative impact assessment (Wärmbéck, and Hilding-Rydevik, 2009); flaws related to EISs and indiscriminate screening leading to many EIAs (Eklund and Bruhn-Tysk, 2002); etc. the reputation for environmental protection is generally good. In other words, important lessons drawn from this, if genuinely applied, can help improve the system in Cameroon, which is grappling with many problems.

The effectiveness of EIA practices in Cameroon suffers from ineffective institutional capacity for good governance and lack of strong political will as well as lack of individual commitment due to mistrust, freedom from political influences, appropriate review system. While these aspects of EIA practices have been noted in the theoretical literature as vital for EIA practices, meeting these requirements has been a challenge for Cameroon. As it stands, one could say that environmental problems and impact assessments in particular are not yet sufficiently given the attention they deserve. More attention turn to be on economic investment, and EA activities more often take place as a formality. In other words, the practice of EA is seen as goals or means in themsevles. In a context largely dominated by the need for economic development and poverty alleviation, it is very likely that environmental and social concerns are relegated to the background in project implementation. Of course, as a developing country, the need for private sector development project and poverty alleviation is important, so too is the need for environmental protection. Though this conclusion may be limited by its reliance primarily on theoretical literature, it gives an idea about the situation underground. Embracing a critical perspective and drawing own personal views and conclusions in some areas is one attempt by the author to overcome this limitation. Moreover, these results are also part of the author’s personal experience.

In order to break away from the attitude of undertaking EA out of mere formality and be more realistic, there are many areas that can be improved upon in comparison with the more successful Swedish system. Even though both systems operate under entirely different context, contextual differences can be put in hindsight if the Swedish way is to be mirrored correctly. One good platform to introduce necessary changes such as motivating people and engaging them in a useful dialogue is by way of the assessment tools that have been described in this thesis. However, it is important that these tools should not be perceived as goals or end in themselves but a means to an end. This implies that first and foremost a radical change in mentality regarding environmental assessment for those who hold power is advocated as EA tools will not themselves change people overnight. Indeed, individuals with their actions and values are the real agents of change and a fundamental source of power in any free society (Constanza et al., 1997). So, as far as Cameroon is concerned, it will require a completely different way of thinking and doing things. It is recommended for everyone to put hand on deck and work for the common good in a spirit of fairness and cooperation. In this regard, the government should take a more proactive approach by introducing necessary changes such as investing in various types of environmental assessment research projects and initiatives as well as education and technical training and re-training in capacity building in accordance with the dynamic nature of EIA itself. This could take several forms such as introducing relevant courses and programmes at the major universities in the country,
creating some sort of a specialized agency or a national institute with expertise knowledge to provide advice and guidance in strengthening environmental assessment as a tool.

In addition, a shift from the traditional over centralized system of decision-making to a more decentralized approach which accords the different regions of the country more power and responsibility over environmental control and management is advocated. Efforts in decentralization should be in deeds not in words or in paper. In this way, people at various local communities will be empowered and have the right to express their opinions freely in a more democratic framework. Also, this decentralisation of power will foster effective EIA review and independence of EIA decision-making. Concerning the decision-making itself, it is recommended that it should incorporate the ideas of life cycle thinking across all aspect. The good thing about this concept is that it is adaptable to a particular situation and can be applied even in small organisation irrespective of their financial standing.

It is important to note that although such changes are not impossible, they may not come easily and without hard work and genuine commitment from across the board. Each and everyone must get on board. This in turn will foster the political will and commitment needed to create necessary factors that can favour the practice of impact assessment. It is often said that where there is a will, there is a way! The case of the four Nordic countries including Sweden provides a good example where tools implementation can flourish in a specific context when the (regional) political will, organizational commitment and professional skills are assembled (Hilding-Rydevik and Bjarnadottir, 2007).
Environmental Assessment Tools as a Framework for Decision-making: A Comparative Study between EIA Theory & Practice in Cameroon & Sweden

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