

**ENVIRONMENTAL IMPACT ASSESSMENT PERFORMANCE IN AN
AFRICAN CONTEXT: CASE STUDIES FROM SOUTHERN AFRICA
(SOUTH AFRICA, NAMIBIA, MALAWI, AND TANZANIA)**

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fulfilment of the requirements for the Degree of Doctor of Philosophy

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DECLARATION

I, Abdulhakim Aljareo, declare that the thesis is my own unaided work. It is being submitted for the degree of Doctor of Philosophy at the University of the Witwatersrand, Johannesburg, South Africa. It has not been submitted before for any degree or examination at any other university.

A handwritten signature in black ink, consisting of several overlapping loops and a long horizontal stroke extending to the right.

Abdulhakim Aljareo

7th day of June 2023 in Johannesburg, South Africa

DEDICATION

I dedicate this thesis to my parents, Salem and Hana Aljareo. A special feeling of gratitude to my loving parents for the gift of education and care.

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I am so grateful to my parents, wife, brothers, sisters, and friends for the endless support and words of encouragement throughout my PhD journey. I am also grateful to my supervisors Dr. Ute Schwaibold and Dr. Ingrid Watson, who have provided input, ideas, encouragement, and feedback.

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Developing an evaluation approach to consider the influence of country context on Environmental Impact Assessment performance, from a southern African perspective – Accepted by the Journal of Integrated Environmental Assessment and Management (6 April 2023).

ABSTRACT

The Environmental Impact Assessment (EIA) system is a worldwide environmental policy tool, which has been introduced and adopted both in developed and developing countries. The EIA system is internationally acknowledged as an essential instrument to support sound decision-making in pursuit of sustainable development. Many countries have established the requirement for EIAs in their respective environmental legislative frameworks. However, considerable concerns are often raised about the inadequate performance of the EIA system in developing countries. The African developing countries have introduced EIA as an environmental policy implementation tool to their environmental policy and legal framework for environmental protection and management, as well as sustainable development promotion. However, the EIA system performance in the African developing country context is regarded as limited. The country context of the developing countries has been perceived to influence the performance of the EIA system.

Fundamentally, the assessment of EIA system performance focuses on particular key EIA systemic components and EIA report, having limited consideration of the country context influence on the EIA system performance, and so does not provide a thorough understanding of the real causes of the limited EIA performance in the African context. Focusing on the EIA system performance in the African developing country context, an evaluation approach for EIA system performance and country context was developed. The developed approach was applied to four case studies from the southern African context (South Africa, Namibia, Malawi, and Tanzania). This was to evaluate EIA system components, EIA report, and country context.

The research findings indicate that EIA system performance is limited due to the influence of the context of the case study countries. It was found that, despite the presence of the EIA legislative frameworks, EIA competent authorities, EIA procedural steps, and EIA reports in the case studies, different shortcomings have been identified such as misinterpretation of EIA provisions, limited EIA timeframes, incomprehensive EIA guidelines, insufficient provisions for conducting EIA follow-up and auditing. A further finding was the insufficient EIA report legal requirement which mirrored in the inadequate quality of the evaluated EIA reports. The most important

finding of this research is that EIA system performance depends on its country context. There is a clear relationship between country context of the case studies and EIA system development, implementation, and enforcement, thereby influencing EIA system performance.

The key country context elements that were found to affect EIA system performance are the country legal, political, and socio-economic context, and the EIA stakeholders' capacity. The consequences of the limited EIA stakeholders' capacity coupled with the inadequate country legal context due to insufficient laws to support justice in the administrative decisions, and access to information, had a significant impact on EIA system implementation and enforcement. The developmental state pressure on the EIA administration due to socio-economic challenges associated with political context issues such as interference and pressure also affected EIA system implementation and enforcement. The EIA system development was also influenced by the development state presented by the demand for economic development due to issues such as poverty and unemployment and the lack of political will and commitment to the EIA system. Based on this, a comprehensive understanding of the relationship between EIA system performance and the country context in Africa is required which can be achieved by using the developed evaluation approach in this study, to identify the possible measures for improving EIA system performance.

Keywords: EIA, System, Performance, Evaluation approach, Country context

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ACRONYMS AND ABBREVIATIONS

AMCEN	African Ministerial Conferences on the Environment
BA	Basic Assessment
DEA	Department of Environmental Affairs
DFFE	Department of Forestry, Fisheries, and the Environment
DMRE	Department of Mineral Resources and Energy
EAD	Environmental Affairs Department
EAPAN	Environmental Assessment Professionals of Namibia
EAPs	Environmental Assessment Practitioners
ECA	Environment Conservation Act
ECC	Environmental Clearance Certificate
EIA	Environmental Impact Assessment
EIAr	Environmental Impact Assessment report
EIS	Environmental Impact Statement
EMA	Environment Management Act
EMA	Environmental Management Act
EMPr	Environmental Management Programme
ESIA	Environmental and Social Impact Assessment
ESMP	Environmental and Social Management Programme
ESPS	Environmental and Social Performance Standards
GDP	Gross Domestic Product
GNI	Gross National Income
HDI	Human Development Index
IAIAsa	International Association for Impact Assessment

I&APs	Interested and Affected Parties
IAU	Impact Assessment Unit
IFC	International Finance Organization
MEFT	Ministry of Environment, Forestry, and Tourism
MEPA	Malawi Environmental Protection Authority
NEAP	National Environmental Action Plan
NEMA	National Environment Management Act
NEMC	National Environment Management Council
NEPA	National Environmental Policy Act
OES	One Environmental System
S&EIR	Scoping and Environmental Impact Report
TEEA	Tanzanian Environmental Experts Association
UNDP	United Nations Development Programme
UNEP	United Nations Environmental Programme
WITS	University of the Witwatersrand

CHAPTER 1 – INTRODUCTION AND RATIONALE

1.1. Introduction to EIA system

The EIA was presented for the first time in the United States National Environmental Policy Act (NEPA) as a model of impact assessment for environmental and social protection (Glasson et al. 2012). Since its inception in 1969, many developed countries such as Australia, England, and New Zealand followed this example, expressing their interests in environmental and social protection by adopting forms of impact assessment (Sadler 1996; Glasson et al. 2012). Likewise, the EIA system has been adopted in the developing world with the support of multilateral and bilateral donors and development agencies (Kakonge 1999; George and Lee 2000; Annandale 2001; Tarr 2003; Li 2008; Marara et al. 2011; Campion and Essel 2013; McCullough 2017; Kamijo 2022). Overall, three common components of the EIA system are recognised, which are EIA legislation, EIA competent authority, and EIA procedural steps (Ebisemiju 1993; Fuller 1999; Ahmad and Wood 2002; El-Fadl and El-Fadel 2004; PhD and Harvey 2004; UNEP 2004; Nadeem and Hameed 2008; Badr 2009; Kolhoff et al. 2009; Marara et al. 2011; Khosravi et al. 2019a). The performance of the EIA system is described as the extent to which EIA contributes to its environmental objectives and promotes sustainable development (Sadler 1996; George and Lee 2000; UNEP 2004; Jay et al. 2007; Glasson et al. 2012; Morgan 2012; Zuhair and Kurian 2016).

Internationally, the EIA system has been regarded as an important environmental policy implementation tool used in more than 190 countries globally (Glasson et al. 2012; Morgan 2012). The EIA informs and facilitates the decision-making process by providing the relevant information about the proposed development actions by implementing a systematic process to identify, predict, evaluate, and mitigate the potential environmental consequences of development projects, and contributes to sustainable development (Kolhoff et al. 2009; Glasson et al. 2012; Morgan 2012; Bond et al. 2013; Kolhoff et al. 2013; Kolhoff et al. 2016; UN Environment 2018). The EIA system evaluation towards achieving its purpose has been the focus of EIA literature for many years (Sadler 1996; Ahmad and Wood 2002; Lyhne et al. 2017;

Loomis and Dziedzic 2018; Mubanga and Kwarteng 2020). EIA system performance evaluation research indicates that EIA systems generally perform well in developed countries while falling short in developing countries (George and Lee 2000; Cherp 2001; Wood 2003; Kakonge 2006a; Li 2008; Kabir 2012; Campion and Essel 2013; Kolhoff et al. 2013; Lesirma 2016; McCullough 2017; Khan et al. 2020; Kamijo 2022). The lack of appropriate EIA legislation, lack of strong EIA competent authority, limited public participation, inadequate methodologies for impacts identification and assessment, lack of EIA stakeholders' capacities, insufficient human and financial resources, and weak EIA implementation and enforcement are the factors deemed to undermine EIA system performance in relation to the context of developing countries (Kakonge 2006a; Kirchhoff 2006; Bitondo and André 2007; Kolhoff et al. 2009; Stoeglehner et al. 2009; Van Loon et al. 2010; Khadka and Shrestha 2011; Marara et al. 2011; Ostrovskaya and Leentvaar 2011; Kabir and Momtaz 2013; Alers 2016; Jones and Fischer 2016; Kolhoff et al. 2018; Khan et al. 2020; Kamijo 2022). Consequently, it is suggested that the EIA system in developing countries cannot deliver its intended environmental and social benefits and contribute to sustainable development, leading to development projects associated with loss of natural resources, degradation of the environment, and continuing poverty (Kosamu 2011; Campion and Essel 2013; Bitondo et al. 2014; Gamu et al. 2015). Many developing countries such as the African nations have introduced EIA regulatory frameworks to ensure adequate EIA implementation and enforcement, however, EIA system performance remains limited (Alberts 2020; Sandham et al. 2020; Ibeh and Walmsley 2021; Nakwaya-Jacobus et al. 2021; Kahangirwe and Vanclay 2022).

In addition, the current literature has highlighted that EIA system performance is influenced by the country context, particularly in developing countries (Sankoh 1996; Emmelin 1998; George and Lee 2000; Cherp 2001; Cherp and Antypas 2003; Wood 2003; Kolhoff et al. 2009; Marara et al. 2011; Kabir 2012; Kolhoff et al. 2013; Van den Berg 2015; Khosravi et al. 2019b; Khan et al. 2020; Bond et al. 2022). It is generally acknowledged that EIA system performance is compromised by country context elements such as socio-economic and environmental conditions, political interference, and limited political will as well as EIA stakeholders' capacity (Ebisemiju 1993; Sankoh 1996; Kakonge 1998; George and Lee 2000; Cherp 2001; Cherp and Antypas 2003; Kakonge 2006a; Runhaar and Driessen 2007; Kolhoff et al. 2009;

Runhaar 2009; Macintosh 2010; Van Loon et al. 2010; Marara et al. 2011; Kabir 2012; Kolhoff et al. 2013; Joseph et al. 2015; Van den Berg 2015; McCullough 2017; Khosravi et al. 2019b; Bond et al. 2020; Khan et al. 2020; Bond et al. 2022). EIA system performance in Africa is considered limited and challenged by various issues such as inadequate EIA legislation and EIA competent authority, inappropriate procedural framework, and lack of capacities and financial resources. lack of EIA implementation and enforcement. This is similar across African countries as shown by some African EIA evaluation studies (e.g., Appiah-Opoku 2001; Ahmad and Wood 2002; Ali 2003; Wood 2003; El-Fadl and El-Fadel 2004; Kakonge 2006b; DEAT 2008; Marara et al. 2011; Campion and Essel 2013; Nwoko 2013; Benfadil 2016; Iheriohanma 2016; Gebreyesus et al. 2017; Sharma and Hategekimana 2018; Alberts 2020; Sandham et al. 2020; Ibeh and Walmsley 2021; Nakwaya-Jacobus et al. 2021; Kahangirwe and Vanclay 2022). Despite the ongoing concern about the country context's influence on EIA system performance, there is a lack of understanding about the underlying causes of the poor performance of the EIA in developing countries in relation to the country context (Bitondo and André 2007; Kolhoff et al. 2009; Marara et al. 2011; Kabir 2012; Kolhoff et al. 2013; Khosravi et al. 2019b; Bond et al. 2022).

1.2. EIA system performance and country context

It is indicated that any system of assessment is introduced to a more or less well-developed context, therefore the wider context of the system should be taken into consideration to understand and learn from experience as the EIA system does not operate independently (Emmelin 1998; Cherp and Antypas 2003; Arts et al. 2012; Morgan 2012; Lawrence 2013). Furthermore, it is argued that EIA system performance could be improved by taking into account the country's context in the evaluation process of the EIA system to develop an EIA that is tailored to or adapted to its specific context (Cherp and Antypas 2003; Bitondo and André 2007; Kolhoff et al. 2009; Macintosh 2010; Marara et al. 2011; Morgan 2012; Van den Berg 2015; Khosravi et al. 2019b).

Internationally, evaluating the EIA system performance as an impact assessment instrument towards achieving its intended objectives, including sustainable

development promotion, has been under on-going scrutiny (Cashmore et al. 2004; Morgan 2012; Loomis and Dziedzic 2018). The focus of EIA evaluation research has been to assess EIA system performance, which is generally around the procedural, substantive, transactive, and normative performance (Loomis and Dziedzic 2018; Alberts 2020), and is broadly based on evaluating EIA regulatory, administrative, and procedural frameworks, EIA implementation, and EIA report (implementation output) (Wood 1995; Sadler 1996; Barker and Wood 1999; Lee et al. 1999; Wood 1999a; Ahmad and Wood 2002; Wood 2003; Glasson et al. 2005; Nadeem and Hameed 2008; Chanchitpricha and Bond 2013; Nyhirani et al. 2014; Khosravi et al. 2019a; Alberts 2020; Sandham et al. 2020). These kinds of EIA performance assessments are based on evaluative frameworks that aim to check compliance and identify the gaps and constraints in the EIA system components and implementation to advance EIA performance (Annandale 2001; Wood 2003; Kolhoff et al. 2009; Loomis and Dziedzic 2018).

While these assessment studies aim to enhance our understanding of the EIA system performance, there is an unclear understanding of country context influence on EIA system performance (Kolhoff et al. 2016; Khosravi et al. 2019c; Bond et al. 2022), and it also is not sufficiently covered in practice. It is important to consider the enabling environment within which EIA is used, which encompasses different elements of the country context such as political, socio-economic, and environmental conditions, which may influence EIA system performance towards achieving its purpose and objectives (Cherp 2001; Cherp and Antypas 2003; Kolhoff et al. 2009; Macintosh 2010; Van Loon et al. 2010; Bina et al. 2011; Marara et al. 2011; Arts et al. 2012; Kolhoff et al. 2013; Van den Berg 2015; McCullough 2017; Khosravi et al. 2019b; Bond et al. 2022). It is highlighted that the process of evaluating EIA performance should take into account the uniqueness of the country context within which it works such as the socio-economic and political contexts, which are yet to be clearly understood in relation to the EIA system performance (Kolhoff et al. 2009; Morgan 2012; Zhang et al. 2013; Lyhne et al. 2017; Bond et al. 2022).

The rationale behind such a call is that the evaluation studies that consider country context influence on EIA system performance provide a better understanding of the challenges related to the limited EIA system performance as well as explore the systematic connections between EIA system performance and country context

(Kolhoff et al. 2009; Marara et al. 2011; Morgan 2012; Kolhoff et al. 2016; Bond et al. 2022). However, the current literature has not thoroughly explored how and to what extent the context of the developing countries influences EIA system performance, especially in Africa (Marara et al. 2011; Campion and Essel 2013; Bond et al. 2022). This condition could be attributed to the fact that there has been no commonly accepted evaluation approach to study the influence of country context on EIA system performance in the EIA literature (Kolhoff et al. 2009; Kolhoff et al. 2016; Khosravi et al. 2019c). In addition, appreciating the environmental, social, cultural, economic, political, and legal contexts in the analysis of EIA performance is regarded as a difficult task (Lawrence 1997; Lawrence 2003; Bond et al. 2022). This is because the context in which the EIA regime operates is uncertain, complex, ambiguous, interconnected, and changing (Macintosh 2010; Lawrence 2013). The research conducted for this thesis contributes to addressing this knowledge gap. As part of this, it is necessary to explore and understand the relationship between the developing country context and EIA system performance. Therefore, the research provides an assessment of the EIA system performance in the southern African developing country context to identify the potential patterns of influence.

1.3. Research aim and objectives

The conceptual model of this research was developed to focus the lens on the performance of impact assessment tools such as the EIA system influenced by the country context in Africa, as there is a limited understanding of the root causes of the limited performance of the African EIA system (Bitondo and André 2007; Kolhoff et al. 2009; Marara et al. 2011; Campion and Essel 2013; Ibeh and Walmsley 2021). The conceptual model sought to thoroughly understand the relationship between EIA system performance and country context, aiming to identify how the developing country in Africa influences EIA system performance, in order to contribute to the potential future of EIA system performance improvement. Fundamentally, the conceptual model was based on setting out the connection between the EIA system components, EIA report, and country context informed the studies of Morgan (2012) and Emmilen (1998). In order to understand the relationship between EIA system performance and country context it was important to look at how country context may

interact with the components of the EIA system and EIA report. Furthermore, designated indicators and evaluation criteria for EIA system components, EIA report, and country context were further incorporated in the developed conceptual model of this research. This was done to identify the potential impact of country context on EIA system performance. Therefore, the aim of this study was to evaluate EIA system performance considering the country context to demonstrate how the African developing country context influences EIA system performance. To achieve this, the following research objectives were set:

- 1- To combine and develop existing methodologies to develop an evaluation approach of EIA system performance and country context based on evaluating EIA system components, EIA report, and country context. The key indicators and evaluation criteria will be clarified through this;
- 2- To apply the new methodology to the selected case studies from the southern African region to evaluate EIA system components, EIA report, and country context;
- 3- To evaluate the influence of country context on EIA system performance in the selected countries;
- 4- To compare the current performance of EIA systems across country contexts of the selected case studies to explore and capture similarities and differences; and
- 5- To propose recommendations to improve EIA performance in the African developing country context of the selected case studies.

1.4. Research approach and methodologies

This study was conducted in the form of an in-depth and descriptive multiple-case study approach. This study was done by undertaking different qualitative research methods to increase the validity and ensures the quality of this research. The methodological approach of this study is mainly based on evaluation research, which was considered an appropriate approach to achieve the research purpose (Yin 2014). In essence, an assessment of any policies, plans, and programmes should be based on an evaluative approach. Research evaluation is used to reach and develop a better understanding of the phenomenon, which may aim to contribute to future improvements in the field of policy-making and decision-making (Yin 2009; Arthur

and Cox 2014; Yin 2014). Building on this, this study was based on the development of an evaluation approach of EIA system performance and its country context to evaluate the relationship between EIA system performance and country context. This research does not provide a fully developed evaluation approach. It only provides a basis for such an approach that contributes to better insights into the relationship between EIA system performance and developing country context. Secondly, it validates the developed evaluation approach by applying it to selected case study countries from the southern African context (South Africa, Namibia, Malawi, and Tanzania) to identify the connection between the performance of EIAs and their developing country contexts. The African continent is an interesting example that represents different developing countries with a variety of contexts, especially when compared to the contexts under which the EIA system was developed and has been practiced. The research lastly compares the performance of the EIA system in relation to its country context to capture the common paradigms of the influence. This was to explain how the African developing country context influences EIA system performance, which may contribute to innovative measures that can make it more effective in their specific contexts.

1.5. Main research themes

This research brings together four main themes on which the conceptual framework for this thesis was formed, namely EIA system components, EIA report, country context, and EIA system performance. The discussion below provides some clarification of these themes as they relate to this research.

EIA system components

In the EIA literature, the term 'EIA system' broadly refers to different systematic elements of EIA (e.g., Sadler 1996; Barker and Wood 1999; Wood 1999b; George and Lee 2000; Annandale 2001; Ahmad and Wood 2002; Cherp and Antypas 2003; Wood 2003; UNEP 2004; Economic Commission for Africa 2005; Glasson et al. 2005; Arts and Morrison-Saunders 2012; Campion and Essel 2013; Bitondo et al. 2014; Loomis and Dziedzic 2018; Alberts 2020; Alberts et al. 2022). It is recognised

that the EIA system can be described by reference to three components, which are EIA legislation, EIA competent authority, and EIA procedural steps (Ebisemiju 1993; Fuller 1999; Ahmad and Wood 2002; El-Fadl and El-Fadel 2004; PhD and Harvey 2004; UNEP 2004; Nadeem and Hameed 2008; Badr 2009; Kolhoff et al. 2009; Marara et al. 2011; Glasson et al. 2012; UN Environment 2018; Khosravi et al. 2019c; Khosravi et al. 2019b). EIA legislation often forms the main component of the EIA system, which establishes the administrative roles of the EIA competent authority, the required EIA procedural steps for implementation, and the roles of the EIA actors (Ebisemiju 1993; Sadler 1996; UNEP 2004; Khosravi et al. 2019a). These components of the EIA system are generally considered as the fundamental principles for good EIA system performance (Kennedy 1988; Sadler 1996; Fuller 1999; UNEP 2004; Glasson et al. 2012; Khosravi et al. 2019a).

EIA report

The main output of the EIA implementation is the EIA report, resulting from the undertaken of the EIA procedural steps prescribed by the EIA legislation and administrated by the relevant EIA competent authority (Sadler 1996; Fuller 1999; Glasson et al. 2012; Sandham et al. 2020). The EIA report includes the relevant information required by the legislative component of the EIA system such as the project development description, environmental description, identification of impacts, assessment methods, mitigation and monitoring measures, and alternatives (European Commission 2001; UNEP 2004). The evaluation of EIA report quality is generally undertaken to assess the performance of the EIA system (Zeremariam 2003; Sandham and Pretorius 2008; Jalava et al. 2010; Van Heerden 2010; Caddick 2015; Lampridi 2016; Tilakram 2018; Sandham et al. 2020). The evaluation of the EIA report often relies on using different review packages such as the Environmental Statement Review Package developed by Lee et al. (1999), the European Commission Guidance on Environmental Impact Statement (EIS) review (European Commission 2001), and the EIS review package developed by the Impact Assessment Unit (IAU) of Oxford Brookes University (Glasson et al. 2005). The EIA report is used to facilitate the EIA decision-making process and its quality contributes to the overall performance of EIA (Fuller 1999; Cashmore et al. 2004; Glasson et al.

2012), however, adequacy and accuracy of the EIA report depends on the context of EIA system, which is also a matter of consideration (Nadeem and Hameed 2006; Kamijo 2022).

Country context

Studies related to EIA evaluation have highlighted the significance of considering the context in which the EIA system is implemented (Cherp 2001; Cherp and Antypas 2003; Kolhoff et al. 2009; Macintosh 2010; Van Loon et al. 2010; Bina et al. 2011; Marara et al. 2011; Arts et al. 2012; Kolhoff et al. 2013; Van den Berg 2015; McCullough 2017; Khosravi et al. 2019b; Bond et al. 2022). It is mentioned that the EIA system relies on the suitability of the EIA system within its context for a good performance (Cherp and Antypas 2003; Lawrence 2003; Macintosh 2010; Kolhoff et al. 2013; Lawrence 2013; Van den Berg 2015). This concept around EIA system performance and country context aligns with the expression “*EIA system does not operate in isolation*” (Emmelin 1998: 132). It is acknowledged that factors such as the environmental, social, economic, political, and capacity of EIA actors are perceived to have an influence on the performance and it should be considered in the evaluation of the EIA system (Emmelin 1998; Lawrence 2003; Kolhoff et al. 2009; Arts and Morrison-Saunders 2012; Kolhoff et al. 2013; Lawrence 2013; Van den Berg 2015; Khosravi et al. 2019b; Khan et al. 2020; Bond et al. 2022). In the literature, there are various perspectives on defining the context (Hilding-Rydevik and Bjarnadóttir 2007; Kolhoff et al. 2009; Runhaar 2009). In this research, the following definition of the term context is used ‘*Context generally encompasses ecological, political, social, economic, institutional, and technological components and systems*’ (Lawrence 2003: 435).

EIA system performance

The EIA system aims to contribute to sustainable development and meets its objectives of anticipating, avoiding, minimising, and mitigating the adverse impacts of project developments on the environment through an informed decision-making process (Glasson et al. 2012; Morgan 2012; Bond et al. 2013; Kolhoff et al. 2013;

Kolhoff et al. 2016; UN Environment 2018). EIA system performance is commonly seen in terms of achieving its objectives (Sadler 1996; Jay et al. 2007; DEAT 2008; Kolhoff et al. 2009; Glasson et al. 2012; Morgan 2012; Zuhair and Kurian 2016). EIA system performance evaluation is therefore an assessment of how all the components of the system as well as the final report determine its performance taking into account the influence of country context as demonstrated in the conceptual framework of this thesis.

1.6. Thesis outline

The thesis is structured into ten chapters. Chapter 1 provides an introduction and rationale for this research, the study's aim and objectives, the conceptual framework, and the organisation of the thesis. Chapter 2 presents a detailed literature review on the origin of EIAs, sustainable development, EIA system components and implementation, EIA performance and country context, and EIA system performance in the African context. Chapter 3 demonstrates the development process of the evaluation approach of EIA system performance and country context based on reviewing the relevant literature, which was developed for this research. This chapter has been submitted for publication. Chapter 4 describes the methodological approach conducted in this study. It explains the research methods, sources of data, and data analysis. It also includes a review of the relevant literature and a discussion of the conceptual model that was used to guide this study.

Chapters 5, 6, 7, and 8 present the case studies of South Africa, Namibia, Malawi, and Tanzania. These chapters describe the EIA system performance in relation to the country context of the case studies using the evaluation approach developed in chapter 3 and the methodological approach described in chapter 4. The case studies are reviewed and compared to identify the patterns of country context influence on EIA system performance in the selected case studies of the African developing countries and recommendations for improvement in the EIA system performance as shown in chapter 9. Chapter 10 closes the thesis with a summary of the key conclusions and suggestions for further research.

CHAPTER 2 – LITERATURE REVIEW

Chapter 2 summarises a review of the relevant literature to set the context for this research. The review introduces the beginnings of the EIA system and the broad concept of sustainable development, it then narrows to focus on the EIA system in Africa, EIA system components, EIA report, and EIA system performance evaluation. As the country context is the focus, this is considered in the literature review in relation to EIA system performance, with particular attention to the African context.

2.1. Growing awareness of environmental issues

Growing human population and economic development with the increasing consumption of environmental resources are affecting the capacity of the natural environment to produce goods and services (Rockström et al. 2009; Biggs et al. 2012). The carrying capacity of the environment is described as the maximum population size that an ecosystem can support, based on the processes and relationship between the finite natural resources and their consumers (Del Monte-Luna et al. 2004). The increasing demand for natural resources has resulted in a decline and unsustainable degradation of the natural ecosystem services and resources (Millennium Ecosystem Assessment 2005). Furthermore, the waste generated by human activities affects the environment, leading to irreversible environmental changes and causing various environmental impacts such as ecosystem degradation, climate change, natural resources loss, and environmental degradation (Rockström et al. 2009; Farley and Voinov 2016; Woo and Kang 2020).

Since the 1950s, increasing awareness of human impacts on the natural environment has grown triggered by deteriorating socio-economic and environmental conditions (Quental et al. 2011). During the twentieth century, different environmental and socio-economic crises happened, such as the Rongelap nuclear fallout in 1954, the mercury crisis of Minamata in 1956, the Chernobyl nuclear disaster in 1986, the debt shock of developing countries in 1982, famine in Ethiopia in 1984, and famine in Somalia due to drought and war in 1991 (Cooper 1992; Keller 1992; Ahmed 1999; Johnston and Barker 2008; Berger 2010). Additionally, poverty

and social inequalities, environmental pollution, and pressures on natural resources were a major focus of communities as a result of significant post-World War II population growth, urbanisation, economic development, and industrialisation in North America and Western Europe in the decade of the 1960s (Caldwell 1988; Kirkby et al. 1999).

The environmental movements in Western Europe were influenced by numerous environmental issues, including pesticide usage, oil spills, and nuclear fallout (Quental et al. 2011). Similarly, the environmental concern in America in the 1960s was driven by a series of environmental problems such as radioactive contamination of milk, pesticides, extreme smog disasters, and oil spills (Andrews 2010). In 1962, *Silent Spring* was published by Rachel Carson and described the effects of pesticide usage on the environment. This was considered to be the most influential warning that drove environmental movements in the United States (United Nations University 1999). Environmental and social complications related to population growth and industrial development triggered an increase in environmental awareness and a need to implement environmental policy to regulate impacts (Bac 2008).

2.2. The history of EIA

The influence of environmental and consumer movements and scientific works impelled politicians to consider tools to guide planning and decision-making for the benefits of environmental and social protection (Andrews 2010). Before the 1960s, impact assessment tools were developed and undertaken in different forms using among others checklists, guidebooks, and procedural manuals (Caldwell 1988). Seeking economic development and achieving environmental and community protection led to the foundation of EIA for environmental and social benefits in the NEPA in the United States in 1969 (Sadler 1996; Glasson et al. 2012). The main purpose of the NEPA was to use a process to appropriately consider environmental and public protection in decision-making processes for economic development projects (Caldwell 1988; Wood 1999a). Ultimately, NEPA defined the legislative and institutional components of an EIA, EIA guidelines, and EIA regulatory procedural requirements. Additionally, the procedural steps for implementation of EIA were included, for instance, scoping, public consultation, impact identification and

prediction, and environmental assessment statement (Glasson et al. 2012). The evolution and enactment of NEPA as an environmental policy manifested the first formal EIA model, which contributes to informed decision-making based on environmental and public protection concerns and interest in the development plans and projects (Glasson et al. 2012; Banhalmi-Zakar et al. 2018).

Since 1969, EIA was adopted by other countries; for example, Canada, Australia, and New Zealand adopted EIA and established EIA legislation and administration frameworks. In 1985, several countries in Europe established a Directive on EIA system provisions, which came into force in 1988 (Sadler 1996; Glasson et al. 2012). The early 1990s also witnessed EIA legislative framework adoption in Africa and South America (Glasson et al. 2012). In 1992, EIA was supported by the United Nations Conference on Environment and Development, also known as the Rio de Janeiro Earth Summit (Sadler 1996). Principle 17 of the Rio Declaration on Environment and Development described the role of EIA as a national environmental instrument at the project level to inform the decision-making process on the development proposals' adverse impacts (UNCED 1992a). Since the Earth Summit, EIA gained significant global recognition and interest. Moreover, the worldwide adoption of EIA was supported by international agreements and conventions related to climate change, natural resources conservation, environmental protection, and pollution control. For example, the Convention on Biological Diversity 1992, the Framework Convention on Climate Change 1992, and the Convention on Transboundary Environmental Impact Assessment in a Transboundary Context (informally called the Espoo Convention of 1991) universally broadened EIA spread (UNEP 2004; Morgan 2012).

In addition, global financial institutions and organisations such as the World Bank adopted Environmental and Social Assessment Procedures as a safeguarding policy to be followed by borrowing countries, which led other development banks and donor agencies to adopt similar procedures in 1989 (Sadler 1996). Furthermore, the World Bank requires the implementation of its safeguard policies by the borrowing governments to fund their economic activities by considering the environmental and social aspects of the funded projects. The objectives of the World Bank safeguard policies were consideration of sustainable development promotion in both project implementation and decision-making. They also included operational principles such

as scoping, impact evaluation, consideration of alternatives, and environmental management plans (World Bank 2005). The World Bank adopted a new set of safeguard policies named the Environmental and Social Framework in 2016, which commenced in 2018 (World Bank 2020).

Another example of a financial organisation's commitment to environmental and social protection is the International Finance Corporation (IFC), which is part of the World Bank group. In 1998, the IFC prepared the Environmental and Social Review Procedure with guidance for its implementation to evaluate the environmental consequences of the projects. The IFC also adopted a sustainability framework focusing on sustainable development. This resulted in the IFC's Environmental and Social Performance Standards (ESPS) being updated in 2006 and 2012 (IFC 2020). The Equator Principles as a risk management framework to identify, evaluate, and mitigate environmental and social risks in projects, were established in 2003 and revised in 2006 based on IFC's ESPS (Williams 2013). The Equator Principles are a global banking initiative adopted by 104 financial institutions to ensure environmental and social consideration in their funded projects, which were revised in 2013 and in 2020 (The Equator Principles 2020).

Parallel to the international adoption and development of EIA, EIA guidelines were published in NEPA in 1971 (Glasson et al. 2012), followed by the development of EIA best practice principles (IAIA 1999). Essentially, EIA guidelines and best practice principles aim to assist EIA professionals in the implementation of EIA following the legal requirements and administrative authority arrangements (Ebisemiju 1993; IAIA 1999). Interestingly, throughout the history of the EIA system development and experience by countries and organisations, the fundamental aspects of the EIA system implementation remain the same. For example, the process still encompasses screening to determine the need for EIA, a scoping stage in which the significance of impacts, alternatives, and Terms of Reference (ToR) are identified. EIA report preparation and review, public participation, environmental management plan, and follow-up and monitoring. Over time, EIA system objectives were broadened to promote sustainable development (Sadler 1996; George and Lee 2000; UNEP 2004; Jay et al. 2007; Glasson et al. 2012; Morgan 2012; Zuhair and Kurian 2016). Eventually, the practice and experience of EIA led to the development

of further assessment instruments such as Social Impact Assessment, Health Impact Assessment, and Strategic Environmental Assessment (Morgan 2012).

2.3. The emergence of sustainable development

Parallel to the EIA development was the sustainable development concept. The evolution of this concept was triggered by earlier environmental movements and scientific works in response to environmental and social consequences, and pressure on natural ecosystems and resources (Watch 2011). The most recognised and widely accepted definition of sustainable development was given in the report of the World Commission on Environment Development in 1987, which was known as the Brundtland report, or *Our Common Future*. Sustainable development was defined as *‘the ability to make development sustainable to ensure that it meets the needs of the present without compromising the ability of future generations to meet their own needs* (United Nations 1987: 15). The report of the World Commission on Environment and Development highlights that project development had limits restricted by the conditions of technology innovations, social reliance on the environment, the ability of the natural ecosystems to accommodate the impacts of population growth, and industrial development, hence, the need for sustainable development which integrates environmental protection, social, and economic development (United Nations 1987).

In 1992, the United Nations Conference on Environment and Development internationally supported the concept of sustainable development. Agenda 21 of the Earth Summit was an action plan for sustainable development to be voluntarily implemented by national, regional, and local governments. Furthermore, the integration of environmental protection, social, and economic development, and public participation in a decision-making process was highlighted (UNCED 1992b). The early focus of the sustainable development concept was on environmental issues. Throughout its evolution, it was broadened to be around three interlinked elements, which are environmental conservation, social, and economic development, and. The primary focus of political interest in sustainable development and environmental protection was shifted to include social and economic aspects of development between The Stockholm Conference in 1972 and The Johannesburg

World Summit in 2002 (Bac 2008). Environmental awareness and protection actions of political leaders are seen at numerous international conferences, meetings, agreements, and protocols, influenced by environmental movements and environmental written papers. Supporting tools for planning and decision-making were developed in line with the sustainable development concept. Impact assessment tools are considered to facilitate sustainable development promotion in decision-making (Sadler 1996; Glasson et al. 2012).

2.4. Sustainable development in Africa

The significance of environmental protection and natural resource conservation in the African continent was shown in Article 24 of the African Charter of Human and Peoples' Rights in 1981 in Nairobi, which entered into force in 1986. Article 24 of the African Convention stated that *'all peoples shall have the right to a general satisfactory environment favourable to their development'* (African Charter on Human and Peoples Rights 1981: 4). It was considered that African governments were committed to introducing the environmental rights into their common law frameworks and develop environmental policies in line with the declaration of Article 24 (World Bank 2011).

In the 1980s, the role of environmental and natural resources protection in the economic development processes on the African continent started to gain attention. For instance, the Lagos Plan of Action for the Economic Development of Africa, held in Nigeria in 1980, highlighted the importance of protecting the environment and natural resources (UNECA 1980). Sustainable development adoption in Africa was supported by international organisations and institutions through numerous conferences such as the African Ministerial Conferences on the Environment (AMCEN) since its establishment. The program was supported by the United Nations Environment Programme (UNEP). Amongst the AMCEN meetings was the one held under the theme: *'Taking action for Environment Sustainability and Prosperity in Africa'* in Durban, South Africa in 2019. The objectives of AMCEN are to ensure that the human population in Africa achieves its social and economic development while considering environmental protection (UNEP 2019a). Furthermore, the latest AMCEN meeting (The eighteenth session) was held in 2021 under the theme:

'Securing people's well-being and ensuring environmental sustainability in Africa'.

This theme encourages African countries to consider long-term objectives with recovery measures for climate change impacts, resilience, integration of environmental challenges in their environmental policies, and prioritisation of green and sustainability recovery plans for social, economic, and environmental resilience (UNEP 2020). Moreover, international banking institutions such as the World Bank have encouraged the adoption of sustainable development in the African region through their funding programs (Elliott 2013).

2.5. EIA in Africa

Over the past three decades, impact assessment tools for environmental and social protection such as EIA were transferred to the African region from developed countries. The early adoption of EIA was influenced by the international lending and donor-funding institutions and organisations in Africa (Kakonge 1999; George and Lee 2000; Annandale 2001; Tarr 2003; Li 2008; Marara et al. 2011; Campion and Essel 2013; McCullough 2017; Kamijo 2022). In the mid-1990s, EIA was mostly practiced based on the requirements of international financial institutions and prior to making EIA a legislated requirement in the African environmental legal frameworks (Petts 1999; Tarr 2003; Marara et al. 2011; Campion and Essel 2013). So while the evolution and development of EIA in developed countries was gradually built based on societal interest and concern about environmental issues and protection (bottom-up approach) (Marara et al. 2011; McCullough 2017), in developing countries, EIA was adopted by the national governments (top-down approach) in response to international environmental pressure and international lending and donor agencies' requirements, which has implications for its effectiveness (George and Lee 2000; Annandale 2001; Tarr 2003; UNEP 2004; Li 2008; Marara et al. 2011; Kamijo 2022).

The history of EIA in Africa can be divided into two periods: pre-1995 and post-1995. Firstly, economic and development projects pre-1995 in Africa were largely donor supported-projects, which means EIAs were implemented following the requirements and conditions imposed by the lending agency on the borrowing African countries (Economic Commission for Africa 2005). The dire need for socio-economic development in many African countries, which lacked any national EIA Regulations

but needed foreign investments, led to the implementation of EIA to comply with the demands of the funding organisations (Ali 2003; Tarr 2003; Katima 2008; Campion and Essel 2013). These borrowing African countries including Botswana, Namibia, Mauritius, Burkina Faso, Egypt, and Sudan applied the EIA with a requirement for public participation to meet the funding conditions of the lending agencies and institutions with the assistance of foreign experts (Goodland 1996; World Bank 2002; Ali 2003; El-Fadl and El-Fadel 2004; Badr 2009).

In 1995, the AMCEN on Environmental Impact Assessment held in Durban, South Africa further influenced EIA adoption in Africa. The conference strengthened the role of EIA by recommending that countries should be *'promoting the use of EIA as a continuous planning tool and the strengthening of institutional and legal frameworks for this purpose to ensure the enforcement of EIA by fully integrating this tool, including biophysical and socioeconomic aspects, from the early stages of policies, plans, programs and project formulation, implementation, monitoring the commissioning and evaluation'* (Goodland 1996: 88). The conference also promoted capacity-building, cooperation between developed and developing countries, and supporting environmental policy and decision-making. Many African nations adopted and developed EIA Regulations, guidelines, administration bodies, and procedural requirements as a result (World Bank 2002). For instance, in the North African region, countries like Egypt enacted EIA legislation in 1995 (Economic Commission for Africa 2005), and Morocco in 2003 (Benfadil 2016). In the western African region, EIA was legislated in Niger in 1997, and Ghana in 1999 (Economic Commission for Africa 2005). Furthermore, countries in the central region of Africa enabled EIA legislation such as Rwanda in 2005, and Cameroon in 1996 (Bitondo et al. 2014). In eastern Africa, Ethiopia, and Kenya enacted EIA legislation in 2002 and 2003 respectively (Economic Commission for Africa 2005). Finally, in southern Africa, EIA was legislated in South Africa in 1989 (Retief et al. 2011). Namibia in 2010, Zambia in 2011, and Botswana in 2010 (Walmsley and Hussleman 2020).

In brief, EIA adoption in Africa was supported by the UNEP, the United Nations Development Programme (UNDP), and global multilateral and bilateral donor institutions and organisations such as the World Bank and the IFC. African countries such as Nigeria, Cameroon, Burkina Faso, Gabon, Kenya, Lesotho, and Senegal were supported and assisted by international donor agencies and banks to develop

their EIA system (World Bank 2002). Furthermore, EIA training programs and capacity-building workshops were donor-driven rather than demand-driven by communities of African countries (Sadler 1996; UNEP 2004; Kakonge 2006a).

2.6. EIA system components and EIA report

The term 'EIA system' is widespread in the EIA literature (Sadler 1996; Barker and Wood 1999; Wood 1999a; George and Lee 2000; Annandale 2001; Ahmad and Wood 2002; Cherp and Antypas 2003; Wood 2003; UNEP 2004; Economic Commission for Africa 2005; Glasson et al. 2005; Arts and Morrison-Saunders 2012; Champion and Essel 2013; Bitondo et al. 2014; Loomis and Dziedzic 2018; Alberts 2020; Alberts et al. 2022). In the context of this research is used to refer to three components, which are EIA legislation, EIA competent authority, and EIA procedural steps (Ebisemiju 1993; Fuller 1999; Ahmad and Wood 2002; El-Fadl and El-Fadel 2004; PhD and Harvey 2004; UNEP 2004; Nadeem and Hameed 2008; Badr 2009; Kolhoff et al. 2009; Marara et al. 2011; Glasson et al. 2012; UN Environment 2018; Khosravi et al. 2019c; Khosravi et al. 2019b). The legislation component provides for a legal basis of the EIA system, which makes EIA mandatory, whereby it reflects the government's commitment and determination to ensure and enforce the promotion of sustainable development in the aspects of development projects in the decision-making process (Ebisemiju 1993; Sadler 1996; Glasson et al. 2012). EIA system legislation includes directives or regulations for the legal enforcement of EIAs, a description of the competent authority, procedural steps for conducting EIA, and the nature and scope of EIA application depending on the types of development proposals (Ebisemiju 1993; Sadler 1996; UNEP 2004; Khosravi et al. 2019a). The following points are generally the elements of EIA system legislation (as per UNEP 2004):

- EIA system purpose and objectives, which are legal statements that describe the purpose and boundaries of the EIA system with decision-making and sustainable development;
- type of projects requiring an EIA;
- EIA process;

- the nature and extent of responsibilities and duties of all actors involved in EIA system implementation such as project proponent, EIA consultant, and decision-maker;
- EIA system relationship to decision-making;
- compliance and enforcement of the EIA system, and
- institutional arrangement of the competent authority, its responsibilities and duties, its relationship to government departments, sectors, and agencies, and cooperation strategies among all related agencies (Ebisemiju 1993).

The second component of the EIA system is the competent authority, which may vary from country to country. A competent authority is usually responsible for preparing the EIA legislation, regulations, and guidelines as well as overseeing and ensuring EIA implementation and enforcement in accordance with the established EIA system legislation (UNEP 2004; Khosravi et al. 2019c). Thus, it guides through establishing guidelines and best practice principles to ensure uniformity and effective performance of the EIA system (Ebisemiju 1993). The following points usually illustrate the general responsibilities and duties of the competent authority (UNEP 2004):

- preparation of EIA system regulations, guidelines, and good practice principles/standards;
- supervision of EIA system implementation;
- assistance in EIA system implementation;
- documentation and registration of EIA reports;
- ensuring and supporting public participation during EIA system implementation;
- issuing or approving ToR for EIA system implementation;
- review of EIA reports;
- promoting EIA good practice;
- approval of EIA reports and issuing terms and conditions for approval;
- ensuring the implementation of the mitigation and monitoring measures described in the reports, and
- conducting the audit and follow-up (EIA system enforcement).

Thirdly, EIA procedural steps are considered as a formal and clearly-defined structure for EIA system implementation and include the arrangement of tasks and responsibilities among EIA key actors (Ebisemiju 1993). The output of the process is an EIA report or statement submitted for decision-making (Fuller 1999; Glasson et al. 2012). The generic EIA procedural steps are described below in Figure 1 (UNEP 2004) and include:

- screening, in which an EIA requirement for projects is identified according to established criteria such as project lists, sensitive areas, and checklists of environmental impacts);
- scoping that includes identification, prediction, and evaluation of likely significant impacts as well as mitigation and monitoring measures required, identification of project alternatives such as design and location, and ToR (work plan) for EIA;
- assessment in accordance with established Terms of Reference, which should include for instance baseline assessment, description, prediction, evaluation of significant impacts, preparation of environmental management plan comprising mitigation, monitoring, and follow-up measures;
- public participation according to legal requirements for EIA;
- EIA report preparation should incorporate, for instance, an executive summary, results of the process, information about any uncertainties and gaps in data, and technical appendices;
- EIA report review based on defined mechanisms and criteria;
- submission of the EIA report to the competent authority, and
- post-approval follow-up and monitoring plan should include reviewing the compliance with terms and conditions of approval, supervision of mitigation measures, identification of unanticipated issues, and EIA review for future improvement.

The advantages of the defined EIA procedural steps for EIA system implementation include (Ebisemiju 1993):

- a description of the required stages (i.e., screening and scoping);
- a description of the responsibilities and duties of the personnel participating in a certain EIA system process stage;

- ensuring the consideration of predicted effects of projects throughout their life cycle;
- a description of public consultation;
- ensuring good management and utilization of the process results;
- reducing inconsistencies in the assessment of similar projects;
- enhancing the objectivity of the process by reducing subjectivities caused by EIA stakeholders;
- enhancing the role of project proponents by increasing clarity in EIA system implementation, minimizing financial cost and time waste, and
- reducing the adverse impacts of external factors on EIA system performance such as corruption.

The main immediate output of EIA system implementation following its legal requirements is the EIA report which is used to inform decision-making (Sadler 1996; Fuller 1999; Glasson et al. 2012; Sandham et al. 2020). A significant part of the EIA system is the EIA report quality which should lead to a rational and better environmental decision being taken (Alberts 2020; Sandham et al. 2020; Alberts et al. 2022). In addition to EIA system components, guidelines, and best practice principles were developed as supporting principles for enhancing EIA system implementation. EIA guidelines provide procedural guidance for EIAs to ensure compliance with the requirements stated in EIA legislation. EIA guidelines are an advisory tool usually developed by an EIA competent authority to interpret EIA legislation (Ebisemiju 1993; UNEP 2004). EIA guidelines also describe the duties and responsibilities of EIA system actors stated in the EIA legislation. These guidelines differ notably in their scope and content from country to country according to EIA legislation and competent authority demonstrations (UNEP 2004). EIAs are normally conducted by professionals with different educational and professional backgrounds (referred to in some countries as Environmental Assessment Practitioners (EAP)) with the assistance of specialists on behalf of the project proponent (UNEP 2004; Shah 2012).

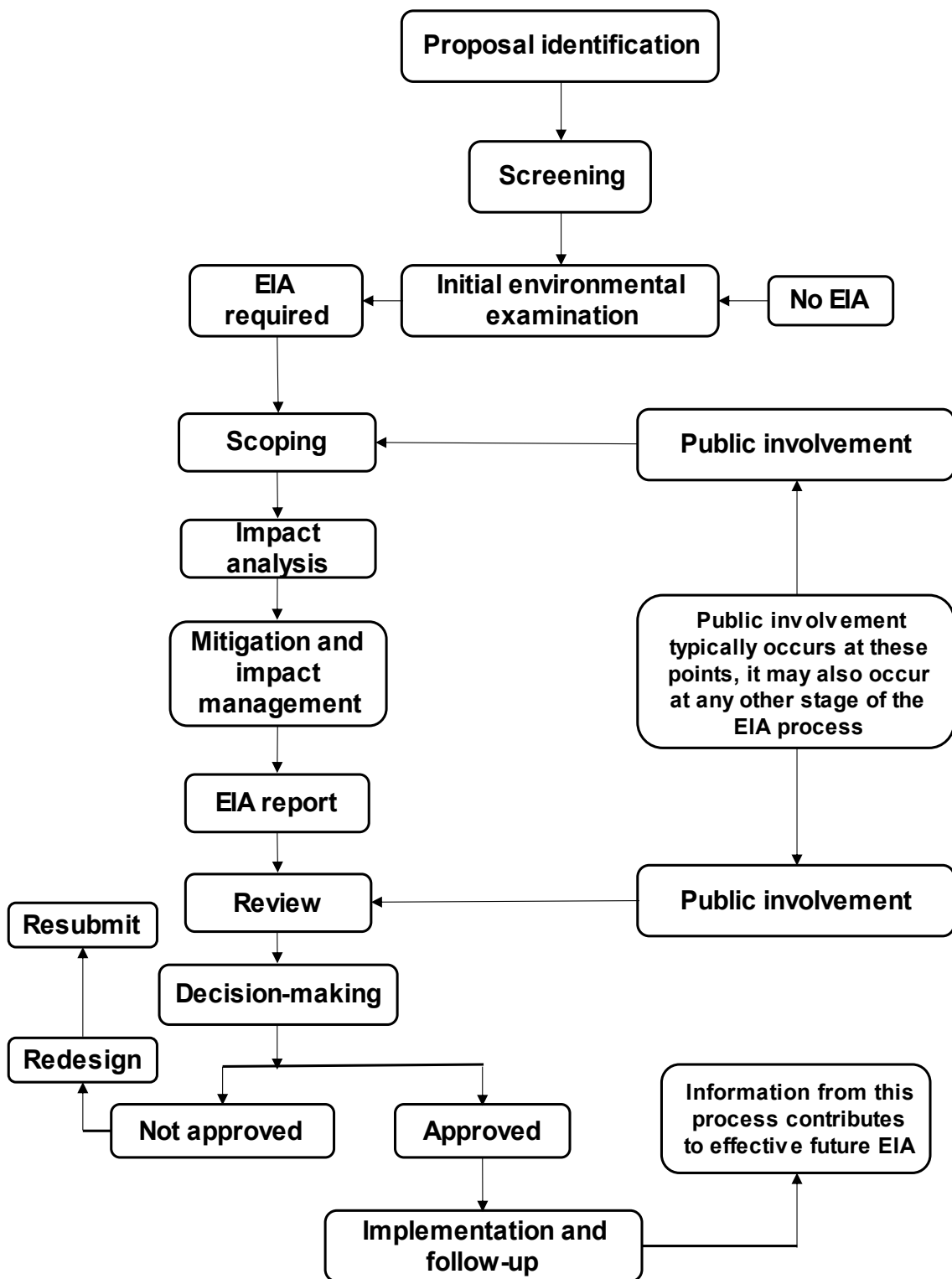


Figure 1. The EIA procedural steps for implementation (UNEP 2002)

The capacity of EAPs is necessary for effective EIA implementation in compliance with the EIA legislative requirements (Clausen et al. 2011; Pearson 2011; Morrison-Saunders and Retief 2012; Sandham et al. 2013; Zhang et al. 2018). The EIA legislation would usually prescribe the qualifications and requirements of the EAP for conducting an EIA as the case in the South African environmental law (RSA 1998a).

In conclusion, an EIA system firstly relies on environmental legislation usually developed by the EIA competent authority. Secondly, EIA legislation illustrates the administrative arrangements, tasks, and duties of the EIA competent authority responsible for EIAs. Thirdly, EIA procedural steps for implementation (process) are legally required and structurally defined in legislation. The final output of the EIA system implementation is the EIA report that is used to facilitate decision-making. Finally, the EIA process is supported by developed guidelines and best practice principles to guide its implementation and achieve its objectives for effective performance.

2.7. EIA system performance evaluation

In recent years, the evaluation of the EIA system towards achieving its purpose and meeting its objectives has been given attention in the EIA-related literature (Morgan 2012; Loomis and Dziedzic 2018). Despite the challenge of reaching an overall judgment about the EIA system's effectiveness in terms of achieving its aim (Wood 1995; Baker and McLelland 2003; Alberts 2020), EIA system effectiveness is generally attributed to its success in promoting sustainable development and to what degree it makes a difference to decision-making and success in managing the pitfalls of EIA components and implementation (Sadler 1996; George and Lee 2000; Ahmad and Wood 2002; Wood 2003; Cashmore et al. 2004; UNEP 2004; Jay et al. 2007; DEAT 2008; Glasson et al. 2012; Morgan 2012; Loomis and Dziedzic 2018). The term 'performance' is used in this study, together with the term 'effectiveness', and both are defined as follows: '*EIA system performance is measured in terms of achieving EIA objectives*' (Kolhoff et al. 2009: 272).

Evaluation of EIA system effectiveness can be conducted in different dimensions (Loomis and Dziedzic 2018), as illustrated for the first time in the *International Study*

of the Effectiveness of Environmental Assessment done by Sadler (1996). This study represented three dimensions for evaluating EIA system effectiveness, which are procedural, substantive, and transactive effectiveness (Loomis and Dziedzic 2018; Alberts 2020; Alberts et al. 2022). Firstly, the evaluation of the procedural effectiveness was based on evaluating the EIA system component (legislation, administrative authority, and procedural steps) by using a set of criteria for evaluation (Bond et al. 2013). Many criteria have been used for evaluating EIA system procedural effectiveness, but the most adopted criteria were developed by Sadler (1996) and Ahmad and Wood (2002). Procedural effectiveness also includes the evaluation of EIA system implementation to evaluate the level of adherence to EIA legislation. Evaluating the EIA report quality is also undertaken to assess EIA effectiveness by using different criteria. The most well-known criterion were presented by Lee et al. (1999), European Commission (2001), and Glasson et al. (2005). Procedural effectiveness has been evaluated in several comparative studies worldwide (El-Fadl and El-Fadel 2004; PhD and Harvey 2004; Nadeem and Hameed 2008; Badr 2009; Khosravi et al. 2019a).

Secondly, the substantive effectiveness involves the evaluation of the EIA system's contribution towards an informed decision-making process and environmental protection (Sadler 1996). It has not been given as much attention in EIA evaluative literature due to the complexity of assessing the impacts of the EIA system on decision-making (Cashmore et al. 2004; Cashmore et al. 2008), and because of the difficulty of measuring the prevented negative impacts (Loomis and Dziedzic 2018).

Thirdly, the EIA system's transactive effectiveness addresses the temporal (timeliness) and financial (cost) aspects of EIA system implementation (Sadler 1996). Sadler's (1996) criteria for transactive effectiveness were the first and the most used in evaluative literature. Time delays and cost overruns are important determinants of EIA system effectiveness. The project developer is the most affected stakeholder due to delays in getting approval, which is invariably associated with additional financial costs. This condition will make the project developer less committed to the EIA system, negatively affecting its effectiveness (Loomis and Dziedzic 2018).

In addition to Sadler's (1996) dimensions, normative effectiveness is developed by Baker and McLelland (2003). Normative effectiveness refers to the achievement of the normative goals stated by the environmental policy, which will lead to policy improvement in the future (Baker and McLelland 2003). Another aspect of normative effectiveness was related to the effect of the EIA system on decision-making and approval, which results in changes in institutions, organisations, philosophy, science, and culture for sustainable development promotion (Cashmore et al. 2004).

Normative effectiveness is also considered as *'the perceptions or attitudes that lead people to react or to take action in impact assessment processes, such that they can learn from the experience; lessons learned could help them achieve new perspective(s) or pattern(s) of knowledge so that they can understand how impact assessment processes can help them improve their quality of life'* (Chanchitpricha and Bond 2013: 69). This dimension of EIA system effectiveness considers sustainable development promotion based on stakeholders' knowledge, experience, and interest in it. The EIA system is required by its definition to include environmental, economic, and social aspects in the project impact assessment for sustainability purposes and should lead to a change in the perspectives of and improve the relations between the system's stakeholders (project developer, administrative authority, Interested and Affected Parties (I&APs)) to contribute to sustainable development (Glasson et al. 2012). Evaluating EIA system effectiveness in relation to sustainable development has gained limited interest due to the complexity of the sustainable development concept concerning the EIA system, and its limitations as a project assessment tool (Cashmore et al. 2004).

Although the EIA system is meant to achieve several environmental, economic, and social objectives, it is still bound by its theoretical basis as an instrument to inform EIA decision-making at the project level (Cashmore et al. 2004; Cashmore et al. 2010; Morgan 2012). All the evaluation dimensions of EIA system effectiveness have relied on the assessment of EIA system components and their importance in decision-making. The fundamental aim of the mentioned evaluation measures was to identify gaps in EIA system components and implementation to improve its practice and therefore its effectiveness (Loomis and Dziedzic 2018; Alberts 2020). Studies assessing EIA system performance identify that EIA legislative framework does not

ensure a well-performing EIA system (Morrison-Saunders and Retief 2012; Sandham et al. 2013).

It is perceived that an EIA system is feasible and effective if implemented in accordance with appropriate legislation, and administrative and procedural arrangements (Ebisemiju 1993; Sankoh 1996; Kakonge 1998; Annandale 2001; Economic Commission for Africa 2005; Marara et al. 2011; Kolhoff et al. 2013). Additionally, it would be more appropriate to evaluate the likely performance of the EIA system based on considering the country context in which it operates (Emmelin 1998; Lawrence 2003; Kolhoff et al. 2009; Marara et al. 2011; Morgan 2012; Lawrence 2013). Evaluation of EIA performance requires consideration of the uniqueness of the country context within which it is applied (Emmelin 1998; Mao and Hills 2002; Kolhoff et al. 2009; Macintosh 2010; Marara et al. 2011; Morgan 2012; Joseph et al. 2015; Bond et al. 2022).

2.8. EIA system performance in the African developing country context

Country context is identified in the literature as a cause of the limited performance of EIA in terms of contributing to sustainable development (e.g., Kolhoff et al. 2009; Marara et al. 2011; Arts et al. 2012; Arts and Morrison-Saunders 2012; Kabir 2012; Champion and Essel 2013; Kolhoff et al. 2013; Van den Berg 2015; Khosravi et al. 2019b; Aung et al. 2020; Ibrahim et al. 2020; Khan et al. 2020; Bishoge and Mvile 2022; Bond et al. 2022). EIA system at the project level is not a standalone impact assessment tool that works in isolation based on its systematic components. It works within a country of interlinked contextual factors (Emmelin 1998; Lawrence 2013). The contextual elements may include political, social, cultural, and economic systems, the capacity of EIA stakeholders, and environmental conditions (Sankoh 1996; Emmelin 1998; Kakonge 1998; Cherp 2001; Cherp and Antypas 2003; Lawrence 2003; Kolhoff et al. 2009; Macintosh 2010; Bina et al. 2011; Marara et al. 2011; Kolhoff et al. 2013; Lawrence 2013; Joseph et al. 2015; Van den Berg 2015; Zuhair and Kurian 2016; Kattumuri and Lovo 2018; Khan et al. 2020).

Globally countries vary in terms of contexts according to their environmental resources and conditions, socio-economic conditions, and political systems, which

influence the performance of the EIA system (Kolhoff et al. 2009; Van Loon et al. 2010; Marara et al. 2011; Kolhoff et al. 2016; Khosravi et al. 2019b). As discussed, EIA system evolution in developed countries was mainly driven by societal interests and concerns about the adverse consequences of human population growth and industrial development, urging governments to take action for societal protection and environmental conservation (Andrews 2010; Marara et al. 2011; McCullough 2017). Conversely, EIA system adoption in less developed countries was driven by their national governments in response to international environmental pressure, international lending, and donor agency requirements to secure funding (Kakonge 1999; George and Lee 2000; Annandale 2001; Tarr 2003; Li 2008; Marara et al. 2011; Campion and Essel 2013; McCullough 2017; Kamijo 2022). However, variations in contexts between countries may impose limitations on EIA system performance (Marara et al. 2011; McCullough 2017). In many developing countries, economic development is vital to meet societal needs, considering one aspect of sustainable development (World Bank 2011; Campion and Essel 2013). In support of this, it is mentioned that developing countries with low economic and political stability, international debt, and social issues are unlikely to effectively implement an EIA system, resulting in low performance (Sankoh 1996; Campion and Essel 2013; McCullough 2017). Based on this, EIA literature broadly discusses the relationship between EIA system performance and the developing country context (e.g., Kolhoff et al. 2009; Marara et al. 2011; Kabir 2012; Kolhoff et al. 2013; Van den Berg 2015; Khosravi et al. 2019a; Khan et al. 2020; Bond et al. 2022).

Many countries in Africa primarily focus on economic development, facing challenges to maintaining economic growth which is based on the exploitation of their natural capital base (UNEP 2016). Countries on the African continent encounter various environmental, economic, social, and political obstacles hindering their development. Issues related to food security, education, inequality, public health, lack of employment, ecosystem, and natural resources degradation, desertification, deforestation, climate change, and water, land, and air pollution are experienced across Africa (UNEP 1994; Abernethy et al. 2016; Bhorat et al. 2016; UNEP 2019b; World Bank 2022). Furthermore, African nations, as developing countries, have less industrial advancement in comparison to the levels of economic development in countries in Europe and America (Goodland 1996; World Bank 2011; UNEP 2016).

The necessity for economic development in Africa often comes at the cost of its environment (World Bank 2011). Furthermore, environmental issues in African countries have been generally caused by a lack of suitable environmental policy enforcement to guide development (UNEP 1994; Economic Commission for Africa 2005; Kakonge 2006a; World Bank 2011; Campion and Essel 2013).

Despite the effort of global organisations such as the UNEP and international banks such as the World Bank in supporting sustainable development in Africa by implementing environmental assessment tools such as the EIA system, performance has not been up to standard (e.g., Appiah-Opoku 2001; Ali 2003; Economic Commission for Africa 2005; Kakonge 2006b; Kakonge 2006a; Bitondo and André 2007; DEAT 2008; Kolhoff et al. 2009; Marara et al. 2011; Campion and Essel 2013; Bitondo et al. 2014; Alers 2016; Sharma and Hategekimana 2018; World Bank 2019; Mubanga and Kwarteng 2020; Nakwaya-Jacobus et al. 2021; Sandham et al. 2022; Sandham et al. 2022). There are several issues associated with EIA system performance in the African context. Issues such as inadequate EIA legislation, lack of EIA implementation and enforcement, insufficient EIA guidelines, inadequate administrative and institutional structures, political and socio-economic pressure on EIA decision-making, inadequate EIA procedural requirements, ineffective public participation, poor quality of EIA reports, lack of EIA competent authority independence and accountability, inadequate financial resources, lack of human and financial resources, and lack of capacities of EIA stakeholders, are perceived as consequences of the African developing country context (e.g., Ahmad and Wood 2002; Wood 2003; El-Fadl and El-Fadel 2004; Bitondo and André 2007; Sampson 2007; Badr et al. 2011; Alemagi et al. 2013; Kakonge 2013; Bitondo et al. 2014; Benfadil 2016; Husselmann 2016; Gebreyesus et al. 2017; Alberts 2020; Sandham et al. 2020; Ibeh and Walmsley 2021; Ehtasham et al. 2022; Kabera and Mutavu 2022; Kahangirwe and Vanclay 2022). Consequently, the EIA system is not performing well to promote sustainable development considering such challenges in the African context (Kosamu 2011; Campion and Essel 2013; Bitondo et al. 2014; Gamu et al. 2015; Ibeh and Walmsley 2021).

Given the fact that the EIA system originated and has been implemented in developed country contexts and was then transferred to and adopted by other countries with less developed contexts driven by international imperatives, leads to

questioning how the EIA system performs in developing country contexts, and whether it contributes to achieving its goals in the given African context. This research aims to shed the light on this. This research focused on the challenge of the EIA system's limited performance due to country context influence and its likely consequences on sustainable development promotion in the African developing country context. The limited understanding of the underlying causes of the poor performance of the EIA in developing countries in relation to the country context was considered. Based on the importance of considering the developing country context in the evaluation of EIA system performance, the research was conducted to evaluate the EIA system performance in the southern African developing country context by developing an evaluation approach to identify the potential patterns of influence. Through this, a better understanding of the challenges related to the limited EIA system performance as well as the relationship between EIA system performance and country context was achieved.

CHAPTER 3 – DEVELOPING AN EVALUATION APPROACH TO CONSIDER THE INFLUENCE OF COUNTRY CONTEXT ON ENVIRONMENTAL IMPACT ASSESSMENT PERFORMANCE, FROM A SOUTHERN AFRICAN PERSPECTIVE (SUBMITTED MANUSCRIPT)

Abstract Environmental Impact Assessment (EIA) as an environmental policy has been adopted in various countries. However, EIA system performance in terms of achieving its stated objectives in the developing country context often falls short in comparison with the developed country context. Evaluation of EIA system performance has gained considerable attention with the aim of ensuring the achievement of its purpose, most recognisably the promotion of sustainable development through informed decision-making. Different evaluation approaches have been developed and applied to explore areas of inadequacy in the EIA system components, EIA implementation, and EIA report. Researchers have considered the context of the EIA system as the underlying cause of its limited performance in developing countries. However, the literature has not rigorously explored the relationship between EIA system performance and country context, and it is the subject of ongoing debate. Our aim in this paper is to contribute to the practical analysis of country context influence on EIA system performance. Drawing on the conceptual frameworks and evaluation methods in the literature, we propose an evaluation approach to the EIA system performance that combines the importance of considering the country context in the evaluation process. It consists of EIA system components, EIA report, and an indicative set of country context indicators. The developed evaluation approach was validated by applying it to four case studies from southern Africa. The South African case study results are presented. The outcome is a practical evaluation approach that assists with understanding the relationship between EIA system performance and country context and can contribute to improved EIA system performance.

Keywords: EIA system performance, country context, developing countries, evaluation approach.

3.1. Introduction

Since the establishment of the EIA in the United States of America in 1969, the EIA has been adopted in various forms and introduced into the national legislative frameworks of most countries worldwide (Sadler 1996; Glasson et al. 2012; Morgan 2012). The EIA is defined as *'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'* (IAIA 1999: 2). The foundation of EIA in 1969 stated its purpose and objectives as ensuring and maintaining environmental and social protection (Caldwell 1988; Glasson et al. 2012). However, since the publication of the Brundtland report which introduced the concept of sustainable development in 1987, EIA objectives have been widened to contribute to sustainable development, by ensuring that development projects are environmentally sound, socially acceptable, and economically viable (Sadler 1996; Kolhoff et al. 2009). EIA has been internationally considered as a key regulatory environmental policy implementation instrument that informs and facilitates the decision-making process with appropriate and relevant information about the proposed development actions to contribute to sustainable development (Sadler 1996; George and Lee 2000; UNEP 2004; Jay et al. 2007; Glasson et al. 2012; Morgan 2012; Zuhair and Kurian 2016).

Based on the understanding of the purpose of an EIA system, the EIA system performance is generally seen in terms of its contribution toward sustainable development, and meeting its objectives of anticipating, avoiding, minimising, and mitigating the significant effects of development activities on the environment (Kolhoff et al. 2009; Glasson et al. 2012; Morgan 2012; Bond et al. 2013; Kolhoff et al. 2013; Kolhoff et al. 2016; UN Environment 2018). This is in line with the defined term of effectiveness outlined by Sadler (1996: 37), *'how well something works or whether it works as intended and meets the purpose for which it is designed.'* Evaluation studies indicate that EIA systems generally perform well in developed

countries, while often falling short in developing countries and countries in transition (e.g., George and Lee 2000; Cherp 2001; Wood 2003; Kakonge 2006a; Li 2008; Kabir 2012; Champion and Essel 2013; Kolhoff et al. 2013; Lesirma 2016; McCullough 2017; Khan et al. 2020; Kamijo 2022). Fundamentally, EIA was transferred from the western, democratic, developed country context to developing countries which differ with regards to socio-economic, political, and cultural characteristics, and capacities of EIA stakeholders (Kakonge 1999; George and Lee 2000; Annandale 2001; Tarr 2003; Li 2008; Kolhoff et al. 2009; Marara et al. 2011; Champion and Essel 2013; McCullough 2017; Kamijo 2022). Marara et al. (2011) highlight that the country context of developing countries is a key factor influencing the implementation of the EIA system, and ultimately its performance. This is as the EIA system does not operate based only on its regulatory and institutional frameworks, but it also performs within a broader system of a specific country context (Sankoh 1996; Emmelin 1998; Cherp 2001; Cherp and Antypas 2003; Lawrence 2003; Nadeem and Hameed 2006; Macintosh 2010; Lawrence 2013; Van den Berg 2015; Bond et al. 2022). EIA system performance thus depends on the appropriateness of the system within its country context, as stated by (Lawrence 2003: 15) '*The effectiveness of an EIA is often highly dependent on how well the EIA fits the context.*'

In Africa, EIA was introduced through donor requirements for development projects and was then adopted by many African developing countries as an environmental policy instrument to promote sustainable development in response to international environmental conventions, laws, and the influence of donor agencies (Kakonge 1999; George and Lee 2000; Annandale 2001; Tarr 2003; UNEP 2004; Li 2008; Marara et al. 2011; Champion and Essel 2013; McCullough 2017; Kamijo 2022). Since the introduction of EIA in Africa in the 1980s, EIA system performance has been challenged by various issues, similar across many African countries (e.g., Kakonge and Imevbore 1993; Kakonge 1996; Kakonge 1998; Wood 1999a; Appiah-Opoku 2001; Ahmad and Wood 2002; Ali 2003; Wood 2003; El-Fadl and El-Fadel 2004; Kakonge 2006b; Kakonge 2006a; DEAT 2008; Marara et al. 2011; Champion and Essel 2013; Benfadil 2016; Sharma and Hategekimana 2018; Alberts 2020; Sandham et al. 2020; Nakwaya-Jacobus et al. 2021; Kahangirwe and Vanclay 2022). These challenges include inadequate EIA legislation, lack of implementation

and enforcement of EIA, lack of EIA actors' capacity, incompetent EIA authorities, inappropriate EIA procedural steps, inadequate decision-making process, weak stakeholder participation, lack of EIA awareness by the public, insufficient human and financial resources, corruption and illiteracy, and lack of political will.

Internationally, the focus of EIA evaluation research has been to assess EIA system performance based on EIA system components (EIA regulatory, administrative, and procedural frameworks), EIA implementation, and EIA report without rigorously considering the country context (Wood 1995; Sadler 1996; Barker and Wood 1999; Lee et al. 1999; Wood 1999a; Ahmad and Wood 2002; Wood 2003; Glasson et al. 2005; Nadeem and Hameed 2008; Chanchitpricha and Bond 2013; Nyihirani et al. 2014; Khosravi et al. 2019a; Alberts 2020; Nakwaya-Jacobus et al. 2021; Alberts et al. 2022). Primarily, these types of EIA performance assessments are based on evaluative approaches and frameworks, consisting of evaluation criteria that aim to check compliance and identify the gaps and constraints in the EIA system components and implementation, which seek to advance EIA system performance (Annandale 2001; Wood 2003; Kolhoff et al. 2009; Loomis and Dziedzic 2018). However, it is recognized that the socio-economic, political, and institutional conditions in developing African countries play an important role in the performance of EIA, which are not similar to the developed country contexts where EIA was developed (Kakonge 1998; Appiah-Opoku 2001; Kakonge 2006a; Marara et al. 2011; Champion and Essel 2013; Bitondo et al. 2014; Nakwaya-Jacobus et al. 2021). In support of considering the country context in the evaluation of EIA system performance, it is mentioned that the process of EIA system performance evaluation should consider the socio-economic, political, and cultural contexts of its country (Morgan 2012).

This paper aims to develop an evaluation approach for EIA system performance that includes country context. This should allow for a better understanding of the relationship between the EIA system performance and the country context in southern Africa. Also, it should provide insights into strengthening the performance of the EIA system by maximising its potential benefits. To achieve this, a process of reviewing, combining, and building on existing methodologies and conceptual models was undertaken. This is presented in the following sections. These methodologies are drawn on to develop a conceptual model for the evaluation of EIA

system performance and country context. The developed evaluation approach and its validation through South African case study are presented, followed by a discussion section. The limitations of developing and applying the evaluation approach are then highlighted. The final section illustrates our conclusion regarding the aim of the paper.

3.2. Literature review

3.2.1. Evaluation trends of EIA system performance

The literature that exists on EIA system performance evaluation is often conceptualised around four dimensions of effectiveness. These are procedural, substantive, transactive, and normative effectiveness (Loomis and Dziedzic 2018; Alberts 2020; Alberts et al. 2022). These dimensions refer to the performance of the EIA system, for instance, in terms of adherence to the EIA legal regime, EIA contribution to decision-making, avoiding excessive time and cost, and promoting sustainable development (Sadler 1996; Baker and McLelland 2003; Loomis and Dziedzic 2018). Since then, significant progress has been made in the area of evaluating EIA system performance through the development of different evaluation approaches (Loomis and Dziedzic 2018). The literature that exists on EIA system performance evaluation is often conceptualized around four main modes of evaluation approaches explained by Emmelin (1998). The first category includes the evaluation of the EIA system structure against evaluation criteria that represent a more or less explicit ideal system. The evaluation criteria usually focus on the legislative, administrative, and procedural aspects of the EIA system structure. The aim is to identify gaps in the existing EIA system by using the ideal EIA system. Examples of this type of EIA evaluation are predominant in the evaluation studies (e.g., Wood 1995; Wood 1999b; Annandale 2001; Wood 2003; El-Fadl and El-Fadel 2004; PhD and Harvey 2004; Benfadil 2016; Khosravi et al. 2019a). The second category of evaluation assesses the performance of the EIA based on the quality of the EIA report. This kind of evaluation uses the evaluation criteria of an ideal type of EIA report to check compliance with the EIA system requirements. Examples of these kinds of evaluation studies are the Environmental Impact Statement (EIS)

Review Package developed by Lee et al. (1999), the European Commission Guidance on EIS review (European Commission 2001), and the EIS review package developed by the Impact Assessment Unit of Oxford Brookes University (Glasson et al. 2005).

The third type of EIA evaluation category is the evaluation of EIA system implementation. This category focuses on evaluating the practical implementation of the EIA system to measure effectiveness in terms of the system outcomes and value. A range of methods are used in this kind of evaluation such as case studies, surveys, EIA report reviews, and interviews, which can take the evaluation approach of system-wide reviews, decision audits, and component-specific evaluations. The International Study of the Effectiveness of Environmental Assessment done by Sadler (1996) is the best example of this evaluation approach. These evaluation studies only consider aspects of the EIA system's legal and administrative structure, EIA implementation, and/or EIA report quality. Emmelin (1998) went further and introduced the fourth mode of EIA evaluation approaches arguing that EIA system performance cannot be understood in isolation. The work of Emmelin (1998) describes the importance of considering the wider system context (country context) within which EIA exists in the evaluation process of EIA system performance. It is highlighted that the context of the impact assessment system determines to a large extent the system's effectiveness as it cannot be separately understood (Emmelin 1998). Additionally, the study of Emmelin (1998) focused on the implementation structures of the EIA system which was represented in the form of the professional and organisational cultures related to EIA (i.e., the EIA stakeholders' capacity).

3.2.2. The evaluation of EIA system performance and country context

The literature on EIA system performance highlights the importance of context in the performance of environmental policy instruments in developed and developing country contexts (e.g., Ebisemiju 1993; Sankoh 1996; Emmelin 1998; Kakonge 1998; Kakonge 1998; George and Lee 2000; Cherp 2001; Cherp and Antypas 2003; Lawrence 2003; Runhaar and Driessen 2007; Runhaar 2009; Macintosh 2010; Van Loon et al. 2010; Kabir 2012; Lawrence 2013; Joseph et al. 2015; Van den Berg

2015; Khosravi et al. 2019b; Bond et al. 2020; Khan et al. 2020; Bond et al. 2022). In support of acknowledging the country context's influence on the EIA system, it is important to consider the context in the evaluation of the EIA system towards achieving its intended objectives (Morgan 2012; Bond et al. 2022). Despite the need to consider the influence of the country context in which the EIA operates in the analysis and evaluation of EIA system performance, the relationship between the performance of the EIA system and its context is still not clearly understood (Bitondo and André 2007; Kolhoff et al. 2009; Kolhoff et al. 2013; Khosravi et al. 2019b; Bond et al. 2022). In general, there are different interpretations of context in the impact assessment literature (Hilding-Rydevik and Bjarnadóttir 2007; Kolhoff et al. 2009; Runhaar 2009). In this paper, we use Lawrence's (2003: 435) definition where context '*encompasses ecological, political, social, economic, institutional, and technological components and systems.*' In addition, appreciating the environmental, social, cultural, economic, political, and legal contexts in the analysis of EIA performance is contemplated a difficult task to achieve (Lawrence 1997; Lawrence 2003; Bond et al. 2022). This is as the context in which the EIA regime operates is uncertain, complex, ambiguous, interconnected, and changing (Macintosh 2010; Lawrence 2013). In addition, there is no common evaluation approach that has been accepted for this kind of evaluation in the EIA literature (Kolhoff et al. 2009; Kolhoff et al. 2016; Khosravi et al. 2019c).

EIA studies that have considered the role of country context in the performance of the EIA system can be categorised into three types. Firstly, studies that broadly discussed how EIA system performance is influenced by the contextual characteristics of the environment in which it operates (e.g., Ebisemiju 1993; Kakonge 1996; Sankoh 1996; Kakonge 1998; Fuller 1999; Appiah-Opoku 2001; Cherp 2001; Cherp and Antypas 2003; Lawrence 2003; Macintosh 2010; Lawrence 2013; Joseph et al. 2015; Bond et al. 2022). The discussion focuses on conceptualising the influence of context on the design, administration, and implementation of EIA which eventually influences EIA system performance. However, practical evaluation approaches of EIA system performance and country context were not clearly provided.

The second approach to considering EIA system context is the development of conceptual models/frameworks for assessing the EIA system performance taking

into account one or more of the contextual factors such as political, socio-economic, and capacities of EIA actors (Emmelin 1998; Kolhoff et al. 2009; Kolhoff et al. 2013; Van den Berg 2015; Kolhoff et al. 2016; McCullough 2017; Bond et al. 2020; Khan et al. 2020). These kinds of studies developed models of EIA system performance analysis that combine the evaluation of EIA legislation, EIA competent authority, and EIA procedural aspects with some country context factors. The conceptual model developed by Kolhoff et al. (2009) is a good example that combined the legislation, competent authority, and procedural elements of the EIA system and country context factors such as EIA stakeholders' capacities, socio-economic and political conditions, legal framework, and the natural environment of the country. However, such a conceptual model has only been discussed in the literature and still needs to be refined and applied (Kolhoff et al. 2009).

The third type of EIA evaluation studies applied a methodological approach to assess country context influence on EIA system performance (e.g., Bina et al. 2011; Marara et al. 2011; Khosravi et al. 2019b). For instance, a practical evaluation approach is represented by Marara et al. (2011) on case studies from East Africa. The evaluation approach consisted of analytical criteria to assess EIA system elements (legal, administrative, and procedural frameworks), and EIA country context (political will, environmental awareness of the public, availability of financial resources, and expertise in conducting EIA). This study largely depended on the evaluation criteria developed by Ahmad and Wood (2002). Although Marara et al. (2011)'s study is unique in terms of its practicality of EIA system performance and country context evaluation, it is still limited in terms of the scope of the EIA system and country context evaluation. This was due to the limited evaluation criteria to assess EIA system components, lack of evaluation criteria to assess the EIA report, and lack of specific evaluation criteria to consider the influence of the country's contextual factors on EIA system performance. The evaluation criteria are very important to thoroughly contribute to our understanding of the relationship between context and performance of the EIA system. The process of developing an evaluation approach for EIA system performance in the southern African context is substantially informed by these previous studies, and in particular by the work done by Marara et al. (2011), and the conceptual model of EIA evaluation developed by Emmelin (1998) and Kolhoff et al. (2009).

3.3. Methodology

Focusing on the EIA practice and drawing on the literature, the process undertaken to develop and validate an evaluation approach of EIA system performance in the southern African developing country context is described below.

3.3.1. Developing the conceptual model of the evaluation approach

Emmelin (1998), Kolhoff et al. (2009), and Marara et al. (2011) highlight the interconnectedness of EIA system components, the EIA report, and the country context in the evaluation of EIA system performance. This forms the basis of the approach developed. Further literature was used to develop a conceptual model that will inform a better understanding of the relationship between EIA system performance and country context. The evaluation model formulated is based on the following building blocks in relation to the EIA system performance as shown in Figure 2:

- EIA system components (EIA legislation, EIA competent authority, and EIA procedural steps),
- EIA implementation output (EIA report), and
- Country context (country legal context, political and socio-economic aspects, environmental conditions, and the capacity of stakeholders to participate in the EIA process).

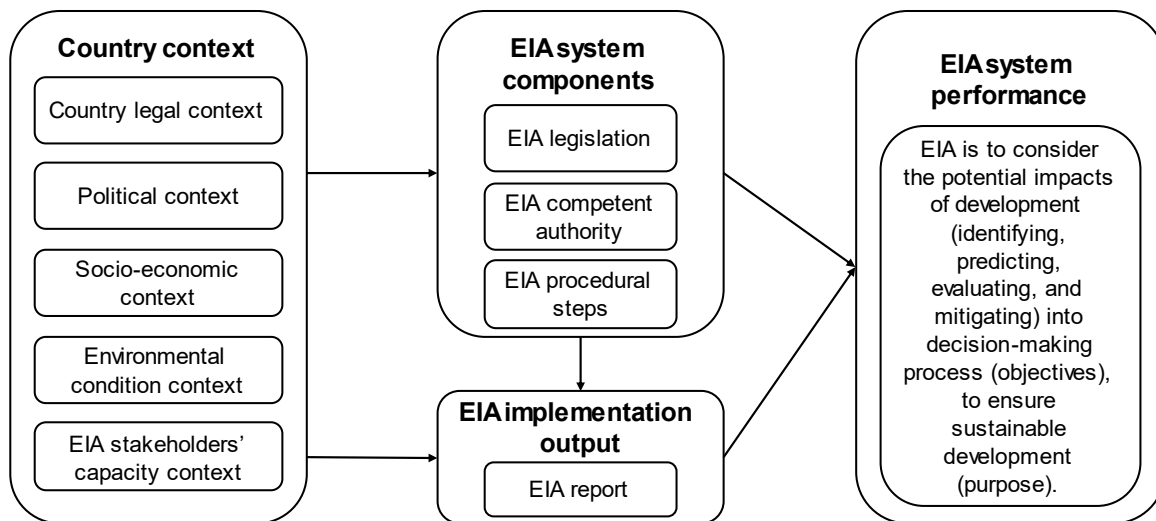


Figure 2. The conceptual model illustrating the correlation between the performance of EIA, EIA system components, implementation output, and country context

These building blocks represent the different elements regulating EIA system performance and country context as drawn from the literature. These elements interact with one another influencing EIA system performance. In the conceptual model interactions are shown between the EIA system components and the EIA report (represented by the bi-directional arrow between these). However, both these are in turn influenced by the country context (the arrows from the country context) and collectively they determine the EIA system performance. The objective of including the different elements for consideration is to provide some context on EIA system components and EIA implementation output within a specific country context. This will provide a detailed analysis of how country context influences EIA system performance. This model is not intended to provide a definitive or quantifiable answer for each element. Thus, there may be other contextual elements worth consideration. This model aims to provide an analytical framework that can be applicable to EIA system performance evaluation, which assists in the understanding of the relationship between EIA system components, EIA reports, and the country context in southern African developing countries. It also provides for exploring the implications of this relationship on EIA system performance.

3.3.2. The evaluation approach building blocks

The various elements of the conceptual model of the evaluation approach are elaborated as follows:

Firstly, the selection process for the EIA system components indicators. This step has drawn on the work of Kolhoff et al. (2009) and Marara et al. (2011) who consider the significance of the systemic components of EIA in the evaluation of performance. Their research on EIA system components is based on the definition provided by Fuller (1999), and the study of Ahmad and Wood (2002), and considered EIA legislation, EIA competent authority, and EIA procedural steps as components of the EIA system in their literature. These are called the systemic measures that ensure good practice and administration of EIA. The systemic measures are described as *'features of EIA system that are designed to deliver quality assurance in the practice and administration of EIA'* (Fuller 1999: 56). Additionally, these systemic components of EIA are the subject of ongoing evaluation research in developing countries (e.g., Nadeem and Hameed 2006; Nadeem and Hameed 2008; Kabir 2012; Kabir and Momtaz 2013; Benfadil 2016; Sharma and Hategekimana 2018; Khosravi et al. 2019c; Khan et al. 2020). Therefore, the selected EIA system components are relevant to the evaluation model developed.

Secondly, an insight into the implementation of the EIA system is required and this can be achieved by reviewing the EIA report. The addition of the EIA report to the development of the evaluation approach model is led by the conceptual model of Emmelin (1998). The EIA report is considered as the product of EIA implementation, its quality can be used as an indicator of good or poor EIA implementation (Fuller 1999). The preparation of good quality EIA reports represented the effective translation of EIA system components. Furthermore, the literature on EIA suggests that the adequacy and accuracy of EIA reports contribute to the overall performance of EIA. However, EIA legislation is not the only driver for good quality EIA report preparation, the context in which the EIA system operates is also a matter of consideration (Nadeem and Hameed 2006; Kamijo 2022). From this perspective, it is important to incorporate the review of EIA reports into the evaluation approach. This

will contribute to the understating of the relationship between EIA system performance and country context.

Thirdly, the selection of the country context indicators. This process is based on studies that considered the country context's role in the evaluation of EIA system performance in developing countries. For instance, the importance of EIA stakeholders' capacity was highlighted by Emmelin (1998), Fuller, (1999), and Ahmad and Wood (2002), who recognized the role of the context as the foundation measures in which the EIA system operates. The foundation measures of the EIA system (herein referred to as the country context) are described as *'features which promote good practice and underpin the successful application of the systemic approaches'* (Fuller 1999: 56). Kolhoff et al. (2009), and Marara et al. (2011) highlight factors such as country legal, socio-economic, political, and environmental contexts contributing to country context. In the approach to be developed, these are elaborated to include the country legal context, political, socio-economic, environmental, and EIA stakeholders' capacity.

Indicators are required in order to undertake an evaluation of the three elements of the conceptual model described above. In this context, indicators do not imply precision in the measurement or evaluation processes but rather suggest that the factors evaluated are indicative (Todd 2001). Indicators are preferred for three reasons. Firstly, to reduce the subjectivity in the evaluation process of EIA performance. Secondly, EIA performance depends on EIA legislation, EIA competent authority, EIA procedural steps, and EIA implementation, which are subject to a process of reform over time. It is important to seek an indication of the performance of the EIA system at the time of conducting the evaluation process. Thirdly, the country context includes different factors that are interrelated, complex, dynamic, and influence each other. Therefore, it is intended to provide an indication of the country's context in relation to EIA system performance at the time of conducting the evaluation process. The evaluation criteria for each indicator are largely descriptive and used to provide a comprehensive framework against which each indicator of the evaluation approach is assessed. This allows for a detailed evaluation of EIA system components, EIA reports, and country context indicators, which eventually assist in the understanding of EIA system performance in the southern African developing country context.

3.3.3. Validation of the evaluation approach

The developed evaluation approach was validated through the iterative application to four case studies from the southern African region (South Africa, Namibia, Malawi, and Tanzania) – for the purpose of this paper, only the South African case study is presented. The first step of the validation process started by applying the tabulated evaluation criteria for the designated indicators of EIA system components. This step was based on document collection and analysis of the EIA policies, legislation, regulations, and guidelines for the relevant case study country. The outcome of this was a tabulated qualitative description of each indicator and so, the status of the EIA system components. The second step involved applying the review package to a selected number of recent examples of EIA reports from the case study country. The results were used to explore the strengths and shortcomings of the legal requirements of the EIA report as well as the quality of EIA reports qualitatively and descriptively. The third step was based on collecting and analysing relevant literature and documents concerning the studied country context indicators against the developed evaluation criteria. This process was complemented by interviews with practitioners responsible for EIA with a specific concern related to the influence of country context on EIA system performance. Through an iterative process, the developed evaluation approach was validated across the four case study countries. The result is a practicable evaluation approach (Figure 3) that can assist in the interpretation of the relationship between EIA system performance and its context.

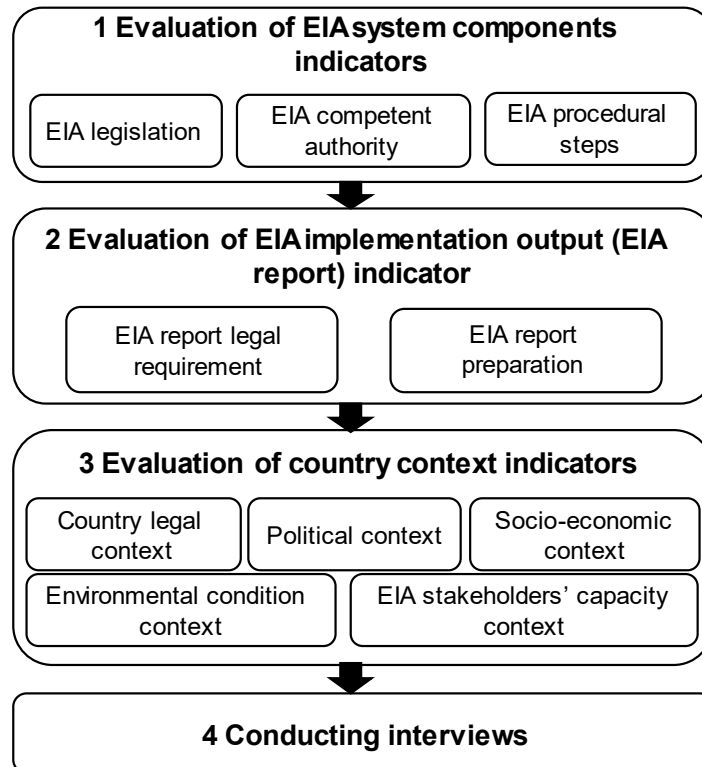


Figure 3. The approach to incorporate country context in the evaluation of EIA system performance

3.4. Results

3.4.1. Developed evaluation approach

The final developed evaluation approach is included as Supporting Information File (Section A). The details of each component of the approach are elaborated below.

Evaluation of EIA system components. The starting point for the development of the evaluation criteria of the EIA system component is the adoption of the evaluation criteria used by Ahmad and Wood (2002). Their evaluation framework consisted of descriptive evaluation criteria for an ideal EIA system, which represents the legislation and competent authority as well as the procedural steps of EIA implementation against which the evaluation process is undertaken. The evaluation criteria of Ahmad and Wood (2002) have been used extensively in developing

countries and have shown to be relevant and reliable in their evaluation of EIA system performance (El-Fadl and El-Fadel 2004; Nadeem and Hameed 2008; Badr 2009; Marara et al. 2011; Khosravi et al. 2019a; Nakwaya-Jacobus et al. 2021). However, there is a need to broaden the scope of Ahmad and Wood's evaluation criteria to better understand the relationship between EIA system components and their context. This is achieved by incorporating criteria developed by Kolhoff et al. (2009) and Marara et al. (2011) and extending these based on a review of EIA literature that focused on EIA system components' role in the EIA system performance in relation to the country context, (Ebisemiju 1993; Sadler 1996; George and Lee 2000; Wood 2003; UNEP 2004; Walmsley and Saphira 2011; Walmsley and Hussleman 2020). The added criteria are highlighted in italics in Table 1 and include criteria such as legislative directive on sustainable development promotion by EIA and legislation on EIA professional registration, responsibilities, and duties.

Table 1. EIA system components indicators

EIA legislation indicator and evaluation criteria
1. <i>Availability of Environmental legislation.</i>
2. <i>Legislative directive on sustainable development.</i>
3. Legal provisions for EIA (Ahmad and Wood 2002).
4. <i>Legislative directive on sustainable development promotion by EIA.</i>
5. <i>Availability of EIA guidelines.</i>
6. <i>Regulations specify the type of development projects that require EIA.</i>
7. <i>Legislation on EIA public participation.</i>
8. <i>Legislation on Environmental Impact Assessment report and Environmental Management Programme.</i>
9. <i>Legislation specifies the competent authority responsible for EIA decision-making (environmental authorization) and its duties.</i>
10. <i>Legislation on project proponent/applicant duties and responsibilities.</i>
11. <i>Legislation on EIA professional registration, responsibilities, and duties.</i>
12. Provisions for appeal by the developer or the public against decisions (Ahmad and Wood 2002).
13. Legal or procedural specification of time limits (Ahmad and Wood 2002).
14. Legal provisions for funding (Kolhoff et al. 2009).

15. *Legislation on penalties and offences.*

16. *Legislation on compliance with conditions of approval of the environmental authorization, amendment, and auditing.*

17. EIA provisions incorporated in relevant related legislation (Kolhoff et al. 2009).

A description, comments (observations), and a reference to the applicable documents reviewed (EIA legislation, Regulations, and guidelines) should be included for each criterion. This could be tabulated for ease of working and review (Section A/Supporting Information File).

EIA competent authority indicator and evaluation criteria

1. Existence of EIA competent authority (Ahmad and Wood 2002).

2. Autonomy of EIA competent authority (Marara et al. 2011).

3. *Responsibility for environmental policy, legislation, and guidelines formulation and amendment.*

4. *Responsibility for issuing/approving Term of References.*

5. Responsibility for decision-making (screening, scoping, *environmental authorisation*) (Kolhoff et al. 2009).

6. Review body for EIA and *EMP reports* (Ahmad and Wood 2002).

7. *Availability of administrative law to promote environmental justice in administrative actions (EIA decision-making) and access to information.*

8. *EIA decision-making criteria followed by the competent authority.*

9. Specification of sectoral responsibilities in the EIA process (Ahmad and Wood 2002).

10. Coordination with other lead agencies (Marara et al. 2011).

11. *Established mechanism for cooperation with project proponent and EIA professionals.*

12. *Preparation of EIA best practice principles for good practice.*

13. *Preparation of Environmental standards.*

14. *Mechanism for inspection of Environmental Management Plan (EIA follow-up and auditing).*

A description, comments (observations), and a reference to the applicable documents reviewed (EIA legislation, Regulations, guidelines, administrative law) should be included for each criterion. This could be tabulated for ease of working and review (Section A/Supporting Information File).

EIA procedural steps indicator and evaluation criteria

1. Specified screening categories (Ahmad and Wood 2002).
2. Systematic scoping approach (Ahmad and Wood 2002).
3. *Terms of Reference (ToR) preparation and approval.*
4. Requirement for public participation in the scoping stage of EIA implementation (Kolhoff et al. 2009).
5. Requirement for public participation in reviewing EIA reports (Kolhoff et al. 2009).
6. Requirement for specified EIA report content (Ahmad and Wood 2002).
7. Requirement for systematic EIA report review process (Ahmad and Wood 2002).
8. *Specialist report requirement.*
9. Requirement for Environmental Management Plan/Programme (EMP) (Ahmad and Wood 2002).
10. *Requirement for EIA follow-up and auditing.*

A description, comments (observations), and a reference to the applicable documents reviewed (EIA legislation, Regulations, and guidelines) should be included for each criterion. This could be tabulated for ease of working and review (Section A/Supporting Information File).

Evaluation of the EIA report. The EIA report is the key output of EIA system implementation which is used to inform the decision-making process (Sadler 1996; Fuller 1999; Glasson et al. 2012; Sandham et al. 2020). The preparation of the EIA report is commonly conducted in accordance with the established EIA system legal requirements, and/or guidelines. The EIA report is prepared by the Environmental Assessment Practitioner (EAP) on behalf of the project proponent, and it should contain for example non-technical summary, introduction, EIA studies results, inputs from the public participation process, and Environmental Management Programme (UNEP 2004). The Environmental Impact Statement (EIS) Review Package developed by the Impact Assessment Unit (IAU) of Oxford Brookes University (Glasson et al. 2005) is used to evaluate EIA report legal requirements and preparation. The IAU review package was developed for a research project into the changing quality of EIS, funded by the Department of Environment of the Scottish

and Welsh Offices in 1995/96 (Glasson et al. 2005). This review package is distinctive because it is firstly a combination and an extension of the Lee and Colley (1990) and the European Commission's (2001) review packages, which also combined the Department of Environment checklist, the requirements of the EIA Regulations, and notions of best practice developed by the IAU. Secondly, it can be used as a checklist of good practices for EIA report preparation as well as reviewing EIA report quality. This was regarded as a strength, in addition to the amalgamation of the above-stated review packages (Anifowose et al. 2016). Thirdly, the IAU review package has been used to evaluate EIA report quality in developed and developing countries (Zeremariam 2003; Lampridi 2016). On that account, the IAU review package is not just adopted to evaluate EIA report preparation but is also used to assess the legal requirements of the EIA report. The evaluation of EIA reports legal requirements by the IAU review package was based on the suggestion made by Glasson et al. (2005) for the possibility of using this review package as a guideline of good practice for EIA report preparation. Based on this, in the approach developed in this research, an additional column was added to the IAU review package to describe whether the required criterion in the report is prepared in accordance with the legal requirements of the EIA report or not. This helps to identify the gaps in the legal requirement and preparation of the EIA report. The final assessment of the EIA reports legal requirements and preparation are made based on the review areas represented in Table 2, which contains 8 review areas each with evaluation criteria.

Table 2. EIA implementation output indicator (EIA report legal requirements/EIA report preparation)

Review areas
1. Description of the development.
2. Description of the environment.
3. Scoping, consultation, and impact identification.
4. Prediction and evaluation of impacts.
5. Alternatives.
6. Mitigation and monitoring.
7. Non-technical summary.
8. Organization and presentation of information.

A description of the review area (availability in the legal requirement and the report), assessment of the review area, and comments (observations). The applicable documents reviewed (EIA Regulations, EIA guidelines, EIA reports) should be assessed based on the evaluation criteria for each review area. This could be tabulated for ease of working and review (The IAU review package, Section A/Supporting Information File).

Evaluation of country context. There are currently no criteria for evaluating country context, and as such, these were developed as part of this research article. These are formulated based on the studies of Kolhoff et al. (2009) and Marara et al. (2011) as well as reviewing the related EIA literature that discussed in the broad sense some elements of the country context in conjunction with the performance of the EIA system and through the application of the approach to the case studies. Five broad categories of country context indicators have been identified as shown in Table 3 and are discussed below.

Table 3. Country context indicators

Country legal context indicator and evaluation criteria

1. *Constitutional directives on: (Environmental policies, Environmental laws, and Sustainable development).*
2. *Availability of Environmental Action Plan and/or Policy to promote sustainable development by impact assessment tools.*
3. *Availability of relevant environmental legislations.*
4. *Availability of environmental standards (Kolhoff et al. 2009).*
5. *Existence of competent judiciary body to prosecute environmental issues (Marara et al. 2011).*
6. *Constitutional directive on: (Access to information and administrative justice, role of public in decision-making, and transparency and accountability in decision-making) (Kolhoff et al. 2009).*

A description, comments (observations), and a reference to the applicable documents reviewed (Constitution, Environmental policies and action plans, Environmental legislation, relevant government publications, and literature)

should be included for each criterion. This could be tabulated for ease of working and review (Section A/Supporting Information File).

Political indicator and evaluation criteria

1. *Country's political participation in the international agreements (conventions, treaties, and protocols) of environmental assessment.*
2. *Political influence on enactment and reform of EIA legislation.*
3. *Political influence on EIA administration: Autonomy of responsible authority (independency and political appointment of managers), and allocation of funding and resources.*
4. *Political influence on EIA decision-making: (EIA decision-making during screening, scoping, and environmental approval of EIA report).*

A description, comments (observations), and a reference to the applicable documents reviewed (relevant government publications and literature) should be included for each criterion. This could be tabulated for ease of working and review (Section A/Supporting Information File).

Socio-economic indicator and evaluation criteria

1. *Human Development Index (HDI).*
2. *Life expectancy index.*
3. *Gross National Income (GNI) per capita (constant 2017 PPP\$).*
4. *Gross Domestic Product (GDP) per capita (2017 PPP\$).*
5. *Unemployment, total (% of labour force).*
6. *Population in multidimensional poverty, headcount (%).*
7. *Total population (millions)(Data refers to 2030).*
8. *Education index.*
9. *Literacy rate, adult (% ages 15 and older).*

A description, comments (observations), and a reference to the applicable documents reviewed (relevant publications of the United Nations Environment Programme) should be included for each criterion. This could be tabulated for ease of working and review (Section A/Supporting Information File).

Environmental condition indicator and evaluation criteria

1. *Land issues.*
2. *Biodiversity and ecosystem issues.*

3. *Water issues.*
4. *Aquatic system issues.*
5. *Air quality issues.*
6. *Climate change issue.*

A description, comments (observations), and a reference to the applicable documents reviewed (relevant publications of the governments and international organizations such as State of the Environment Reports) should be included for each criterion. This could be tabulated for ease of working and review (Section A/Supporting Information File).

EIA stakeholders' capacity indicator and evaluation criteria

1. EIA competent authority staff competency (Kolhoff et al. 2009; Kolhoff et al. 2016).
2. EIA consultant and specialist competency (Kolhoff et al. 2009; Marara et al. 2011).
3. Project proponent/developer competency (Kolhoff et al. 2009).
4. Interested and affected party's competency (Kolhoff et al. 2009; Marara et al. 2011).

A description, comments (observations), and a reference to the applicable documents reviewed (relevant publications and literature) should be included for each criterion. This could be tabulated for ease of working and review (Section A/Supporting Information File).

Country legal context indicator. This indicator is adopted from the conceptual model of EIA performance and country context evaluation developed by Kolhoff et al. (2009). The evaluation criteria for the purpose of this indicator are descriptive and aim to assess the country's legal context in relation to EIA system performance. The development of the evaluation criteria is informed by a number of EIA studies (Kolhoff et al. 2009; Marara et al. 2011; Walmsley and Saphira 2011; Walmsley and Hussleman 2020). The literature looked at the role of a country's constitution towards environmental and natural resources protection, through promoting environmental policy and legislation development, implementation, and enforcement. Furthermore, the legal environment of citizens such as legislation on freedom of speech and access to information that encourages the community's participation in the

development and enforcement of environmental policies and laws is also given importance in the aforementioned literature. Table 3 presents the country legal context indicator with the adopted evaluation criteria with their reference and the additional formulated criteria written in italics.

Political indicator. There is a relationship between EIA system performance and the political country context (e.g., Sadler 1996; Lawrence 2003; Cashmore et al. 2004; Cashmore et al. 2010; McCullough 2017; Bond et al. 2020). The political country context indicator is adopted from the comparative study done by Marara et al. (2011) and the evaluation conceptual model developed by Kolhoff et al. (2009). The evaluation criteria for this indicator are developed based on reviewing various EIA-related literature that drew attention to the political power influence on EIA system performance (Sadler 1996; Mao and Hills 2002; Lawrence 2003; Cashmore et al. 2004; Kolhoff et al. 2009; Bina et al. 2011; Marara et al. 2011; Hapuarachchi et al. 2016; McCullough 2017; Bond et al. 2020). The developed evaluation criteria aim to provide a different perspective on how the political context could influence EIA system performance. For example, criteria such as political influence on enactment and reform of EIA legislation and political influence on EIA administration are included as these can have a significant impact on the performance of EIA. Table 3 demonstrates the political country context indicator with the evaluation criteria written in italics, which provide for a descriptive evaluation of the qualitative data.

Socio-economic indicator. The socio-economic context, particularly in developing countries, has a significant influence on EIA system performance (Kakonge 1996; Sankoh 1996; Kakonge 1998; Appiah-Opoku 2001; Cashmore et al. 2004; Kolhoff et al. 2009; Marara et al. 2011; Van den Berg 2015; Khan et al. 2020). Where possible existing international indicators have been drawn on. This contributes to ensuring that data is available for all countries and that it is comparable. As examples, indicators include the Human Development Index, literacy rate, Gross Domestic Product, and life expectancy. These evaluation criteria are listed in Table 3. The data for socio-economic indicators are quantitative and give an indication of the socio-economic context, which should be considered when looking at the country context.

Environmental condition indicator. The state of the environment in a country could have an impact on EIA system performance in response to the ongoing

environmental challenges, and this could happen in the form of EIA system improvement and enhancement of EIA stakeholders' awareness (Kolhoff et al. 2009; Marara et al. 2011). The developed evaluation criteria, in Table 3, give an indication of the importance of considering environmental protection in setting and developing environmental principles and environmental policy instruments such as the EIA system. The developed evaluation criteria are descriptive and highlight the current status of the environment by looking at the significant environmental challenges that exist in the country. The evaluation criteria are based on the type of environmental challenges that are identified in the state of the environment report of South Africa and the environmental analysis report of Malawi (DEA 2012; World Bank 2019). Table 3 presents the environmental condition indicator with the developed criteria written in italics. These include challenges such as water and air pollution, desertification, deforestation, and climate change.

EIA stakeholders' capacity indicator. According to the basic principles of EIA best practice, the EIA system should be purposive in informing decision-making for environmental and social protection, participative by integrating all interested and affected parties, and rigorous through applying the best practicable science (IAIA 1999). The principles of the EIA system best practice describe EIA as a multidisciplinary and interprofessional process, which involves actors such as EIA practitioners, decision-makers, project proponents, and the interested and affected parties (UNEP 2004). In addition, capacity is defined as *"the ability of individuals, institutions, and societies to perform functions, solve problems, and set and achieve objectives in a sustainable manner"* (UNDP 2006). The practice of EIA involves a clear division of tasks between EIA practitioners, specialists, decision-makers, project proponents, and public engagement (Alberts 2020). The capacity of the key EIA actors can be seen in terms of their ability to achieve EIA goals, leadership and autonomy, human and financial resources, and scientific capacity (Kolhoff et al. 2016). For instance, EIA system implementation is managed by EIA practitioners who have a great deal of discretion in the setting of EIA activities, choices, inputs, and outputs, which may lead to different results rather than promoting sustainability (Morrison-Saunders and Retief 2012; Zhang et al. 2018). Therefore, it is important to reflect on the importance of EIA stakeholders' capacity in the performance of the EIA system. Table 3 shows the EIA stakeholders' capacity indicator with the adopted

evaluation criteria with their reference, drawn from Kolhoff et al. (2009), Marara et al. (2011), and Kolhoff et al. (2016).

Conducting interviews. Interviews are considered a significant method of data collection in qualitative research (Yin 2014), and a significant source of evidence in case study research (Yin 2009). Key informant interviews were incorporated into the developed evaluation approach of EIA performance and country context. It is indicated that an interview is the only method to collect data that may not feasibly be available in any other forms such as documents or literature (Mason 2002).

Interviews proved very useful in exploring and understanding the extent of country context influence on EIA system performance, beyond that which is captured in the EIA literature. The interviews were based on a semi-structured interview design, which was guided by an interview protocol comprised of a number of open-ended questions (Section A/Supporting Information File) relevant to EIA system components, EIA implementation output, and country context indicators. From the validation process, it was evident that a range of EIA stakeholders should be interviewed, including EIA practitioners, Environmental Audit Experts, Environmental Control Officers, and Officers from the EIA competent authorities. The format of semi-structured interviews allowed the participants to elaborate on specific issues and concerns. A deductive approach was used to analyse the interviews based on the interview questions. The interview results were thematically aligned with the selected indicators of the evaluation approach.

3.4.2. Summary results of the South African case study

The evaluation approach was applied to four case study countries as part of the validation process. A summary of the results from the South African case study is provided below as an example, with the details of the evaluation included as a Supporting Information File (Section B). The findings of the South African case study showed that the EIA system performance is limited due to the influence of its country context. An analysis of the EIA system components suggested that the EIA legislative framework is well-developed and clearly defines the role of the EIA system in the promotion of sustainable development in the South African context.

However, particular legislative shortcomings emerged when evaluating the EIA legislation, these are that the EIA guidelines are outdated, the process for conducting EIA follow-up and auditing is unclear, and that there is misinterpretation of EIA Regulations. In terms of the EIA competent authority, the evaluation findings showed that there are numerous challenges related to EIA administration and decision-making by the relevant EIA competent authorities in South Africa. EIA administration is fragmented across a number of different EIA competent authorities, with often contradictory sets of legal requirements for EIA application submission. There is also a lack of cooperation between EIA actors such as the EAPs and EIA competent authorities, a lack of adherence to the EIA time frames, limited human and financial resources, uncertain levels of independence and autonomy, and unclear roles in terms of EIA system enforcement.

The evaluation of the EIA procedural steps indicated that though the main operating principles of the EIA process such as screening, scoping, public participation, EIA report content, EIA report review, EIA follow-up, and auditing are legally prescribed, conducting EIA follow-up and auditing is not clearly described. The evaluation results of the legal requirements of the EIA reports correlate with the outcomes of the reviewed EIA reports. It was found that the review areas such as the description of the planned development, impact identification, prediction and evaluation of impact, mitigation and monitoring, and non-technical summary are insufficiently covered in the legislation and poorly presented in the evaluated EIA reports.

The findings of the South African country context revealed that the legal context of the country in terms of enhancing the promotion of sustainable development by the EIA system is adequate with a single weakness identified. This was the absence of a competent judiciary body to prosecute environmental infringements. The results obtained in this case study regarding the political context of South Africa indicated that there is a lack of political commitment to environmental policy tools such as EIA, political pressure, interference, and corruption in the EIA administration and decision-making, all affecting EIA system implementation. This case study's key findings on the socio-economic context evaluation suggested that EIA legislation development has been influenced by the challenging socio-economic context of South Africa. It was observed that the South African EIA legislation has gone through different stages of development with the purpose of reducing the number of EIA

applications and the timeframes of EIA decision-making to support economic development. This was done by largely focusing on refining the screening criteria (EIA Listing Notices), and the EIA processing time limits. The results also suggested that the EIA system is implemented as a tick box exercise, with decisions made to prioritise socio-economic development in order to address issues of poverty and unemployment in the country.

A further country context indicator evaluated is the environmental condition of South Africa. Regardless of the environmental issues experienced such as land degradation, soil erosion, and loss of natural habitat, it seems that these issues are not a key consideration for EIA decision-making.

The capacity of EIA stakeholders in South Africa was also analysed and found to be lacking. The officials of the EIA competent authority lacked the capacity in terms of skills, experience, and educational background to ensure EIA system implementation and enforcement. This can be attributed to the legacy of apartheid and the transformation stage of the country. Similarly, there is also limited capacity among the EIA consultants and specialists as regards skills, experience, and qualifications despite the existence of the relevant legislation and organisation to ensure their competence. This has impacted the implementation of the EIA system resulting in inadequate EIA reports. The results also highlighted that the ability, willingness, and environmental awareness of some project proponents and the interested and affected parties tend to be limited. Some project proponents focus on obtaining environmental authorisation with a lack of commitment to comply with the conditions of approval (EMP). While the interested and affected parties are sometimes influenced by their cultural context as they are usually interested in jobs, employment, and compensation. From the application of the developed evaluation approach to the South African case, as summarised above, one can conclude that the country context has a significant impact on the effectiveness of the EIA system.

3.5. Discussion

In order to investigate and understand the relationship between EIA system performance and the developing country context and its implications on the EIA

system performance, we developed an evaluation approach of EIA system performance and country context. This approach was validated through application to four southern African case studies, with the South African results summarised in this paper. According to the EIA legislative framework of South Africa, the EIA system is regarded as a key regulatory environmental policy tool that contributes towards sustainable development by identifying, predicting, evaluating, and mitigating the negative impacts of development projects (RSA 1998a). As indicated in the results, the EIA system performance in South Africa is limited. Through the use of the evaluation approach, it was possible to highlight specific insights into the relationship between the EIA system and the developing country context of South Africa and the implications of this relationship on EIA system performance.

The first lesson learned is that there is a relationship between EIA system development and country context. It is found that the political and socio-economic context of South Africa influences the development of EIA system components, particularly EIA legislation. This finding concurs with other studies that discuss the role of the political and socio-economic context of developing countries in the development of EIA legislation (Kolhoff et al. 2009; Kolhoff et al. 2013). Although the EIA system in South Africa is based on a good legislative framework that prescribes the EIA competent authorities responsible for the EIA system implementation and enforcement as well as the procedural steps for the EIA process, there are shortcomings within the components of the EIA system. The reason for that is attributed to the influence of the political and socio-economic context of South Africa. The highlighted issues of the lack of political commitment to EIA and the pressure of the socio-economic context are reflected in developing EIA legislation that generally focuses on reducing the time and EIA studies required in pursuit of supporting development projects. Consequently, important elements of EIA system components such as coherent understanding of EIA provisions, sufficient EIA guidelines, EIA monitoring and auditing requirements, adequate requirements of EIA report, and effective EIA system implementation and enforcement by the relevant EIA competent authorities have not been given enough consideration. The inadequate quality of the reviewed EIA reports may be a result of insufficient EIA report legal requirements, which can be seen as an indication of the role of the country context in the development of the EIA system.

A further lesson that was captured by the developed evaluation approach is the relationship between EIA system implementation and enforcement and the South African context. The South African findings indicated that the political and socio-economic context and the capacity of EIA stakeholders are the main country context indicators that were interconnected with EIA system implementation and enforcement. This is in line with other studies that highlight the relationship between such country context indicators and the EIA system implementation and enforcement (Campion and Essel 2013; Van den Berg 2015; Kolhoff et al. 2016; Lesirma 2016; McCullough 2017; Khan et al. 2020; Kahangirwe and Vanclay 2022). According to the evaluation approach results, EIA system implementation and enforcement are challenged by the political and socio-economic pressure and interference with the EIA administration, insufficient human and financial resources, lack of cooperation with key EIA actors such as the EAPs and relevant competent authorities, and limited capacity of the EIA competent authorities officials. These issues have undermined the ability to ensure effective EIA system implementation and enforcement in accordance with the EIA legal regime by the EIA competent authorities.

The developed evaluation approach facilitated the identification of a further challenge in the South African country context - capacity constraints across the EIA system. Limited capacity was identified amongst EAPs and specialists, project proponents, and interested and affected parties. As a consequence, the quality of EIA reports is not adequate for decision-making. The capacity of such EIA actors is needed to contribute to the effective implementation of the EIA system.

The validation of the evaluation approach has helped to underpin the understanding of how the developing country context influences EIA system performance in southern Africa. The value of the evaluation approach is that it has provided insights into the relationship between EIA system performance and country context. It has identified how country context indicators such as the political and socio-economic, and EIA stakeholders interacted with the development, implementation, and enforcement of the EIA system, leading to a limited EIA system performance.

3.6. Challenges and limitations

Including the country context as described is a challenging procedure. This is caused by the complexity of integrating the interdependent and changing country context indicators into a feasible evaluation approach. The experienced challenges can be distinguished between the development and application processes of the evaluation approach. Exploring the influence of country context on EIA system performance necessitated undertaking a combination of different research methods to collect the relevant data, which are mostly qualitative due to the nature of assessment such as document analysis, literature review, and interviews. This process has proven to be a demanding task that requires time, extensive effort, and interpretation, due to the lack of existing data that talks specifically to the impact of country context on EIA system performance. This was exacerbated by the difficulty in accessing data related to sensitive aspects of the country's context such as political interference or corruption. This is where the interview process was particularly useful and complemented the gaps in the documents and literature reviews. The interview process is based on the practical experience of EIA practitioners, who interact with most EIA stakeholders. Finally, it is observed that the task of applying the evaluation approach of EIA system performance and country context requires expertise, data, and time. It should ideally be conducted by an interdisciplinary team with knowledge and skills in the related indicators of EIA system components, EIA report, and country context with appropriate time and financial resources.

The aim of conducting such an evaluation is necessary in order to identify and understand the various contextual drivers acting on EIA system performance, and so improve its performance as a decision-making tool. This is becoming critical in the face of the growing environmental crises of biodiversity loss, ecosystem collapse, climate change, and the desperate need for human and economic development in southern Africa (Skowno et al. 2019; URT 2019; World Bank 2019) and other developing countries.

3.7. Conclusion

This research aimed to contribute to the understanding of the relationship between EIA system performance and country context, by developing a practical evaluation approach. The developed approach draws on the literature and existing evaluation methodologies and considers the different components of the EIA system, EIA report, and country context. Once developed, the approach was validated by applying it to four case study countries in southern Africa, namely South Africa, Namibia, Malawi, and Tanzania. This approach has allowed us to analyse the relationship between EIA system performance and country context and illuminated how country context can influence EIA system development, implementation, and enforcement as demonstrated by the South African case study. Through the application of the approach, opportunities to improve EIA system performance can be identified. This paper has also highlighted some limitations in the development and application of EIA system performance and country context evaluation approaches, and the need to further develop such approaches and explore different country contextual elements.

CHAPTER 4 – RESEARCH DESIGN AND METHODOLOGY

The chapter outlines the methodological approach used in this research. It describes the design and conceptual model based on the case study evaluation approach. The approach is taken to select the case study countries and the data collection, and analysis is illustrated. The chapter concludes with the study design's limitations.

4.1. Research design

This research was conducted in the form of an in-depth, cross-disciplinary, and descriptive multiple-case study design. This was done by undertaking different qualitative research methods to develop a comprehensive understanding of country context influence on the EIA performance in the developing country context of Africa. The methodological approach of this study was based on evaluation research, which was considered as an appropriate approach to achieve the research purpose. Evaluation research is an appropriate assessment approach to assess any form of policies, plans, or programmes (Yin 2014).

Evaluation research is used with a view to reach and develop a better understanding of a phenomenon, which aims to contribute to future improvements in the field of policy-making and decision-making (Yin 2009; Arthur and Cox 2014; Yin 2014). Internationally, evaluation research as a methodological approach has been widely used and accepted in the assessment of EIA system effectiveness (Annandale 2001; Ahmad and Wood 2002; Wood 2003; El-Fadl and El-Fadel 2004; PhD and Harvey 2004; Sandham and Pretorius 2008; Badr 2009; Marais 2010; Marara et al. 2011; Alberts 2020; Nakwaya-Jacobus et al. 2021).

4.1.1. Conceptual model

The developed conceptual model focused on how EIA system performance is influenced by the country context in Africa. A conceptual model represents the logical framework and context for this research by illustrating the relationship

between EIA system performance and country context. This model provides a framework for the in-depth, cross-disciplinary, descriptive, and multiple case studies chosen in this study. The conceptual model is informed by the literature review (Chapter 2) and the developed evaluation approach described in Chapter 3.

The development of the conceptual model was informed by Morgan's perspective on EIA system performance evaluation, in which it is believed that *'any evaluation of EIA effectiveness is only meaningful when made in the socio-economic, political and cultural context of the country or countries concerned'* (Morgan 2012: 10). The model also drew on the work by Emmelin, who developed an evaluation framework that considered the context of EIA system highlighting that *"any system of assessment will be introduced, operationalised and implemented in the context of a more or less well-developed environmental administration and in relation to a planning system."* (Emmelin 1998: 1). The model development was also guided by further studies that consider the relationship between some aspects of country context such political and socio-economic and the EIA performance in developing countries (Kolhoff et al. 2009; Marara et al. 2011).

Indicators and evaluation criteria for EIA system components, EIA implementation output, and country context are included. As elaborated in Chapter 3, the indicators of EIA system components include EIA legislation, competent authority, and procedural steps. The EIA implementation output indicator is the EIA report, this reflects on the EIA system implementation. Furthermore, the country context indicators included in the model are the country legal context, political. socio-economic, environmental conditions, and EIA stakeholder's capacity.

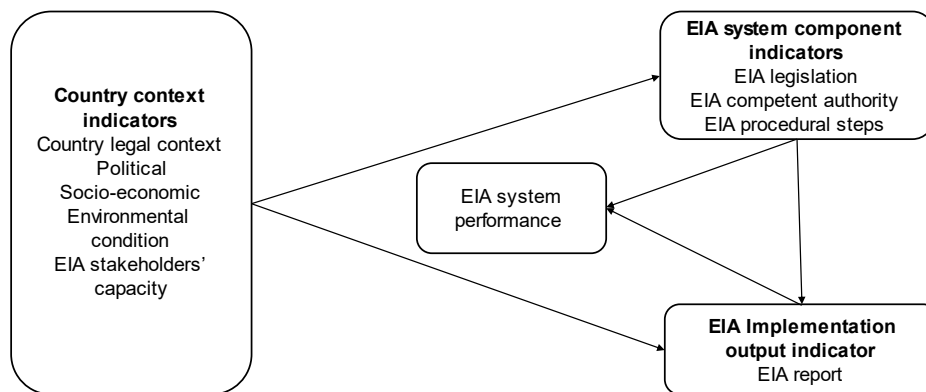


Figure 4. The developed conceptual model for this research

As illustrated in the conceptual model (Figure 4), these various components influence each other and ultimately the EIA system. The performance of the EIA system relies on its legislative framework, competent authority, procedural steps, and EIA report. However, different country contextual elements influence the EIA system such as the political and socio-economic context where the system of EIA operates. The conceptual model components focused on evaluating EIA legislation, competent authority, procedural steps, EIA report, and country context to capture the influence of country context on EIA system performance in Africa. The components of the conceptual model and the evaluation criteria for each of these components were discussed in Chapter 3.

4.1.2. Developing an evaluation approach of EIA system performance and country context

The EIA literature is rich in terms of case study research methods using different methodological evaluation approaches to evaluate EIA system performance (Loomis and Dziedzic 2018). Conventionally, these evaluation approaches tend to identify the gaps in the legislative, administrative, and practical aspects of the EIA system to

propose improvements to its performance (Emmelin 1998; Annandale 2001; Ahmad and Wood 2002; Wood 2003; Kolhoff et al. 2009). Different studies identify the link between EIA system performance and country context (e.g., Bina et al. 2011; Marara et al. 2011; Arts et al. 2012; Van den Berg 2015; Lyhne et al. 2017; McCullough 2017; Bond et al. 2022). Despite the considerable attention given to this relationship, a common and accepted evaluation approach to evaluate the influence of country context on EIA system performance has not been agreed on (Kolhoff et al. 2009; Kolhoff et al. 2016; Khosravi et al. 2019c). This research attempted to develop an evaluation approach by combining and further developing existing approaches to assess EIA system performance in the southern African developing country context. The development process of the evaluation approach used in this study was explained and discussed in Chapter 3.

4.1.3. The case study evaluation approach

This research adopted a multiple case study approach to investigate and unpack the nature of EIA system performance considering the African context. Case study research contributes to scientific research because it can describe the intervention policy in its real context, especially when the limits between them are not easily distinguishable (Yin 2003; Yin 2014). The case study as a research approach is considered to be appropriate as it '*allows investigators to retain the holistic and meaningful characteristics of real-life events*' (Yin 2009: 4). In the single case study research approach, the opportunity to evaluate and describe the causes of how and why the phenomenon happened is better considered (Fiss 2009). Meanwhile, the multiple case study approach is likely to be more effective than the single case study design in research problem investigation, as the evidence is often more persuasive and the analysis through conducting a systematic comparison across case studies may affect the study's findings by capturing and understanding the similarities and differences between the case studies (Yin 2009; Ridder 2017).

4.1.4. The case study selection process

This research focused on the EIA system performance in four southern African developing country contexts (South Africa, Namibia, Malawi, and Tanzania). The designated approach of case study selection was based on purposeful sampling to enhance the benefits of the case studies and minimise their limitations to this research. The identification and selection process of case studies in qualitative research commonly uses purposeful sampling specifically the criterion sampling strategy (Palinkas et al. 2015). The selection process of the case studies was accomplished according to the following criteria:

- The adoption of an EIA system - The presence of EIA legislation and the implementation of an EIA system were necessary to undertake the evaluation. Therefore, only countries that have had a legislated EIA system in place for at least 10 years were considered as case studies for this research.
- Country context - As the focus of the research was on the developing country context, it was necessary to ensure that the case study countries fitted these criteria. This was achieved by reviewing the Human Development Index (HDI) and Gross Domestic Product (GDP). HDI and GDP represent a country's quality of life based on economic and social (health, education, and human security) achievements. HDI and GDP were considered as a reflection of the socio-economic, and political context of a country.
- Data availability and access - The fundamental data sources were the publications of EIA competent authorities and related authorities, legislation, and reports. Countries that have made their publications and reports electronically available regarding the study topic were selected.
- Language criteria - Countries that use the English language as an official language were selected as a case study. This made it possible to review documents and conduct interviews. This contributed to the achievement of data collection from different sources, especially in the southern African context that is rich in terms of languages.

Table 4 presents a comparison of southern African countries using the above-mentioned selection criteria. The selected case studies are highlighted in grey.

Table 4. Country's list of the southern African countries (Walmsley and Saphira 2011; Southern African Development Community 2018; UNDP 2019)

Country	Name of EIA legislation	EIA Regulations	HDI Value	GDP (Per Capita)	Official Language
Angola	Environmental Framework Law, No. 5/98 of 19 June 1998	Decree on Environmental Impact Assessment, No. 51/2004 of 23 July 2004	0.581	3691	Portuguese
Botswana	Environmental Assessment Act, No. 10 of 2010	EIA Regulations, Statutory Instrument No. 58 of 2012	0.728	8124	English
Democratic Republic of Congo	Environmental Protection Act, No. 11/009 of July 2011 Mining Code, Law No. 007/2002	None The Mining Regulations, Decree No. 038/2003 of March 2003.	0.459	515	French
Eswatini	Swaziland Environment Act, No. 15 of 1992, as amended by Environmental Management Act, No. 5 of 2002	Environmental Audit, Assessment, and review Regulations of 1996, as amended in 2000	0.608	3764	English
Lesotho	Environment Act, No. 10 of 2008	None	0.518	1154	English
Madagascar	Environment Charter, Law No. 90-033 of 21 December 1990 as amended by Law No. 97-012 and Law No. 2004-015	Decree on Ensuring the Environmental suitability of investment No. 99-954 as amended by Decree No. 2004-167	0,521	529	French
Malawi	National Environmental Management Act, No. 23 of	None EIA Guidelines 1997	0.485	410	English

	1996, as amended by Environment Management Act, No. 19 of 2017				
Mauritius	Environmental Protection Act, No. 19 of 2002	None EIA Guidelines	0.796	11160	Most common French
Mozambique	Environmental Law, No. 20/97 of 1 October 1997	EIA Regulations, No. 76 of 1998, as amended by EIA Process Regulations, Decree No. 45 Of 2004	0.446	518	Portuguese
Namibia	Environmental Management Act, No. 7 of 2007	EIA Regulations, No. 30 of 2011	0.645	5985	English
South Africa	Environment Conservation Act, No. 73 of 1989 as amended by National Environmental Management Act, No. 107 of 1998	EIA Regulations of June 2014	0.705	6382	English
Seychelles	Environmental Protection Act, No. 9 of 1994	EIA Regulations, S/I 39 of 1996	0.801	16378	French
Tanzania	Environmental Management Act, No. 20 of 2004	EIA and Audit Regulations, Government Notice No. 349 of November 2005	0.528	1058	English
Zambia	Environmental Protection and Pollution Control Act, No. 12 of 1990, and amended in Act No. 13 of 1994, as amended by Environmental Management	Environmental Protection and Pollution Control (EIA) Regulations, Statutory Instrument No. 28 of 1997	0.591	1491	English

	Act, No. 12 of 2011				
Zimbabwe	Environmental Management Act, No. 20:27 of 2002	EIA and Ecosystem Protection Regulations, Statutory Instrument No. 7 of 2007	0.563	1535	English

From this list, South Africa, Namibia, Malawi, and Tanzania were selected as case studies from the southern African region. The selected countries represent a variety of EIA system experiences and country context aspects. Therefore, a comprehensive understanding of the influence of the southern African developing country context on EIA system performance could be reached.

4.2. Data collection and review strategy

Case study research usually involves combining evidence from multiple data sources such as document analysis, interviews, observation, surveys, questionnaires, and others (Dooley 2002; Patton 2003; Fiss 2009). This is to seek convergence and corroboration by using different data sources and methods of collection to deeply explore the process of the phenomenon (Mason 2002; Bowen 2009). This also enhances the validity and efficacy of the processes used to explore the research phenomena and their findings (Dooley 2002; Mason 2002; Yin 2014; Ridder 2017). The data collection strategy for this research was based on primary data sources (interviews and review of EIA reports), and secondary data sources (documents and literature review).

4.2.1. Document collection and review

The document collection and review process were conducted between January and October 2021. It was done in parallel for the four case studies. The documents reviewed for each case study are listed in Table 5. This included country-specific EIA legislation, EIA Regulations, EIA guidelines, and a number of EIA reports from

numerous sectors. These documents were reviewed against the developed evaluation criteria of the EIA system components and EIA report indicators as demonstrated in Chapter 3 (Tables 1 and 3). These documents were sourced from the official websites of each country's EIA competent authorities, consulting companies, and research participants and presented the most recent version of the legislation and recently conducted EIAs. The number of EIA reports was mainly framed by availability and access; assessment of between 4 and 10 reports improves the quality of results (Eisenhardt 2002).

Table 5. The documents reviewed and EIA reports per the case study

Case studies	Documents reviewed	Number of EIA reports
South Africa	<ul style="list-style-type: none"> • EIA legislation <ol style="list-style-type: none"> 1. The National Environmental Management Act, No. 107 of 1998 (NEMA). <ul style="list-style-type: none"> • EIA Regulations <ol style="list-style-type: none"> 1. EIA Regulations of 2014 2. EIA Regulations: Listing Notice 1 of 2014 3. EIA Regulations: Listing Notice 2 of 2014 4. EIA Regulations: Listing Notice 3 of 2014 • EIA guidelines <ol style="list-style-type: none"> 1. Guidelines on the implementation of the EIA Regulations, 2010. <ul style="list-style-type: none"> • EIA related legislation <ol style="list-style-type: none"> 1. National Environmental Management: Waste Act (NEMWA), No. 59 of 2008 sections 19 and 20 2. Mineral and Petroleum Resources Development Act (MPRDA), No. 28 of 2004 	Ten EIA reports were reviewed from the following sectors: mining, energy, and infrastructure.
Namibia	<ul style="list-style-type: none"> • EIA legislation <ol style="list-style-type: none"> 1. Environmental Management Act, No.7 of 2007 (EMA) <ul style="list-style-type: none"> • EIA Regulations <ol style="list-style-type: none"> 1. EIA Regulations of 2012 	Twenty EIA reports were reviewed from the following sectors: housing development, infrastructure, agriculture, energy, mining, and petroleum.
Malawi	<ul style="list-style-type: none"> • EIA legislation <ol style="list-style-type: none"> 1. Environment Management Act, No.23 of 1996 (EMA) 	Sixteen EIA reports were reviewed from the following sectors:

Case studies	Documents reviewed	Number of EIA reports
	2. Environment Management Act, No.19 of 2017 (EMA) <ul style="list-style-type: none"> • EIA guidelines 1. EIA guidelines of 1997	agriculture, petroleum, infrastructure, and mining.
Tanzania	<ul style="list-style-type: none"> • EIA legislation 1. Environmental Management Act (EMA), No.20 of 2004 <ul style="list-style-type: none"> • EIA Regulations 1. EIA and Audit Regulations of 2005. 2. EIA and Audit (Amendments) Regulations of 2018. <ul style="list-style-type: none"> • EIA related legislation 1. Marine Parks and Reserves Act, No.27 of 1994	Eleven EIA reports were reviewed from the following sectors: infrastructure, and agriculture. petroleum, and minerals.

The collected reports (Appendix B) were reviewed using the IAU review package as illustrated in Chapter 3 (Table 2). The evaluation criteria of the IAU review package were employed to assess the legal requirement and preparation of EIA reports. The legal requirements of EIA reports are usually part of EIA legislation, EIA Regulations, or EIA guidelines.

The documents reviewed to understand the country's context included the Constitution, environmental policy, environmental standards, state of the environmental reports, socio-economic reports, and literature that were related to country context indicators. These documents and literature were sourced from government websites, EIA competent authorities, World Bank, African Development Bank, IFC, UNEP, UNDP, and Google Scholar and were reviewed against the developed evaluation criteria for the country context indicators as provided in Chapter 3 (Table 3).

4.2.2. Interview process

Key informant interviews were conducted in this research. According to Yin (2017), the interviewer is proposed to follow a line of inquiry and conduct the interview process with an unbiased approach. The focus of the interviews was on how country context influences EIA performance in Africa, this informed who to interview, what type of interviews to conduct, and which questions to ask. As EAPs are key role

players in the EIA system they were selected to participate. The interview process involved semi-structured, open-ended questions, which were developed based on the EIA system components, implementation output, and country context indicators and evaluation criteria formulated.

The research participants were identified through three phases. Firstly, EAPs who were registered in the formal registration organization of EIA experts, and the department of environmental affairs in the selected case studies were contacted via email. These organisations were:

- South Africa: The International Association for Impact Assessment (IAIASa),
- Namibia: The Environmental Assessment Professionals of Namibia (EAPAN),
- Malawi: (There was no established association for EAPs in Malawi at the time of this study, but the Environmental Affairs Department (now called Malawi Environmental Protection Authority (MEPA) was contacted via email to assist in reaching EAPs working in Malawi), and
- Tanzania: The Tanzanian Environmental Experts Association (TEEA), also there was a list of Environmental Experts available on the National Environment Management Council (NEMC) website.

Secondly, EAPs who have their contact details available on the international and national environmental consulting companies' websites in the selected countries were contacted via email. Finally, the snowballing sampling method was used in this study. It is recognised as a popular method of sampling in qualitative research which is based on networking and referral of research participants who recommend other potential participants (Parker et al. 2019). The EAPs who agreed to take part in the interview process were asked by the researcher to recommend other research participants who might be interested to participate. Using snowballing sampling, other research participants were contacted via email and requested to participate in the interview,

In total 29 interviews were conducted with eight South African participants, five Namibian participants, eight Malawian participants, and eight Tanzanian interviewees. All participants had over 10 years of experience in the field of EIA, with a few having over 20 years. The experience of interviewees ranged from working in the environmental departments, international and local environmental consulting

companies, as independent EIA experts and practitioners, environmental audit experts, environmental control officers, and Officers from the EIA competent authorities. A number of research participants had experience with EIA in many southern African countries. Most of the interviewees are holders of postgraduate degrees in environmental assessment and related fields. A number of interviewees were Professors (1), holders of Doctorate degrees (5), holders of Master's degrees (13), and Bachelor's degrees (10).

The interviews were conducted online between July 2021 and December 2021, using Microsoft Teams, ZOOM, and Google Meet platforms. Also, WhatsApp calls were conducted in a few cases. Interviews were conducted in English for a duration of time between 45 to 60 minutes, which were recorded and transcribed. All the research participants were informed of the purpose of the study and sent the interview questions protocol (Section A/Appendix A). Ethical clearance was obtained from the Wits Human (non-medical) Research Ethics Committee before conducting the interviews (protocol number H21/04/03: Appendix C).

4.3. Data analysis strategy

Data analysis is a primary step in qualitative research, which leads to achieving the research aim by conducting a particular methodological approach. Qualitative data analysis is a process of interpreting and analysing the data by applying an analytical approach to generate the meaning of data (Flick 2013).

A broad range of data to evaluate, describe, and understand the relationship and influence of EIA country context on EIA system performance in the selected southern African case studies were used. To manage the potential complexity of data and assist in conducting an appropriate data analysis process, evaluation tables were used for EIA system components, EIA reports, and country context indicators. The evaluation tables as explained in Chapter 3 were developed based on reviewing the related literature that looked at different aspects of EIA system performance concerning its components, EIA report, and country context. The evaluation criteria presented in the evaluation tables were developed based on combining and further developing the existing evaluation criteria in the literature to evaluate EIA system

components, EIA report, and country context. These evaluation criteria assisted in assessing EIA legislation, EIA competent authority, EIA procedural steps, EIA report, country legal, political contexts, socio-economic and environmental conditions, and EIA stakeholders' capacity. The purpose of the tabulated evaluation criteria was to reflect on the current status of each indicator in terms of meeting the developed criteria. The evaluation criteria that were used in the evaluation of documents, literature, and EIA reports, formed a detailed description of each indicator.

Qualitative description of the relationship between EIA system components, EIA report, and country context, and their potential impact on the performance of EIA, were made based on the details in the evaluation tables for each case study country. The data analysis relied on the assumption that meeting more evaluation criteria implies better conformance to and understanding of each indicator and their interaction with each other, eventually the overall EIA system performance. Essentially, the findings of the evaluation criteria presented a qualitative description of the indicators. The analysis of the qualitative data was accomplished based on the following steps as shown in Figure 5:

- A detailed review and analysis of the gathered data guided by the developed evaluation criteria was conducted to provide a qualitative description of the specific indicators. This was based on a qualitative judgment of the data obtained and a detailed review of the documents, literature, and reports collected, informed by the measuring conformity of the specific indicators to their evaluation criteria to evaluate and describe the defined indicators.
- As part of the individual case analysis, the findings of the specific indicators of the EIA system components, EIA report, and country context were aligned to identify and describe the interaction between the defined indicators, informed by the interview findings which were obtained through a deductive analysis of the interviews guided by the interview questions and the occurring themes fitting the specific indicators and their evaluation criteria. This was done to interpret and understand the relationship between the defined indicators in order to describe and explain how EIA system performance is shaped by its country context.
- A systematic comparison of the key findings of the specific indicators across the case studies was undertaken based on identifying and describing the

patterns of country context influence on EIA system performance. This was done to explore the similarities and differences of the southern African developing country context influence on EIA system performance and to propose potential improvements to EIA system performance by understanding the unique context of the southern African region.

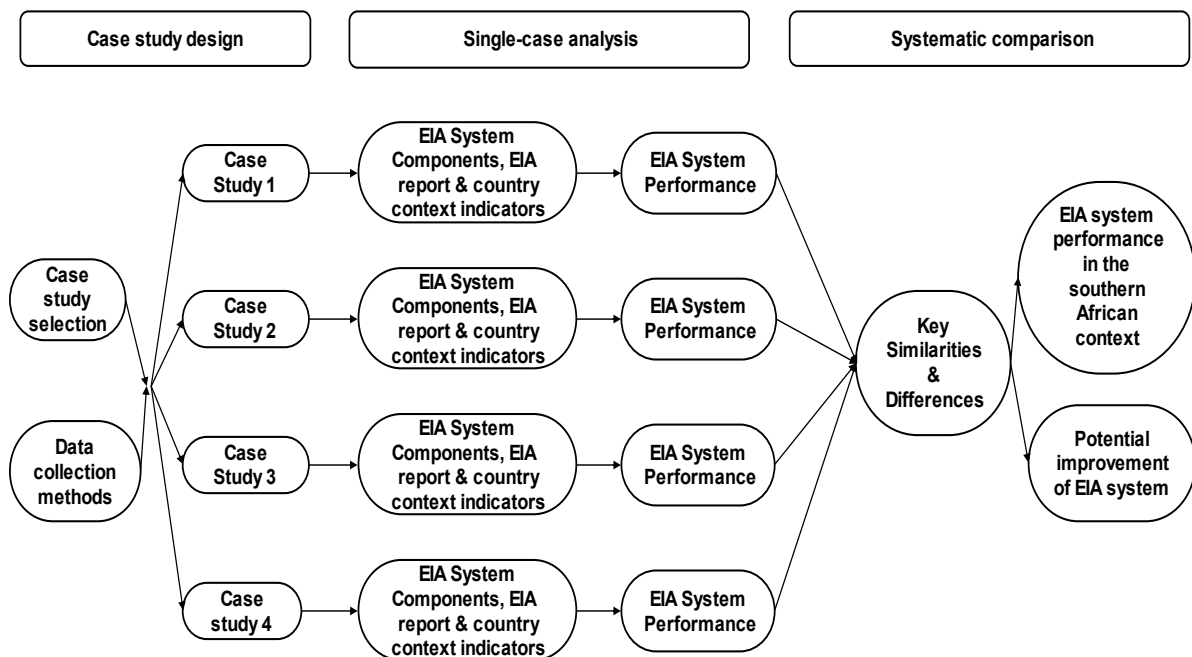


Figure 5. Data analysis strategy conducted for this research

4.4. Limitations

The following limitations should be considered that are related to the nature of the research and the methodology conducted.

The research relied heavily on access to literature, documents, and the perspectives of practitioners. The documentation was largely accessed through websites, it is acknowledged that there may well be local documents that provide additional data on the issue under investigation. For example, EIA reports were not readily accessible for the case studies selected through the websites of the EIA competent authorities, which were also not responding to the formal request for accessing the reports. As such, certain perspectives may have been missed, influencing the

findings of this research. It is hoped that interviews with local practitioners have addressed this potential gap.

Similarly, access to EIA practitioners was obtained through registered online platforms, and then through snowball sampling. Interviews were all conducted online. Such an approach may exclude practitioners affiliated with other institutions. The process of conducting the interviews was proven difficult for two reasons, one being the COVID-19 pandemic period between 2020 and 2021 which resulted in lockdowns and limited access to people. Most of the research participants who were contacted expressed their interest in participating, but they had limited time to share due to the load of work that they had on their desks and the stress from working remotely. This factor was dealt with by consistently contacting the participants and allowing them to have the interview at any time convenient to them including their free time on weekends. Furthermore, they were given the option to have the interview as long as they could manage. The second factor was conducting the interview online, especially in the case studies of Tanzania and Malawi. Few research participants preferred a particular online platform such as ZOOM, while others had low internet service that did not allow for the online meeting. This condition was addressed by giving all the options to the research participants to participate in the interview via any online platform as well as conducting WhatsApp calls in case of difficult online meetings. However, the challenge of engaging with the research participants associated with the limited timeframes for the interviews conducted hindered a better understanding of the relationship between EIA system performance and country context.

A further limitation affecting the research findings was the availability of data for the country context indicators. It appears that the existing literature that covers some aspects of country context influence such as the socio-economic and political contexts in southern Africa on EIA system performance was unavailable or minimal affecting the level of investigation for the case studies selected. In such cases, the interview method was used as a primary source of data to enhance the depth of understanding and so analysis of some country context indicators and their connection with EIA system performance. However, exploring how environmental, political, or socio-economic country context indicators may influence EIA performance during the interviews was quite difficult and sensitive. The researcher

observed that some participants were reluctant to discuss issues of power relations or political interference in relation to EIA system performance. As provided for through the ethics process, participants were not obliged to answer all questions. As such important details regarding the country's context may have been missed.

The findings of this study may also have been limited by the substantial time required to develop and apply the evaluation approach of EIA system performance and country context, which has been conducted by one individual. Accessing the needed documentation, and literature, contacting the research participants, conducting interviews, and analysing the data for different indicators ranging from EIA system components, EIA reports, and country context required an iterative and time-consuming process. As such, there are limitations to the process of evaluating EIA system performance pertinent to the time and work required as well as the difficulty of evaluating EIA system performance in terms of achieving its aim as indicated by Alberts (2020), affecting the broader understanding of the underlying patterns and the current reality of the southern African developing country context influence on the performance of EIA system.

CHAPTER 5 – EIA SYSTEM PERFORMANCE IN SOUTH AFRICA

Chapter 5 describes the EIA system performance in South Africa. Firstly, a brief history of the South Africa EIA system is provided. Thereafter, the results of applying the developed evaluation approach of EIA system performance and the country context of South Africa are presented (document analysis sources are provided in Appendix D and will not be listed in Chapter 5). Chapter 5 finishes with a discussion of the South African case study findings.

5.1. Overview of EIA in South Africa

The adoption of the EIA system in the context of South Africa as an environmental policy implementation instrument followed international actions such as the enactment of the NEPA which introduced the first form of the EIA system, and the Stockholm Conference on the Human Environment in 1972 (Sowman et al. 1995; Wood 1999b). This encouraged government officials, academics, and professionals to introduce a similar mechanism into the South African planning and administrative system. During the 1980s, the EIA system went through many stations of development including the development of the Environmental Conservation Act 100 of 1982, the establishment of the Council for the Environment in 1983, and the publication of the Integrated Environmental Management Programme to ensure the integration of environmental considerations into planning and decision-making through the mechanism of EIAs (Sowman et al. 1995). In that same year, the Environment Conservation Act (ECA), No. 73 of 1989 was promulgated to replace the Environmental Conservation Act 100 of 1982, making EIA a legal requirement (Sowman et al. 1995; Hamann et al. 2000).

In 1998, the ECA was replaced by the National Environmental Management Act (NEMA), No. 107 of 1998, which was promulgated to give effect to the environmental right contained in Section 24 of the Constitution of South Africa and the Environmental Management Policy of South Africa (Kidd et al. 2018; Alberts 2020). NEMA is based on a set of environmental management principles set out in section

2 of NEMA. These are important for the application of environmental management tools to achieve the general objectives of the integrated environmental management of activities (RSA 1998a). Section 24 of NEMA legally prescribes the EIA system in South Africa by illustrating the environmental authorisation process, the procedure for listing and delisting activities, and the procedure for identifying competent authorities (RSA 1998a). As an environmental legislative framework Act, NEMA provides for the establishment of the EIA Regulations and the relevant guidelines to support EIA system implementation in compliance with the Act.

The first NEMA-EIA Regulations were published in 2006 and have since been amended in 2010, 2014, and 2017 (DEA 2018a; Matlhare 2020). The EIA Regulations describe the process of EIA implementation, the content of the report, EIA stakeholders' responsibilities, the listed activities to be regulated, and the issuing of environmental authorisations (RSA 2014a). The EIA Regulations include three Listing Notices that form the screening mechanism to determine the level of environmental assessment required for proposed developments. Listing Notice 1 contains a list of activities that require Basic Assessment (BA). Listing Notice 2 includes activities requiring a Scoping and Environmental Impact Report (S&EIR), with Listing Notice 3 listing activities requiring BA in specific geographical areas (RSA 2014a). The interpretation of the EIA Regulations is based on the related EIA guidelines that were published in 1998 and amended in 2006 and 2010 (DEAT 1998; DEAT 2006; DEA 2010).

According to NEMA, the mandate for EIA system administration is divided among eleven environmental competent authorities. Section 24C of NEMA describes the National Department of Forestry, Fisheries, and the Environment (DFFE) (previously known as the Department of Environmental Affairs) as the competent authority if the development projects are nationally or internationally important projects taking place within a specific geographic area, projects affecting more than one province or exceed international boundaries, projects to be undertaken by national and provincial departments, and projects situated in a national protected area (RSA 1998a). In terms of this legislation, the Minister of the DFFE may designate one of the nine provincial departments in South Africa as the competent authority if development projects do not fall within the above-mentioned specialties of the national department (RSA 1998a). Section 24C also identifies the department responsible for mineral

resources as the competent authority if the activity is related to the prospecting or exploration of mineral or petroleum resources, or the extraction and primary processing of mineral or petroleum resources (RSA 1998a). The Department of Mineral Resources and Energy (DMRE) is the competent authority responsible for the related mineral resources activities under NEMA through the One Environmental System (OES). Section 50A of NEMA introduces the OES based on the agreement between the Ministers of Environmental Affairs, Mineral Resources, and Water Affairs, which came into effect on 08 December 2014. Under the OES, the Minister of Mineral Resources can make environmental authorisations and waste management licences for mining and related activities in terms of NEMA and the National Environmental Management: Waste Act, No. 59 of 2008.

Figure 6 below provides a review of the S&EIR process in terms of the NEMA-EIA Regulations of 2014 (as amended in 2017) in South Africa. It includes the legislated timeframes for S&EIR implementation.

5.2. EIA system performance in South Africa

The methodology elaborated on in Chapter 4 was applied to the South African case study. The findings of reviewing EIA legislation, pertinent literature, EIA reports, and the key informant interviews have been integrated and are presented below, according to the evaluation approach presented in Chapter 3.

5.2.1. EIA legislation

An evaluation of the South African EIA legislation showed that the EIA system is based on a well-developed and comprehensive legislative framework. Table D-1 (Appendix D) provides a detailed assessment of the EIA legislation for the case study of South Africa, including all relevant sources of information which will not be repeated here. It is illustrated that NEMA is the main legislative framework that provides a legal mandate for the EIA system in South Africa. For example, NEMA defines the role of EIA in the promotion of sustainable development in the South African context.

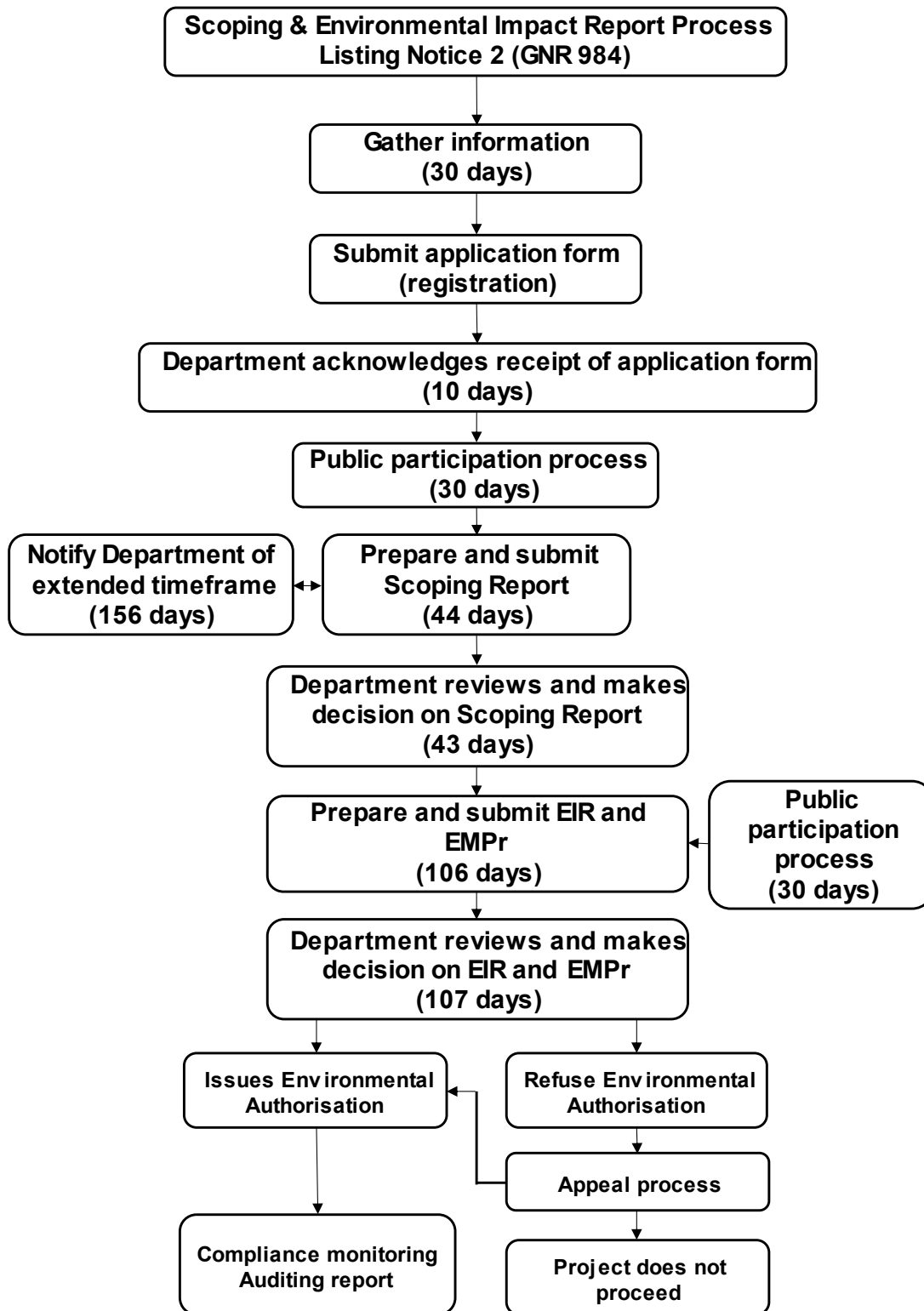


Figure 6. S&EIR process in South Africa (Walmsley and Hussleman 2020)

NEMA also prescribes the establishment of EIA Regulations. This is to guide the implementation of EIA in compliance with NEMA requirements. In addition, NEMA requires public involvement in the EIA process based on defined steps shown in the related Regulations and guidelines. NEMA also provides a process for identifying the competent authority responsible for EIA system administration. There are also legal requirements prescribed in NEMA related to EIA timeframes for implementation and EIA stakeholders' roles such as the certification and registration of the EAPs. NEMA contains provisions related to EIA and EMP reports. Furthermore, NEMA ensures the right for stakeholders to appeal the competent authority decisions, requires compliance with the conditions of approval, and prescribes consequent actions in cases of noncompliance.

Regardless of the good development of the South African EIA legislation, the conducted evaluation approach showed that there is a gap between the 2014 EIA Regulations and the use of the 2010 EIA guidelines. The implementation of EIA based on the NEMA-EIA Regulations of 2014 is guided by outdated EIA guidelines which were published in 2010 in line with the 2010 EIA Regulations. There is also a gap in the EIA legislation related to ensuring the monitoring of the conditions of approval of the environmental authorisation. The Act and Regulations require EIA monitoring and follow-up by submitting the environmental audit report to the EIA competent authorities. NEMA and the relevant EIA Regulations prescribe the role of the environmental management inspector and the independent auditor to ensure compliance with the conditions of approval and EMP report. However, it is not clearly described how the monitoring should be undertaken throughout the project life cycle.

The South African EIA legislation was further evaluated through a series of interviews conducted with EIA professionals. The semi-structured interviews were focused on obtaining the EIA professionals' perspectives on the EIA legislation in the context of South Africa. All research participants agreed that the South African EIA legislation is well-developed, comprehensive, and stringent. In addition, the interviewees raised similar concerns related to EIA legislation, these being that there is a lack of clarity and misinterpretations of EIA legislation amongst the various EIA stakeholders. For instance, one research participant indicated that *'Eye-to-eye interpretation of the triggering activities in the Listing Notices of EIA Regulations is not the same for everyone'*. EIA Regulations interpretation is inconsistent,

particularly between the EAPs and the staff of the EIA competent authority, so not everyone understands the Listed Activities the same way. This leads to disagreements between the EIA stakeholders and uncertainty about the outcomes of the submitted EIA applications.

5.2.2. EIA competent authority

Table D-2 (Appendix D) provides a detailed analysis of the EIA competent authority for the South African case study. As indicated, the EIA system is administrated by eleven different competent authorities, indicating that the EIA decision-making process is fragmented across different competent authorities with an uncertain level of independence and autonomy. The EIA competent authorities have certain roles and responsibilities to practice under the umbrella of NEMA in relation to EIA system administration. For example, NEMA and EIA Regulations describe the required ToR and the review process of the EIA and EMP reports conducted by the relevant authorities. Also, NEMA provides the decision-making criteria that should be followed by EIA competent authorities, these include consideration of related laws such as the promotion of the Administrative Justice Act, and so contributes to environmental justice. However, the analysis of the cooperation between the competent authorities and the relevant sectors did not show how the related authorities coordinate in the administration of EIA regardless of NEMA requirements. As is evident from the review of the legislation and the related EIA Regulations and guidelines, neither of the two documents clearly shows the process of cooperation with EIA stakeholders such as the EAPs. The evaluation of the EIA competent authorities in terms of the enforcement of the environmental authorisation conditions, as set out in the legislation, revealed that there is insufficient information about how the EIA competent authorities ensure compliance with the authorisation conditions and at what stage of the project life cycle this should be done (EIA monitoring and follow-up).

All the interviewees responded that EIA system performance is challenged by the EIA competent authorities in South Africa. In particular, they shared concerns about the following issues:

- The EIA competent authorities have limited human and financial resources. As a result, the process of reviewing EIA applications and EIA decision-making takes longer than the timeframes specified in the legislation. The interviewees described this condition as problematic due to the pressure of applications lapsing (which will require repayment of the application submission fee) and the pressure from the project proponents who are concerned about getting the environmental authorisation as soon as possible. In addition, two of the eight research participants highlighted that the limited financial and human capacity of the EIA competent authorities affects the ability of these authorities to ensure the enforcement of the EIA system. This particularly happens when the authorities tend to neglect to conduct the monitoring of EMP reports during the operation, closure, and decommissioning stages of the development project.
- Different EIA competent authorities have different sets of requirements for EIA application submission. Seven of the eight interviewees responded that there are contradictions and duplications in the requirements which appear in the integrated environmental authorisation process. For example, one interviewee stated that *'Coping with different authorizations in one EIA application during the implementation of EIA is extremely difficult. It is supposed to be one system to submit all applications at once and supposed to come through all at the same time, and the related department supposed to talk to each other. This is to make sure that there is no duplication in the issued licenses and that the conditions in the license do not contravene each other. It does not work like that at all. In reality, there are always delays in getting some licences which cause delay and affects the clients who become more difficult. It is always difficult to manage different authorizations because of different requirements asked by the EIA-related authorities who usually do not cooperate with each other There is nothing you can do about it'*. According to an interviewee, the competent authorities are trying to use the OES to cope with the integrated environmental authorisation. However, the interviewee doubted the success of the system if the competent authorities did not address the ambiguity and unclarity of some of the legal requirements for EIA applications. Another research participant raised a concern about the

implementation of OES. According to the interviewee's perspective, there is an issue with the inconsistent system of EIA application submission. Some authorities are still accepting hard copies, while others have an online system for electronic submissions. This may hinder the success of implementing the OES.

- Poor communication and lack of feedback from the competent authorities are further concerns. EIA professionals highlighted the difficulty of contacting and engaging with EIA competent authorities, this was due to staff absence, staff movement across the department, or staff who left the department. One research participant mentioned that *'It is always a challenge knowing who to contact in the competent authorities because they always change their positions'*. All research participants stated that communication with the EIA competent authorities was harder during the COVID-19 lockdown period because most of the staff were working from home. Another interviewee indicated that they rely on existing relationships with staff at the competent authority for feedback on submitted EIA applications. This presents a challenge for the new EAPs to know who to communicate with in the competent authorities: *'We do not know who to contact and who is the responsible Case Officer for the EIA application in the competent authority'*. Moreover, a research participant highlighted that competent authorities are usually ineffective when it comes to cooperation with the EAPs. From the interviewees, it is evident that the EIA competent authorities do not seem to have a systematic process or guidelines for cooperation with EIA actors, particularly the EAPs. This affects the proper implementation of EIA in line with its legal requirements.

5.2.3. EIA procedural steps

Table D-3 (Appendix D) provides the evaluation results of the EIA procedural steps. It is shown that the procedural steps of the EIA system are well-developed in South Africa. The implementation of the EIA system is based on well-defined procedural steps prescribed by the legal regime. For example, the first procedural step of the EIA process is screening which aims to determine if an EIA is required based on the

screening criteria specified in the Listing Notices of the EIA Regulations of 2014. If the proposed activity is contained in Listing Notice 2, the project proponent must follow the full EIA process (S&EIR). The S&EIR comprises a scoping stage, a Plan of Study, EIA and EMP reports (report contents are described), specialist studies (report content is described), public participation (during scoping and reports review), EIA follow-up, and auditing. Although the procedural steps of the EIA system in South Africa are well-developed, the procedure to undertake EIA follow-up and auditing during the project life cycle is not clearly described. The EIA Regulations require an EIA Audit Report in the case of EMP report amendment and a closure plan without mentioning the construction and operation stages of the project life cycle.

An opportunity was given to the interviewees to discuss any concerns or issues relevant to the procedural steps of EIA during the interview process. Six of the eight research participants did not raise any concerns about the steps required for the EIA process. However, two interviewees identified some issues related to the scoping stage of the EIA process. They firstly stated that the number of days prescribed in the Act for conducting the scoping phase is too short. According to their perceptions, the timeframe given (44 days) is not enough due to the time-consuming public participation process, which needs more time to identify and communicate with I&APs during the scoping phase. They suggested that conducting a pre-application scoping step could assist in saving time. Secondly, there is a risk of contradiction between the identified impacts and impact management in the scoping report and the presented impacts and impact management shown in the EIA report. They highlighted that this happens because specialist studies are not required for the scoping report.

Findings on EIA legislation, EIA component authority, and EIA procedural steps have indicated that the South African EIA system is based on a comprehensive legislative framework. However, major concerns are raised about the misinterpretation of EIA Regulations, outdated EIA guidelines, inadequate human, technical, and financial capacity of the competent authorities, lack of cooperation among EIA actors, tight timeframes for EIA implementation, improper impacts identification and risk assessment means, and lack of EIA enforcement in terms of conducting EIA follow-up and auditing.

5.2.4. EIA report - legal requirements

As demonstrated in Table D-4 (Appendix D), the assessment of the legal requirements of the EIA report demonstrated that the EIA legal requirements have both strengths and shortcomings across the review areas. The following main findings are presented below:

- A description of the proposed development is required and should include the location, layout plan, and scope of the proposed development and its associated infrastructure. However, this requirement does not extend to describing the proposed activity inputs such as the type and quantity of materials needed during the life cycle of the activity. Similarly, there is no requirement for the outputs such as the type and quantity of wastes, emissions, and residues. This is a shortcoming of the requirements.
- Legislation requires that the description of the environmental attributes of the development footprint be included in the assessment and report. This should cover the geographical, social, economic, physical, biological, cultural, and heritage attributes. However, this requirement does not extend to aspects such as land uses, the broad environment surrounding the development footprint, environmental investigation method, environmental future conditions, and description of data sources.
- Scoping, consultation, and impact identification are prescribed in the EIA Regulations. The scoping process results in the scoping report, which includes for instance impacts identification and management. Public participation is also clearly stated in EIA Regulations, particularly in terms of timeframes and processes during the scoping step and review of the EIA report. Describing the process to identify the activity impacts is required. However, the Regulations are not specific in terms of the required information on the source and relevance of data, type of impacts during the activity life cycle, justification of impacts selection methodology, and consideration of impacts that might result from accidents and emergencies.
- Prediction and evaluation of impacts are part of the EIA report content according to the EIA Regulations. The description of the methodology used to determine the significance of impacts and impacts description, such as nature, consequence,

extent, and duration, should also be stated. However, the justification for impacts and risk assessment methodology and data used is not well covered in the Regulations.

- A description of alternatives is required in the preparation of the EIA report in terms of development footprint alternatives, positive and negative impacts of the proposed activity, and its alternatives. Regardless of alternative considerations, the Regulations tend to focus on the development footprint alternatives rather than broadly considering other activity alternatives such as activity design and process alternatives. The justification of the alternatives' selection methodology as well as a comprehensive comparison of activity alternatives, including the likely future of the environment without the activity, are not clearly stated in the legal requirements.
- The Regulations broadly mention the consideration of mitigation and monitoring measures. The justification of the selected mitigation and monitoring measures, their effectiveness, their consideration during the activity life cycle (design, construction, operation, and decommissioning), and consideration of potential environmental impacts and conflict with the benefits of mitigation measures, are not adequately covered in the legal requirements.
- The legal requirements of the EIA report do not require the inclusion of the non-technical summary.
- The organisation and presentation of information are indirectly considered in the legal requirements. Aspects of EIA report organisation and presentation of information such as the related policy and legislative context of the proposed development, EAPs' details, and objectivity of EIA report content prepared by the EAP are prescribed. However, considering any gaps in the data used to prepare the report, explaining any difficulties in assembling or analysing the data, the logical arrangement of information, source of information and data, description of the project, the aim of the evaluation, and its methods are not required.

5.2.5. EIA report preparation

A sample of ten EIA reports from a range of projects in South Africa was obtained as described in Chapter 4 (section 4.2.1). The reports were evaluated, and the findings

demonstrate that the EIA reports quality along with the review areas is inadequate for decision-making (I). Detailed results are presented in Table D-5 (Appendix D) and the summarised results are presented in Figure 7. The key reason for this finding is that, although the EIA reports complied with the South African EIA legislation, they did not meet the accepted requirements for EIA reports, as set out in the IAU review package (Section A/Appendix A). For instance, the review area of the development description was inadequate in 50% of the EIA reports reviewed. It was found that the proposed development was well-described in terms of project location, layout, and associated infrastructure. Meanwhile, the description of the material needed for the project construction, implementation, and operation was largely insufficient. This also was the case for the type and quantity of the project wastes, emissions, and residues. The prediction and evaluation of impacts were inadequate in 70% of the reports reviewed. The common shortcoming in this area was that the justification of impacts and risk assessment methodology and the data used were mostly absent in the reports evaluated. Another factor was that the quality of the mitigation and monitoring review area across all the reports evaluated was inadequate (100%). The mitigation and monitoring measures were described without justification for the method used for the selection process. The mitigation and monitoring measures effectiveness was not addressed in the reports. The implementation of the mitigation and monitoring measures during the activity life cycle was not well-described in the reports. Furthermore, the consideration of the potential environmental impacts and conflict with the benefits of mitigation measures were not included in the reports. On the other hand, the review area of organisation and presentation of information shows that 70% of the reviewed reports were complete for decision-making which approximately met most of the evaluation criteria of this review area.

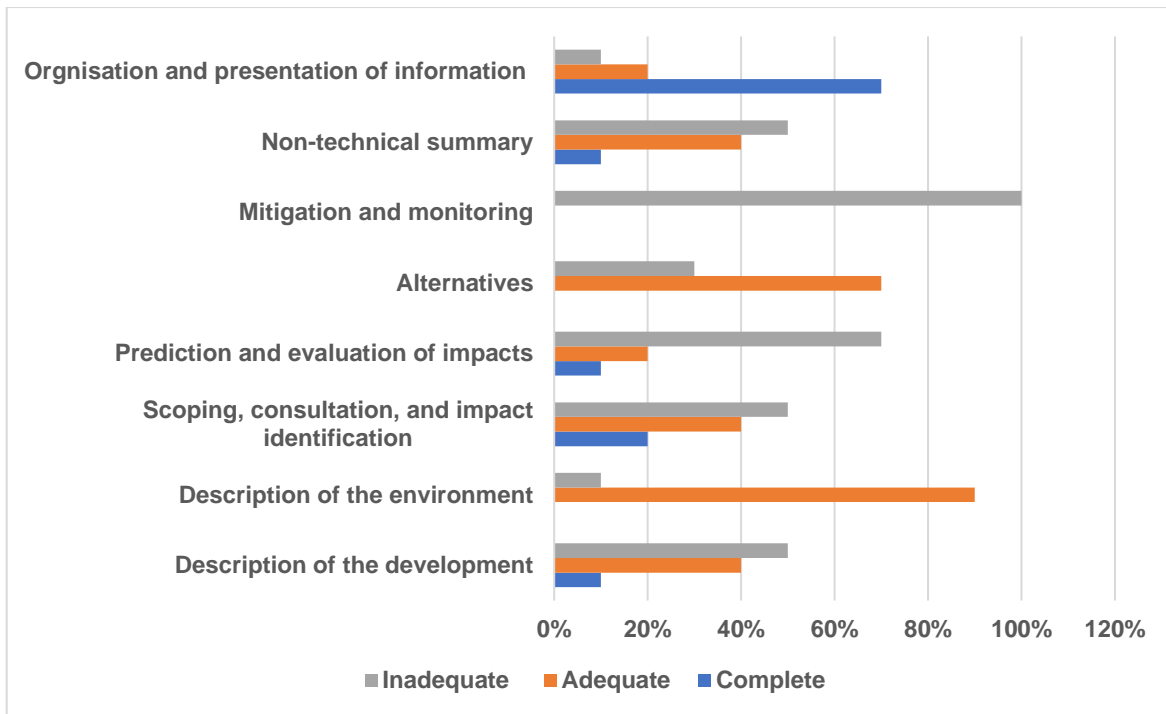


Figure 7. Summary results of the South African EIA report evaluation

Through the interview process, the research participants presented some concerns about the generic nature of the EIA reports. Five of the eight interviewees agreed that EIA reports tend to be very scientific and difficult to understand by the project teams, officials from the competent authority, and the I&APs. This affects the decision-making process, which is based on the report's content. One of the eight research participants highlighted that the approval conditions of the environmental authorisation are sometimes impractical, putting pressure on the project applicant to comply with them as well as the competent authority to ensure commitment to the environmental authorisation conditions. The EMP report as part of the EIA report was also a common concern amongst most interviewees. There are numerous cases where the EMP report was not practical as it presents mitigation and monitoring measures that are difficult for the project applicants to apply. According to one research participant, the impracticality of EIA and EMP reports is one of the reasons for the lack of EIA follow-up and auditing in South Africa which most often takes place in the construction phase of the proposed development. One of the eight research participants also expressed some concerns about the impact identification and risk assessment methodologies, stating that '*Most of the methodologies that are*

used for impact assessment in South Africa are rubbish'. The same interviewee went further and mentioned that '*Justification of the conclusion reached to identify the impacts should be the focus, and not to worry about the method used*'. The impact identification, prediction, and assessment methodologies appear to be the most significant issues in the EIA report.

The key findings of the EIA report have shown that the identified shortcomings of the legislative requirements of the EIA report were observed in the inadequate quality of the EIA reports. There are gaps in the legislative requirements for EIA reports such as the impact identification and risk assessment methodologies. As such, this weakness was mirrored in the EIA reports reviewed.

5.2.6. Country legal context

Based on the evaluation, one can conclude that South Africa has an adequate country legal context, which is driven by the Constitution as demonstrated in Table D-6 (Appendix D). Section 24 of chapter 2 (the Bill of Rights) of the Constitution of the Republic of South Africa provides the constitutional directive for environmental rights. Based on this, relevant environmental policies such as the National Environmental Management Plan was introduced to promote sustainable development through environmental management tools such as EIA. In addition to NEMA, other related environmental legislation such as the National Water Act, and environmental standards such as greenhouse gas emissions standards as part of the National Air Quality Act were introduced. The Constitution also ensures that the administrative decision-making process is lawful, reasonable, and procedurally fair and ensures the public's right to participate in the process and have the right of access to information. Regardless of the adequacy of the country's legal context, there is currently no established environmental court in South Africa. The only South African environmental court was established in 2003 in the Western Cape province to prosecute wildlife poaching and damaging coastal marine parks and then was shut down in 2007. Environmental crimes are currently detected by the Environmental Management Inspector (Green Scorpion), and then through the National Prosecuting Authority are represented to the High Court.

5.2.7. Political context

The political context of South Africa shows that the country has endorsed a number of environmental conventions as required by the Constitution and the relevant environmental legislation as illustrated in Table D-7 (Appendix D). However, South Africa has not ratified significant conventions related to EIA such as the Convention on Environmental Impact Assessment in a Transboundary Context. It sets out the obligation of parties to evaluate the environmental impact of certain projects through conducting EIA at an early stage of planning projects that may have transboundary impacts. Regardless of the indefinite political influence on the EIA legislation reform, the findings indicated that the political context of South Africa lacks commitment to environmental management and support to the EIA competent authorities.

Despite the sensitivity of exploring the issues of political interference and corruption within the competent authorities, there was a sign of significant concern about the political interference and corruption in the EIA administration. As is evident from the reviewed literature, this often occurs in the form of influencing the EIA decision-making within the EIA competent authority by using means of power relations of the applicant, government, political appointee, consultants, and local authorities to put pressure on EIA decision-making and speed up the environmental authorisation process. Furthermore, one of the eight research participants provided anecdotal evidence of the political context's impact on the performance of the EIA system. The interviewee mentioned that there was a case when the municipal manager used political power to speed up the processing of EIA applications and decision-making for a municipality project. One of the eight interviewees provided an example of power relations influence on the EIA administration within the EIA competent authority. The interviewee mentioned that some EAPs tend to win EIA applications through power relationships. This often happened when some of the officials of the EIA competent authority give the EAPs who are their friends, some financial information about their competitors during the tender process of EIA applications, so they can submit the lowest financial offer to the developer.

5.2.8. Socio-economic context

The socio-economic context of South Africa is a challenge; this is due to inequality, poverty, literacy, and unemployment issues as indicated in Table D-8 (Appendix D). South Africa's HDI value is 0.713, which is an average measurement of the basic human development achievement that masks inequality in the distribution of human development (life expectancy, education, and GDP) across the population at the country level. This puts the country of South Africa in the high human development classification, positioned at 109 out of 191 countries (UNDP 2021a). Moreover, there is an issue of high unemployment in South Africa. The current official national rate stands at 34.5% (RSA 2022), which means about 7.9 million of the population are unemployed.

The key informant interviews revealed that the South African socio-economic context plays an important role in the EIA system performance. One of the eight interviewees mentioned that '*EIA is conducted in South Africa as a mitigation report (tick box exercise) as the decision is already made to allow socio-economic development*'. Another research participant highlighted that the socio-economic issues of South Africa put pressure on all parties to advance development, which has influenced EIA decision-making, resulting in most of the EIA applications in the utility sector, for example, being approved. Furthermore, one of the eight interviewees cited an example in which an EIA application was approved despite significant objections raised during the public participation process. According to one interviewee's perspective, the South African socio-economic context influences the ongoing process of EIA legal regime reform and amendment. The core of the reform process was the refinement of the screening criteria (Listing Notices) and EIA process timeframes. The aim was to bring down the number of EIA applications and the time required for the EIA process and environmental authorisation. The continuous reform of the EIA legal regime was driven by '*The developmental state of South Africa*' as described by the same research participant.

5.2.9. Environmental condition context

Table D-9 (Appendix D) provides an evaluation of the environmental condition of South Africa. It is highlighted that the country faces significant environmental issues such as land degradation, soil erosion, loss of natural habitat, water, and air pollution, and climate change. These environmental issues usually occur because of poor land use, urban expansion, unsustainable agriculture activities, and mining activities. In addition, six of the eight research participants addressed the challenging environmental context in South Africa, noting that environmental issues are not a high priority. More focus is given to enhancing the country's economy by fighting poverty by creating jobs and employment opportunities.

5.2.10. EIA stakeholders' capacity

Evidence from this research indicates that there is a limited capacity among the EIA stakeholders in South Africa. The issues raised include the lack of skills, experience, and appropriate qualifications of the EIA competent authority staff, and the lack of human and financial resources of the competent authority, as elaborated in Table D-10 (Appendix D). As is evident from the reviewed literature that the EIA competent authorities' officials have skills, experience, and qualifications that are however not suitable to their roles. This is somewhat concerning since the personnel of the EIA competent authorities should ideally ensure that the EIA system aim and objectives as stipulated in the EIA legal regime are met.

The capacity of the EAPs is a particular concern that was considered in the literature. In some instances, EIA studies were conducted by EAPs who did not have the relevant qualifications, experience, and training in environmental science and management. In the South African context, EAPASA is established as a registration authority to register EAPs based on a set of core competencies under Section 24H of NEMA to ensure the adequacy of the environmental assessment practice and quality. Despite the existence of the EAPs registration body (EAPASA), the number of registered EAPs and their experience are still not easily determined in South Africa. Furthermore, some EIA studies were conducted by junior EAPs who were assigned by other EAPs, bringing up another issue of liability as indicated in the

reviewed literature. Along with the lack of capacity among the EAPs and the staff of EIA competent authority, the capacity of the specialists, project applicants, and I&APs is also a major concern. Issues such as the inappropriate qualifications and experience of the specialists and low environmental awareness of the I&APs and applicants are highlighted in the relevant literature.

The research participants were in agreement regarding the lack of capacity across the EIA stakeholders. All the interviewees had the same perspective regarding the limited capacity of the EIA competent authority's staff. For instance, one stated that *'The EIA competent authorities need capacity building due to insufficient human and financial resources, and inexperienced staff who tend to be recent graduates, affecting the competency of the related competent authorities'*. It is highlighted that, regardless of the capacity improvement within the EIA competent authorities' staff, they are still struggling to cope with EIA applications due to inexperienced staff and insufficient human and financial resources. This is a major challenge that affects the role of the competent authorities to make EIA decisions, comply with EIA timeframes, and oversee EIA implementation and enforcement. An example was given by a research participant describing that some officials just copy and paste the conditions of approval from the EIA report, which were not applicable and relevant to the EIA study itself (e.g., EIA application for utility project and the conditions of approval for mining project). According to a research participant, the lack of capacity within the EIA competent authorities is a result of the South African legacy and the transformation stage that the country is going through, resulting in the appointment of officials with limited experience.

The capacity of EAPs in South Africa varies even with the presence of EAPASA, as demonstrated by the interviewees. Five of the eight research participants mentioned that not all the EAPs have the relevant environmental qualifications, the appropriate experience, and training, yet they are registered with EAPASA. Based on that, all interviewees highlighted that environmental consulting is becoming very competitive because of new consultants who attract clients with low rates. As a result, some EAPs tend not to charge the applicants for everything and do some specialist studies to reduce the cost of the EIA study. These sorts of challenges led some EAPs to change careers and become Environmental Control Officers, Environmental Expert auditors, and SIA practitioners. One of the eight research participants stated that

registration with EAPASA does not ensure the competency of the EAPs. According to the interviewee's perception, '*The problem with EAPASA is the accreditation of EAPs based on qualifications from higher education institutions which do not meet and align with the core competency of an EAP*'.

During the interview process, the capacity of the specialists was also discussed. All research participants generally had positive perceptions about the capacity of the specialists. However, it was mentioned that some specialists do not have the relevant qualifications and experience. In some instances, the specialists conduct studies that are not in their field of expertise for the sake of gaining more financial benefits as some of the specialist reports are just copied and pasted. Also, not all specialists are registered with the South African Council for Natural Scientific Professions, as some specialist fields do not have formal registration authorities, such as the social sciences. It is also mentioned that the cost of specialist studies is very high due to the small pool of specialists.

Moreover, the capacity of the project proponent was addressed by the research participants. It was highlighted that the capacity of the project proponent depends on '*The maturity of the client*', the commitment to environmental values such as sustainable development, and the awareness of environmental laws. These are observed more often within larger companies than small businesses. Also, large companies tend to be financially prepared to conduct EIAs and comply with the conditions of approval. On the other hand, four of the eight interviewees indicated that some project proponents usually focus on getting the environmental authorisation quickly and '*Do what it takes to get them the approval*' as they consider EIA as an impediment to development. According to the interviewees' perceptions, the proponents also think that the cost of EIA is very high, even though it is generally less than 1% of the project cost. A further challenge with project proponents was that they usually do not appoint the EAP early during the project life cycle and provide enough information regarding the project to conduct the appropriate EIA process. Additionally, five of the eight research participants highlighted that project proponents are generally not financially prepared to implement the conditions of the EMP, particularly small companies.

It was also possible during the key informant interviews to discuss the capacity of the I&APs. It is indicated that the environmental awareness of the local communities is still very low. Seven of the eight research participants indicated that, during the public consultation process, the I&APs attendance tends to be low with the attention being given to employment opportunities. In some instances, there is a conflict of interest across the I&APs, as community leadership influences the I&APs' views. However, some environmental groups and activists are engaging more in the public participation process and have better awareness than local communities.

5.3. Discussion

The findings above illustrate that EIA system performance in South Africa is limited and its country context is a key issue that influences EIA performance. The evaluation approach taken throughout this case study was used to evaluate EIA system performance, considering the country context influence on EIA system performance. Through this approach, it was observed that there is a relationship between EIA system performance and its country context. Important country context factors strongly influenced the development, implementation, and enforcement of the EIA system as well as its performance. For the South African case study, three emerging themes that explain much of the EIA system performance have been identified and are discussed below.

5.3.1. Well-developed EIA legislation

EIA system performance depends on the development of the legislative framework governing it (UNEP 2004; Badr 2009; Kolhoff et al. 2009; Khosravi et al. 2019a; Khosravi et al. 2019b). Although South Africa has a good EIA system and comprehensive legislative framework, EIA system performance is still limited. Based on evidence from this case study findings, the development state (socio-economic issues and low political commitment to EIA) of South Africa is the primary focus that drives the development of EIA legislation. This is due to the developmental challenges that the country needs to address such as poverty, unemployment, and

inequality, as indicated in the results. As has been discussed in the literature, there is a relationship between EIA legislation development and the country context (Kolhoff et al. 2009; Kolhoff et al. 2013; Khosravi et al. 2019b). Country context elements such as the political, legal, environmental, and socio-economic contexts are acknowledged to play a role in the EIA legislation development (Kolhoff et al. 2009; Marara et al. 2011; Kolhoff et al. 2013; Khosravi et al. 2019b). This was evident in the South African context. Regardless of the good country legal context that supports environmental legislation and the challenging environmental condition in South Africa, the development process of EIA legislation was affected by the socio-economic context as indicated by the key informant interviews. This is also similar to the context of Cameroon in which EIA legislation development seems to be influenced by the context of the country (Bitondo and André 2007)

The EIA legal requirements are present and well-developed in South Africa. However, some gaps exist within the legislative framework. The most significant observed deficiencies are related to the EIA monitoring and follow-up, the interpretation of the triggering activities in the Listing Notices of EIA Regulations, and gaps in the legal requirements for EIA reports such as the impacts identification and risk assessment methodologies. The results of the EIA report evaluation also mirrored the highlighted gaps in the legal regime. It suggests that the EIA report quality was inadequate for decision-making due to weaknesses in the review areas. For instance, the impact identification and risk assessment were major deficiencies in the reports evaluated as a result of insufficient EIA legal report requirements. This area in particular was an important aspect that was discussed during the interview process. The impact identification, prediction, and assessment methodologies were described as inadequate, whether during the scoping or the EIA report preparation steps of the EIA process.

Despite the long history of the EIA legal regime development in South Africa (DEA 2018a; Matlhare 2020), these gaps have not been addressed. To date, the development process of the EIA legislation mainly focused on the refinements of the screening criteria (Listing Notices) and the timeframes of the EIA process (Alberts 2020). The reason for this, according to the interview findings, was to decrease the number of projects that require an EIA and the time needed to conduct the EIA process to speed up the decision-making process. This was to support the socio-

economic development of the country. According to this, EIA legislation was likely developed in response to certain socio-economic demands, leading to the existing gaps which affect EIA performance. The refinement process of EIA legislation ignored improving significant elements of the legislation such as the EIA report requirements. This provides an indication of the socio-economic influence as the underlying cause that drives EIA legislation development. Furthermore, a significant perspective of EIA system performance concerning the socio-economic context of South Africa mentioned during the interviews is that '*EIA is conducted in South Africa as a mitigation report (Tick box exercise) as the decisions already made to allow socio-economic development*'.

5.3.2. EIA administration challenges

EIA system performance depends on the human, financial, and technical capacity of the responsible authorities (Kirchhoff 2006; Van Loon et al. 2010; Ostrovskaya and Leentvaar 2011; Jones and Fischer 2016). The EIA competent authorities are accountable for ensuring the implementation of EIA requirements in accordance with the legal regime and ensuring that these (through the conditions of authorisation) are met by conducting EIA follow-up and auditing (Ebisemiju 1993; UNEP 2004; Khosravi et al. 2019a).

A common challenge within the EIA competent authorities is to make sure that the EIA system is implemented and enforced according to its legislation, particularly in developing countries (Wood 2003; Kirchhoff 2006; Badr 2009; Khosravi et al. 2019a; Nakwaya-Jacobus et al. 2021; Kamijo 2022). As demonstrated throughout this case study, EIA system performance is undermined by the administrative capacity of the EIA competent authorities due to the lack of appropriate EIA system implementation and enforcement mechanisms. Although the EIA competent authorities in South Africa are well-established in terms of the stipulated roles and duties which are based on the NEMA requirements. Their administrative capacity appears to be the prevalent issue that affects EIA system performance. The case study findings suggest that the availability of human, financial, and technical capacities across the EIA competent authorities is insufficient, which influences their ability to conduct their duties as per the legal regime requirements of NEMA. For example, one of the key

aspects of the EIA implementation is the cooperation between the EIA competent authorities as required under the OES. This is to ensure effective EIA implementation complying with the legislated timeframes and considering the alignment of the relevant requirements across the responsible authorities (Kolhoff et al. 2009). It is shown that the EIA competent authorities in South Africa suffer from a lack of collaboration with each other, which is exacerbated by the different sets of requirements for EIA applications by different EIA competent authorities. As a consequence, there is difficulty in adhering to the legislated timeframes affecting the EAPs and project proponents due to the long environmental authorisation process. Despite the fact the EIA competent authorities are trying to represent one environmental management system for EIA application submission, the success of the system is doubtful unless the competent authorities agree on one set of requirements and have the appropriate technical capacity to handle the online submission of EIA applications. This issue was associated with the lack of compliance with the EIA legal timeframes by the EIA competent authorities. Compliance with the legislated timeframes is significant because it provides certainty to the developers and I&APs and reduces the potential of interference in the EIA administration and decision-making (Alberts et al. 2022). This issue was evident in the South African context. The EIA competent authorities are not adhering to the time limits prescribed in the Act. As a consequence, EAPs and project proponents are affected due to delays in the processing of EIA applications and decision-making. This usually puts pressure on the EAPs and affects the economic development in the South Africa.

The issue of lack of human, financial, and technical capacity made the EIA competent authorities vulnerable to the influence of the political context in terms of power relations and corruption. It is stated that EIA administration outcomes tend to be politically affected in the developing country context (Marara et al. 2011; McCullough 2017; Nakwaya-Jacobus et al. 2021). It is observed that there is an influence on the EIA administration within the EIA competent authorities through the use of political influence or power relations to affect the EIA decision-making in the South African case study. This is particularly exacerbated by the uncertainty of the EIA competent authorities' independence and the different layers of decision-making across the national, provincial, and sector authorities. Additionally, EIA system

implementation is also influenced by the lack of cooperation between the EIA competent authorities and EIA stakeholders, particularly the EAPs. According to the research participants' perspectives, it is a major challenge due to the lack of guidelines for cooperation between the competent authorities and the EAPs. This issue affects the efficiency of EIA implementation, which is worsened by the misinterpretation of the triggering activities, the lack of alignment of application requirements, and the lack of collaboration between the related competent authorities.

EIA system enforcement is also framed by the administrative capacity of the competent authorities (Khadka and Shrestha 2011; Kolhoff et al. 2016). EIA follow-up and auditing are an integral part of the EIA system which include monitoring and auditing of the EMPs and ensuring compliance with the approval conditions (UNEP 2004; Glasson et al. 2012). However, it is a neglected stage of the EIA process, particularly in developing countries (Alers 2016; Khosravi et al. 2019a). As indicated previously, the limited human, financial, and technical capacity of the responsible authorities tend to be the cause of the lack of enforcement, as seen in the case study of South Africa. It is shown that the EIA competent authorities are not appropriately enforcing the EMP requirements due to insufficient human and financial resources. The EIA competent authorities lack the capability to conduct adequate monitoring and follow-up measures. This condition has been indicated in the context of Uganda (Kahangirwe and Vanclay 2022).

Several studies indicate that the socio-economic and political context affects the capacity of the EIA competent authorities in terms of the availability of human, financial, and technical resources (Khadka and Shrestha 2011; Marara et al. 2011; Ostrovskaya and Leentvaar 2011; Kolhoff et al. 2016; Khosravi et al. 2019b). The country context of South Africa patently led to the current condition of the limited capacity of the competent authorities. According to the case study findings, there is a strong relationship between the socio-economic and political context of South Africa and the administrative capacity of the EIA competent authorities. It is observed that South Africa experiences difficult socio-economic challenges, which led to the development of an inadequate administrative capacity.

5.3.3. The limited capacity of EIA stakeholders

The limited capacity of the EIA primary actors is identified as an underlying cause for the limited EIA performance in developing contexts (Economic Commission for Africa 2005; Campion and Essel 2013; Bitondo et al. 2014; Khosravi et al. 2019c; Alberts 2020; Khan et al. 2020; Kahangirwe and Vanclay 2022). EIA system implementation and enforcement are subject to the skills, experience, knowledge, and training of the EIA stakeholders as a contextual factor in developing countries (Kolhoff et al. 2009; Van Loon et al. 2010; Marara et al. 2011; Khosravi et al. 2019c; Khosravi et al. 2019b). Lack of human capacity is a key challenge to the EIA system performance that emerged when evaluating the capacity of EIA stakeholders in South Africa. The appropriate skills, experience, and training are needed within the EIA competent authorities to ensure EIA system implementation and enforcement in accordance with the regulatory frameworks (UNEP 2004; Economic Commission for Africa 2005; Khadka and Shrestha 2011; Marara et al. 2011; Kolhoff et al. 2016). The lack of personnel capacity in terms of skills and experience in the EIA competent authority was observed as a constraint to the South African EIA system performance. The skills, experience, and qualifications of the EIA competent authorities' officials tend to be insufficient or inadequate. This has implications for the quality of EIA decision-making, cooperation with the relevant EIA actors, complying with EIA timeframes, conducting EIA monitoring, and follow-up on the EMPs. A common weakness highlighted by the participants was the lack of skilled staff at the national, provincial, and sector levels across the EIA competent authorities. For instance, it was found that the quality of EIA reports was inadequate for decision-making, however, the environmental authorisations were granted despite the unsatisfactory quality of the information represented in the reports. This finding was further supported by a research participant stating that EIA decisions are not always based on the report's quality and tend to be influenced by the skills and experience of the officials. The same participant provided an example of the inadequacy of the EIA decision-making process by mentioning that officials just copy and paste the conditions of approval from the EIA report, which were not applicable and relevant to the EIA study itself.

The capacity of EIA practitioners is an important requirement for EIA system performance (Clausen et al. 2011; Morrison-Saunders and Retief 2012; Zhang et al.

2018). A further constraint mentioned is the EAPs' and specialists' lack of capacity to conduct EIAs. The South African environmental law requires that EAPs register with EAPASA. This is to ensure that EIAs are conducted by qualified and experienced consultants. However, the findings indicate that there is a concern about the quality of the EIA consultants. It is observed that EIAs are conducted by EAPs who may have unsuitable or limited environmental qualifications and inadequate experience. For example, the EAP who is responsible for signing the EIA report is not always the EAP who prepares it. It is mentioned that EIAs are conducted by junior EAPs who were designated by others. The outcomes of the EIA report evaluation support the raised concern about the EAPs' limited capacity. As discussed, EIA reports were inadequately prepared for decision-making, and the inexperienced EAPs stand to cause that among other potential reasons.

Similarly, there is a concern raised about the capacity of the specialists. The specialist studies are a fundamental part of the EIAs based on which the potential impacts of a proposed development are identified, predicted, and assessed, and the EMP report for them is prepared. The specialist studies reports are conducted in line with the EIA Regulations requirements. However, it is suggested that there is a lack of capacity of the specialists due to unsuitable qualifications and skills. This, according to the interview findings, is reflected in the poor quality of the specialist reports and the lack of specialist registration with formal bodies. The capacity of the project proponent in terms of environmental awareness and financial resources to conduct the EMPs is highly relevant to EIA system performance (Stoeglehner et al. 2009; Jones and Fischer 2016; Kolhoff et al. 2016). In South Africa, it is observed that the capacity of the project proponents is varied with a tendency to focus on getting the environmental authorisation in a short time. It is found that environmental awareness and investment in the EMPs are greater in large companies than in small business entities. Ultimately, the role of the general public in the EIA system performance is important through the public participation process (UNEP 2004; Kakonge 2006a; Kolhoff et al. 2009; Marara et al. 2011). In the case study of South Africa, it appears that the socio-economic context undermines the efficiency of the public participation process. Although there is an improvement in the environmental awareness of the I&APs based on the interview findings, they tend to be more interested in job opportunities and employment. It also seems that there is a lack of

awareness of what EIAs are as well as an issue of conflict of interest among the I&APs. The limited capacity of EIA stakeholders is a common challenge in the African context highlighted by other researchers (Bitondo et al. 2014; Sharma and Hategekimana 2018; Kahangirwe and Vanclay 2022).

5.4. Conclusion

The case study of South Africa concludes that EIA system performance does not only depend on the system components. The country has well-defined EIA legislation, competent authorities, and procedural steps, but EIA system performance is still limited. The used evaluation approach in this case study led to an understanding of how the country context interacts with the EIA system. The key deliverables of this case study are that the political, and socio-economic context and EIA stakeholders' capacity of South Africa had a major impact on the development, implementation, and enforcement of the EIA system, thereby influencing its performance.

CHAPTER 6 – EIA SYSTEM PERFORMANCE IN NAMIBIA

The Namibian EIA system performance is illustrated in Chapter 6. It provides an overview of the EIA system history in Namibia. Then, the findings of the evaluation of EIA system performance and the country context of Namibia are provided (document analysis sources are provided in Appendix E and will not be listed in Chapter 6). Chapter 6 concludes with a discussion of the Namibian case study results.

6.1. Overview of EIA in Namibia

The EIA legal regime in Namibia really started in 2007 with the introduction of the Environmental Management Act (EMA, No. 7 of 2007), which was followed by the EIA Regulations of 2012 (GRN 2007; GRN 2012). Before the independence of Namibia in 1990, environmental protection and management fell under the South African Environment Conservation Act (ECA, No. 73 of 1989) as Namibia was under the administration of the South African government (Husselmann 2016). Soon after Namibia gained its independence in 1990, the Ministry of Environment and Tourism (currently named the Ministry of Environment, Forestry, and Tourism (MEFT)) was established to promote Articles 95(C) and (I) of the Constitution of the Republic of Namibia, which ensures environmental protection and management for the wellbeing of the people by the government (Nakwaya-Jacobus et al. 2021).

In 1991, the Ministry of Environment and Tourism through a consultative process, drafted the Namibian Green Plan which was presented at the Rio Earth Summit in 1992, to address the environmental challenges and required actions in the Namibian context (Walmsley and Hussleman 2020; Nakwaya-Jacobus et al. 2021). Namibia's Environmental Assessment Policy which was approved in 1994 represented EIA as the environmental governance tool to ensure environmental and social considerations of development projects and policies as well as sustainable development promotion (MET 1995). The policy provided a definition for EIA and its procedural steps as well as the required content of the EIA report. However, it is indicated that the development of Namibia's Green Policy and Environmental Assessment Policy was influenced by the EIA regime in South Africa, particularly the

ECA and the introduction of Integrated Environmental Management (Husselmann 2016).

The first Namibian EIA legislative framework was presented in terms of the EMA, No. 7 of 2007, and the EIA Regulations of the Act were published in 2012. EMA of 2007 designates the Department of Environmental Affairs (DEA) under the MEFT as the competent authority responsible for the supervision of the EIA system and decision-making. The DEA is led by the Environmental Commissioner. A consultation process for EIA regime revision and the amendment was recently completed, which was initiated by the government of Namibia in 2016. However, the amended EMA and EIA Regulations are not yet published and still await cabinet approval since 2018 (Walmsley and Hussleman 2020; Nakwaya-Jacobus et al. 2021).

According to the EMA and EIA Regulations, the EIA process comprises the following steps (see also Figure 8): screening (informed by a List of Activities), scoping (informed by required scoping report content), EIA report (informed by required content of the report), EIA report review (informed by a consultation process), EIA decision-making, monitoring (optional and not legally required), public consultation and participation (required during EIA process from the scoping stage up to the EIA report review stage).

6.2. EIA system performance in Namibia

The findings of the case study of Namibia were obtained by applying the developed approach described in Chapter 3 and the methodological approach illustrated in Chapter 4. The results have been integrated and are presented below.

6.2.1. EIA legislation

An evaluation of the EIA legislation in Namibia indicates that the EIA system is based on a legislative framework that is not well-developed. Table E-1 (Appendix E) provides a detailed evaluation of the EIA legislation for the case study of Namibia. EMA No.7 of 2007 is the main legislative framework that provides a legal mandate for the EIA system in Namibia.

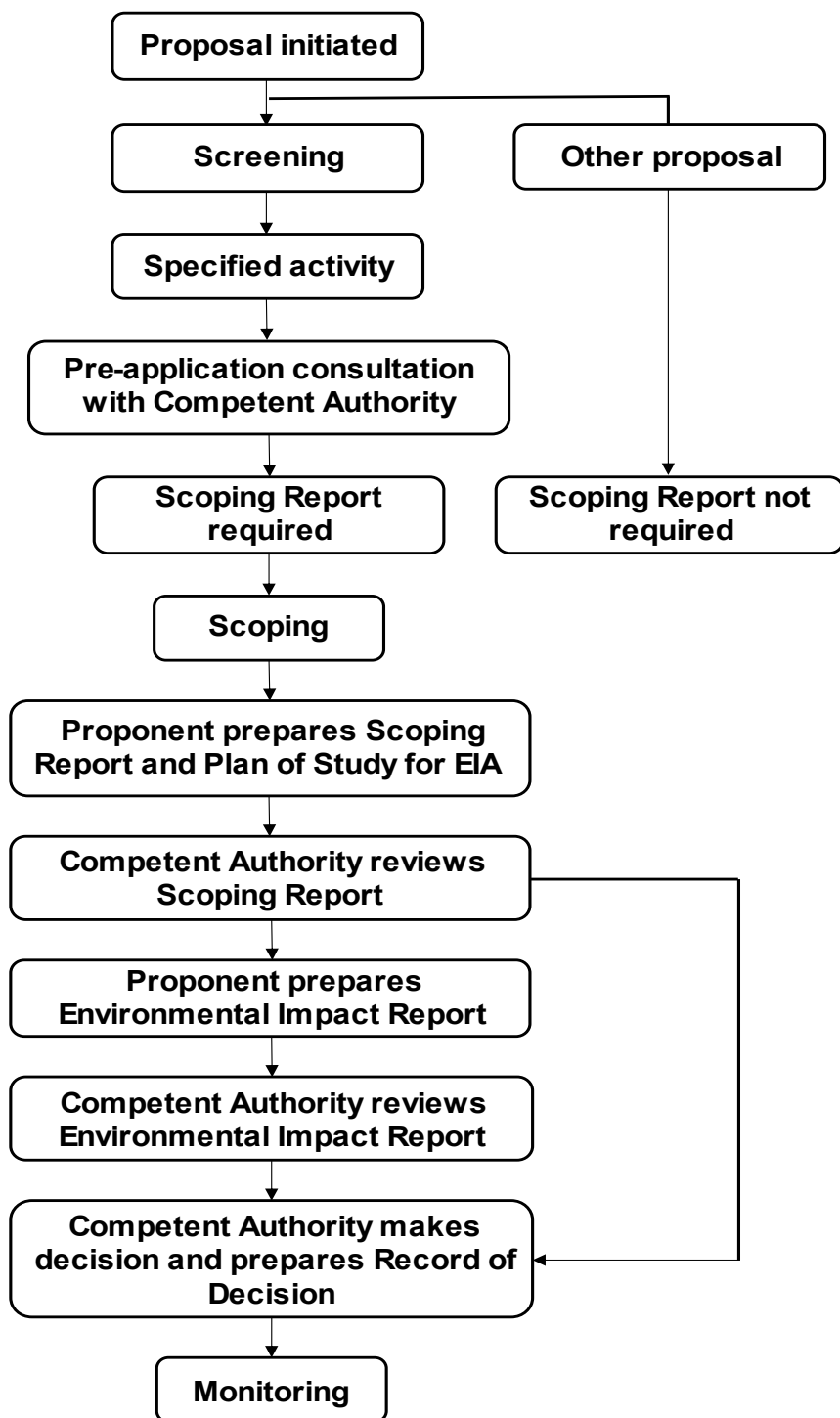


Figure 8. EIA process as provided in EMA and EIA Regulations (Husselmann 2016)

The EMA defines EIA's role in the promotion of sustainable development in the Namibian context. EMA also prescribes the establishment of EIA Regulations such as the EIA Regulations of 2012, and the 2008 EIA guidelines. This is to guide the implementation of EIA in compliance with EMA requirements. In addition, a list of activities is prescribed in the legal regime that may not be undertaken without an Environmental Clearance Certificate (ECC) issued after conducting an EIA. Regardless of the existence of the EIA legal framework, analysis of the EIA legislation highlighted several weaknesses. For instance, the timeframes are provided for different stages of the EIA process, but no guidelines exist on the total time provided to conduct the EIA. The Act indicates that the EAPs must have the knowledge and experience to conduct EIAs, objectivity in conducting EIAs, compliance with the Regulations, and accountability in information disclosure to the related players. However, the EIA legal framework in Namibia does not require EAP registration or certification by a recognized body. A further shortcoming of the EIA legislation is the lack of guidelines for preparing the EIA report, despite its content being prescribed, yet EMP report content requirements and guidelines remain absent. Further shortcomings incorporated a lack of EIA monitoring and enforcement as the EIA legislation vaguely mentions monitoring and limited guidelines for public participation. and lack of EIA guidelines for the EIA Regulations of 2012. A further point to note is that the EMA is in the process of being revised. Consultations were held in 2016 to gather public input on the proposed revisions. The amendments to the EMA were considered by the MEFT. The amended legislation awaits cabinet approval before it is published.

The Namibian EIA legislation was further evaluated through a series of interviews conducted with five EIA professionals. The semi-structured interviews were focused on obtaining the participants' perspectives on the EIA legislation in the country context of Namibia. All interviewed professionals agreed that EIA legislation in Namibia is not good enough. A senior consultant said that *'EIA legislation needs a lot of work, but it is better than nothing'*. In addition, the research participants shared the following concerns:

- There is no legal requirement for the registration and certification of EAPs. This is a major issue affecting the business of EIA consulting and the quality of EIA studies. One research participant highlighted that legal requirements

for EAPs' registration are needed to stop '*The overnight consultant*'. There is an association for EAPs called EAPAN (An unregulated organisation of EAPs that aims to advance and promote international best practices and develop capacity in all forms of environmental assessment in Namibia). According to a research participant, it does not carry any weight because it is not recognised by the government, and it is controlled by a minority of people who can register EAPs based on their agenda. The absence of legislation to regulate EAPs in Namibia has led to allowing EAPs with inadequate or insufficient qualifications, skills, and experience to practice. One research participant mentioned that some EAPs started to gradually decrease their work on EIAs and move to academia due to the competition from other EAPs with less experience. This condition is exacerbated by the low commitment of some project proponents to pay the EAPs, as well as the attractive low rates charged by other consultants.

- The EIA legal regime lacks requirements and guidelines for EIA follow-up and auditing. However, it is an optional part of the EIA process.
- There are no EIA sector guidelines for the development projects requiring EIAs, therefore, EIAs are conducted differently across various sectors.
- A research participant indicated that the existing gaps in the EIA legislative framework were likely a result of a lack of stakeholder involvement and consultation during the process of EIA legislation preparation.
- An interviewee indicated that the IFC and World Bank environmental principles are also used in the undertaken of EIA. This is because EIA legislation is recently developed and mainly benchmarked against the South African EIA legal framework.

6.2.2. EIA competent authority

Table E-2 (Appendix E) provides a detailed analysis of the EIA competent authority for the case study of Namibia. As indicated, the competent authority that supervises the EIA system and makes the final EIA decision by granting ECCs is the DEA (Office of the Environmental Commissioner) under the MEFT. Analysis of the EIA competent authority shows that there are several weaknesses within the EIA

administration, including a lack of autonomy, poor implementation of EIA, and lack of EIA monitoring and enforcement. There is no clear evidence that highlights the autonomy of the EIA competent authority as it falls under the administrative hierarchy of the MEFT with which the EIA decision-makers are affiliated. However, this might compromise the autonomy of the EIA competent authority due to the different levels of administration and decision-making within the Ministry. The EIA competent authorities have certain roles and responsibilities under the umbrella of EMA in relation to EIA system administration, however, these are not well-described. For example, the ToR for the EIA is prescribed in the EIA legal regime without clearly providing any guidelines. Similarly, the EIA competent authority is responsible for the review of the EIA report and the EIA decision-making process with a requirement for a consultation process with other related authorities and the assistance of an external specialist if needed. However, there are no guidelines available that describe how the review, decision-making, and consultation processes work within the competent authority and other relevant entities. Moreover, there is no clear indication of compliance with the administrative law to promote environmental justice in administrative actions and access to information. In addition to the lack of legal EIA follow-up and monitoring, there is no evidence available that describes how the EIA competent authority ensures EIA follow-up and auditing.

All the interviewees responded that EIA system performance is challenged by the EIA competent authority in Namibia. In particular, they shared concerns about the following issues:

- There is an issue of lack of capacity within the EIA competent authority in Namibia. The research participants indicated that the EIA competent authority suffers from insufficient human, technical, and financial resources. This issue is exacerbated by the centralisation of the EIA administration as the DEA (under MEFT) is the main competent authority. As a consequence, there is a lack of EIA implementation and enforcement. For instance, the competent authority is not effective in terms of complying with the timeframes of EIA. Furthermore, an interviewee described the functionality of the EIA competent authority as '*Huge chaos*'. The work is not organised, they do not have a register for EIAs, EIA documents sometimes get lost, and they cannot ensure compliance with and enforcement of the legislation and EIA monitoring.

- The research participant further indicated that there is a lack of collaboration between the main EIA competent authority and other related authorities. For instance, a concern was raised over the evaluation of EIA reports and decision-making processes. The related competent authorities act as evaluators of EIA reports, which are then submitted to the DEA (which falls under MEFT) for decision-making. A research participant mentioned that it is not clear how the review and decision processes are made and what criteria are used in light of the lack of cooperation between the related authorities. This brings up a further issue of lack of accountability and transparency from the competent authorities.
- Another weakness is the lack of cooperation between the EIA competent authority and EAPs. The majority of the research participants said that it is hard for the EAPs to follow up with EIA applications. This is because they do not know where the application sits and with whom.
- A further concern highlighted by a senior consultant is that the current EIA administration is lacking independence and autonomy. This is because the DEA falls under the MEFT, which puts constraints on the administration of EIA due to the centralisation of the EIA administration and exposes it to government and political interference.

6.2.3. EIA procedural steps

Table E-3 (Appendix E) provides the evaluation results of the EIA procedural steps in Namibia. The results indicate that the EIA procedural steps in the Namibian context include the main operating principles of the EIA process such as screening, terms of reference, scoping, public participation, EIA and EMP reports, and EIA report review. However, there are gaps in the required steps to conduct EIA. For instance, the screening step is based on the list of activities provided in the EMA and EIA Regulations. According to the legal requirements, screening is conducted by the proponent based on a consultation process with the competent authority to decide whether the EIA is required. This process has no guidelines available to describe the consultation process. Although it is legislated that the competent authority and the project proponent should consult with each other to develop the ToR, guidelines to

illustrate this process do not exist. A further gap in the EIA procedural steps is the lack of appropriate guidelines that provide guidance on the EIA process. For example, there were inappropriate guidelines on scoping, public participation, EIA report preparation and review, and EMP preparation steps. In addition, some of the required steps of the EIA process did not have a timeframe for implementation. The EIA legal regime provided the time needed to decide on the scoping report, but there was no time limit indicated for the undertaken of the scoping study. Similarly, there was no indication of the time required for the screening and EIA report decision-making. A further finding about the Namibian EIA process was that the legal requirements for the specialist report were absent. As indicated in Table G-3, EIA follow-up and auditing were insufficiently covered in the legislation and the guidelines.

An opportunity was given to the interviewees to discuss any concerns or issues relevant to the EIA procedural steps during the interview process. The interviewees brought up similar key concerns about the procedural steps required for the EIA process. The following issues were identified:

- There is an unclarity in the list of activities due to a lack of thresholds to determine the type of assessment required and the scope of the EIA. This is causing misinterpretation of the list of activities between the EAPs and the EIA competent authority officials.
- A further issue is the lack of clear timelines for screening, scoping, and EIA decision-making. This affects the project proponents and the EAPs due to the long-time taken for EIA decision-making by the competent authority. This issue is exacerbated by the insufficient guidelines for some EIA procedural steps such as screening and scoping.

The findings indicate that the Namibian EIA system is based on a limited legislative framework. Several weaknesses were highlighted, including misinterpretation of the EIA Regulations, inadequate EIA follow-up and auditing legislation, lack of appropriate guidelines and timeframes, inadequate EIA administration, and gaps in the EIA procedural steps.

6.2.4. EIA report - legal requirements

As elaborated in Table E-4 (Appendix E), there are both strengths and shortcomings in the EIA report legal requirements across the review areas as can be seen in the following points:

- A description of the proposed development is required and should include describing the project's objectives, and the project's environmental and temporal boundaries. However, this requirement does not extend to describing the duration of the project life cycle, the project design, layout, plan, and size. Furthermore, the development inputs such as the type and quantity of materials needed during the life cycle of the activity are not required. Likewise, there is no requirement to describe the development project outcomes such as the type and quantity of generated activity wastes, emissions, and residues.
- Legislation requires that the environmental aspects (physical, biological, social, economic, and cultural) should be described, including any activities in the area of the project. However, this requirement does not extend to aspects such as land uses, the broad environment surrounding the development footprint, environmental assessment methods, future environmental conditions, and the description of data sources.
- Scoping, consultation, and impact identification are prescribed. For example, the identification of the environmental issues, the list of EIA stakeholders, and the means of conducting the consultation process are prescribed. There are some gaps in this review area such as the required data to predict and identify the impacts, justification of the methods used to identify the impacts, consideration of direct and indirect impacts, and any operational impacts, accidents, and emergencies.
- Prediction and evaluation of impacts are required by the EIA Regulations and guidelines. The description is required in terms of cumulative effects, nature, extent, duration, reversibility, irreplaceable loss of resources, and the methodology of impact significance. However, this area has some shortcomings such as the lack of including the likelihood of impacts,

describing the data and justification of the method used, and a detailed evaluation of the impact's significance.

- Alternatives' consideration is required, including a comparison of alternatives in terms of project design, site, technology, operational alternatives, alternatives monitoring requirements, environmental costs and benefits, economic values, and alternative selection methods. Nevertheless, there are some gaps in the alternatives' legal requirements such as the lack of considering the following: the no-action alternative, the unexpected severe adverse impacts which are difficult to mitigate, and the re-appraisal of alternatives rejected in the earlier planning phases.
- The Regulations broadly mention the consideration of mitigation and monitoring measures, for instance, the description of the identified, feasible, and cost-effective mitigation measures, a description of the impractical mitigation measures, description of the monitoring measures in terms of type and cost are indicated. Description of the mitigation measures in relation to project stages of development and operation, justification of mitigation measures selection, the mitigation measures effectiveness, investigating the environmental consequences of mitigation measures, considering any conflict between the benefits of mitigation measures and their impacts are not adequately covered in the legal requirements.
- The non-technical summary is required in the legal requirements of the EIA report. However, no clarification on the structure of the non-technical summary is provided.
- The organisation and presentation of information are indirectly considered in the legal requirements. Aspects of this area such as the inclusion of the *curriculum vitae* of the EAP and the description of the gaps and uncertainties in knowledge, the related policy, and the legislative context of the proposed development are required in the EIA report. However, the logical arrangement of information, source of information and data, the objectivity of the report content, description of the project, and the assessment approach and aim are not included.

6.2.5. EIA report preparation

A sample of twenty EIA reports from a range of projects in Namibia was collected as demonstrated in Chapter 4 (section 4.2.1). The reports were evaluated, and the findings indicate that the reports' overall quality along with the review areas is inadequate for decision-making (I). Detailed results are shown in Table E-5 (Appendix E) and the summarised results are presented in Figure 9. The key reason for this finding is that the EIA reports did not comply with the Namibian EIA legislation and did not meet the accepted requirements for EIA reports, as set out in the IAU review package (Section A/Appendix A). The results reveal that all the review areas of the evaluated EIA reports failed to meet the review package criteria, except the review area of the environment description, which was adequate (A). For instance, the review area of the development description was inadequate in 95% of the EIA reports reviewed. It was found that the development project was well-described in terms of the project's purpose and objectives. Meanwhile, the description of the duration of the project phases, the project design, layout, plan, and size were not sufficiently provided. Similarly, the description of the material required for the project construction, implementation, and operation was largely insufficient. This was also the case for the type and quantity of the project waste generated, emissions, and residues.

Surprisingly, although the prediction and evaluation of impacts were included in the reviewed EIA reports, all were inadequate (100%) for decision-making according to the review package criteria. The common weaknesses in this area were that the justification of impacts and risk assessment methodology and the data used were mostly absent in the reports evaluated. Another factor was that the quality of the mitigation and monitoring review area across all the reports evaluated was inadequate (100%). The mitigation and monitoring measures were described without justification for the methods used for the selection process. The mitigation and monitoring measures in terms of effectiveness were not addressed in the reports. How to implement the mitigation and monitoring measures during the activity life cycle was not well-described. Furthermore, the consideration of the potential environmental impacts and conflicts with the benefits of mitigation measures were not described in the reports. Similarly, the alternatives were inadequate in 100% of

the reports reviewed, and non-technical summary review areas were inadequate for decision-making in 95% of the evaluated reports. Most of the evaluation criteria in those review areas were not met or not well-addressed, including an alternatives description, a comparison of alternatives, a justification for choosing alternatives, and a summary that explains the assessment and its main findings.

Through the interview process, the research participants presented some concerns about the EIA reports. Four of the five interviewees perceived that the EIA reports quality is inadequate due to poor presentation of the reports' content. For instance, three of the five participants indicated the project impacts are insufficiently identified and assessed in the EIA reports. A further example was given highlighting the process of preparing an EIA report is just copying and pasting, which was not based on a practical and scientific approach.

The key findings of the EIA report analysis show that the identified shortcomings of the legislative requirements regarding EIA reports are reflected in the unsatisfactory quality of these reports. There are gaps in the legislative requirements such as the requirement for development and environment description, mitigation, and monitoring measures, impacts identification, and risk assessment methodologies which aligned with the shortcomings found during the analysis of the EIA report.

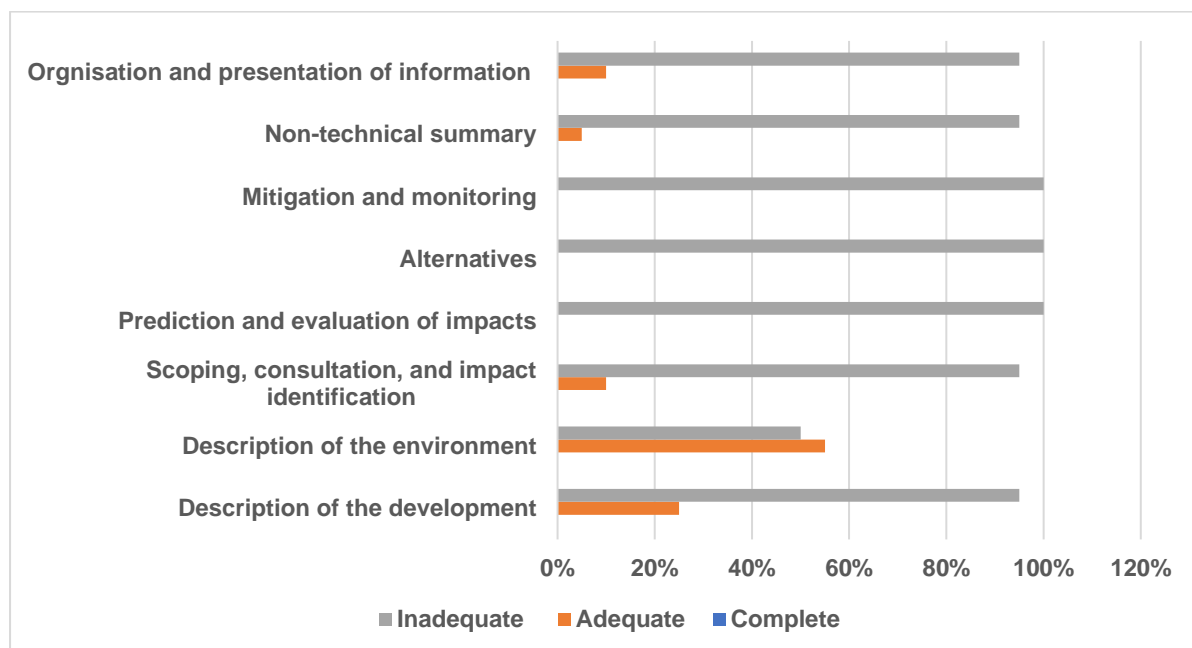


Figure 9. Summary results of the Namibian EIA report evaluation

6.2.6. Country legal context

Table E-6 (Appendix E) provides an evaluation of the country legal context of Namibia. It shows that the country legal context is efficient in meeting the requirements of the Constitution to support sustainable development and environmental protection. Articles 91(c) and 95(l) of The Constitution of the Republic of Namibia of 1990 provide the basis for the establishment of development policies and legislation and the promotion of sustainability in Namibia. Through the mandate of the Constitution, environmental policies such as Namibia's Environmental Assessment Policy of 1995 were formed. The Environmental Assessment Policy was approved in August 1994. It provides a definition for EIA and its procedural steps as well as the EIA report. It was used as the basis for the EIA system after the independence of Namibia in 1990 until the promulgation of EMA in 2007. Also, environmental legislation such as the EMA of 2007 and the Water Resources Management Act of 2013 was promulgated. However, particular weaknesses emerged when evaluating the country legal context of Namibia. According to the findings, there are no environmental standards, competent judiciary bodies for environmental issues, laws that ensure transparency and accountability of decision-making, information access, and public involvement in decision-making. An opportunity was given to the interviewees to discuss any concerns or issues relevant to the country legal context during the interview process. One research participant highlighted that South African environmental standards are used in the implementation of EIA because there are no national environmental standards in the Namibian context.

6.2.7. Political context

As indicated in Table E-7 (Appendix E), the political context of Namibia shows that the country has signed some environmental conventions as required by the Constitution and the relevant environmental legislation. For instance, Namibia was a signatory to many international environmental agreements such as the 1992 United Nations Framework Convention on Climate Change, and the 1992 Convention on Biological Diversity. Despite the country's political commitment to the international

interest in environmental protection, Namibia has not ratified significant conventions related to EIA such as the Convention on Environmental Impact Assessment in a Transboundary Context, which obligates its Parties to establish relevant EIA procedures for the assessment of activities' impacts. Another important element revealed by the findings is that there is no clear evidence that describes the influence of the country's political system on the development of the EIA legal regime. However, there is an indication that the development of EIA legislation is influenced by the conflict of interest of different groups during the consultation process of EIA legislation development. As is evident from the reviewed literature, there is an indication that the current institutional arrangement of the EIA competent authority (DEA) under the government ministry (MEFT) in Namibia lacks independence and autonomy in EIA administration.

A further issue associated with the lack of autonomy is that the financial and technical resources available for the competent authority to achieve its duties and responsibilities are not adequate. This points to the concern regarding the political context's influence on the EIA administration and decision-making. Furthermore, Three of the five research participants raised serious concerns about the influence of power relations and conflicts of interest on the EIA administration. One interviewee revealed that power relations and supportive and influential connections influenced EIA decision-making in some instances. For instance, some project proponents, particularly international clients, do not want to follow the legislated EIA process. They tend to take shortcuts and influence the EIA authorisation process through ways of power relations and corruption. Another example was provided by a research participant, highlighting that some of the EIA competent authority staff are owners of environmental consulting companies or shareholders in development projects, or friends of project proponents. This increases the likelihood of conflicts of interest and favouritism during the reviewing and decision-making processes, which leads to the approval of the projects even though the EIAs were poorly done. As a consequence, the EIA competent authority may be more vulnerable to government interference, political pressure, corruption, and bribery.

6.2.8. Socio-economic context

Table E-8 (Appendix E) shows that Namibia is experiencing a challenging socio-economic context. This is due to low HDI, inequality, poverty, unemployment, and literacy issues. For instance, Namibia's HDI is 0.615, which puts the country of Namibia in the medium human development categorisation, positioned at 139 out of 191 countries. Namibia's HDI value changed from 0.579 to 0.615 between 1990 and 2021 (UNDP 2021b). Namibia is among the countries with a high unemployment rate, particularly in Africa. The 2018 Namibia Labour Force Survey indicates that the country's overall unemployment rate stands at 33.4% in 2018 (Namibia Statistics Agency 2019). The key informant interviews show that the socio-economic context of Namibia influences the EIA system performance, particularly EIA decision-making. For instance, Three of the five research participants pointed out that there were cases of projects, especially government projects, being approved regardless of their significant environmental impacts, without going through the main process of EIA.

6.2.9. Environmental condition context

Table E-9 (Appendix E) provides an evaluation of the environmental condition of Namibia. It is indicated that the country faces significant environmental issues such as land degradation, soil erosion, and contamination, loss of natural resources, droughts, deforestation, water, and air pollution. These issues usually occur because of poor land uses, climatic variations, household farming, agriculture activities, infrastructure activities, mining activities, industrial activities, overstocking, and overgrazing. Additionally, the challenging environmental conditions in the Namibian context were discussed by a few interviewees. Three of the five research participants highlighted that environmental issues are not a high priority in Namibia. It is more about enhancing the country's economy by fighting poverty and creating employment opportunities. For instance, an interviewee spoke about a mining licence that was issued to an offshore proposed marine phosphate-mining project (Sandpiper) southwest of Walvis Bay in Namibia in 2011. This proposed project was opposed by some organisations and taken to Namibia's High Court due to the associated implications for the commercial fishing industry and the interference with fish

behaviour. The High Court declined to invalidate the mining licence awarded, although it found that the project proponent failed to obtain the ECC before carrying out any mining activity. The proposed project is expected to create 4200 jobs in addition to the economic value that the project will add to the integrated fertilizer industry of the country. This is an example of the socio-economic values that override the importance of protecting the Namibian environmental context.

6.2.10. EIA stakeholders' capacity

Evidence from this research highlights that there is a lack of capacity among the EIA stakeholders in the Namibian context. As indicated in Table E-10 (Appendix E), the issues raised include a lack of experience, training, and appropriate qualification among EIA actors. As is evident from the reviewed literature, EIA system performance is influenced by the limited capacity in terms of experience, training, and the relevant qualifications of the EIA officers within the EIA competent authorities. This affects the ability of the competent authorities to accomplish their roles according to the EIA legislation. Consequently, there is a lack of compliance with the legislated timeframes, which affects the project proponent and EIA consultants. Also, there is a concern about the reviewing process of the EIA report quality, which is conducted by evaluators lacking the necessary skills and experience. This was reflected in the approval of unsatisfactory EIA reports by the staff of EIA competent authorities. Similarly, the capacity of the EAPs and specialists is a particular concern that was considered in the literature. Although there is no evidence about the level of competencies of the EIA consultants and specialists, the absence of official registration authorities for both consultants and specialists raises a question about their capacity. Therefore, the number, qualifications, skills, and experience of the EIA consultants and specialists can not be determined or judged. This is very concerning as there is no official registration authority that ensures the core competency of such important EIA actors. Moreover, the reviewed literature also considered the capacity of the project proponent. It is indicated that there is a lack of environmental awareness, compliance with the legislated EIA system, adherence to the ECC conditions of approval, and use of power relations to influence EIA implementation and the EAPs are prevalent issues among the project

proponents. A further concern is the capacity of the I&APs, which is regarded as low. The I&APs, with the exception of some environmental organisations, tend to focus on employment opportunities during the public participation process with less environmental interest.

The research participants agreed on the lack of capacity across the EIA stakeholders in the Namibian context. All the interviewees raised concerns similar to those found in the reviewed literature. For example, a research participant indicated that over 80% of the attendees of the public participation process hand their CVs looking for jobs *‘The I&APs generally lack the understanding of the purpose of the public consultation process and EIA, 80% of the public consultation responses are about job opportunities, and the attendees tend to handle their CVs hoping for work’.*

Another interviewee mentioned that the project proponents are mostly interested in getting the ECC quickly with little concern for protecting the environment. Another research participant mentioned that some project proponents (in this case international Asian companies) are not strict as they tend to influence the EIA decision-making using power relations and other ways *‘The awareness and compliance by the project proponents are lacking as some project proponents tend to take shortcuts to escape proper EIA process through some relationships with ministers and deputy ministers to fasten the EIA process by influencing EIA decision-making’.*

The capacity of the EIA competent authorities’ staff was a particular concern of the research participants. Four of the five interviewees highlighted the same issues *‘The competence of the EIA competent authority employees is limited’* as was raised in the literature. Finally, the interviewees notably considered the consequences of not having a formal registration and certification authority for both EIA consultants and specialists. They emphasised that it is a serious challenge that should be addressed to improve the capacity of EAPs and specialists.

Findings on the country context indicated that the country legal context, political context, socio-economic context, and the EIA stakeholders ‘capacity significantly affect the Namibian EIA system performance. The highlighted contextual challenges such as the weak country legal context support, political interference, socio-

economic issues, and limited EIA actors' capacity interacted with the systemic components of EIA, influencing the performance of EIA.

6.3. Discussion

The evaluation approach taken throughout this case study was used to assess EIA system performance in relation to the country context of Namibia. Through this approach, it was observed that there is a relationship between EIA system performance and the country context in which it exists. The findings illustrate that EIA system performance in Namibia is limited and its country context is a key issue that influences EIA performance. The development, implementation, and enforcement of the EIA system were influenced by the Namibian context, which resulted in its limited performance. For the Namibian case study, three emerging themes that describe the relationship between EIA system performance and the Namibian context have been identified and are discussed below.

6.3.1. Inadequate EIA legislation

In Namibia, the EIA legislative framework consisting of the EMA of 2007, the EIA Regulations of 2012, and the relevant EIA guidelines form the basis of the EIA system. Articles 91(c) and 95(l) of the Namibian Constitution guided the adoption of environmental policy implementation instruments such as the EIA for sustainable development. The EMA of 2007 and the 2012 EIA Regulations established the purpose and systemic components of EIA. However, its performance is limited. An interviewed EIA professional mentioned that '*EIA legislation needs a lot of work, but it is better than nothing*'. This quote indicates the inadequacy of the EIA legislation in the Namibian context.

As is evident from the findings, there are numerous shortcomings within the systemic components of EIA. The EIA legislation lacks provision for key fundamental aspects of the EIA system, including overall timeframes for EIA steps from screening to decision-making. The list of activities in the EIA Regulations is misinterpreted due to a lack of thresholds to determine the type of assessment required and the scope of

EIA. There are insufficient guidelines for the implementation of the different stages of EIA such as screening, scoping, EIA report preparation, EMP as well as EIA sector guidelines. The EIA legal regime also does not require EAPs' registration or certification by a recognised body. Impact monitoring (EIA follow-up and auditing) is vaguely mentioned in the EIA legislation. The provisions for the EIA report failed to meet the recognised international best practice standards for EIA report preparation. Moreover, the duties of the EIA competent authorities are not well-described in the EIA legislation. Similar EIA legislation gaps have been observed in other countries in Africa such as Kenya and Ethiopia (Gebreyesus et al. 2017).

The EIA legislation development tends to be affected by the political, legal, environmental, and socio-economic contexts (Kolhoff et al. 2009; Marara et al. 2011; Kolhoff et al. 2013; Khosravi et al. 2019b). This was evident in the case study of Namibia. The legal and political context of Namibia is reflected in the inadequacy of the EIA legislation, resulting in limited EIA system performance due to significant weaknesses in the EIA legislation as highlighted above. This has led to the conduct of the EIAs not only based on the Namibian EIA legislation, the IFC and World Bank environmental principles, and the South African environmental standards were also used. Although the Constitution of Namibia provides for the development of relevant environmental policies and legislation, the country legal context showed no environmental standards, competent judiciary body for environmental issues, laws that ensure transparency and accountability of decision-making, or laws on access to information. Since the independence of Namibia in 1990, the EIA system was based on the Environmental Assessment Policy of 1994 until the promulgation of the EMA in 2007. As evident from the interviews, the existing gaps in the EIA legislative framework were likely a result of a lack of stakeholder engagement and consultation and a conflict of interest between different groups during the process of EIA legislation development. This is an indication of the weak country legal context that did not enhance the development of EIA legislation.

In addition, the political setting in Namibia did not promote great interest in the EIA. This could be seen in the lack of commitment to international EIA conventions such as the Espoo and the prolonged process of EIA legislation amendment. As noted in the findings, the process of EMA amendment started in 2016 and still awaits cabinet approval. The influence of the Namibian context on EIA legislation development is

reflected in the EIA implementation. This is a consequence of the observed weaknesses in the legislative framework. The quality of EIA reports which was found to be inadequate for decision-making mirrors the implementation of EIA. A key factor that contributed to the poor EIA reports quality was the lack of appropriate EIA report provisions. The legal requirements of EIA reports were inefficient in terms of meeting the standard requirements of EIA reports as shown in the IAU review package. For instance, the review areas of the development, environment, impact identification, prediction, and assessment, mitigation and monitoring, and alternatives were poorly described in the legislation and inadequately presented in the reports evaluated. It can be understood that the influence of the Namibian legal and political context interacted with developing EIA legislation resulting in inadequate EIA legislation and influencing the performance of the EIA system.

6.3.2. EIA administration weaknesses

In Namibia, EIA system performance is affected by the current administration framework of the EIA competent authority. Ensuring the implementation of EIA in accordance with the legal regime and the enforcement of EIA through conducting EIA follow-up and auditing are the responsibility of the EIA competent authorities (Ebisemiju 1993; UNEP 2004; Khosravi et al. 2019a). This is a common challenge within the EIA competent authorities in developing countries to ensure the implementation and enforcement of the EIA system (Wood 2003; Kirchhoff 2006; Badr 2009; Khosravi et al. 2019a; Nakwaya-Jacobus et al. 2021; Kamijo 2022). According to EMA, the DEA as the main EIA competent authority that is responsible for overseeing EIAs and issuing ECCs falls under the MEFT in Namibia. However, the established EIA competent authority has weaknesses related to the human, financial, and technical capacities which influence the implementation and enforcement of EIA.

The limited capacity issue of the EIA competent authority is exacerbated by the legislation gaps in terms of describing their roles and responsibilities. The cooperation between the EIA competent authority and EIA stakeholders such as the relevant sectors and EIA consultants is important to ensure the timely implementation of EIA complying with the legislative framework based on the

alignment of the relevant requirements across the responsible authorities (Kolhoff et al. 2009; Kabir and Momtaz 2013). Although the EIA legislation requires cooperation between the competent authorities, the related sectors, and EIA stakeholders such as the EAPs, there is no evidence obtained that illustrates how this works. On the contrary, this has been problematic as indicated in the interviews. There is a lack of cooperation between the related competent authorities and EIA key actors such as the EAPs. There is also no evidence available that describes any kind of cooperation mechanisms between the EIA competent authorities and EIA actors during the undertaken of the EIA steps such as screening, EIA report review, and public participation. Also, the processes of EIA report review and decision-making are not clearly outlined.

Consequently, the work of the EIA competent authority was described as '*huge chaos*' by a senior consultant. The EIA competent authority is ineffective in terms of communicating with the relevant stakeholders, keeping a record of EIA applications, and ensuring the accountability and transparency of the decision-making in the implementation of the EIA system. Furthermore, compliance with the legislated timeframes is significant because it provides certainty to the developers and I&APs, and reduces the potential for interference in EIA administration and decision-making (Alberts et al. 2022). The Namibian EIA competent authorities are not complying with the legislated timeframes of the EIA. Consequently, EIA stakeholders such as the EAPs and project proponents are affected due to delays in the EIA administration and decision-making. This usually affects the pace of socio-economic development in the country.

There is an issue of centralised EIA administration in addition to the lack of human, financial, and technical capacity. This has made the EIA competent authority susceptible to the effect of the political context in terms of power relations and corruption. It is stated that EIA administration outcomes tend to be politically driven in the developing country context (Marara et al. 2011; Runhaar 2013; McCullough 2017; Khosravi et al. 2019c). In Namibia, the EIA administration is centralised under the DEA. The process of EIA from the beginning to decision-making falls under the DEA. Consequently, it is found that the EIA competent authority is more vulnerable to government interference, political pressure, corruption, and bribery. This is not only observed in the Namibian context as countries like Cameroon encounter a

similar issue (Bitondo and André 2007). This denotes that the EIA competent authority lacks autonomy and independence. This is supported by examples given by some interviewees in which some projects were approved due to the influence of project proponents through power relations and supportive and influential connections. A further example includes some projects being approved without EIAs due to government interference. This also provides an illustration of the socio-economic context's influence on EIA decision-making, which indicates that socio-economic development is more important than environmental protection in the Namibian context.

The capacity of the competent authorities is important in terms of ensuring EIA system enforcement (Khadka and Shrestha 2011; Kolhoff et al. 2016). EIA follow-up and auditing is an integral part of the EIA system that includes monitoring and auditing of the EMPs and ensures compliance with the conditions of approval (UNEP 2004; Glasson et al. 2012). However, EIA follow-up auditing is lacking in developing countries (Alers 2016; Khosravi et al. 2019a). As indicated previously, EIA follow-up and auditing were not adequately covered in the Namibian EIA legislation. This is aggravated by the limited human, financial, and technical capacity of the EIA competent authority, which tends to be the cause for the limited EIA enforcement in Namibia. As highlighted, the EIA competent authority was not appropriately enforcing EIA, particularly the conditions set out in EMP reports. The EIA competent authority lacked the capability for conducting adequate monitoring and follow-up activities to ensure the enforcement of the EMP due to political and socio-economic pressure on the EIA administration in Namibia.

6.3.3. The limited capacity of EIA stakeholders

The issue of the limited capacity among EIA stakeholders in developing countries affects EIA system performance (Economic Commission for Africa 2005; Campion and Essel 2013; Bitondo et al. 2014; Khosravi et al. 2019c; Alberts 2020; Khan et al. 2020; Kahangirwe and Vanclay 2022). This key challenge was evident when evaluating the EIA stakeholder's capacity in the Namibian context. The appropriate skills, experience, and training are needed within the EIA competent authority to ensure EIA implementation and enforcement in accordance with the regulatory

frameworks (UNEP 2004; Economic Commission for Africa 2005; Khadka and Shrestha 2011; Marara et al. 2011; Kolhoff et al. 2016). The lack of skills, experience, and training in the EIA competent authority was observed as a constraint to the Namibian EIA system performance. The skills, experience, and qualifications of the EIA competent authorities' officials tend to be insufficient. This has implications for the review of EIA and decision-making, cooperation with the relevant EIA actors, complying with EIA timeframes, conducting EIA monitoring, and follow-up on the EMPs. A further reason for the lack of EIA officials' capacity is the deficiencies in the EIA legislation related to the roles and responsibilities of the EIA officials that ensure accountability and transparency and limits the influence of conflicts of interest. This was reflected in the approval of the poor EIA reports quality due to the lack of clear approaches for the EIA reports review and decision-making.

A further constraint was highlighted as the lack of capacity to conduct EIAs by the EAPs and specialists in Namibia. The EIA legislation does not require the registration and certification of the EAPs and specialists. In the Namibian context, the number, qualifications, and experience of the EAPs and specialists were unknown. This condition may explain the inadequate quality of the reports. The importance of the capacity of the EAPs and specialists as identified in this study is in line with other studies globally (Clausen et al. 2011; Morrison-Saunders and Retief 2012; Zhang et al. 2018). A further issue is the career change of some qualified EAPs as indicated in the interviews. Some EAPs are moving to academia due to the competition from inexperienced EAPs, who attract project proponents by conducting EIAs at low rates.

Furthermore, it was found that the capacity of the project proponents is lacking in the Namibian context. They tend to have little interest in environmental protection, lack compliance with the legislated EIA requirements, and adherence to the ECC conditions of approval. The capacity of the project proponent in terms of environmental awareness and financial resources was related by other researchers to EIA system performance (Stoeglehner et al. 2009; Jones and Fischer 2016; Kolhoff et al. 2016). It seems that the issues associated with EIA legislation and administration such as the lack of decision-making criteria, accountability, and transparency regulations have opened the door to the dishonest project proponents to use different means such as power relations to influence making EIA decisions.

Furthermore, the participation of the general public in the EIA system is important through the public participation process (UNEP 2004; Kakonge 2006a; Kolhoff et al. 2009; Marara et al. 2011). In the case study of Namibia, it appears that the effectiveness of the EIA public participation is affected by socio-economic issues. The environmental awareness of I&APs seems to be low as they tend to focus on job opportunities and employment. The capacity of EIA stakeholders is an issue in another African context such as Rwanda (Sharma and Hategekimana 2018).

6.4. Conclusion

The case study of Namibia concludes that the EIA system performance is limited. The used evaluation approach in this case study led to an understanding of how the country context interacts with the EIA system. The key deliverables of this case study are that the EIA stakeholders' capacity, country legal, political, and socio-economic context of Namibia significantly affected the development, implementation, and enforcement of the EIA system, thereby influencing its performance.

CHAPTER 7 – EIA SYSTEM PERFORMANCE IN MALAWI

Chapter 7 briefly describes the history of the EIA in Malawi. The results of applying the developed approach for EIA system performance and the country context of Malawi are presented (document analysis sources are provided in Appendix F and will not be listed in Chapter 7). This chapter is concluded with a discussion and conclusion of the EIA system performance in relation to the Malawian context.

7.1. Overview of EIA in Malawi

The Environment Management Act (EMA), No. 19 of 2017 is the main legislative framework in Malawi (GoM 2017a). The principal goals of the EMA are to provide management of the environment on a sustainable basis through environmental management tools rooted in the Act. The EMA was first formulated in 1996, prescribing the EIA Regulations, EIA competent authority, EIA procedural steps, and EIA guidelines (GoM 1996). Before the introduction of EMA in 1996 as the main legal environmental management legislation in Malawi, other related environmental laws did not provide for national environmental principles and lacked guidance for and coherence to environmental management (Banda 2018). The government of Malawi considered the need for environmental policy and law to consider the environmental challenges that the country encountered, leading to the development of the National Environmental Action Plan (NEAP) of 1994. This was followed by the National Environmental Policy of 1996 (revised in 2004), which guided the establishment of EMA, No. 23 of 1996 (Dobson 1997; GoM 2004; Banda 2018). The EMA, No. 23 of 1996 was promulgated as the main environmental legislation to ensure environmental management and protection of natural resources in Malawi (GoM 1996). According to the EMA of 1996, the EIA competent authority responsible for EIAs was the Environmental Affairs Department (EAD) in the Ministry of Natural Resources, Energy, and Mining. In 2017, EMA, No. 19 of 2017 was approved by the parliament and entered into force in November 2019 to repeal the 1996-EMA. The EMA of 2017 presented a new EIA competent authority, which is the MEPA.

According to the EMA of 2017, MEPA is in charge of the Environmental and Social Impact Assessment (ESIA) implementation and enforcement, Currently, the ESIA process is based on the EMA of 2017 and the ESIA guidelines of 1996. which consists of screening (based on the list of Activities), scoping (project brief), ESIA report, EMP, and appeal process as provided in the ESIA legal framework (EMA of 1996 and EIA guidelines of 1997 (GoM 1996; GoM 1997). Figure 10 below illustrates the EIA process in Malawi.

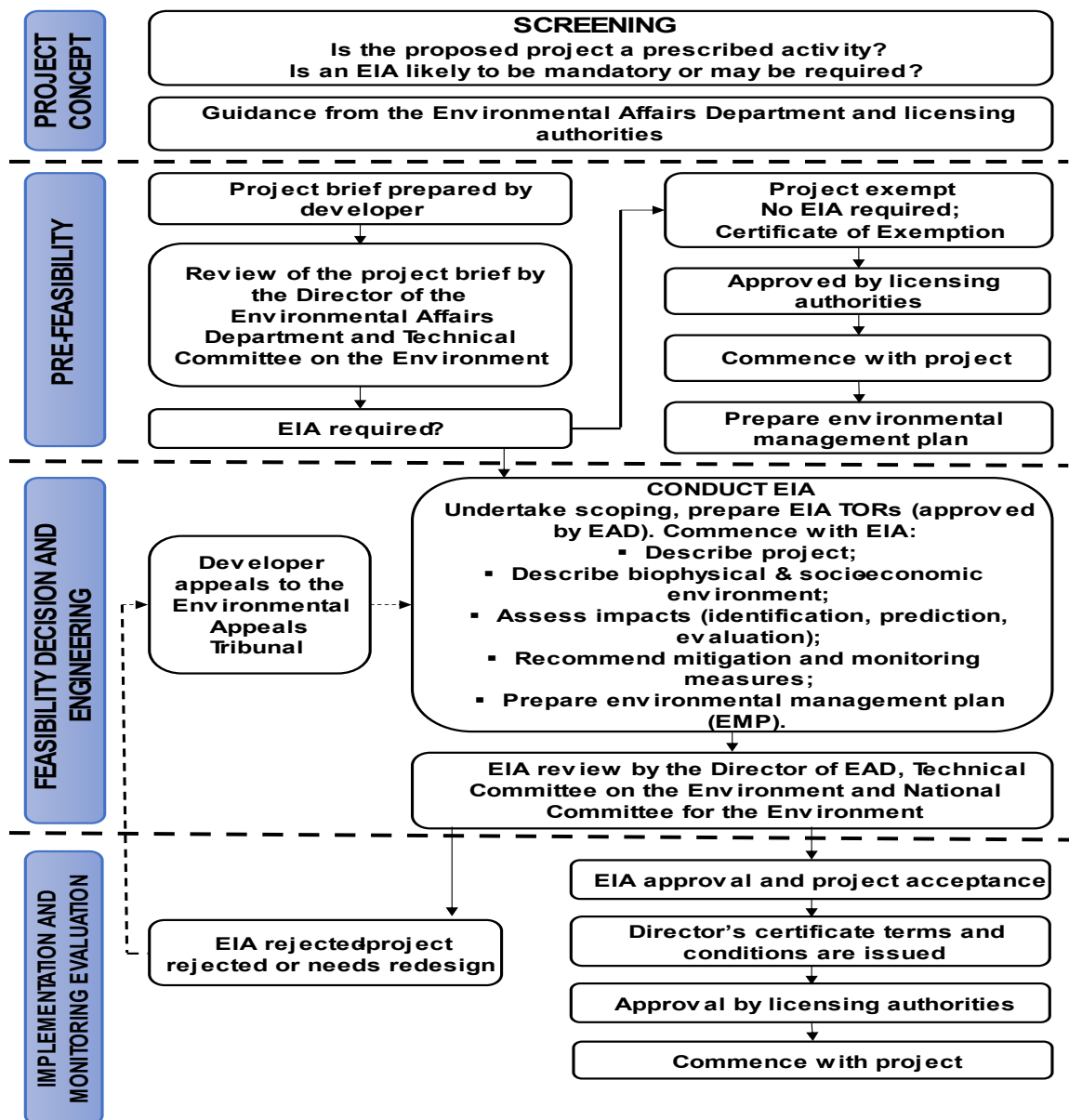


Figure 10. ESIA process in Malawi (Walmsley and Hussleman 2020)

7.2. EIA system performance in Malawi

The Malawian EIA system performance was assessed by conducting the evaluation approach manifested in Chapter 3 and the methodology provided in Chapter 4. The evaluation of legislation, relevant literature, EIA reports, and the key informant interviews have been combined and are presented below.

7.2.1. EIA legislation

The legislative framework of the EIA system is currently based on the EMA, No. 19 of 2017, and ESIA guidelines of 1997. The Regulations and guidelines in line with the 2017-EMA were unavailable publicly. An evaluation of the ESIA legislation in Malawi highlights that the ESIA system is based on a legislative framework that is not adequate. Table F-1 (Appendix F) provides a detailed analysis of the ESIA legislation for the case study of Malawi. The EMA of 2017 provides the legal mandate for EIA as in form of an ESIA. Section 2, part I of the 2017-EMA defines the ESIA as an 'a systematic evaluation of a project to determine its impact on the physical and ecological environment and the conservation of natural resources on the social and socio-economic fabric of a particular community and any social change process that may be associated with any project'. Meanwhile, part VI of the 2017-EMA mentions the legal requirements of the ESIA reports, environmental audits, monitoring, and fees. Furthermore, Section 3, part II of the 2017-EMA specifies the role of the ESIA as a tool for environmental protection and sustainable development. The ESIA legal regime defines and requires public consultation during environmental decision-making. It also names the competent authority responsible for the ESIA in Malawi as the MEPA.

Notwithstanding the highlighted strengths of the ESIA legal regime, several weaknesses of the legislative framework are captured. For example, the Act requires the submission of ESIA and Environmental and Social Management Programme (ESMP) reports without providing requirements for the contents of the reports. The roles and duties of the EIA stakeholders were a further gap in the Act. The project proponent is defined without clearly providing for the responsibilities that the proponent should undertake as part of the ESIA. Similarly, the EMA of 2017 does not

provide a legal mandate for the EIA consultants' certification and registration or describe their duties and responsibilities in Malawi. In addition, the EMA of 2017 lacked any guidance on the ESIA time framework. However, the EIA guidelines of 1996 described some of the time limits required in the ESIA process. The timeframes were provided for some steps of the EIA such as making decisions on the project brief and ToR. There was no time framework on the total time required to conduct any of the ESIA stages.

The monitoring and auditing of the ESIA were clearly required in the Act but with no Regulations or guidelines that describe the undertaking of this step of the ESIA. The interpretation of the EMA of 2017 for the ESIA implementation was based on outdated EIA guidelines of 1997, which were developed in line with the EMA of 1996. The relevant ESIA Regulations and guidelines of the 2017-EMA were not publicly accessible. This has caused confusion in the understanding of the Act which is reflected in the implementation of the ESIA. For instance, the screening stage of the ESIA was based on the list of prescribed projects provided in the EIA guidelines of 1997. This is a result of the absence of ESIA Regulations and guidelines of the EMA of 2017. Other stages of ESIA also lacked guidance for their implementation in line with the EMA of 2017 such as public participation, ESIA monitoring and auditing, and the preparation of ESIA and ESMP reports. Consequently, the ESIA was implemented based on the EIA guidelines of 1997 which are developed in accordance with the EMA of 1996.

The Malawian ESIA legislation was further evaluated through a series of interviews conducted with eight EIA professionals. The semi-structured interviews were focused on obtaining the EIA professionals' perspectives on the ESIA legislation in the country context of Malawi. One of the eight interviewed ESIA consultants mentioned that *'ESIA performance is limited and does not promote sustainable development in Malawi'*. The research participants also shared the following concerns:

- The ESIA legal regime is currently inadequate due to the misinterpretation of the EMA provisions such as the list of activities, lack of appropriate ESIA Regulations and guidelines, and outdated ESIA guidelines. A senior EIA consultant indicated that ESIA legislation is not a priority in Malawi, as the overriding concern of the government is the socio-economic development

because the country faces poverty issues. Another participant mentioned that, when there is a discussion about enhancing the environmental legislation, the response is that *'There are many laws in the country that are blocking why we are focusing on this one (environmental law)'*. Consequently, three of the eight interviewees indicated that the EIA practice for international projects is based on not only the Malawian ESIA legislation, but also the IFC, and World Bank environmental principles. This is because EIA legislation is inadequate.

- There is no legal requirement for the registration and certification of EAPs. The former EIA competent authority (EAD) keeps a list of local and international EIA consultants. However, there was no legal basis for this list nor a formal criterion on which an EIA consultant can be registered or removed. This is a major issue affecting the business of EIA consulting and the quality of ESIA studies due to the lack of a code of conduct. The absence of legislation to regulate EAPs in Malawi has led to allowing EAPs with inadequate qualifications, skills, and experience to conduct ESIA. Moreover, a research participant mentioned some members of the former EIA competent authority (EAD) were ESIA consultants who were also reviewers of ESIA and ESMP reports. This is causing a massive issue of conflict of interest and favouritism leading to another issue of subjectivity in reviewing the ESIA and ESMP reports. This condition is exacerbated by the low commitment of some project proponents to pay the EAPs and the attraction of other ESIA consultants with low rates. Therefore, four of the eight ESIA consultants mentioned that they are working less on ESIA and focusing more on teaching and giving training courses on environmental management and assessment.
- A further issue highlighted was the high cost of ESIA and the inadequate timeframes prescribed in the Act. According to a research participant, ESIA is costly and time-consuming, leading to discouraging developers to undertake ESIA, especially local developers. This is inhibiting the development process because of cost and delay. This condition led some of the project proponents to start their projects without an ESIA certificate.

7.2.2. EIA competent authority

Table F-2 (Appendix F) provides a detailed analysis of the EIA competent authority for the case study of Malawi. As indicated, the competent authority that supervises the ESIA system and makes the final ESIA decision is the MEPA. Currently, MEPA holds the mandate to become the strongest and most credible environmental regulator in Malawi. MEPA was established when EMA entered into force in November 2019, to address the deficiencies of the former EIA competent authority (EAD) linked to weak EIA implementation and enforcement. The 2017-EMA describes the formalisation and structure of MEPA, including its establishment, powers, functions, and composition. For instance, MEPA is responsible for initiating environmental legislative proposals, standards, best practice principles, and guidelines. MEPA is also responsible for the ESIA administration, review, and decision-making; however, the Act does not provide the process and decision-making criteria for any ESIA stage such as screening, scoping, ToR, ESIA report review, or ESIA follow-up and auditing.

Furthermore, under the EMA of 2017, the MEPA is required to coordinate, monitor, supervise, and consult with all relevant stakeholders and sectors with regards to any activities relating to environmental management and the use of natural resources. However, there was no information available that describes the engagement of related sectors in the ESIA process. EMA gives the competent authority (MEPA) more independence by becoming an independent authority and giving it the power to manage its administrative and financial resources. Nevertheless, the Act is making the MEPA a semi-autonomous authority, and its autonomy and independence are uncertain. According to the EMA, the MEPA's Chairperson, Vice-Chairperson, and five Body Members shall be appointed by the President. Based on the political role in the appointment of the MEPA administration and the relationship between the Malawian government and MEPA, the degree of independence and autonomy of MEPA is unknown. Moreover, there is no clear indication of compliance with the administrative law to promote environmental justice in administrative actions (ESIA decision-making) and access to information.

All the interviewees acknowledged that the ESIA system performance is challenged by the EIA competent authority in Malawi. In particular, they shared concerns about the following issues:

- The major issues related to the former EIA competent authority are the lack of implementation and enforcement of ESIA legislation. This is due to insufficient human, technical, and financial resources. A senior ESIA consultant stated that *'Government always says that they do not have the money and capacity to ensure the implementation and enforcement of environmental laws'*. As a result, the former EIA competent authority could not ensure the implementation and enforcement of ESIA at the national and district level. However, the new EIA competent authority (MEPA) is more independent in terms of managing its financial resources according to the EMA of 2017. This is supposed to contribute to improving its human, financial, and technical capacity to ensure ESIA implementation and enforcement.
- A further weakness is the lack of collaboration between the former EIA competent authority (EAD) and the related environmental sectors. Similarly, there is a lack of cooperation between the ESIA consultants and the EIA competent authority. This is consequently affecting the ESIA consultant and the developer due to time delays in the ESIA process, which tends to take six months according to a research participant.
- The EAD still exists, and the MEPA is taking over the EAD's responsibilities (transitional stage). This could cause confusion between both entities in terms of the distribution of responsibilities as the EAD's staff is moving to the MEPA.

7.2.3. EIA procedural steps

Table F-3 (Appendix F) shows the evaluation results of the EIA procedural steps. The results demonstrate that the EIA procedural steps in the Malawian context include the main operating principles, such as screening, scoping, ToR, public consultation, ESIA report content, and ESIA report review. However, there are gaps in the required steps of the ESIA process. The main issues associated with the current procedural steps of the ESIA are firstly the absence of ESIA Regulations and

guidelines that guide the undertaking of the process in line with the EMA of 2017. For instance, screening is based on the list of activities, screening criteria, and the project brief provided in the EIA guidelines of 1997. The guidelines for the screening stage of ESIA are old and were developed to guide EIA implementation following the EMA of 1996. This creates a gap between the 2017-EMA and EIA guidelines of 1997 which may mislead the implementation of ESIA.

Secondly, the timeframes for the ESIA implementation are insufficient. According to the EIA guidelines of 1997, the time needed to decide on the project brief, ToR, ESIA, and ESMP reports by the competent authority was indicated. However, the time limits required to undertake the screening, scoping, public consultation, ESIA, and ESMP reports preparation were not mentioned. Other weaknesses of the ESIA procedural steps include the lack of specialist studies requirements and the inadequate provisions for ESIA follow-up and auditing. The specialist studies do not form part of the ESIA process, and the EIA follow-up and auditing are insufficiently considered in the legal regime.

An opportunity was given to the interviewees to discuss any concerns or issues relevant to the ESIA procedural steps. The main concerns of all research participants were the misinterpretation of the list of activities and the lack of appropriate ESIA time limits. The list of activities prescribed in the EIA guidelines of 1997 lacked thresholds to make decisions regarding activities that require an ESIA. The time limits for conducting different stages of ESIA were inadequately provided in the guidelines. This according to the views of the interviewed consultants makes the ESIA process lengthy and costly.

The Malawian ESIA system is based on a limited legislative framework. Analysis of the system components highlighted several weaknesses including an absence of provisions to regulate ESIA consultants, lack of appropriate ESIA Regulations and guidelines, inadequate description of the roles and duties of the ESIA stakeholders, misinterpretation of the list of activities, and inappropriate time frameworks of ESIA implementation.

7.2.4. EIA report - legal requirements

As shown in Table F-4 (Appendix F), the evaluation of the legal requirements for the EIA report demonstrates both strengths and weaknesses across the review areas.

The main conclusions are shown below:

- A description of the project is required in terms of type, location, size, layout, background, and the reasons or necessity for it. Also, the project input (raw materials), project output (products), project processes, major types of equipment, maps, flow diagrams, and photographs of the project are required. However, this requirement does not extend to describing the project objectives and the time required for its construction, operations, and decommissioning. Likewise, information on the methods of construction, production, operations, and services of the project is not required. Considerations of any project accidents and emergencies are not specified. Moreover, the description of the quantities of materials needed, the types and quantities of wastes from the construction and operation of the project, and the methods of estimation are not required.
- The environmental description is required and should include a description of the spatial and temporal boundaries within which the environmental setting was considered, the existing condition of the physical, biological, and human environments of the project area, and the future environment without the project. Describing any activities in and around the land required for the project and the methods used to investigate the affected environment are not required as part of the legal requirements.
- Impact identification, scoping, and consultation are prescribed in the EIA report. It should include identification of the impacts during the scoping stage, sources of data, the objectives, methods, and results of public consultation during the EIA, and a complete record of all parties consulted. However, there are no requirements for describing and justifying the scoping method used, considering the effects of constructing, operating, and decommissioning the project. In addition, describing the methods used for impact identification and the rationale for using them are not indicated in the legal requirements.

- The prediction and evaluation of impacts are required and should cover a discussion of the sources or causes of the impacts, the severity of impacts (magnitude, extent, and duration), the likelihood of impacts, impact significance, methods used to forecast the impacts, the data gathered, and the methods and criteria used to judge impact severity and significance. There are weaknesses in this review area pertinent to describing the duration of the impacts, differentiating the project impacts from other impacts, and justifiably indicating the significance of impacts.
- Consideration of Alternatives is legally required to form part of the EIA report content. Project alternatives should include design and implementation strategies, size, site, technology, layout, raw materials, energy sources, and products. However, considering a no-action alternative, describing the main alternatives, justifying the selection of alternatives considering the environmental effects, alternatives comparison, and the future environmental conditions without the no-go option for the project are not legally required.
- Mitigation and monitoring measures are legally required. This review area has several weaknesses such as a lack of guidance on describing the mitigation measures and considering the mitigation measures during the project phases. Similarly, there is no requirement for justifying the choice of mitigation measures and their implementation, investigating the mitigation measures environmental impacts and their implications.
- The legal requirement indirectly mentioned the non-technical summary as part of the report content. It includes the expected impacts and management measures and should not exceed three pages. However, it does not include describing of the project and the environment, the assessment approach, the main findings, and any remaining or residual impacts.
- The EIA report's organisation and presentation of information are partially covered in the legal requirements of the EIA report. It should include sources of data and information, names, qualifications, and roles of the team members who carried out the EIA study. There are no legal requirements for incorporating the EIA legislation, details of the EAP, EIA competent authority, and project proponent developer. Likewise, describing the project, the EIA

purpose, the methods, and the data used are not required. The consideration of any challenges pertinent to the data and methods used is not required.

7.2.5. EIA report preparation

A sample of sixteen ESIA reports from a range of projects in Malawi was gathered as illustrated in Chapter 4 (section 4.2.1). The reports were evaluated, and the findings show that the EIA report's overall quality along with the review areas is inadequate for decision-making (I). Detailed results are shown in Table F-5 (Appendix F) and the summarised results are presented in Figure 11. The key reason for this finding is that the ESIA reports did not comply with the Malawian ESIA legislation and did not meet the EIA reports legal requirements, as set out in the IAU review package (Section A/Appendix A). The results demonstrated that all the review areas of the evaluated ESIA report failed considerably to meet the review package criteria. For instance, the review area of the development description was found to be inadequate for the decision-making in each of the reports assessed (100%). The common shortcomings included deficiencies related to providing the project design, layout, and the estimated duration of the project phases (construction, operation, and decommissioning). The methods of construction, production, operation activities, and services of the development project are either absent or not well-described.

Further weaknesses included a lack of describing the accidents or emergencies related to the project, quantities, and type of materials needed as well as energy generated during the different phases of the project. Another important shortcoming highlighted in the reviewed reports is the lack of describing the prediction of impacts and evaluation approach. Despite the legal requirement to provide information on the source, cause, severity, magnitude, extent, duration, likelihood, impact significance, and the methods and data used to evaluate impacts, all the reviewed reports (100%) failed to present such information. In addition, the mitigation and monitoring review area was insufficiently presented in all evaluated reports (100%). The methods used for the selection process of the mitigation and monitoring measures were not included. Describing the mitigation and monitoring measures in terms of effectiveness is also not addressed, and neither were the mitigation and monitoring measures implemented during the activity life cycle. Furthermore, the consideration

of any environmental effects and conflict with the benefits of mitigation measures were not mentioned in the reports. Other review areas such as the description of the environment, scoping, impact prediction and evaluation, alternatives, a summary of the report, and organisation of information were also poorly presented in the reports reviewed.

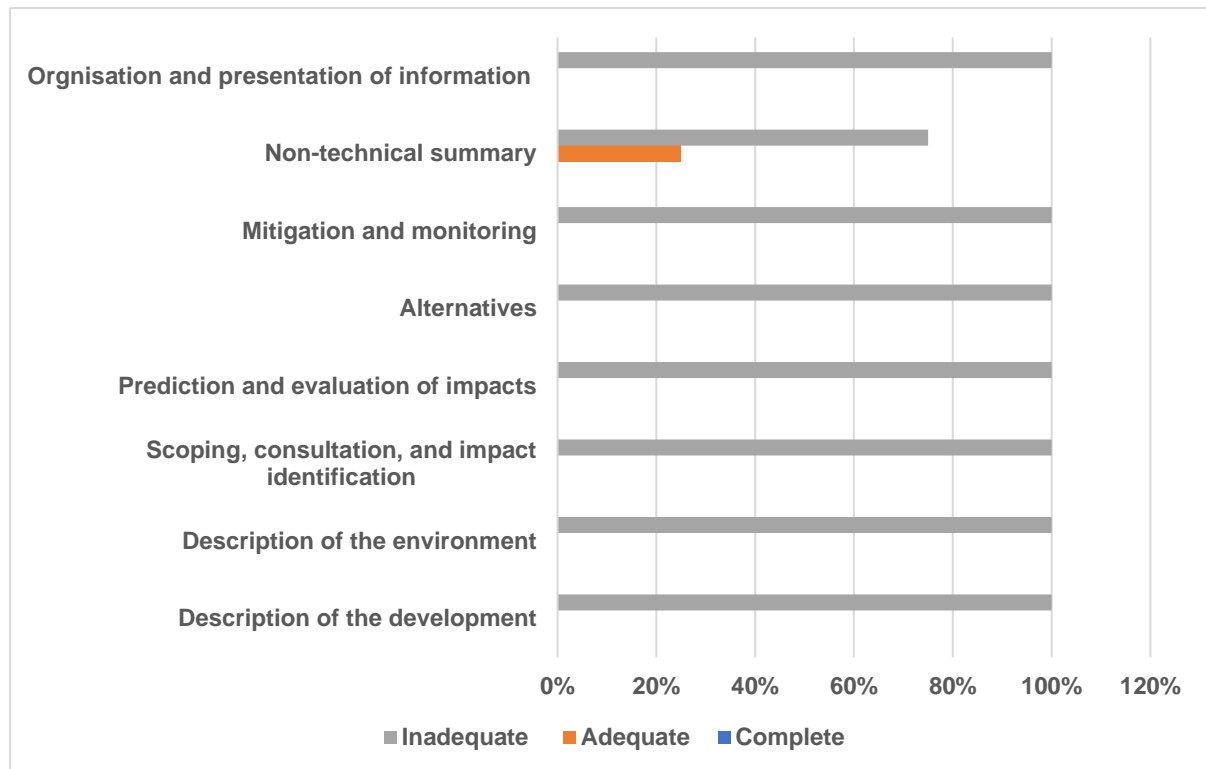


Figure 11. Summary results of the Malawian EIA report evaluation

Through the interview process, the research participants presented some concerns about the quality of the ESIA reports. Five of the eight research participants highlighted that the quality of ESIA reports is poor. According to the perspectives of four of the eight interviewees, the lack of a formal regulated authority for the registration and certification of ESIA consultants in Malawi has resulted in the poor implementation of ESIA and the inadequate quality of the reports. One interviewed ESIA consultant highlighted that, due to the lack of integrity and code of conduct, some EAPs provide false names and incorrect information in the ESIA reports. For instance, another research participant gave an example of this issue stating that

some ESIA reports mentioned the undertaken public consultation, and its output was incorporated in the report, however, it was not even done during the ESIA process.

The ESIA report results identified shortcomings in the legislative requirements of the ESIA report that were reflected in the inadequate quality of the ESIA reports. There are gaps in the legislative requirements of ESIA reports such as the development and environment description, mitigation, and monitoring measures, impacts identification, and risk assessment methodologies. These shortcomings were found in the EIA reports reviewed.

According to the evaluation results of the Malawian country context, there are contextual challenges such as political interference, socio-economic pressure, and limited ESIA actors' capacity that influence the performance of the ESIA system.

7.2.6. Country legal context

An evaluation of the Malawian legal context is illustrated in Table F-6 (Appendix F). It indicates that the Constitution of the Republic of Malawi demonstrates the importance of the environment in the country. Section 11(d), Chapter III of the Constitution has led to the development of the relevant environmental Acts and policies to promote sustainable development in Malawi. As a result, environmental legislation such as EMA and environmental policies such as the National Environmental Action Plan and the National Environmental Policy were introduced. ESIA's role to promote sustainable development in Malawi is clearly stated in the EMA and environmental policies. Relevant environmental legislation such as the Water Resources Act, No.2 of 2013, and the Mines and Mineral Act, 2019 are also given. Environmental standards which were developed by the Malawi Bureau of Standards are also included, such as the standards for drinking water, boreholes and well water quality, noise pollution (tolerance limits), and industrial effluents. Furthermore, the rights of every person to access information, lawful and procedurally fair administrative action, accountability, and transparency in public institutions are guaranteed by the Malawian Constitution. Establishment of the Environmental Tribunal that considers any appeals against any decisions or actions related to the environment made by the Authority, lead agency, Director General, or

Inspector is prescribed in the EMA of 2017. However, there was no information available about the existence and functionality of the Environmental Tribunal.

7.2.7. Political context

As indicated in Table F-7 (Appendix F), the political context of Malawi shows that the country has committed to some environmental conventions as required by the Constitution and the relevant environmental legislation. For instance, Malawi was a signatory to many global environmental agreements such as the Convention on International Plant Protection and the African Convention on Conservation of Nature and Natural Resources. Despite the country's political commitment to the international interest of environmental protection, Malawi has not ratified significant conventions related to EIA such as the Convention on Environmental Impact Assessment in a Transboundary Context, to assess the environmental impacts of development projects by conducting the EIA system.

There is a concern about the political influence on the development and amendment of the ESIA legal framework in Malawi. However, there is an indication of a weak motive to strengthen the EIA legal framework. The raised concern is that the political and economic considerations have influenced the development and integrity of the ESIA legislation in Malawi, as, there was an indication of governmental interference in the EIA decision-making under the EAD. This was observed in some government projects that were approved to conduct inappropriate ESIA processes or without ESIA. Therefore, the EMA of 2017 was developed to empower the ESIA competent authority to develop a more effective EIA legal regime that becomes more resistant to political economy pressures. The former EIA competent authority (EAD) was under the Ministry of Natural Resources, Energy, and Mining. Hence, the EAD was not independent in terms of the administrative structure, leading to a limited allocation of human and financial resources by the Ministry. This affected the ability of EAD to function properly, causing significant delays in the EIA process as a result of the limited human and financial resources. On the one hand, the MEPA is the current EIA competent authority that is more independent and financially empowered according to the EMA of 2017. On the other hand, the Body Members of MEPA who are responsible for the ESIA final decision are politically appointed. This could

indicate to some extent the possibility of political interference in ESIA decision-making and question the independence and autonomy of the MEPA. However, there is no evidence of political influence on EIA decision-making under the MEPA yet as it is still not fully operational.

An opportunity was given to the interviewees to discuss any concerns or issues relevant to the influence of the political context on the ESIA administration. Seven of the eight research participants were in agreement with the findings above. In general, they shared the perception that there is a lack of political will and commitment to environmental management and protection. They also indicated that the former ESIA competent authority was facing issues of conflict of interest and governmental interference, therefore the MEPA was introduced. One of the issues highlighted was the government interference in the ESIA administration. For instance, government projects were approved faster than private projects, and sometimes without ESIA to enhance economic development driven by political motives. One of the eight interviewees mentioned that it was hard for the EAD to autonomously fulfil its responsibilities without being influenced by the government power *'You cannot bite your own finger'*. A further example was given by a research participant stating that international investors are worse than local investors in terms of not complying with the EIA legislation in Malawi. This is because they are connected politically, and they use their power relations to commence projects without ESIA approval. Another concern highlighted by interviewed ESIA consultant was about the independence and autonomy of the MEPA. It was developed for more autonomy and independence as a competent authority, however, it is still controversial because the Body Members are appointed politically (appointed by the president). Therefore, the political context of Malawi appears to influence ESIA decision-making, implementation, and enforcement to some extent.

7.2.8. Socio-economic context

As demonstrated in Table F-8 (Appendix F), Malawi faces many socio-economic challenges. Malawi's underlying socio-economic issues include low HDI, poverty, various forms of inequality, a high rate of unemployment, and low literacy. The country's HDI value is 0.512, which puts the country of Malawi in the low human

development position at 169 out of 191 world-wide. Malawi's HDI value changed from 0.303 to 0.512 between 1990 and 2021 (UNDP 2021c). The current unemployment rate in Malawi is 7.02%, which increased by 0.3% in comparison to the previous year (World Bank 2021a).

The socio-economic context of Malawi was further discussed by the research participants. Five of the eight interviewees noted that the Malawian government focuses on economic development due to socio-economic issues such as poverty, which have made the Malawian community very vulnerable. One of the eight research participants highlighted that the government is more interested in economic development than environmental protection to meet the national demand for socio-economic development: *'ESIA is not a priority in the Malawian context, socio-economic development is a priority'*. According to the perceptions of three of the eight interviewees, there was a need to compromise on protecting the environment. One interviewee said that *'economic development comes first, and the environment comes second'*. One research participant perceived that the Malawian socio-economic context indirectly influenced the ESIA administration which is exacerbated by the political context of the country. This has affected the implementation and enforcement of the ESIA by the EAD due to insufficient human and financial resources and a lack of independence.

7.2.9. Environmental condition context

An evaluation of the environmental condition of Malawi was conducted. As is evident from Table F-9 (Appendix F), Malawi is experiencing numerous environmental challenges. Major environmental problems being experienced in Malawi include soil erosion, deforestation, natural resource degradation and depletion, a threat to ecosystems and biodiversity, human habitat degradation, air pollution, and climate change. This is, for instance, due to rapid population growth, agriculture, overgrazing activities, industrial activities, poverty, mining, inappropriate land, and fishing use. Additionally, the challenging environmental condition in the Malawian context was discussed by the eight research participants. They emphasised the need for addressing the environmental issues in the Malawian context. However, five of the eight interviewees mentioned that protecting the environment and addressing the

issues being experienced in Malawi is not a priority. For instance, one interviewed ESIA consultant said that *'The government considers the environmental issues as soft issues'*.

7.2.10. EIA stakeholders' capacity

Evidence from this research highlights that there is a lack of capacity among the ESIA stakeholders in the Malawian context. The issues raised include a lack of experience, training, and appropriate qualification among ESIA actors, as indicated in Table F-10 (Appendix F). As is evident from the reviewed literature, there is a lack of capacities in terms of experience, training, and the relevant qualifications of the ESIA officers within the former ESIA competent authority (EAD). Consequently, the time taken for the process of ESIA implementation is long, and there is a lack of active enforcement of ESIA follow-up, auditing, and monitoring. The MEPA is still not completely operational as the transitional process between EAD and MEPA is still ongoing. Moreover, the MEPA is taking over the responsibility and staff of the EAD. This could indicate that MEPA might face the same issue of the lack of staff capacity in the short term.

Similarly, the capacity of the EAPs and specialists is a particular concern that was considered in the literature. There is a lack of knowledge, qualifications, understanding of ESIA requirements, training, experience, and commitment to good EIA practice among the EIA consultants and specialists in Malawi. The EAPs and specialists are not regulated in Malawi. Despite the list of registered ESIA consultants provided on the website of EAD, there is no indication of the type of requirements or criteria which were used by the EAD to register or deregister ESIA consultants. The legislative gap related to the lack of EAPs and specialists' provisions to ensure the core competencies of such EIA actors is the likely cause of their lack of capacity. Moreover, the reviewed literature also considered the capacity of the project proponent. It is indicated that there is a lack of environmental awareness, compliance with the legislated ESIA, and commitment to ESIA implementation and enforcement. A further concern is the capacity of the I&APs, which is regarded as low. The I&APs focus on employment opportunities during the public participation process with less environmental interest.

The research participants shared similar perspectives on the highlighted lack of capacity across the ESIA stakeholders in the Malawian context. They discussed that the lack of ESIA stakeholders' capacity influences ESIA implementation and enforcement. A major issue raised by seven of the eight interviewees is the lack of provisions to regulate ESIA consultants and specialists. A research participant said that *'There is a lack of capacity among the EIA consultant and specialists due to lack of regulations and registration body responsible for the code of conduct leading to a poor quality of the reports'*. They also mentioned that the number of ESIA consultants and specialists (international and local) is unknown as there is a shortage of specialists such as biodiversity specialists. As a result, the ESIA is often conducted by different consultants with varying competencies and interests, who were also ESIA officials of the former competent authority. The implications include poor quality of the ESIA and ESMP reports, inadequate public consultation process, and variation in fees charged by the consultants to attract project proponents which may compromise the effectiveness of the ESIA implementation and its final output.

The capacity of the EAD's staff and current competent authorities is a big issue mentioned by all the interviewees *'There is an issue of limited capacity in terms of experience and training of the EIA competent authority staff'*. Four of the eight research participants were also concerned about the lack of capacity of some project proponents. It was suggested that the project proponents are usually not committed to implementing the ESMP as they are not financially prepared as they think of EIA as an obstacle to development, taking advantage of the lack of ESIA enforcement by the related competent authorities. One interviewed ESIA consultant mentioned that the project proponents are not committed to paying the EAPs' fee and the ESIA's cost *'Project developers usually do not have appropriate awareness of ESIA and in some cases do not undertake ESIA's'*. This usually happens because ESIA is costly and project proponents, particularly the local proponents, were financially unable to continue to fund the ESIA study and cover the EAP's fee. For that reason, some of the EAPs prefer to work with international clients who can fund the ESIA study.

A further issue indicated by a senior ESIA consultant is the community level of stakeholder engagement in the public consultation process. According to the view of one research participant, it is very low as the I&APs are interested in job opportunities, relocation, and compensation *'Public awareness of environmental*

protection and ESIA is very low'. It was also indicated that, in some cases, the community is not comfortable, in fact, *'terrified'* to participate and speak in the public consultation process when their local leaders are present if they are against the project.

7.3. Discussion

Through the evaluation of the Malawian ESIA system performance, it is found that the Malawian context influences the ESIA system leading to the limited performance of EIA. According to the findings of the Malawian case study, there is a relationship between ESIA system performance and the country context of Malawi. It is identified that the country context influences the development, implementation, and enforcement of the ESIA system, affecting its performance. For the Malawian case study, three emerging themes that demonstrate much of the performance of the ESIA system have been identified and are discussed below.

7.3.1. ESIA legislation shortcomings

The ESIA system in Malawi is based on a legislative framework, including the EMA of 2017 and the EIA guidelines of 1997. Section 11(d), Chapter III of the Malawian Constitution guided the adoption of environmental policy implementation instruments such as the EIA to promote sustainable development. Consequently, relevant environmental legislation and policies were introduced in Malawi. The EMA of 2017 and the 1997 ESIA guidelines established the purpose and systemic components of ESIA in the Malawian context for environmental management and natural resources protection.

However, the ESIA system performance is limited in the case of Malawi. An interviewed ESIA consultant stated that *'ESIA performance is limited and does not promote sustainable development in Malawi'*. As is evident from the findings, there are numerous weaknesses within the systemic components of ESIA. The main ESIA legislative shortcomings of the EMA of 2017 are mainly attributed to the lack of the relevant ESIA Regulations and guidelines as the ESIA guidelines of 1997 are still

used for interpreting the EMA of 2017. These guidelines are considered outdated and inadequately interpret the EMA of 2017. The main issues of the ESIA legal regime include a lack of appropriate Regulations and guidelines for the implementation of different stages of the ESIA such as screening, scoping, public consultation, ESIA and ESMP, and ESIA follow-up and auditing. Other legislative shortcomings include misalignment between the EMA of 2017 and ESIA guidelines of 1997, lack of provisions for the registration and certification of EAPs, lack of adequate time frameworks and cost of the ESIA implementation, lack of clear responsibilities of the EIA stakeholders such as the EAPs and the EIA competent authority, and misinterpretation of EIA provisions. Moreover, the provisions for the ESIA report failed to meet the recognised international good practice of EIA report preparation. Gebreyesus et al. (2017) highlight similar issues that affect the EIA system performance in Kenya and Ethiopia.

Numerous studies identify the link between EIA legislation development and the country context (Kolhoff et al. 2009; Marara et al. 2011; Kolhoff et al. 2013; Khosravi et al. 2019b). Although the country legal context showed significant support to promote sustainable development through tools such as ESIA considering the challenging environmental condition, the socio-economic and political context drove the ESIA legislation development in the Malawian country context. Consequently, the ESIA system performance was limited due to significant weaknesses in the ESIA legislation, as highlighted above. As noted in the findings, the EMA was first developed in 1996 and amended in 2017, and entered into force in 2019. It took more than twenty years to work on advancing the EISA legal regime, which is still not complete yet due to the lack of ESIA Regulations and guidelines pertinent to the EMA of 2017. It seems that the ESIA legal regime is still as not well-developed as the IFC and World Bank environmental principles are used in the implementation of ESIA in some cases.

The interviewees' perspectives provided a broader understanding of the lack of adequate ESIA legislation in relation to the country context of Malawi. It was revealed that the government of Malawi has prioritised economic development due to socio-economic issues with less interest in environmental protection. A quote from an ESIA consultant describes very well the political will and commitment in Malawi towards environmental legislation: *'There are many laws in the country that are*

blocking why we are focusing on this one (environmental law)'. It indicates that different laws are ineffective including the environmental law in Malawi. Therefore, the political and socio-economic contexts are interlinked, shaping the motivation and interest of the Malawian government. Developing adequate ESIA legislation has not been given enough attention, while economic development has been the focus. This has been reflected in the inappropriate implementation of the ESIA and the lack of ESIA enforcement as a result of inadequate ESIA legislation. The quality of ESIA reports which were inadequate for decision-making is a good example that highlights the effects of the Malawian context in terms of social, economic, and political conditions on the ESIA legal regime development. Key factors that contributed to the poor quality of the ESIA reports were the inappropriate requirement for the ESIA report and the lack of provisions to ensure the competency and integrity of the EAPs. As found in this case study, the legal requirements of EIA reports were inefficient due to not meeting the standard requirements of EIA reports as shown in the IAU review package. For instance, the review areas such as the environmental description, identification, prediction, and assessment of impacts, mitigation and monitoring, and alternatives were poorly addressed in the legislation and inadequately presented in the reports evaluated.

7.3.2. ESIA administration constraints

According to the EMA of 1996, the EAD under the Natural Resources, Energy, and Mining Ministry was designated as the ESIA competent authority that ensures ESIA implementation and enforcement with the assistance of the Technical Committee on the Environment. On the one hand, the EIA competent authorities are responsible to ensure the implementation of EIA in accordance with the legal regime and the enforcement of EIA through conducting EIA follow-up and auditing (Ebisemiju 1993; UNEP 2004; Khosravi et al. 2019a). On the other hand, many studies indicate that the EIA competent authorities often lack EIA system implementation and enforcement in developing countries (Wood 2003; Kirchhoff 2006; Badr 2009; Khosravi et al. 2019a; Nakwaya-Jacobus et al. 2021; Kamijo 2022). As discussed in the literature review, the performance of EIA relies on the human, financial, and technical capacity of the competent authorities responsible for EIAs (Kirchhoff 2006;

Van Loon et al. 2010; Ostrovskaya and Leentvaar 2011; Jones and Fischer 2016). In the case of Malawi, the former ESIA competent authority (EAD) was lacking ESIA implementation and enforcement due to insufficient human, financial, and technical resources.

The implications of such issues included the limited capacity of the EAD to conduct its responsibilities under the legal regime. As highlighted in the findings, the ESIA process is lengthy and costly due to the lack of cooperation between the former competent authority and the related ESIA stakeholders as well as the lack of compliance with the described ESIA time limits. The cooperation between the EIA competent authority and EIA stakeholders such as the relevant sectors and EIA consultants is important to ensure the timely implementation of EIA to comply with the legislative framework (Kolhoff et al. 2009; Kabir and Momtaz 2013). Although EMA requires cooperation and collaboration between the competent authority and the relevant ESIA stakeholders such as the EAPs, there is no evidence to illustrate how this works. On the contrary, this has been problematic as suggested in the interviews. There was a lack of cooperation between the former competent authority and the relevant ESIA stakeholders. Additionally, adherence to the EIA time limits as prescribed in the EIA legislation by the related EIA competent authorities enhances the timely implementation of EIAs and eliminates any interference in the EIA administration (Alberts et al. 2022). This was evident as an issue in the case study of Malawi. The former competent authority was not adhering to the time limits prescribed in the Act. As a result, the EISA competent authority was taking a long time to administer EIA applications and decision-making. This condition affects the EAPs, the project proponents, and the socio-economic development in the country.

In addition, ESIA enforcement was neglected due to the limited capacity of the EAD to ensure ESIA follow-up and auditing. As indicated previously, ESIA follow-up and auditing were not adequately covered in the EMA of 2017 and ESIA guidelines of 1997. This condition is exacerbated by the limited human, financial, and technical capacity of the former competent authority, which tends to be the cause of the lack of ESIA enforcement in Malawi. As found, the EAD was not appropriately enforcing ESIA, particularly the ESMP report. This was due to a lack of the capability of conducting adequate monitoring and follow-up measures to ensure the enforcement of the ESIA. This is perceived as a result of the political and socio-economic context

influence on the limited human and financial capacity of the ESIA competent authority, which concurs with other studies that highlighted the same constraints in developing countries (e.g., Khadka and Shrestha 2011; Marara et al. 2011; Ostrovskaya and Leentvaar 2011; Alers 2016; Kolhoff et al. 2016; Khosravi et al. 2019c).

A further challenge encountered by the EAD was a vulnerability to government interference, political pressure, and corruption, which is found to be similar to other African countries such as Nigeria (Nwoko 2013; Iheriohanma 2016). As was evident from the interview findings, the EAD faced issues of government interference and pressure on ESIA decision-making. This was observed in cases of public development projects that were approved without conducting ESIA or with inappropriate ESIA. Interviewed ESIA consultant described the pressure on the EAD *'you cannot bite your own finger'*. The identified finding in this case study is in line with the other studies that addressed the political context influence on EIA administration in developing contexts (Marara et al. 2011; Runhaar 2013; McCullough 2017; Khosravi et al. 2019c).

There were also signs of power relations and corruption. Some research participants noted that some of the project proponents, especially the international proponents who were politically connected, used their power relations to commence projects without EIA approval or to influence the ESIA decision-making. This illustrates the intertwined influence of the political and socio-economic context on the EAD, which indicates that socio-economic development is more important than environmental protection in the Malawian context.

Currently, ESIA administration is under MEPA. It was established by the EMA in 2017 to act as a principal agency to ensure environmental protection and sustainability of natural resources use. Other functions of MEPA include coordination, monitoring, supervision, and consultation with the relevant stakeholders. MEPA is also responsible for the administration, implementation, monitoring, and ESIA decision-making. MEPA is under the Ministry of Statutory Operations which is under the President's Office (GoM 2017a). According to the EMA of 2017, the main purpose of the establishment of MEPA was to introduce an independent and autonomous principal agency replacing the EAD. MEPA is

supposed to address the issues associated with the former competent authority such as the governmental pressure on the ESIA decision-making and the limited human and financial resources, which affected the implementation and enforcement of ESIA. An evaluation of the ESIA administration under MEPA has not been done yet as it is still not fully operational and the transition between the EAD and MEPA is ongoing. However, a concern was raised by an interviewee about the independence and autonomy of the MEPA. This is because the MEPA's Chairperson, Vice-Chairperson, and five Body Members are appointed by the President.

7.3.3. The limited capacity of ESIA stakeholders

Lack of human capacity is a key challenge to the performance of the ESIA system that emerged when evaluating the ESIA stakeholder's capacity in the Malawian context. EIA system performance depends on the capacity of EIA stakeholders to effectively conduct EIA system implementation and enforcement in developing countries (Kolhoff et al. 2009; Van Loon et al. 2010; Marara et al. 2011; Khosravi et al. 2019c; Khosravi et al. 2019b). The lack of personnel capacity in terms of skills, experience, relevant qualifications, and training in the former EIA competent authority (EAD) was observed as a constraint to the Malawian ESIA system performance. The skills, experience, training, and qualifications of the EAD officials were found to be unsuitable to the requirements of the position. The implications of such an issue may include the ineffective process of ESIA review and decision-making, lack of cooperation with the relevant ESIA actors, lack of compliance with ESIA timeframes, lack of conducting ESIA monitoring, and follow-up on the ESMP report (UNEP 2004; Economic Commission for Africa 2005; Khadka and Shrestha 2011; Marara et al. 2011; Kolhoff et al. 2016; Khosravi et al. 2019b).

The effect of the Malawian political and socio-economic context on the ESIA legislation development is one of the observed causes of the lack of the EAD's staff competence. There were gaps in the ESIA legislation (EMA of 1996) related to the roles and responsibilities of the EAD officials that ensure accountability and transparency and limit the influence of conflict of interest. This, for instance, was reflected in the approval of poor quality ESIA reports due to the lack of clear approaches for the ESIA reports review and decision-making. These processes were

also subjected to the influence of conflicts of interest and favouritism due to governmental interference and power relations. This is a consequence of the absence of provisions that regulate the registration and certification of who conducts the ESIA and ensures the core competence of EAPs and specialists. As found in some cases, the reviewers of the ESIA reports were the owner of the environmental firms that prepared the reports or were subjected to government power and power relations influence. The new EMA of 2017 is supposed to address this issue of competence in the competent authority. This is based on presenting the MEPA that is autonomous and financially independent. Therefore, it can enhance and uplift the competency of its staff. However, there is an ongoing transition process between the EAD and MEPA in which the responsibilities and staff of EAD are taken over by the MEPA. Moreover, at the time of this study, the ESIA Regulations and guidelines were still not published to provide an interpretation of the Act. As mentioned, MEPA is taking over the EAD's staff who need capacity building. This may raise a concern about the effectiveness of ESIA implementation and enforcement.

A further constraint was highlighted as the lack of capacity to conduct ESIA by the EAPs and specialists in Malawi. The capacity of such EIA actors is important for good EIA implementation (Clausen et al. 2011; Morrison-Saunders and Retief 2012; Zhang et al. 2018; World Bank 2019). The legislative weakness related to the registration and certification of EAPs and specialists is reflected in their lack of capacity. As was evident from this case study, although the EAD keeps a list of the EAPs, the number, qualifications, and experience of the EAPs and specialists were unknown. This condition may explain the poor quality of the reviewed ESIA reports. The interview findings further support this. The ESIA reports are often not scientifically prepared or are based on wrong and false information provided by the EAPs and specialists. This may be due to a lack of integrity and a code of conduct. As a consequence, ESIA can be conducted by anyone despite their lack of skills, experience, and qualifications. This was confirmed by the research participants who mentioned that unskilled EAPs and some of the staff of EAD were involved in the ESIA report preparation.

There is also another complication in the lack of EAPs' competence, which is the change of career of some EAPs. Professional EAPs tend to gradually change their

career to academia due to unfair competition with some inexperienced EAPs who charge the proponents low rates.

The capacity of the project proponent in terms of environmental awareness and financial resources to conduct the EMPs is highly relevant to EIA system performance (Stoeglehner et al. 2009; Jones and Fischer 2016; Kolhoff et al. 2016). As indicated, the capacity of the project proponents is lacking in the Malawian context. The capacity issues of the project proponents include limited environmental awareness, lack of commitment to EIA legislation, and lack of conducting the ESMP. This issue of the project proponent's limited capacity has affected the EIA system performance through the use of power relations to influence ESIA administration and ESIA decision-making. In fact, the mentioned challenges of the ESIA legislation and administration such as the lack of appropriate ESIA Regulations and guidelines, lack of ESIA stakeholders' responsibilities and duties, and lack of the autonomy and independence of the former competent authority allowed some project proponents not to comply with the legislated ESIA.

In addition, the capacity of the I&APs is also lacking as the I&APs were interested in employment, compensation, and relocation. In the case study of Malawi, the level of environmental awareness and understanding of ESIA benefits and laws are low. As was also evident from the findings, the Malawian community was vulnerable to socio-economic issues such as poverty. They are also exposed to cultural pressure due to community leaders' influence on the ESIA public consultation process. As a result, the I&APs were terrified to participate in the process caused of the conflict of interest of the community leaders who had other interests. Therefore, the capacity of the I&APs should be enhanced in Malawi due to their significance in supporting the performance of the EIA system (UNEP 2004; Kakonge 2006a; Kolhoff et al. 2009; Marara et al. 2011). The limited capacity of EIA stakeholders in the case study of Malawi is also observed in the sub-Saharan African context (Ibeh and Walmsley 2021).

7.4. Conclusion

The evaluation approach conducted for this case study demonstrates that the ESIA system performance is limited due to the influence of the Malawian context. The key deliverables of this case study are that the EIA stakeholders' capacity and the political, and socio-economic context of Malawi had a major impact on the development, implementation, and enforcement of the ESIA system, thereby influencing its performance.

CHAPTER 8 – EIA SYSTEM PERFORMANCE IN TANZANIA

The EIA system performance in the Tanzanian case study is explained in Chapter 8. It contains a brief history of the EIA system in the case study of Tanzania. Chapter 8 also presents the findings of evaluating EIA system performance and the country context of Tanzania (document analysis sources are provided in Appendix G and will not be listed in Chapter 8). This chapter finishes with a discussion of these findings to illustrate the relationship between EIA system performance and the developing country context of Tanzania.

8.1. Overview of EIA in Tanzania

The EIA system is an essential component of the environmental law for effective environmental management. EIA is a mandatory instrument conducted to fully understand and consider the environmental consequence of development in decision-making for long-term sustainability purposes (URT 1997a). The EIA system in Tanzania started for the first time when EIA was undertaken for the Stiegeler's Gorge Power and Flood Control project in 1980, without a legal basis (Mwalyosi and Hughes 1998). In 1983, the National Environment Management Act, No. 19 of 1983 was introduced as the first law for environmental management. It provided for the establishment of the NEMC (URT 1983). The Act of 1983 was replaced by the Environmental Management Act (EMA), No. 20 of 2004 to address weaknesses in the 1983 Act to support environmental management tools. The Environmental Impact Assessment and Audit Regulations of 2005 were promulgated to guide the undertaking of EIAs in compliance with the EMA of 2004 (URT 2005). In 2018, the Environmental Impact Assessment and Audit Regulations were partially amended and renamed to the Environmental Management (Environmental Impact Assessment and Audit) (Amendment) Regulations (URT 2018). The new Regulations must be read together with the Environmental Impact Assessment and Audit Regulations of 2005, which are called the "Principal Regulations" (URT 2018). According to the EMA of 2004, the EIA competent authority is the NEMC under the Minister responsible for Environment. The process of EIA includes submitting a registration

form of the EIA in order to provide the project information, which is followed by the screening stage which is guided by the screening criteria. The scoping and ToR are part of the process guided by the relevant Audit Regulations and guidelines. Afterwards, the EIA reports preparation and review happens in line with the Act and EIA and Audit Regulations. EIA monitoring and auditing are also part of EIA process according to EMA and its Audit Regulations. Figure 12 below shows the EIA process in Tanzania.

8.2. EIA system performance in Tanzania

The results of evaluating the EIA system performance in the Tanzanian case study are provided in this section of Chapter 8. The findings are derived from the review of legislation, relevant literature, EIA reports, and the key informant interviews through the undertaken of the developed evaluation approach explained in Chapter 3 and the methodology provided in Chapter 4.

8.2.1. EIA legislation

The assessment of the EIA legislation in Tanzania showed that the EIA legislative framework is adequate. There are gaps related to the EIA timeframes, outdated EIA guidelines, EMP report content, and the independence of the EIA expert. Table G-1 (Appendix G) presents a detailed analysis of the EIA legislation for the case study of Tanzania. The EMA, No. 20 of 2004 provides the legislative basis of the EIA system in Tanzania. It was initiated through a study called the *'Institutional and Legal Framework for Environmental Management Project'*. This study was initiated and funded by the World Bank to present new environmental legislation in Tanzania. Section 3 of EMA defines EIA as a systematic process implemented to consider the environmental consequences of development projects.

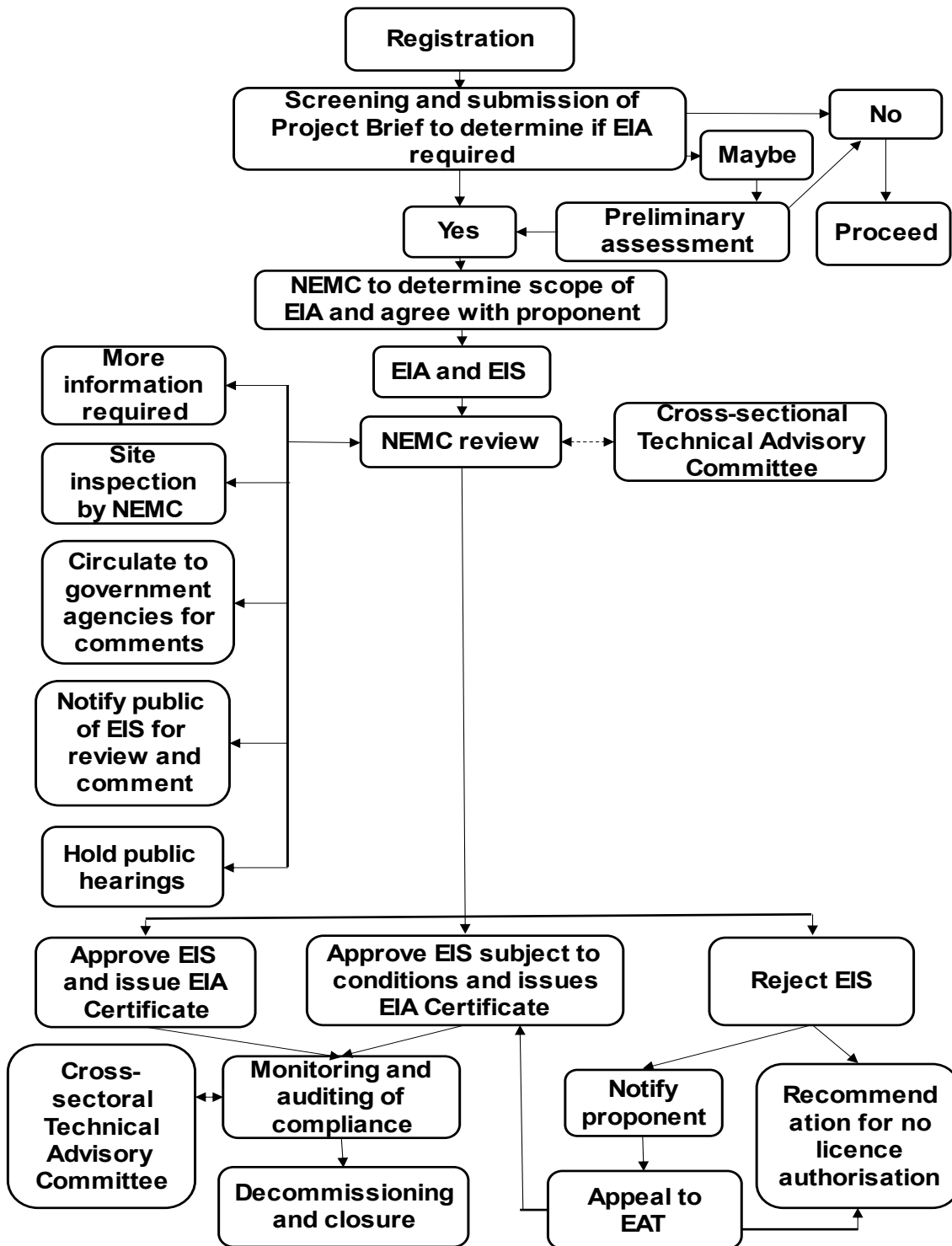


Figure 12. EIA process in Tanzania (Walmsley and Hussleman 2020)

In addition, the relevant EIA Regulations and guidelines were also part of the EIA legal regime prescribed by the EMA of 2004. For instance, the Environmental Impact Assessment and Audit Regulations of 2005 (Principal Regulations) and the

Environmental Management (Environmental Impact Assessment and Audit) (Amendment) Regulations of 2018 are used together to guide the undertaking of EIAs in compliance with the EMA of 2004.

The EIA guidelines such as the procedure for carrying EIA and Audit (2004) and the Environmental Impact Assessment Training Manual (2005) were developed by the NEMC in line with the EMA and the related EIA and Audit Regulations. However, the EIA guidelines are not comprehensive as they do not provide a detailed explanation of each step of the EIA. Also, there were no updated guidelines for the EIA and Audit Regulation of 2018. Sustainable development promotion by EIA is clearly stated in the EIA legal regime. The EIA and Audit (Amendment) Regulations of 2018 prescribed the kind of development projects that need EIA study. Category A and Special Category of projects require EIA studies. Category B1 may require an EIA study, depending on the information presented in the scoping report and the decision of the NEMC. The projects that fall under Category B2 do not need an EIA study and only require submitting a project brief. Public involvement is stipulated in the EIA legislation during the scoping, preparation, and review stages of the EIA report.

The EMA of 2004 designated the NEMC the EIA competent authority responsible for overseeing the EIA study and providing recommendations to the Minister on the EIA reports for decision-making. Moreover, the EIA follow-up and auditing were well-described in the EIA legislation. The content of the monitoring and auditing reports and the duties of the relevant EIA stakeholders in the monitoring and auditing of EIA were prescribed. The appeal process related to EIA decisions was well covered in the EIA legislation, as well as the timeframes. Furthermore, the EMA of 2004 provided a legal mandate for EIAs to be conducted by registered and certified environmental experts. Accordingly, the Environmental (Registration of Environmental Experts) Regulations of 2005 were introduced to provide for the establishment of the Environmental Experts Advisory Committee, the certification process and registration of environmental experts, the registration process by the NEMC, the Code of Practice and Professional Ethics, and disciplinary procedures. However, the independence of the Certified Environmental Experts is not considered. Although the total period for the determination (decision-making) of an EIA application at all stages by the NEMC and the Minister was well-defined (50 working days), the time needed to carry out EIA was not provided in the EIA legal

regime. The EMA of 2004 and the EIA and Audit Regulations of 2005 described the content and format of the EIA statement. The EMP was also defined by the legislation and included in the EIA statement but without defining the content of the EMP.

The Tanzanian EIA legislation was further evaluated through a series of interviews conducted with EIA professionals. The semi-structured interviews were focused on obtaining the EIA professionals' perspectives on the EIA legislation in the country context of Tanzania. According to a senior EIA consultant, '*EIA system performance is improving but it is still limited*'. On the basis of the interviews, the following concerns were highlighted:

- The EMA and EIA Regulations lack clarity and are not easy to implement. One interviewed EIA consultant described the EIA legislation as '*not straightforward and not very specific*'. A research participant elaborated on the issue of the list of activities clarity. The list of activities requiring EIA are lacking thresholds and limits. For instance, the list of transport and infrastructure development projects such as road construction does not distinguish between road construction, expansion, and rehabilitation. According to one of the eight interviewees, the issue of misinterpretation of the EIA Regulations remains a challenge even if a consultation process occurs between the consultant and the NEMC. This is due to the ambiguity of the relevant EIA Regulations, resulting in a conflict of views between the staff of NEMC and EAPs.
- EIA timeframes and costs are further issues within the legislation. The process of EIA is very lengthy due to the lack of prescribed time limits. The EIA competent authority is not complying with timeframes related to the EIA decision-making. The EIA cost is very high, which makes the project proponents, particularly the local proponents, unwilling to comply with EIA. Consequently, some of the local proponents pay the fee for EIA application registration and they do not commit to making the rest of the payments for the rest of the EIA steps. This condition also has a consequence on the EIA consultants who prefer to work with international project proponents who are financially capable of covering the cost of the EIA process. In addition, one interviewed EIA consultant indicated that the EIA practice for international

projects is based on the Tanzanian EIA legislation, the IFC, and World Bank environmental principles. This is because international funders require the inclusion of the IFC and World Bank environmental principles as the Tanzanian EIA system is not well-established.

8.2.2. EIA competent authority

Table G-2 (Appendix G) demonstrates a detailed analysis of the EIA competent authority for the case study of Tanzania. Part II of the EMA of 2004 described the EIA administration arrangements and responsibilities. The EIA administration is under Vice-President's Office, the National Environmental Advisory Committee, the Minister responsible for the Environment, the Director of Environment, the NEMC, and the Directorate of EIA within the NEMC. Despite placing the EIA competent authority in a high-profile office under the Vice-President's Office, there was no clear evidence that highlights the autonomy and independence of NEMC. According to the EIA legislation, the NEMC's responsibilities are to ensure the implementation of EIA in compliance with the Act, develop the relevant EIA guidelines, cooperate with the EIA stakeholders, facilitate the public involvement process, EIA reports review, undertake EIA monitoring and auditing, and make recommendations to the Minister for approval or rejection of the EIA reports. So, the EIA application submission, screening, scoping, and report review are the NEMC's responsibility. Meanwhile, EIA decision-making and final approval are made by the Ministry of the Environment under the Vice President's Office. The EIA and Audit Regulations of 2005 provide the EIA decision-making criteria for approving and issuing EIA Certificates. However, the criteria are broad and do not aid to ensure the quality of the final EIA report.

Additionally, the EIA legislation stipulates that the NEMC shall collaborate with the EIA stakeholders which as the project proponent, EIA consultants, and the related sectors. For instance, the project proponent is responsible for the preparation of the ToR in consultation with the NEMC. The NEMC should also conduct a consultation with the relevant sectors, regional offices, agencies, or institutions in matters related to the environmental aspects of EIA stages such as the review of the EIA report. However, there was no evidence available to describe the process of consultation between the NEMC and the relevant EIA stakeholders. EIA enforcement is legally

prescribed in the EMA of 2004 and the EIA Regulations and guidelines. Regardless of the roles of the NEMC to ensure effective EIA enforcement as mentioned in the EIA Regulations, there was no information available on how the NEMC ensures EIA enforcement. Furthermore, evidence of the NEMC's commitment to the administrative justice law and access to information was not obtainable, indicating a lack of transparency and accountability.

All research participants agreed that the EIA system performance is challenged by the EIA competent authority in Tanzania. In particular, they shared concerns about the following issues:

- EIA system performance has been hindered by the centralisation of EIA administration. One of the eight research participants highlighted that the EIA approval sometimes takes a long time, leading to disappointing the developers due to the '*bureaucracy of EIA administration and approval by the Minister*'. Efforts are being made to decentralise EIA administration through the zone offices of the NEMC and an online submission system. However, this is no clear classification of projects that should go to the zone offices or the main office of the NEMC. As a consequence, the EIA process and decision-making take a long time. The EIA legislation assigns the issuance of Provisional Environmental Clearance to the Minister based on the advice from the NEMC before completing the EIA study. This is to avoid the negative effect of the decision-making delay and allow development to proceed.
- Lack of cooperation between the EIA competent authority and EIA stakeholders such as the project proponent, EIA consultant, and related sectors is also of concern. This is because there are no clearly established channels and approaches to communication between the NEMC and EIA stakeholders. A further reason is the online system of EIA application submission. It limits the consultation between the EIA stakeholders and NEMC, who are already affected by the areas of unclarity in the EIA legislation. This affects the EIA implementation and practice on the ground.
- Insufficient funding and human resources at all levels of EIA administration. This is leading to inadequate EIA implementation and a lack of EIA monitoring and enforcement. According to the EIA legislation, the NEMC is responsible for supervising EIA implementation and ensuring that EIA monitoring and

auditing are conducted in line with the legal requirements. However, the NEMC lacks sufficient human, financial, and technical resources to meet its responsibilities such as conducting site visits, staying compliant with EIA timeframes, handling EIA applications, cooperating with EIA stakeholders, and conducting EIA monitoring and auditing. Consequently, the EIA process takes a long time due to the high load of EIA applications on the EIA competent authority's desk, which is exacerbated by the limited capacity of the NEMC.

8.2.3. EIA procedural steps

Table G-3 (Appendix G) shows the evaluation results of the EIA system procedural steps. The results indicated that the EIA procedural steps in the Tanzanian context include the main operating principles such as screening, scoping, ToR, public consultation, EIA report content, EIA report review, EIA follow-up and auditing. For instance, the screening process is based on the project categories (A, B1, B2, and Special Category), and screening criteria stipulated in the EIA and Audit (Amendment) Regulations of 2018. These are used to determine the undertaken of EIA for the development projects. Following this step is the scoping stage, including the preparation of the Scoping Report highlighted in the Fourth Schedule of the Audit (Amendment) Regulations of 2018. The EIA report content and review process are well described as part of the process. Furthermore, EIA follow-up and auditing were legal requirements demonstrated in EIA Regulations. The EMA and relevant Regulations define and describe the content of the EIA auditing reports.

Although the EIA procedural steps generally aligned with the accepted operating principles of the EIA process, there were some gaps within the required steps. Firstly, the EIA guidelines insufficiently describe some of the EIA procedural steps. For instance, the public participation process was legally required during the scoping, report preparation, and review stages of the EIA process. However, this process was lacking guidelines to demonstrate how it should be conducted. Similarly, although the review criteria for the EIA report review were presented in the EIA legislation, these lacked sufficient illustrations in the EIA legislation and its relevant guidelines. The third issue is the lack of time frames for EIA implementation.

For example, there was no indication of the timeframe allowed to conduct screening, scoping, public participation, EIA follow-up, and auditing. Other weaknesses of the EIA procedural steps included the lack of specialist studies requirements and the inadequate provisions for EMP report content. The specialist studies and the EMP report content are not considered in the legal framework.

An opportunity was given to the interviewees to discuss any concerns or issues relevant to the EIA procedural steps during the interview process. Five of the eight research participants suggested dropping the project brief from the EIA study and moving straight to scoping to save time. According to their views, the Project Brief is a detailed process, which is basically a full EIA without the cost-benefit analysis. It is a time-consuming stage that should be taken out of the EIA study.

Findings on EIA legislation, EIA component authority, and EIA procedural steps indicated that there are different shortcomings, including a lack of appropriate EIA timeframes and cost, misinterpretation of the list of activities, outdated EIA guidelines, centralisation of EIA administration, lack of cooperation between the EIA competent authority and the EIA stakeholders, and lack of the EIA competent authority capacity.

8.2.4. EIA report - legal requirements

As indicated in Table G-4 (Appendix G), the findings of the legal requirements of the EIA report shows both strengths and weaknesses across the review areas as highlighted below.

- A description of the development is required and should include the following: the project objectives and its related activities; project location; implementation technology, procedures, and processes; materials used in the development construction, and implementation; the project products including wastes. The description should incorporate any potential hazards associated with the project. However, there are no specific requirements for the following: the project's different phases and duration, the project location and size, the project layout, the nature and quantities of materials energy needed, the kind

and quantities of waste resulting from the project, and the methods used to treat or handle the expected wastes and residual materials.

- A description of the environment is required and should include an environmental description, the important environmental impacts, and the necessary data for identifying and assessing the effects. There are no requirements for the following: defining the affected area by suitable maps, describing the land uses on the site and surrounding areas by appropriate maps, describing the methods of investigation and data sources, and predicting the future conditions of the environment without the development project.
- Scoping, consultation, and impact identification are not well covered. The stakeholders' involvement is required in terms of including the list of the I&APs approached. There are no requirements for describing the environment based on the consultation process, providing the main comments, providing plans to respond to the comments raised, or describing and justifying the scoping method and data used to identify the project impacts.
- Impact prediction and evaluation are not adequately covered. The prediction of impact magnitude is limited to describing the effects anticipated. There are no requirements to describe the nature and magnitude of impacts; location, number, value, and sensitivity of the affected environment; the impact predictions in quantitative or qualitative terms; impacts' likelihood and uncertainty; the data required, and methods used; and the impact significance.
- A range of project alternatives such as site, technologies, design, processes, and reasons for choosing the alternatives are legally prescribed. However, considering the "no action" alternative, alternative scales, alternatives' environmental advantages, and disadvantages are not stipulated in the EIA Regulations. Also, a clear and objective comparison of the alternatives, considering the presence and absence of the project is not legally required.
- Impact mitigation and monitoring measures are required and should include measures for preventing, eliminating, minimising, or mitigating the impacts, including the cost, and timeframes for implementing the mitigation measures. There are deficiencies in the required mitigation and monitoring plans

including describing the mitigation measures in terms of the project design, phases, processes, and resources; explaining the effectiveness of the mitigation measures; describing the monitoring measures; justifying the selection of the mitigation measures: describing any environmental consequences of mitigation measures.

- EIA legal requirements require a non-technical summary and should include the project description and the environment, developer, and EIA consultant details, public participation conducted, major impacts identified and assessed, alternatives considered, mitigation and monitoring measures, and decommissioning of the proposed development. However, there are no requirements to explain the technical phrases, data list, and scientific justification of methods used.
- EIA legal requirements mention the organisation and presentation in the report and should include the following: defining the acronyms; introduction; policy, administrative and legal frameworks; sources and references of information; details of the EAP and developer; identifying any gaps and difficulties collecting or evaluating the data. However, consideration of gaps in the required information and data and how they are addressed are not required.

8.2.5. EIA report preparation

A sample of eleven EIA reports from a range of projects in Tanzania was collected as shown in Chapter 4 (section 4.2.1). These reports were assessed, and it was found that the overall quality of the reports along with the review areas is inadequate for decision-making (I). Detailed results are shown in Table G-5 (Appendix G) and the summarised findings are presented in Figure 13. The key reason for this finding is that the EIA reports did not comply with the Tanzanian EIA legislation and did not meet the requirements of the EIA reports as set out in the IAU review package (Section A/Appendix A).

The results demonstrated that all the review areas of the evaluated EIA reports failed to meet the review package criteria. For instance, the development description

review area was found inadequate for decision-making in 55% of the reports assessed. The common shortcomings were deficiencies in terms of providing details on project design, duration, and phases. The methods of construction, production, and kind of activities associated with the project phases, and project additional services were not well-described. Further weaknesses include an insufficient consideration of the accidents, hazards, and emergencies, quantities of materials and energy needed, and the waste types and quantities related to the project stages such as construction and operation. Given the different weaknesses highlighted, this review area was poorly incorporated into the assessed reports. The description of the environment was inadequate in 82% of the reports and was lacking sufficient information related to describing the area of the project development, describing the methods and sources of data used to investigate the environment, and information describing the environmental status without the project. Likewise, in terms of scoping, consultation, and impact identification, 64% of the reviewed EIA reports failed to meet the evaluation criteria of this review area. Several shortcomings were highlighted, including a lack of providing the data and methods used to identify the impacts, and the measures taken to address the main comments of the I&APs.

Another important shortcoming highlighted in the reviewed reports is the lack of describing the prediction and evaluation process for potential impacts, which was found inadequate in 90% of the reports. Most of the evaluated reports poorly described the source, cause, severity, magnitude, extent, duration, and likelihood of impacts. A common issue within this review area was the insufficient description of the methods and data employed for the significance of impacts. Moreover, the alternatives were inadequate for decision-making in 100% of the reports evaluated, related mainly to shortcomings in providing the essential alternatives and their choice of selection, describing the alternatives in terms of technologies, processes, and design during the project stages, and comparing the alternatives' main environmental impacts.

The mitigation and monitoring review area was also inadequately presented in 100% of the evaluated reports. The methods used and justifying the selected mitigation and monitoring measures were not included. The mitigation and monitoring measures effectiveness was not well-addressed. The implementation of the mitigation and monitoring measures during the activity life cycle was not well-

described in the reports. Furthermore, the consideration of the potential adverse environmental impacts and conflict with the benefits of mitigation measures were not mentioned in the reports. The review areas such as the non-technical summary and the report organisation and presentation of information were evaluated as adequate in 64% of the reports reviewed.

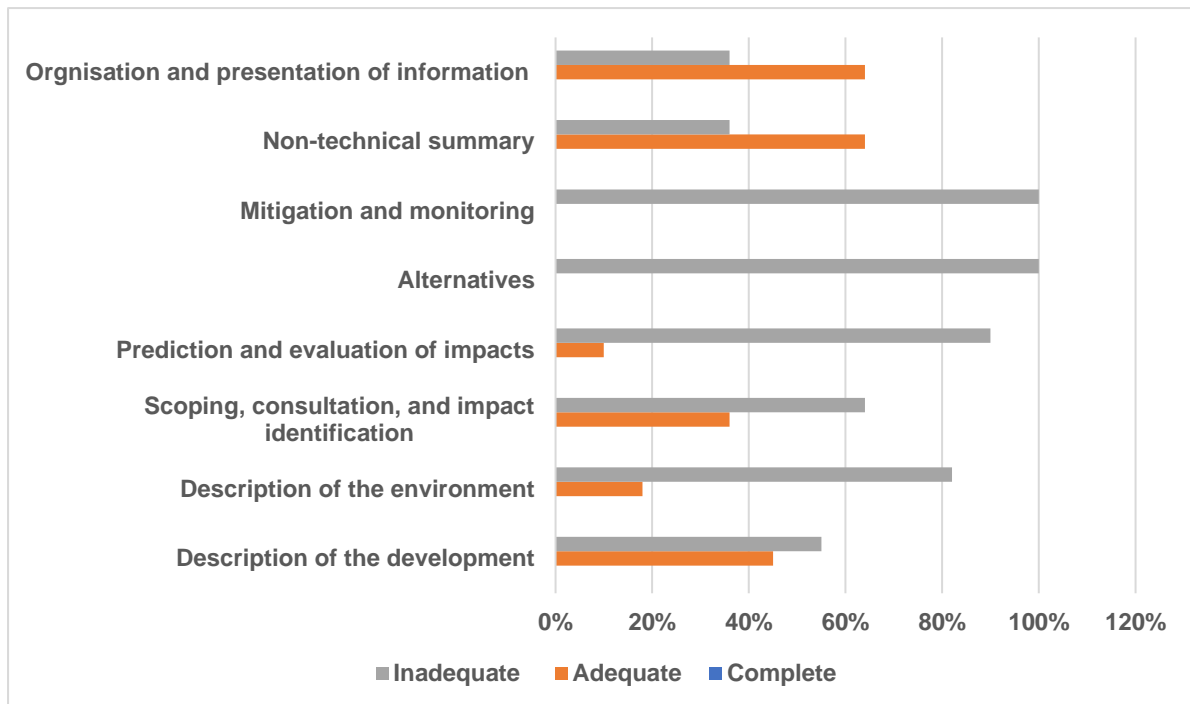


Figure 13. Summary results of the Tanzanian EIA report evaluation

Through the interview process, the research participants presented some concerns about the EIA report preparation and quality. According to six of the eight interviewees, the EIA report quality is poor because the reports are descriptive and written following the outlines of the EIA report requirements. The common deficiencies associated with the reports are that they are often not reflective of the actual development and environmental conditions, environmental impacts, appropriate public consultation, adequate methods of impact significance assessment, project alternatives, and effective mitigation and monitoring measures. One interviewed EIA consultant raised a concern about the methodological approaches used by the consultants and specialists to predict, identify, and assess the impacts. According to the opinion of the EIA consultant, these methods seem to

be inadequate as they are based on the expert's experience and inputs from stakeholders with no clear justification or scientific rigor.

The key findings of the EIA report evaluation showed that there are shortcomings in the EIA legislative requirements in relation to preparing the report and its inadequate quality. The shortcomings are noticed in the review areas of the development description, environmental description, mitigation, and monitoring measures, impact identification, and risk assessment methodologies.

8.2.6. Country legal context

An analysis of the country legal context of Tanzania is demonstrated in Table G-6 (Appendix G). As indicated under Article 27 of the Constitution of the United Republic of Tanzania, every person is responsible for environmental protection. Accordingly, environmental legislation such as the EMA of 2004 and environmental policies such as the National Environmental Action Plan of 1994 and the National Environmental Policy 1997 were introduced. EIA's role to promote sustainable development in Tanzania was clearly stated in the EMA and environmental policies. The country legal context of Tanzania also includes relevant environmental legislation such as the Forestry Act, No.14 of 2002, the Water Resources Management Act, 2009, and the Marine Parks and Reserves Act, No.27 of 1994. Moreover, the EMA of 2004 states that the environmental standards are developed by the National Environmental Standards Committee of the Tanzanian Bureau of Standards. Therefore, environmental standards such as the permissible limits for municipal and industrial wastewater, drinking water standards, and ambient air quality standards were formulated. The establishment of the Environmental Appeals Tribunal that considers any appeals against any decisions or actions related to the environment is prescribed in the EMA of 2004. However, there was no information available about the existence and functionality of the Environmental Appeals Tribunal. In addition, there was no clear indication in the Constitution with regard to administrative justice, transparency, and accountability in decision-making. However, EMA and the related EIA Regulations ensured the right of information access by any citizen and administrative justice in decision-making.

Based on the interviews, a senior EIA consultant suggested the reform of the environmental standards. According to the consultant's perspective, the standards are impossible to meet because they are too stringent to achieve, '*they just adopted the figure from somewhere else, but it won't work*'.

8.2.7. Political context

As indicated in Table G-7 (Appendix G), the political context of Tanzania demonstrates that the country has signed some environmental conventions as required by the Constitution and the relevant environmental legislation. For instance, Tanzania was a signatory to many international environmental agreements such as the Convention on Biological Diversity, the United Nations Framework Convention on Climate Change, and the Ramsar Convention on Wetlands. However, Tanzania has not ratified significant conventions related to EIA such as the Convention on Environmental Impact Assessment in a Transboundary Context.

No evidence describes the political context's influence on developing the EIA legislation. However, the reviewed literature indicated that the EIA regime in Tanzania relies on the government's political will and commitment among other factors such as the political pressure on environmental decisions. The EIA competent authority's independence and autonomy are contentious. According to EMA, the board members of the EIA competent authority are appointed by the President (political appointment). Given that there is a relationship between the government and the EIA competent authority, the given degree of independence and autonomy of the NEMC is unknown. Furthermore, the literature also considered that the limited financial resources affect the NEMC to conduct its responsibilities and duties in relation to EIA implementation and enforcement. There is also a concern about the political context's impact on the EIA decision-making process as highlighted in the reviewed literature. EIA administration under the NEMC is constrained by the political influence on the decision-making. For instance, it was indicated that EIA decision-making for some development projects is politically and socio-economically motivated. Some projects were approved despite their environmental and social impacts, particularly projects owned by the government.

An opportunity was given to the interviewees to discuss any concerns or issues relevant to the political context and the EIA administration during the interview process. The eight research participants were in agreement with the findings above. In general, the interviewees shared the perception that there is a lack of political will and commitment to supporting the EIA competent authority. All the research participants mentioned that development projects, particularly government projects, are politically and economically motivated due to local and international pressures on the government to proceed with development, regardless of the environmental consequences. According to one of the eight interviewees, some projects were commenced without conducting EIAs, and others were approved despite what the EIA said; *'the government is using its power to influence the authorisation process and make it faster'*. The interviewed consultant provided an example of a project with national interest that was approved despite the negative EIA outcomes. In this particular case, the EIA consultant who conducted the EIA was fired because of the EIA's outcomes which were against the government's interest. Therefore, the participant suggested that it would be useful to consider making the NEMC a semi-autonomous institution with regulatory powers to make EIA decisions and be politically and financially independent.

Bribery and corruption are further issues that intervened with the EIA decision-making process. As stated by one interviewed EIA consultant, there were cases in which some staff of the EIA competent authority phoned the consultant trying to get some financial benefit to process the EIA application quickly. A further example was provided by another research participant in which it was mentioned that there are ways that the project applicants use to speed up the EIA administration such as reviewing applications by offering the staff of the NEMC incentives such as flight tickets to visit the site for site inspection.

8.2.8. Socio-economic context

As highlighted in Table G-8 (Appendix G), Tanzania is encountering a challenging socio-economic context. Issues such as poverty, inequality, low HDI, and a low rate of literacy and unemployment are considered major national developmental challenges. Tanzania's HDI value is 0.549, placing it in the low human development

status, which is positioned at 160 out of 191 globally. Tanzania's HDI value changed from 0.371 to 0.549 between 1990 and 2021 (UNDP 2021c). The unemployment rate in Tanzania is 2.649%, which was increased by 0.1% in comparison to the previous year (World Bank 2021b).

The socio-economic context of Tanzania was further discussed by the research participants. Five of the eight research participants mentioned that the socio-economic context interlinked with the political context of Tanzania has a major impact on the EIA administration. This was observed in terms of the socio-economic and political pressures on the EIA decision-making. A senior EIA consultant alluded that the decision-making process is influenced politically and economically by the strategic importance of the project, especially government projects, which sometimes get approved without conducting EIAs or in opposition to the EIA's recommendations. Another interviewed EIA consultant elaborated on this point by mentioning that *'the government wants to fulfil its promises to the community by allowing developments for economic benefits without environmental authorisation to create employment'*.

8.2.9. Environmental condition context

An evaluation of the environmental condition of Tanzania was conducted. As is evident from Table G-9 (Appendix G), Tanzania is experiencing significant environmental issues. The key environmental challenges include deforestation and forest degradation, land degradation, degradation of water resources, loss of biodiversity, degradation of freshwater and marine fisheries, climate change, air and water pollution, and industrial pollution. The key forces identified as the causes of the challenging environmental condition of Tanzania include the increasing urbanisation rate, economic growth, rapid population growth, climate variability, poor farming practices, overgrazing, inadequate waste management practices, and mining activities.

Additionally, the challenging environmental conditions in Tanzania were discussed by some research participants. Seven of the eight interviewees expressed that environmental protection usually is not highly considered in the EIA decision-making

process. A senior EIA consultant indicated that projects with high economic benefits are approved by the Minister, despite the high potential environmental impacts raised by the expert. An example was given by a research participant indicating that there were cases of projects taking place in environmentally sensitive areas, which were approved regardless of their environmental consequences.

8.2.10. EIA stakeholders' capacity

Evidence from this research highlights that there is a lack of capacity among the EIA stakeholders in the Tanzanian context. As indicated in Table G-10 (Appendix G), the issues raised include a lack of experience, training, and appropriate qualification among EIA actors. As is evident from the reviewed literature, the EIA competent authority in Tanzania faces a serious challenge such as insufficient human and financial resources. The experience, training, and appropriate qualifications, particularly at the provincial level, are inadequate. Thus, the ability of the EIA competent authority to perform in accordance with legal requirements was limited. For instance, aspects of EIA implementation such as complying with the EIA timeframe were not adhered to. A further issue that highlights the lack of capacity within the EIA competent authority was the issuance of fake EIA certificates by the staff, a clear sign of corruption. Likewise, the capacity of the EIA consultants and specialists was lacking in terms of knowledge, skills, experience, and attitudes toward undertaking EIAs. As indicated by the reviewed literature, there was an issue of subjectivity when it comes to conducting the EIA study. A key concern was raised about the credibility and validity of results and the methods used for data collection and analysis, impact identification, and assessment. In addition, the capacity of the project proponent was regarded as low in relation to environmental awareness, comprehension of EIA requirements, and commitment to EIA conditions of approval. The project proponents considered the EIA as an added cost to the investment and an impediment to the development.

The capacity of the I&APs was viewed as very low in the reviewed literature. The attendance of the I&APs during the consultation process of the EIA study was low as they are less interested in environmental protection. The key underlying causes that

influenced the EIA public participation include illiteracy, language barriers, cultural differences, and lack of political will.

The research participants shared similar perspectives on the highlighted lack of capacity across the EIA stakeholders in the Tanzanian context. They discussed that the lack of EIA stakeholders' capacity influences EIA implementation and enforcement. The eight interviewees agreed that the staff of the EIA competent authority lacked the necessary educational background, training, and experience. A research participant mentioned that *'some of the officers know EIA, in theory, more than in practice'*. According to all research participants' views, the current status of the capacity of the EIA competent authority's staff has a major impact on EIA implementation and enforcement.

The capacity of the EAPs and specialists was a further concern of the research participants. They contemplated that there were issues of lack of adequate educational background, experience, training, and code of Conduct. Consequently, the quality of the EIA and EMP reports was poor. In addition, interviewed EIA consultants highlighted that some EAPs were disturbing the environmental consulting business by charging low rates and conducting specialist studies themselves to save money without employing a specialist. As a result, some senior EAPs changed their careers to academia. Similarly, there was a lack of specialist competency. A research participant was concerned about the quality and the findings of the specialist reports as the participants perceived that inadequate methods of impact identification and assessment were used.

The capacity of the project proponent was considered as low. This was because the project proponents were interested in the project approval with limited awareness of environmental protection and environmental legislation as they perceive that EIA hinders their development projects. Further issues were that the project proponents, particularly the local proponents, were not prepared to pay the EAPs, undertake the EMP, and comply with the terms and conditions of the EIA certificate.

The interviewees also discussed the I&APs' capacity. Five of the eight research participants stated that I&APs' capacity was low except for some NGOs, and their involvement in the EIA consultation depends on the scope of the project. Moreover, they tended to focus on employment, compensation, and relocation. Also, there was

an issue of conflict of interest and corruption. A senior EIA consultant said that there was a case in which the community leader asked for payment to sign and stamp the list of the public participation process.

8.3. Discussion

EIA system performance in the Tanzanian case study was found limited according to the results of the conducted evaluation approach. It was observed that the country context of Tanzania interacts with EIA system development, implementation, and enforcement which affects its performance. Three emerging themes explain the relationship between the EIA system performance and country context, which has been identified and discussed below.

8.3.1. EIA legislation gaps

The EMA of 2004, the EIA and Audit Regulations of 2005 “Principal Regulations”, the Environmental Management (EIA and Audit) (Amendment) Regulations of 2018, and the related EIA guidelines are the legal basis of the EIA system. Article 27 of the Constitution of the United Republic of Tanzania guided the undertaken of EIA as an environmental instrument for environmental protection and sustainable development. The EIA legal regime defined the purpose of EIA and introduced the system components for sustainable management of the environment. However, the EIA system performance is limited in the case study of Tanzania. As stated by one interviewed EIA consultant ‘*EIA system performance is improving but it is still limited*’.

As was evident from the findings, there are gaps across the systemic components of EIA. These gaps are mainly attributed to the legislative component of the EIA. The main weaknesses of the EIA legislation include misinterpretation of the EIA list of activities, inappropriate EIA timeframes, high cost of EIA, outdated and limited EIA guidelines, lack of EMP report content and specialist report, lack of EIA consultant independence, the complexity of EIA administration, inadequate EIA report review process and decision-making criteria, and inadequate EIA report requirements.

These EIA legislative shortcomings are observed in other African countries such as Morocco (Benfadil 2016).

As discussed in the literature, political, legal, environmental, and socio-economic contexts significantly interfere with EIA legislation development (Kolhoff et al. 2009; Marara et al. 2011; Kolhoff et al. 2013; Khosravi et al. 2019b). This was evident in the case study of Tanzania. Although the country legal context showed significant support for promoting sustainable development through tools such as EIA, the socio-economic and political context had an impact on the EIA legislation development. Consequently, EIA system performance was limited due to key shortcomings in the EIA legislation, which also led to the use of the IFC and World Bank environmental principles in EIA implementation for many projects as highlighted in the findings. Throughout the lens of the history of EIA legislation development, it can be understood that improving EIA legislation has not gained enough attention in the Tanzanian context.

The EIA legislation mainly went through two stages of development in Tanzania. The first EIA legislation started in 1983 with the introduction of the National Environment Management Act, No. 19 of 1983. After twenty years, the EMA, No.20 of 2004 repealed the 1983 Act with the support of the World Bank to strengthen environmental legislation in Tanzania. Subsequently, the EIA and Audit Regulations of 2005 were promulgated, which were relatively amended in 2018 (Walmsley and Hussleman 2020). It took fourteen years to consider uplifting the EIA Regulations which were largely focused on broadening the list of activities that may or may not require EIA study. According to the findings, it appears that the timeline of the EIA legislation development showed the limited scope of improving EIA legislation that was merely narrowed to the list of activities, paying no attention to important aspects such as EIA timeframes, EIA cost, EIA report requirements, and EIA administration.

As highlighted in the findings, there seems to be a link between the political and socio-economic context of Tanzania and EIA legislation development. The key contextual challenge is that there is a lack of political will and commitment to supporting environmental legislation and a huge focus on social-economic development. This was mirrored in the limited interest in the EIA legislation improvement. The quality of EIA reports which were inadequate for decision-making

is a good example that describes the effect of the Tanzanian context on the EIA legislation development. Key factors that contributed to the poor quality were the inappropriate requirements for the EIA report. As found in this case study, these requirements were inefficient in terms of meeting the standard requirements of EIA reports as shown in the IAU review package. For instance, the review areas of the environmental description, identification of impacts, prediction, and assessment, mitigation and monitoring, and alternatives were poorly described in the legislation and inadequately presented in the reports evaluated. This is in line with other studies in the Tanzanian context that identified the inadequate quality of EIA reports (Gebreyesus et al. 2017).

8.3.2. EIA administration limitations

According to the administration and institutional hierarchy described in part II of the EMA, No.20 of 2004, the EIA process is administered and reviewed by the NEMC, which is placed under the Minister of the Environment and the Vice-President's Office. The designated NEMC oversees the implementation of EIA in compliance with the Act, develops the relevant EIA guidelines, cooperates with the EIA stakeholders, facilitates public involvement, reviews EIA reports, undertakes EIA monitoring and auditing, and makes recommendations to the Minister for approval or rejection of the EIA reports.

The EIA competent authority in Tanzania contributed to the limited EIA system performance. The effective implementation of EIA in accordance with the legal regime and the enforcement of EIA through conducting EIA follow-up and auditing are ensured by the relevant EIA competent authorities (Ebisemiju 1993; UNEP 2004; Khosravi et al. 2019a). However, the duty of the EIA competent authorities in terms of conducting appropriate EIA system implementation and enforcement in compliance with the EIA legal regime is a big challenge in developing countries (Wood 2003; Kirchhoff 2006; Badr 2009; Khosravi et al. 2019a; Nakwaya-Jacobus et al. 2021; Kamijo 2022). As discussed in the literature review, the availability of significant resources such as human, financial, and technical resources is important for the EIA competent authorities to undertake their duties (Kirchhoff 2006; Van Loon et al. 2010; Ostrovskaya and Leentvaar 2011; Jones and Fischer 2016). This was

evident in the case study of Tanzania. The NEMC was lacking EIA implementation and enforcement due to insufficient human and financial resources, and enough equipment. The consequences of such issues included the limited capacity of the NEMC to meet its responsibilities under the legal regime.

The issue of time delays and associated high costs related to EIA has been identified in other studies due to challenges such as lack of cooperation between EIA competent authorities and other EIA stakeholders and adherence to the legislated EIA timeframes (Kolhoff et al. 2009; Kabir and Momtaz 2013; Alberts 2020; Nakwaya-Jacobus et al. 2021; Alberts et al. 2022). In the case study of Tanzania, the issues of EIA delays, high cost, and lack of cooperation between the EIA competent authority and the relevant EIA actors are of concern. As indicated in the findings of this case study, the EIA process is lengthy and costly as a result of a lack of cooperation between the EIA competent authority and the EIA stakeholders, and a lack of compliance with the described EIA timeframes. This occurs regardless of the EMA of 2004 requirement for cooperation between the competent authority and the relevant EIA actors to ensure effective EIA implementation.

A further limitation within the EIA administration in Tanzania is the different layers of EIA administration '*bureaucracy of EIA administration and approval by the Minister*'. This constrains the NEMC from effectively administering the EIA implementation and enforcement. Different studies indicate the consequences of the EIA administration hierarchy such as EIA delays and cost and lack of cooperation with EIA stakeholders in the African context (Bitondo and André 2007; Nwoko 2013; Nakwaya-Jacobus et al. 2021). In addition, the online system of EIA application submission limited the opportunity of the EIA experts to communicate and consult with the EIA competent authority.

As indicated previously, the limited human, financial, and technical capacity of the NEMC led to the lack of EIA system enforcement in Tanzania despite the EMA requirements for EIA follow-up and auditing. The lack of EIA system enforcement by the competent authority is not only present in the Tanzanian context. In developing countries including African countries, the issue of lack of EIA implementation and enforcement is observed (Kakonge 2006a; Bitondo et al. 2014; Alers 2016; Khosravi et al. 2019a; Khan et al. 2020). The socio-economic and political pressure led to the

limited resources of the EIA competent authority to undertake its duties in Tanzania according to the results of this case study. The influence of such country contextual factors on EIA administration has been highlighted in other studies globally including the African continent (Kakonge 2006a; Bitondo and André 2007; Marara et al. 2011; Campion and Essel 2013; Kakonge 2013; Bitondo et al. 2014; Kolhoff et al. 2016). A further weakness of the EIA administration in Tanzania was the vulnerability to government interference, political pressure, and corruption. This is in agreement with the literature reviewed, which highlights that EIA administration outcomes tend to be politically affected in the developing country context (Marara et al. 2011; Runhaar 2013; McCullough 2017; Khosravi et al. 2019c). As was evident from the findings, the EIA competent authority lacks independence and autonomy. This was reflected in the approval of projects that were politically and economically motivated '*the government is using its power to influence the authorization process and make it faster*'. Also, the EIA administration was exposed to the influence of power relations and corruption, which were demonstrated in the issuance of fake EIA certificates. A key factor that may contribute to the vulnerability of the EIA administration in Tanzania is the political appointment of EIA competent authority members.

8.3.3. The limited capacity of EIA stakeholders

Lack of human capacity is a key challenge to a well-performing EIA system that emerged when evaluating the EIA stakeholder's capacity in the Tanzanian context. Studies focusing on EIA stakeholders' capacity consider its relation to the limited EIA system performance (e.g., Kakonge 2013; Kolhoff et al. 2016; Khosravi et al. 2019a; Alberts 2020; Nakwaya-Jacobus et al. 2021). One of the key EIA stakeholders is the staff of the EIA competent authority whose capacity is significant for effective EIA system implementation and enforcement (UNEP 2004; Economic Commission for Africa 2005; Khadka and Shrestha 2011; Marara et al. 2011; Kolhoff et al. 2016). As highlighted, the capacity of the NEMC's staff with regards to experience, training, and educational background particularly at the provincial level is insufficient. The capacity of the NEMC's staff was described as '*some of the officers know EIA, in theory, more than in practice*'. Consequently, the EIA implementation and enforcement were hindered due to the ineffective process of EIA review and

decision-making, lack of cooperation with the EIA stakeholders, lack of compliance with EIA timeframes, lack of conducting EIA monitoring, and follow-up.

The lack of competence of the EIA primary actors is one of the reasons pertinent to the limited EIA performance in developing contexts (Economic Commission for Africa 2005; Betey and Essel 2013; Bitondo et al. 2014; Khosravi et al. 2019c; Alberts 2020; Khan et al. 2020; Kahangirwe and Vanclay 2022). According to this case study findings, the impact of the lack of capacity of the NEMC staff on EIA system performance was aggravated by the influence of the political and socio-economic context in terms of governmental pressures and interference, the influence of power relations, bribery, and corruption. This is a consequence of the lack of NEMC autonomy, lack of a Code of Conduct, and lack of transparency and accountability. In the African context, this issue has been highlighted in some studies (Campion and Essel 2013; Kakonge 2013; Bitondo et al. 2014).

A further challenge is the lack of EIA practitioners' capacity and specialists in Tanzania. The Tanzanian case study findings suggest the capacity of the EAPs and specialists is insufficient despite the fact that the EIA legislation prescribes the certification and registration of the EAPs through the Environmental (Registration of Environmental Experts) Regulations of 2005 without mentioning the specialists. However, the capacity of the EIA consultants and specialists was lacking in terms of adequate qualifications, skills, and experience. Other research focusing on the role of the capacity of such EIA actors in developing countries supports this finding (e.g., Bitondo and André 2007; Clausen et al. 2011; Morrison-Saunders and Retief 2012; Bitondo et al. 2014; Zhang et al. 2018; Alberts 2020). Furthermore, there are other issues associated with the EAPs and specialists' lack of capacity according to the Tanzanian results. For instance, poor quality of the EIA and specialist reports, lack of EAPs' independence, inadequate methods used for data collection and analysis, and lack of appropriate methods used for impact identification and assessment. This was in line with the findings of the EIA report's evaluation. The reviewed EIA reports were poorly prepared as a result of inexperienced EAPs and specialists and inadequate EIA report requirements. There is also a further repercussion of the lack of EAPs' capacity, which is the change of career of some EAPs. Professional EAPs tend to gradually change their career to academia due to unfair competition with some inexperienced EAPs who charge the proponents low rates.

The case study of Tanzania also reveals that there is a lack of capacity of the project proponents. Other research has shown that the capacity of the project proponent is lacking in the context of some African countries (Sampson 2007; Husselmann 2016; World Bank 2019). This concurs with the results of the Tanzanian case study. As indicated, the capacity of the project proponents is lacking in the Tanzanian context in terms of adherence to the EIA legal requirements and conditions of approval, fully paying the EAPs and covering the EIA cost, and commitment to conduct the EMP. This case study further indicates that the project proponent's capacity is exacerbated by the EIA legislation gaps related to the EIA timeframes and cost, and the EIA competent authority weaknesses such as vulnerability to government interference, political pressure, and corruption. This led to creating means for the project proponents to not commit to undertaking the EIA in accordance with EMA. The lack of capacity of the I&APs is another important finding in the case study of Tanzania. The results suggest that the environmental awareness of I&APs was low. This is in agreement with other studies that considered the capacity of the I&APs in relation to the EIA process in the African context (e.g., Marara et al. 2011; Kolhoff et al. 2013; Joseph 2018; Kaekae 2019; Sandham et al. 2019; Nakwaya-Jacobus et al. 2021). In the Tanzanian context, the I&APs tend to focus on job opportunities, employment, compensation, and relocation. The results provide a further indication, which is that the I&APs were also susceptible to socio-economic pressure leading them to focus on what they can get out of the project. The I&APs were also influenced by their community leaders who influence the public participation process of EIA. This was seen in some cases of community leaders asking for money to proceed with the public participation process.

8.4. Conclusion

The EIA system performance is limited due to the Tanzanian country context influence. The important country contextual elements include the EIA stakeholders' capacity and the political, and socio-economic context of Tanzania. These have affected the EIA system development, implementation, and enforcement resulting in its limited performance.

CHAPTER 9 – DISCUSSION

9.1. Introduction

This research set out to explore the relationship between EIA system performance and country context, in order to evaluate the African country context influence on EIA systems and in so doing, to contribute to improving such impact assessment. In order to achieve this, an evaluation approach was developed and applied to four southern African case studies, namely South Africa, Namibia, Malawi, and Tanzania. The evaluation approach has been accepted for publication and is included in Chapter 3. The results of each of these case studies are written up in Chapters 5, 6, 7, and 8 respectively. In Chapter 9, the outcomes of the four case studies are reviewed together, and emerging issues are discussed. Recommendations to improve the EIA system performance in the African developing country context are then made.

9.2. Key findings of the case study countries

According to the findings, the performance of the EIA system in all case studies is limited due to the influence of the country context. These limitations are summarised and compared across the four case studies in Table 6.

Table 6. Key findings of the evaluation approach of EIA system performance and the country context in the case study countries

Evaluation approach indicators	Case studies			
	South Africa	Namibia	Malawi	Tanzania
EIA system components	<ul style="list-style-type: none"> The EIA system is based on well-developed legislation, yet some gaps exist. Gaps include outdated EIA guidelines, unclear EIA follow-up and auditing guidelines, and misinterpretation of EIA regulations. Weaknesses within the EIA competent authority, include fragmented administration, concern around independence and autonomy, lack of cooperation between EIA role players, contradictory legal requirements for EIA application submission, limited human and financial resources, unclear roles as regards enforcement, and lack of adherence to timeframes. Well-developed procedural steps for EIA implementation, although gaps related to the insufficient description of the EIA follow-up and auditing during the project life and tight timeframes for the scoping stage. 	<ul style="list-style-type: none"> EIA legislative framework is inadequate. Key weaknesses include insufficient EIA guidelines, lack of provisions to regulate the EAPs, lack of legal requirements to conduct EIA follow-up and auditing, and insufficient EIA sector guidelines. The role of EIA competent authority is undermined due to a lack of independence and autonomy, centralisation of EIA administration, lack of accountability and transparency, lack of compliance with time limits, insufficient human, financial, and technical resources, and lack of cooperation with the relevant EIA stakeholders. Gaps in procedural steps with the insufficient description of screening and scoping steps, lack of time limits for implementation, lack of requirement for the specialist report, and EIA follow-up and auditing requirements. 	<ul style="list-style-type: none"> ESIA system is established based on inadequate legislation. Important shortcomings encompass insufficient ESIA Regulations and guidelines, misinterpretation of ESIA provisions, lack of prescribing ESIA timeframes and costs, lack of prescribing EIA monitoring and auditing, insufficient provisions of ESIA and ESMP reports, and lack of provisions for the certification and registration of EIA consultants. The former EIA competent authority encountered issues related to limited human, financial, and technical resources, lack of cooperation with the EAPs, lack of adherence to the EIA time limits, and lack of ensuring EIA follow-up and monitoring. The roles of the new ESIA competent authority are still not established. There is uncertainty about its independence and autonomy due to political interference in the administration. ESIA procedural steps are insufficient to conduct different steps of the EIA such as screening and scoping lack of EIA time limits, unregulated specialist reports, and lack of EIA follow-up and auditing requirements. 	<ul style="list-style-type: none"> The EIA system is reliant on a good legislative framework. However, some weaknesses exist such as a lack of EMP report requirements, insufficient description of EIA time limits and costs, lack of independence of EIA experts, and misinterpretation of EIA legislation. The EIA competent authority lacks compliance with the EIA time frames, insufficient human and financial resources, centralised EIA administration, lack of cooperation between EIA key players, lack of independence and autonomy, and lack of transparency and accountability. Shortcomings in EIA procedural steps related to insufficient EIA guidelines to describe some steps of EIA such as public participation and EIA report, insufficient EIA timeframes, and lack of specialist report requirements.
EIA report	<ul style="list-style-type: none"> The legislative requirements of the EIA report are generally good. However, some areas are insufficiently covered, namely impact identification, prediction and evaluation of impact, mitigation and monitoring, alternatives consideration, and non-technical summary. EIA reports are inadequate for decision-making, with shortcomings in the prediction and evaluation of impacts, mitigation, and monitoring, data used, impact identification, and assessment methodologies. 	<ul style="list-style-type: none"> Shortcomings in the legal requirements of the EIA report include, for instance, insufficient requirements for the development and environment description, scoping, consultation, impacts identification, consideration of alternatives, and mitigation and monitoring measures. Reviewed EIA reports are inadequate for decision-making due to the lack of providing enough information relevant to the development, alternatives, prediction, and evaluation of impacts, mitigation, and monitoring, impacts identification, assessment methodologies, and used data. 	<ul style="list-style-type: none"> ESIA legislative framework contains inadequate legal requirements for EIA reports. Key gaps include an insufficient description of the development and environment, scoping, consultation, impact identification, prediction and evaluation of impacts, consideration of alternatives, mitigation, and monitoring measures, non-technical summary, organisation and presentation of information. The quality of the ESIA reports is inadequate for decision-making. Weaknesses are highlighted in all areas such as the description of the development, environment, alternatives, prediction, and evaluation of impacts, mitigation and monitoring, and organisation and presentation of information. 	<ul style="list-style-type: none"> Weaknesses in the legislative requirements of the EIA report include an insufficient description of development and environment, scoping, consultation, impact identification, prediction and evaluation of impacts, consideration of alternatives, mitigation, and monitoring measures. EIA reports are inadequate for decision-making. Key gaps are highlighted in the areas of environment description, scoping, consultation, impact identification, prediction and evaluation of impacts, alternatives, mitigation, and monitoring measures.
Country context	<ul style="list-style-type: none"> A good country legal context, although no established environmental court exists. The political context shows low commitment to environmental management, pressure, interference, and corruption in the EIA administration. 	<ul style="list-style-type: none"> The country context is inadequate due to a lack of environmental standards, environmental courts, and lack of transparency and accountability. Lack of political will and commitment to environmental legislation, interference in EIA administration, and decision-making due to 	<ul style="list-style-type: none"> A good country legal context, however, information on the existence of the environmental courts is not available despite its requirements by the environmental legislation. The role of the political context in supporting ESIA is limited due to low political commitment to environmental management and legislation, 	<ul style="list-style-type: none"> Weaknesses within the country legal context, include unavailable environmental courts, limited information on administrative justice, transparency, accountability in decision-making, and stringent environmental standards. The political context shows low commitment to environmental management and legislation,

Evaluation approach indicators	Case studies			
	South Africa	Namibia	Malawi	Tanzania
	<ul style="list-style-type: none"> Socio-economic issues such as low literacy rates, poverty, unemployment, and inequality influence EIA legislation development and EIA decision-making as a result of the need for economic development. Environmental condition is a challenge due to several environmental issues such as climate change, pollution, and loss of natural resources. There is a significant issue of limited capacity among EIA role actors, including the EIA officials, EAPs, specialists, project proponents, and I&APs. 	<p>political pressure, power relations, and corruption are key issues.</p> <ul style="list-style-type: none"> Socio-economic context influences EIA system implementation by affecting EIA decision-making due to issues such as low literacy rate, low HDI, inequality, poverty, and unemployment. Key environmental issues such as loss of natural resources, deforestation, and climate change. The capacity of the EIA officials, EAPs, specialists, project proponents, and I&APs is limited. 	<p>political interference and pressure, and the influence of power relations on ESIA administration and decision-making.</p> <ul style="list-style-type: none"> Underlying socio-economic issues, including poverty, inequality, low HDI, low literacy rate, and unemployment undermine proper ESIA implementation and decision-making. Environmental problems experienced include soil erosion, deforestation, water resource degradation and depletion, and climate change. ESIA stakeholders' capacity is limited, including the ESIA officials, EAPs, specialists, project proponents, and I&APs. 	<p>pressure, and influence of power relations and means of corruption on EIA administration and decision-making.</p> <ul style="list-style-type: none"> Socio-economic challenges such as low HDI, unemployment, low literacy rate, inequality, and poverty are considered a priority in the EIA decision-making. Significant environmental challenges, including deforestation and forest degradation, land degradation, degradation of water resources, loss of biodiversity, and climate change are experienced. The limited capacity of EIA stakeholders including the EIA officials, EAPs, specialists, project proponents, and I&APs is an important issue.
EIA system performance	<ul style="list-style-type: none"> Development, implementation, and enforcement of EIA system components and EIA report have been subjected to the influence of the political, socio-economic, and limited EIA stakeholders' capacity resulting in the limited performance of EIA towards meeting its purposes 	<ul style="list-style-type: none"> The inadequate country legal context, political and socio-economic context, and the limited capacity of EIA stakeholders have interfered with the development, implementation, and enforcement of EIA system components and reports affecting its performance. 	<ul style="list-style-type: none"> The performance of the ESIA system is limited due to the influence of the country legal context, political and socio-economic context, and the limited capacity of ESIA role players on the development, implementation, and enforcement of the ESIA system components and report. 	<ul style="list-style-type: none"> Weaknesses of the country legal context, the limited capacity of EIA stakeholders, political, and socio-economic context have interacted with the development, implementation, and enforcement of EIA system components and reports, thereby influencing its performance.

Although the case study countries have established the components of their EIA systems, results suggest that the EIA system performance is still limited in the respective countries. As indicated in Table 6, there are shortcomings within the systemic components of EIA in South Africa, Namibia, Malawi, and Tanzania. The EIA legislative frameworks in the selected case studies contain several weaknesses. For instance, the South African EIA legislation includes some gaps such as outdated EIA guidelines, an unclear process for conducting EIA follow-up and auditing, and misinterpretation of EIA Regulations. The status of the EIA legislation of Tanzania is similar to the South African EIA legislation with further issues such as insufficient EIA Regulations and guidelines to prescribe the content of the EMP report, EIA time limits and costs, independence of EIA experts, and misinterpretation of EIA provisions. The case study of Namibia highlights that the EIA legislation is inadequate due to insufficient EIA guidelines to illustrate the timeframes and undertaken of the different stages of the EIA process, lack of provisions to regulate the EAPs, lack of legal requirements to conduct EIA follow-up and auditing, and insufficient EIA guidelines. Likewise, the findings on the EIA legislation in Malawi, reveal that there are EIA legislative shortcomings in terms of insufficient ESIA Regulations and guidelines to prescribe ESIA timeframes and costs, EIA monitoring and auditing, the preparation of ESIA and ESMP reports, certification and registration of EIA consultants, and misinterpretation of ESIA provisions.

The results also show that there are similar challenges that the EIA competent authorities experience in the case study countries. The main issues are the centralisation of the EIA administration, lack of cooperation with EIA stakeholders, lack of independence and autonomy, and lack of transparency and accountability. These key issues pertinent to EIA system components in relation to the limited EIA system performance are not unique to the case study countries. Benfadil (2016) considers the limited EIA system performance to the inadequate EIA system components in Morocco. Similarly, Gebreyesus et al. (2017) discuss how the gaps in the EIA legislation, competent authority, and procedural steps affect the EIA system performance in Kenya and Ethiopia.

Given the importance of the EIA report quality, as it contributes to the performance of the EIA system (Sadler 1996; Fuller 1999; Glasson et al. 2012; Sandham et al. 2020; Alberts et al. 2022), it was imperative to reflect on the quality of the reports and their

legal requirement. In all case study countries, the legal requirements of the EIA reports included different shortcomings regardless of requiring the general review areas of the IAU review package. The EIA report legal requirements of the respective countries have common weaknesses such as the lack of describing the required prediction and evaluation of impacts, mitigation, monitoring, impacts identification, and assessment methodologies. Interestingly, the highlighted gaps in the legal requirements of the EIA report were further reflected in the poor quality of the reviewed EIA reports. Findings show that the evaluated EIA reports were inadequate and shared common shortcomings such as providing an insufficient description of the prediction and evaluation of impacts, mitigation and monitoring measures, the data used, impacts identification, and assessment methodologies. The inadequate legal requirements and quality of the reports are also observed in other African countries such as Egypt, Cameroon, and Rwanda (Bitondo and André 2007; Badr et al. 2011; Kabera and Mutavu 2022).

Compellingly, the findings presented in Table 6 show that the country context in the four countries, as in many developing countries, is very similar. For instance, the country legal context of South Africa is good, while Namibia, Malawi, and Tanzania have weak country legal context due to gaps such as unavailable environmental courts, lack of administrative justice, transparency, accountability in decision-making, and stringent environmental standards. In addition, South Africa, Namibia, Malawi, and Tanzania have in common a low political will and commitment to environmental legislation, interference in EIA administration, and decision-making due to political pressure, power relations, and corruption. The socio-economic context of the respective countries is also similar in terms of inequality, poverty, unemployment, education, literacy, and HDI issues. Of concern is the finding that all case studies have similar environmental issues such as loss of natural resources, pollution, and climate change. A further challenge within the country context of the case studies is the limited capacity of EIA stakeholders. The four countries have in common a poor capacity among key EIA actors including the ESIA officials, EAPs, specialists, project proponents, and I&APs. Likewise, such issues of limited capacity among different EIA key players, lack of political will and commitment to impact assessment, political and socio-economic pressure on EIA administration, the influence of power relations and corruption on EIA decision-making were identified in other African countries

(Alemagi et al. 2007; Alemagi et al. 2013; Nwoko 2013; Iheriohanma 2016; Kahangirwe and Vanclay 2022). Based on the findings of the case studies, there is a strong relationship between EIA system performance and country context.

9.3. The influence of the country context on EIA system performance

According to the case studies findings (Table 6), there are three ways in which country context can influence EIA system performance. These are through the development, implementation, and enforcement of the EIA system, as illustrated in Figure 14. As discussed, EIA system performance across the four case studies experiences similar dysfunction. The poor performance, as it pertains to EIA system development, implementation, and enforcement, is linked to the country context in the discussion below, highlighting specific examples from each of the case study countries.

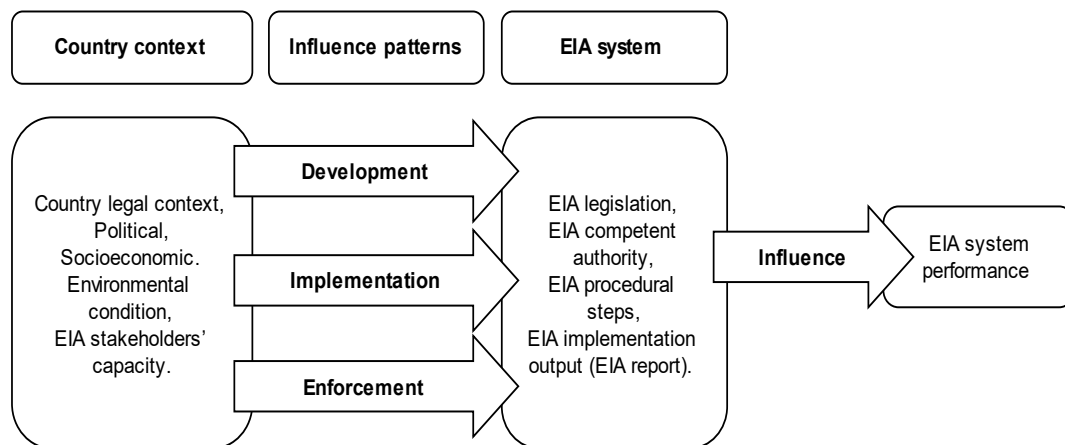


Figure 14. The patterns of the southern African developing country context influence on EIA system performance

9.3.1. EIA system development

The establishment of the EIA system depends on the development of its systemic components as an important element for a good EIA system performance (Ebisemiju 1993; Fuller 1999; Ahmad and Wood 2002; El-Fadl and El-Fadel 2004; PhD and Harvey 2004; UNEP 2004; Nadeem and Hameed 2008; Badr 2009; Kolhoff et al. 2009; Marara et al. 2011; Glasson et al. 2012; UN Environment 2018; Khosravi et al. 2019c; Khosravi et al. 2019b). As illustrated through this research and summarised in Table 6, there is a relationship between EIA system development and the country context of the case studies. The development of EIA legislation as the core of EIA system components (Ebisemiju 1993; Sadler 1996; Glasson et al. 2012), depends on the dynamic interactions between different elements of a given context such as the political, legal, environmental, and socio-economic factors (Kolhoff et al. 2009; Marara et al. 2011; Kolhoff et al. 2013; Khosravi et al. 2019b). The evaluation approach conducted for this research indicates that the overwhelming country context elements that influence EIA system development are the country legal, political, and socio-economic context. Examples from each of the case studies are highlighted below.

Notwithstanding the good country legal context and the need to address challenging environmental conditions in South Africa through tools such as EIA, the development of EIA system legislation has been driven by the developmental state of South Africa. There is a significant demand for economic development to address socio-economic issues such as poverty, unemployment, and inequality. In addition, the political context of South Africa shows a low commitment to environmental assessment tools such as EIA in the face of a challenging socio-economic context. Consequently, certain elements of EIA system legislation were the focus of the ongoing EIA legislation amendments. As demonstrated, amending the screening criteria (Listing Notices) and the timeframes of the EIA process is the emphasis of enhancing EIA legislation. As highlighted through interviews, this is to minimise the number of EIA applications and shorten the timeframes of the EIA process for quick decision-making. This has contributed to the gaps in the systemic components of the EIA system and the legal requirements of EIA reports which are reflected in the poor quality of the reports, thereby limiting EIA system performance.

In contrast, in Namibia, the weaknesses of EIA system components and the EIA reports' requirements and quality are perceived to be a result of the weak country legal context, issues of the socio-economic context, and the influence of the political context. The Namibian legal context does not support environmental laws such as EIA legislation due to a lack of environmental standards, competent judiciary bodies for environmental issues, and laws that ensure transparency and accountability of decision-making, despite the environmental issues faced, such as loss of natural resources and climate change. A further contextual challenge in relation to EIA legislation development is the Namibian socio-economic issues. The country faces issues of low HDI, literacy, poverty, inequality, and unemployment leading to less focus on environmental protection. This condition is exacerbated by the low political commitment of the country to environmental protection and laws such as EIA legislation. The relatively recent establishment of the EIA legislation in 2007 and the ongoing process of approving the amended EIA legislation that still awaits cabinet approval since 2016 could interpret the influence of the developmental state of Namibia on EIA legislation development.

In Malawi, the shortcomings of the ESIA legislation and the pertinent gaps in the ESIA competent authority, procedural steps, and ESIA report legislative requirements and quality are attributed to the influence of the socio-economic and political context. Malawi faces serious environmental challenges including climate change, deforestation, and water resource degradation. The Malawian legal context provides a good basis for environmental protection through environmental policies and legislation. However, the need to address issues of lack of employment, high level of literacy, poverty, and inequality interlinked with a low political commitment to ESIA legislation development affects the development of the ESIA legislation. The government of Malawi has prioritised economic development over environmental protection.

Although the Tanzanian legal context shows significant support to promote sustainable development through instruments such as the EIA system in the face of significant environment issues (i.e., climate change and land degradation), it does not illustrate good frameworks of environmental and administrative justice, transparency, accountability in decision-making, and environmental standards. The key country contextual factors that interacted with the EIA legislation development

are the Tanzanian political and socio-economic context. This case study has demonstrated that there is a lack of political will and commitment to supporting environmental legislation and a significant focus on social-economic development. It is observed that dire socio-economic challenges such as low literacy, low HDI, unemployment, and poverty are the main focus to improve the economy while developing EIA legal framework has not gained enough attention. Despite the early introduction of EIA legislation in 1983 and the amendment undertaken in 2004, 2005, and 2018 which were largely based on changing the EIA list of activities, EIA system performance is found to be limited.

The relationship between EIA system development and the African context is also observed in other African countries (Kakonge 2006a; Bitondo and André 2007; Marara et al. 2011; Bitondo et al. 2014; Ibeh and Walmsley 2021). For instance, Bitondo and André (2007) highlight the relationship between the development of the EIA system and the lack of political will and socio-economic issues such as poverty and unemployment in Cameroon. They indicate that the political and socio-economic context determines the development of EIA legislation, thereby influencing EIA performance. These country contextual challenges in relation to EIA system development are also discussed internationally (Bina et al. 2011; Kabir and Momtaz 2013; Khosravi et al. 2019b; Aung et al. 2020; Khan et al. 2020).

9.3.2. EIA system implementation and enforcement

EIA system performance relies on the effective implementation and enforcement of the EIA system in line with the requirements of the EIA legislative framework (Glasson et al. 2012; UN Environment 2018; Kamijo 2022). Of concern, the findings show that EIA system implementation and enforcement are problematic across all case studies. This limits the performance of the EIA system. The adequacy of EIA system legislation (Marara et al. 2011; Khosravi et al. 2019c) and the capacity of the EIA competent authority (Ebisemiju 1993; UNEP 2004; Khosravi et al. 2019a) are key drivers of successful implementation and enforcement. Interestingly, this is observed in the respective case study countries. As indicated in section 9.3.1, there are legislative shortcomings in all case studies including issues such as misinterpretation of EIA provisions, insufficient EIA guidelines, inadequate EIA

timeframes, lack of appropriate EIA procedural steps, inadequate EIA report requirements, and lack of appropriate EIA follow-up and auditing due to the country context influence of EIA system development. These have affected the effective EIA system implementation and enforcement.

It is important for the EIA competent authority to have sufficient human, financial, and technical resources (Kirchhoff 2006; Van Loon et al. 2010; Khadka and Shrestha 2011; Ostrovskaya and Leentvaar 2011; Jones and Fischer 2016) to make sure that EIA implementation and enforcement are conducted appropriately (Nakwaya-Jacobus et al. 2021). However, this is found to be a major issue across the EIA competent authorities in the case study countries. Although the EIA systems are administered through established EIA competent authorities, it is evident that these authorities are struggling to effectively conduct appropriate EIA implementation and enforcement measures such as adhering to EIA time limits, having adequate systems for handling EIA applications, cooperating with relevant the EIA stakeholders, and undertaking EIA follow-up and auditing. There is also a concern about the lack of independence, transparency, and accountability of the EIA competent authorities in relation to EIA system implementation and enforcement in the respective countries. These are considered as significant factors in the administration of the EIA system (Alberts 2020; Retief et al. 2020; Ehtasham et al. 2022).

The literature indicates that the decentralisation of the EIA administration should lead to improved administrative capacity in terms of enhancing independence, transparency, and cooperation with EIA stakeholders, improving the human, financial, and technical resources, and complying with the EIA legal regime (Kattumuri and Lovo 2018). However, although the EIA system administration in South Africa is decentralised through different EIA competent authorities, the issues of lack of independence and accountability, lack of adequate human, financial, and technical resources, lack of cooperation with EIA stakeholders, and lack of adherence to the EIA time frames are still issues. In fact, the findings of the South African case study further revealed that the mentioned constraints are exacerbated by the different requirements for EIA applications imposed by the EIA competent authorities which influence EIA system implementation (Kolhoff et al. 2009; Kabir and Momtaz 2013).

Interestingly, the challenges that the South African EIA competent authorities face are similar to the other case study countries. Although the EIA administration in Namibia, Malawi, and Tanzania is centralised, their EIA competent authorities encounter issues of lack of independence and autonomy, lack of accountability and transparency, lack of compliance with the legislated EIA timeframes, insufficient human, financial, and technical resources, and lack of cooperation with the relevant EIA actors. Another finding of significant concern is that the EIA competent authorities are vulnerable to the influence of the political and socio-economic context of the case study countries which is in line with other studies globally (Marara et al. 2011; Arts et al. 2012; Zhang et al. 2013; McCullough 2017; Khan et al. 2020; Alberts et al. 2022; Khan et al. 2022). The effects of political and socio-economic factors on the EIA competent authorities have been observed across all case studies. For instance, the political appointment of the EIA managers affects the independence and autonomy of the authorities. Political interference in the EIA decision-making, usage of power relations, and corruption to avoid conducting EIAs or influence the process of EIA decision-making are also concerns.

Moreover, interviews conducted with EIA professionals for this research indicate that the low political commitment and socio-economic pressure negatively affected the EIA competent authorities in terms of lack of independence and autonomy as well as insufficient human, financial, and technical resources. At the same time, other African countries also experience the same issues pertinent to the EIA competent authority. For instance, it is mentioned that the responsible EIA authority in Nigeria faces issues of lack of autonomy, political interference, corruption, lack of cooperation with EIA stakeholders, and insufficient human and financial resources to ensure EIA system implementation and enforcement (Nwoko 2013; Iheriohanma 2016).

The EIA competent authority staff must have sufficient skills, experience, and educational background in order to conduct effective elements of EIA implementation and enforcement (UNEP 2004; Economic Commission for Africa 2005; Khadka and Shrestha 2011; Marara et al. 2011; Kolhoff et al. 2016). However, the limited capacity of the staff of the EIA competent authorities is a common issue across the case study countries. The lack of political will and commitment, low literacy rate, low HDI, poverty, and unemployment in the respective countries has impacts on EIA

administration, and the capacity of not just the EIA officials, but also the other EIA stakeholders. Considering this finding, together with the inadequate EIA reports quality observed, results suggest that EIA administration in particular EIA decision-making tends to be affected by the country context rather than the quality of the report. This issue has been noted by other researchers who consider the influence of country context on EIA competent authorities in developing countries including African countries (Marara et al. 2011; Kabir 2012; Campion and Essel 2013; McCullough 2017; Alberts 2020; Ibeh and Walmsley 2021; Alberts et al. 2022).

As much as EIA system implementation and enforcement depends on the capacity of the competent authority officials, it also relies on the capacity of EIA practitioners, specialists, project proponents, and I&APs (Kolhoff et al. 2009; Marara et al. 2011; Kolhoff et al. 2016; Kolhoff et al. 2018; Zhang et al. 2018; Alberts 2020). Morrison-Saunders and Retief (2012) discuss the importance of focusing on the enhancement of the EIA professional's capacity in particular the EAPs rather than seeking further legislation reform to adequately prepare EIA reports for improved EIA system performance. Sandham et al. (2013) and Zuhair and Kurian (2016) also highlight the role of the key EIA actors such as the EAPs, specialists, project proponents, and I&APs in the improvement of EIA report quality and EIA process, thereby improving EIA system performance. This research has shown that the capacity limitation within the EIA stakeholders exists across the case study countries. The capacity of the EAPs and specialists in the case studies of Namibia and Malawi is found to be limited may be due to the absence of legislation that can ensure their competency. On the contrary, the countries of South Africa and Tanzania have presented legislative frameworks for the registration and certification of the EAPs and further the specialists in the South African case study to ensure their capacity, however, it is still limited.

The capacity of project proponents is also of concern (Stoeglehner et al. 2009; Jones and Fischer 2016; Kolhoff et al. 2016), which is lacking in terms of proper understanding of EIA legislation and commitment to implement the conditions of environmental authorisation in the respective countries. Comparably, the capacity of the I&APs is very important as they legally form part of the EIA process such as public participation in the scoping and EIA report review processes (UNEP 2004; Kakonge 2006a; Kolhoff et al. 2009; Marara et al. 2011). However, this research has

indicated that the capacity of the I&APs is lacking as they appear to focus on employment and forms of compensation, and they also tend to be vulnerable to cultural pressure by their community leaders, and poverty and unemployment issues. The limited capacity of the I&APs and project proponents can again be linked to the socio-economic context challenges such as poverty and literacy. The finding on the limited capacity of the EIA stakeholders confirms that of other researchers in African countries such as the Republic of Congo, Rwanda, Nigeria, Uganda, and Cameroon (Alemagi et al. 2013; Nwoko 2013; Bitondo et al. 2014; Ibeh and Walmsley 2021; Kahangirwe and Vanclay 2022)

Based on this discussion, the research findings have shown that the EIA system performance is limited in case study countries of the southern African region due to the influence of their developing country context. It is identified that EIA systems are being adopted in developing countries including African countries in response to international environmental conventions, laws, and the influence of donor agencies not for the potential benefits of conducting EIAs (top-down approach) (Kakonge 1999; George and Lee 2000; Annandale 2001; Tarr 2003; UNEP 2004; Li 2008; Marara et al. 2011; Campion and Essel 2013; McCullough 2017). On the other hand, the development and practice of the EIA system in developed countries were based on societal pressure on governments to protect the environment through environmental assessment (bottom-up approach) (Marara et al. 2011; McCullough 2017). This research has shown the identified influence of the low political will and commitment to environmental laws, and the developmental state in pursuit of economic development and growth on the EIA system has affected the development of adequate EIA system legislation. This has also impacted the implementation and enforcement of EIA due to the legislative gaps related to EIA competent authorities and procedural steps. Alongside this, the socio-economic issues (i.e., poverty, unemployment, inequality), issues of political interference, power relations, and corruption in EIA administration, and the limited capacity of EIA stakeholders have led to ineffective EIA system implementation and enforcement. These issues can be also linked to the pressure resulting from the fact that all case studies are in the developmental state looking to enhance their economy in light of challenging political and socio-economic contexts. This concurs with the other research that highlights the limitation of the EIA system performance concerning the context of developing

countries (e.g., Kabir and Momtaz 2013; Kolhoff et al. 2013; Kolhoff et al. 2016; Lesirma 2016; Khosravi et al. 2019c; Ibrahim et al. 2020; Khan et al. 2020; Kamijo 2022).

In conclusion, the country legal context, the capacity of the EIA stakeholders, and the political and socio-economic context of the case studies countries are the key drivers of the poor EIA system performance in developing countries.

9.4. Recommendations to improve EIA system performance

Regardless of the challenges of the country context, EIA can and must still play a significant role to support the promotion of sustainable development in Africa (Ibeh and Walmsley 2021; Sandham et al. 2022). Recognising the need for economic development in the face of environmental, socio-economic, political, and capacity-building challenges in Africa (Bitondo et al. 2014; Abernethy et al. 2016; Bhorat et al. 2016; UNEP 2019b; World Bank 2022), the EIA system remains a necessary environmental policy tool (Economic Commission for Africa 2005; Kakonge 2006a; Bitondo et al. 2014; Walmsley and Hussleman 2020; Ibeh and Walmsley 2021). This is especially relevant given the global environmental challenges of biodiversity loss and climate change, coupled with the significant rates of population growth and related urbanisation forecast for Africa (Bhorat et al. 2016; UNEP 2019a). Africa will also be the epicentre for new projects to support the green energy transition. This will include mining and various forms of green and renewable energy projects (Bitondo et al. 2014; Ibeh and Walmsley 2021).

Therefore, there is a need to improve EIA system performance by taking the country context into account. EIA literature has broadly acknowledged the need to adapt/tailor the system of EIA to its country-specific context to improve performance (Kolhoff et al. 2009; Van Loon et al. 2010; Marara et al. 2011; Arts et al. 2012; Kolhoff et al. 2013; Khosravi et al. 2019b; Bond et al. 2022). Furthermore, moving to use other impact assessment tools without understanding the role of context in the region could be ineffective. While impact assessment instruments differ, the context in which these tools exist determines the extent of the contribution of these tools to

their objectives (Kolhoff et al. 2009; Marara et al. 2011; Kolhoff et al. 2016; Khosravi et al. 2019b; Bond et al. 2022).

Building on the lessons learned from this research, the following recommendations can be used to improve EIA system performance in the African developing country context. These recommendations may also be applicable to other developing country contexts.

- It is recommended that the developed evaluation approach in this research be used as a tool to consider the influence of country context on EIA system performance. This evaluation approach has helped to understand the relationship between EIA system performance and the county context in Africa. Through the application of the developed approach in other developing countries, opportunities to improve EIA system performance can be identified based on sufficiently considering and understanding the role of the country-specific issues in the EIA system performance. The evaluation approach, therefore, could be considered as guidance for EIA best practices based on understanding the country context.
- Careful consideration should be given to the development and review of EIA legislation. As discussed, a number of elements within the EIA system components and EIA report were identified as gaps and should be adequately and clearly set out in the development of the EIA system.
- It is also recommended that African countries employ additional environmental safeguard measures to enhance their environmental legislative frameworks to address the highlighted shortcomings. For instance, the globally accepted IFC's Performance Standards on Environmental and Social Sustainability, and the Equator Principles can be applied to local and international development projects to ensure that social and environmental risks are effectively managed.
- The lack of political will, political interference, corruption, and socio-economic issues pose risks to the EIA administration and decision-making. It is therefore recommended that there should be increased recognition of country context influence on EIA system performance to find feasible solutions to the problems identified.

- An effective EIA system also depends on the competence of EIA key actors. A forward-looking focus on enhancing the capacity building of EIA stakeholders is needed. In particular, the capacity of EIA officials, EAPs, specialists, project proponents, and I&APs. It is therefore recommended that registration bodies (i.e., IAIAAsa, EAPAN, and TEEA), university programmes, and non-governmental organisations (for example the Centre for Environmental Rights in South Africa and the Centre for Environmental Policy and Advocacy in Malawi) can substantially contribute to the development and improvement of the capacity within those groups of EIA stakeholders.

CHAPTER 10 – CONCLUSION

The EIA system has been accepted and used globally as an environmental policy implementation tool for environmental protection and sustainable development by supporting the decision-making process at the project level (Glasson et al. 2012; Morgan 2012). The EIA system performance is seen in terms of the extent to which it is actually meeting its objectives (Sadler 1996; Kolhoff et al. 2009; Morgan 2012; Kolhoff et al. 2016; Loomis and Dziedzic 2018). The evaluation of the EIA system towards achieving its purpose has been the central debate of the EIA literature (Morgan 2012; Loomis and Dziedzic 2018). There is a general and ongoing concern about the influence of country context on EIA system performance particularly in developing countries (Sankoh 1996; Lawrence 1997; Emmelin 1998; George and Lee 2000; Cherp 2001; Cherp and Antypas 2003; Lawrence 2003; Wood 2003; Kolhoff et al. 2009; Marara et al. 2011; Kabir 2012; Kolhoff et al. 2013; Van den Berg 2015; Khosravi et al. 2019b; Khan et al. 2020; Bond et al. 2022). Notwithstanding the wealth of literature and research on EIA system performance and country context, the fundamental understanding on the relationship between the performance of EIA system and country context is still not clearly understood (Kolhoff et al. 2009; Morgan 2012; Zhang et al. 2013; Lyhne et al. 2017; Bond et al. 2022). Thus, in practice there is a limited understanding of the dynamic connection between the country context and EIA system performance through common accepted evaluation frameworks (Kolhoff et al. 2009; Kolhoff et al. 2016; Khosravi et al. 2019c).

The purpose of this research has been to contribute to the understanding of how country context influences EIA system performance in African developing countries. An important contribution of this research has been the development of an evaluation approach, which draws on and further develops existing evaluation approaches. As a consequence, the developed evaluation approach can be considered the current best practice. The value of the evaluation approach is that it can be used to inform the review and/or development of EIA systems in developing countries.

In applying the developed evaluation approach to the four case studies, the influence of country context on the EIA system performance has become apparent. Different

aspects of the country context impact on EIA system development, implementation, and enforcement, limiting overall EIA performance. The developmental state (political and socio-economic context), country legal context, and EIA stakeholders' capacity appeared to be the most significant country context indicators that influenced the performance of the EIA system in the case study countries. However, this is more than likely also the case in other African countries and developing countries more generally. The recommendations to address these, proposed in the previous chapter, may be equally applicable across these countries. The individual case studies provide a detailed analysis of all the components of the EIA system and country context. These may be of particular benefit to each of the case study countries in their pursuit of improved EIA system performance. The findings caution that the normal government response of developing or changing the legislation, will not address the performance concerns in these countries. Rather a more systemic and longer-term intervention, that addresses some of the country's context role, will be needed.

There are limitations to this research including the development of the evaluation approach of EIA performance and country context. The process of developing the evaluation approach is time-consuming, and complex, and needs collective investment in terms of research and expertise. Comparably, the application process of the developed evaluation approach is also time-consuming, complex, and challenging in terms of exploring sensitive areas of country context influence on EIA performance such as political interference, independence of EIA competent authority, and socio-economic pressure on the EIA system performance. Evaluating EIA system performance and country context using the developed evaluation approach required accessing multiple sources of data, interviews, and review of EIA reports, which involved considerable time and access to information. The processes of developing and evaluating EIA system performance and country context should ideally be conducted by a team of multiple professionals in the related specialties of EIA and country context with appropriate time, financial resources, and access to more nuanced data on country context.

The developed evaluation approach of EIA system performance and country context is meant to be applied in the African developing country contexts; however, a generic evaluation approach sometimes would not be applicable to all developing countries

contexts as the country context influence on EIA performance can be context specific. Therefore, there is an opportunity for further development of the methodology to provide for an appropriate analysis framework that is applicable and suitable to evaluate EIA system performance considering its unique country context. To this end, this research revealed that EIA system performance cannot be considered independently, and a broad understanding of the relationship between EIA system performance and country context is fundamental for a well-performing EIA system. In order for EIA system performance to improve, future research is needed to explore additional challenges and opportunities considering both EIA system performance and the country context.

Future research relating to alignment between the EIA system and the country context will assist in enhancing EIA system performance. In doing so, the EIA system would become feasible within the country context and likewise, the country context would become suitable for a good EIA system performance.

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APPENDICES

APPENDIX A: SUPPORTING INFORMATION FILE

Part of chapter 3 that has been submitted to the Journal of Integrated Environmental Assessment and Management

Section A: Developed evaluation approach

EIA system components indicators

Table 1: EIA legislation indicator and evaluation criteria

Evaluation criteria	Results		Source of data
	Description	Comments	
<i>Availability of Environmental legislation.</i>			
<i>Legislative directive on sustainable development.</i>			
Legal provisions for EIA. (Ahmad and Wood 2002)			
<i>Legislative directive on sustainable development promotion by EIA.</i>			
<i>Availability of EIA guidelines.</i>			
<i>Regulations specify the type of development projects that require EIA.</i>			
<i>Legislation on EIA public participation.</i>			
<i>Legislation on Environmental Impact Assessment report and Environmental Management Programme.</i>			

Evaluation criteria	Results		Source of data
	Description	Comments	
<i>Legislation specifies the competent authority responsible for EIA decision-making (environmental authorization) and its duties.</i>			
<i>Legislation on project proponent/applicant duties and responsibilities.</i>			
<i>Legislation on EIA professional registration, responsibilities, and duties.</i>			
Provisions for appeal by the developer or the public against decisions. (Ahmad and Wood 2002)			
Legal or procedural specification of time limits. (Ahmad and Wood 2002)			
Legal provisions for funding. (Kolhoff et al. 2009)			
<i>Legislation on penalties and offences.</i>			
<i>Legislation on compliance with conditions of approval of the environmental authorization, amendment, and auditing.</i>			
EIA provisions incorporated in relevant related legislation. (Kolhoff et al. 2009)			

Table 2: EIA competent authority indicator and evaluation criteria

Evaluation criteria	Results		Source of data
	Description	Comments	
Existence of EIA competent authority. (Ahmad and Wood 2002)			
Autonomy of EIA competent authority. (Marara et al. 2011)			
<i>Responsibility for environmental policy, legislation, and guidelines formulation and amendment.</i>			
<i>Responsibility for issuing/approving Term of References.</i>			
Responsibility for decision-making (screening, scoping, environmental authorisation). (Kolhoff et al. 2009)			
Review body for EIA and EMP reports. (Ahmad and Wood 2002)			
<i>Availability of administrative law to promote environmental justice in administrative actions (EIA decision-making) and access to information.</i>			
<i>EIA decision-making criteria followed by the competent authority.</i>			
Specification of sectoral responsibilities in the EIA process. (Ahmad and Wood 2002)			
Coordination with other lead agencies. (Marara et al. 2011)			
<i>Established mechanism for cooperation with project proponent and EIA professionals.</i>			
<i>Preparation of EIA best practice principles for good practice.</i>			
<i>Preparation of Environmental standards.</i>			

Evaluation criteria	Results		Source of data
	Description	Comments	
<i>Mechanism for inspection of Environmental Management Plan (EIA follow-up and auditing).</i>			

Table 3: EIA procedural steps indicator and evaluation criteria

Evaluation criteria	Source of data		Source of data
	Description	Comments	
Specified screening categories. (Ahmad and Wood 2002)			
Systematic scoping approach. (Ahmad and Wood 2002)			
<i>Terms of Reference (ToR) preparation and approval.</i>			
Requirement for public participation in the scoping stage of EIA implementation. (Kolhoff et al. 2009)			
Requirement for public participation in reviewing EIA report. (Kolhoff et al. 2009)			
Requirement for specified EIA report content. (Ahmad and Wood 2002)			
Requirement for systematic EIA report review process. (Ahmad and Wood 2002)			
<i>Specialist report requirement.</i>			
Requirement for Environmental Management Plan/Programme (EMP). (Ahmad and Wood 2002)			
<i>Requirement for EIA follow-up and auditing.</i>			

The IAU’s review package was used to evaluate EIA report legal requirements and preparation

The IAU’s review package includes eight review areas. Each review area has assessment columns. The first column is used to assess the legal requirements of EIA reports and to indicate that the review areas and their criteria are legally required by the Regulations (R) or Guidelines (G). It also has a column that illustrates the Presence (P) or Absence (A) of evaluation criteria in the report. The review package also includes a column for the assessment of the criteria in the report. The assessment is undertaken in the form of Complete for decision-making (C), Adequate (not complete but adequate for decision-making) (A), and Inadequate (not adequate for decision-making) (I). After the assessment column, there is a comment column for each assessed criterion.

DOCUMENTATION EVALUATION SHEET	
EIA Project	
EIA Project Date	
Type of Project	
Project Location	
Evaluation Date	
Assessment Symbols: R. Regulations G. Guidelines P. Present A. Absent C: Complete for decision-making A: Adequate (not complete but adequate for decision-making) I: Inadequate (not adequate for decision-making)	

Review area 1: Description of the development

Evaluation criteria	Required by EIA R/G	EIA report P/A	Assessment C/A/I	Comment
Principle features of project.				
1.1 Explain the purpose(s) and objectives of the development.				
1.2 Indicates the nature and status of the decision(s) for which the environmental information has been prepared.				
1.3 Gives the estimated duration of the construction, operational, and where appropriate, decommissioning phase, and the programme within these phases.				
1.4 Provides a description of the development comprising information on the site, design, and size of the development.				
1.5 Provides diagrams, plans or maps and photographs to aid the description of the development.				
1.6 Indicates the physical presence or appearance of the completed development within the receiving environment.				
1.7 Describes the methods of construction.				
1.8 Describes the nature and methods of production or other types of activity involved in the operation of the project.				
1.9 Describes any additional services (water, electricity, emergency services etc.) and developments required as a consequence of the project.				
1.10 Describes the project's potential for accidents, hazards, and emergencies.				
Land requirements.				
1.11 Defines the land area taken up by the development and/or construction site and any associated arrangements, auxiliary facilities, and landscape areas, and shows their location clearly on a map. For a linear project, describes the land corridor, vertical and horizontal alignment and need for tunnelling and earthworks.				
1.12 Describes the uses to which this land will be put and demarcates the different land use areas.				

Evaluation criteria	Required by EIA R/G	EIA report P/A	Assessment C/A/I	Comment
1.13 Describes the reinstatement and after-use of landtake during construction.				
Project inputs.				
1.14 Describes the nature and quantities of materials needed during the construction and operational phases.				
1.15 Estimates the number of workers and visitors entering the project site during both construction and operation.				
1.16 Describes their access to the site and likely means of transport.				
1.17 Indicates the means of transporting materials and products to and from the site during construction and operation, and the number of movements involved.				
Residues and emissions.				
1.18 Estimates the types and quantities of waste matter, energy (noise, vibration, light, heat, radiation etc.) and residual materials generated during construction and operation of the project, and rate at which these will be produced.				
1.19 Indicates how these wastes and residual materials are expected to be handled/treated prior to release/disposal, and the routes by which they will eventually be disposed of to the environment.				
1.20 Identifies any special or hazardous wastes (defined as...) which will be produced and describes the methods for their disposal as regards their likely main environment impacts.				
1.21 Indicates the methods by which the quantities of residuals and wastes were estimated. Acknowledges and uncertainty and gives ranges or confidence limits where appropriate.				
Review area evaluation:				

Review area 2: Description of the environment

Evaluation criteria	Required by EIA R/G	EIA report P/A	Assessment C/A/I	Comment
Description of the area occupied by and surrounding the project.				
2.1 Indicates the area expected to be significantly affected by the various aspects of the project with the aid of suitable maps. Explains the time over which these impacts are likely to occur.				
2.2 Describes the land uses on the site(s) and in surrounding areas.				
2.3 Defines the affected environment broadly enough to include any potentially significant effects occurring away from the immediate areas of construction and operation. These may be caused by, for example, the dispersion of pollutants, infrastructural requirements of the project, traffic etc.				
Baseline conditions.				
2.4 Identifies and describes the components of the affected environment potentially affected by the project.				
2.5 The methods used to investigate the affected environment are appropriate to the size and complexity of the assessment task. Uncertainty is indicated.				
2.6 Predicts the likely future environmental conditions in the absence of the project. Identifies variability in natural systems and human use.				
2.7 Uses existing technical data sources, including records and studies carried out for environmental agencies and for special interest groups.				
2.8 Reviews local, regional and national plans policies, and other data collected as necessary to predict future environmental conditions. Where the proposal does not conform to these plans and policies, the departure is justified.				
2.9 Local, regional and national agencies holding information on baseline environmental conditions have been approached.				

Evaluation criteria	Required by EIA R/G	EIA report P/A	Assessment C/A/I	Comment
Review area evaluation:				

Review area 3: Scoping, consultation, and impact identification

Evaluation criteria	Required by EIA R/G	EIA report P/A	Assessment C/A/I	Comment
Scoping and consultation.				
3.1 There has been a genuine attempt to contact the general public, relevant public agencies, relevant experts and special interest groups to appraise them of the project and its implication. Lists the groups approached.				
3.2 Statutory consultees have been contacted. Lists the consultees approached.				
3.3 Identifies valued environmental attributes on the basis of this consultation.				
3.4 Identifies all project activities with significant impacts on valued environmental attributes. Identifies and selects key impacts for more intense investigation. Describes and justifies the scoping method used.				
3.5 Includes a copy or summary of the main comments from consultees and the public, and measures taken to respond to these comments.				
Impact identification.				
3.6 Provides the data required to identify the main effects which the development is likely to have on the environment.				
3.7 Considers direct and indirect/secondary effects of constructing, operating and, where relevant, after-use or decommissioning of the project (including positive and negative impacts). Considers whether effects will arise as a result of "consequential" development.				
3.8 Investigates the above types of impacts in so far as they affect: human beings, flora, fauna, soil, water, air, climate,				

Evaluation criteria	Required by EIA R/G	EIA report P/A	Assessment C/A/I	Comment
landscape, interactions between the above, material assets, cultural heritage.				
3.9 Also noise, land use, historic heritage, communities.				
3.10 If any of the above are not of concern in relation to the specific project and its location, this is clearly stated.				
3.11 Identifies impacts using a systematic methodology such as project specific checklist, matrices, panels of experts, extensive consultation, etc. Describes the methods/approaches used and the rationale for using them.				
3.12 The investigation of each type of impact is appropriate to its importance for the decision, avoiding unnecessary information and concentrating on the key issues.				
3.13 Considers impacts which may not themselves be significant, but which may contribute incrementally to a significant effect.				
3.14 Considers impacts which might arise from non-standard operating conditions, accidents and emergencies.				
3.15 If the nature of the project is such that accidents are possible which might cause severe damage within the surrounding environment, an assessment of the probability and likely consequences of such events is carried out and the main findings reported.				
Review area evaluation:				

Review area 4: Predictions and evaluation of impacts

Evaluation criteria	Required by EIA R/G	EIA report P/A	Assessment C/A/I	Comment
Prediction of magnitude of impacts.				

Evaluation criteria	Required by EIA R/G	EIA report P/A	Assessment C/A/I	Comment
4.1 Describes impacts in terms of the nature and magnitude of the change occurring and the nature, location, number, value, sensitivity of the affected receptors.				
4.2 Predicts the timescale over which the effects will occur, so that it is clear whether impacts are short, medium or long term, temporary or permanent, reversible or irreversible.				
4.3 Where possible, expresses impact predictions in quantitative terms. Qualitative descriptions, where necessary, are as fully defined as possible.				
4.4 Describes the likelihood of impacts occurring, and the level of uncertainty attached to the results.				
Methods and data.				
4.5 Provides the data required to assess the main effects which the development is likely to have on the environment.				
4.6 The methods used to predict the nature, size and scale of impacts are described, and are appropriate to the size and importance of the projected disturbance.				
4.7 The data used to estimate the size and scale of the main impacts are sufficient for the task, clearly described, and their sources clearly identified. Any gaps in the data are indicated and accounted for.				
Evaluation of impact significance.				
4.8 Discusses the significance of effects in terms of the impact on the local community (including distribution of impacts) and on the protection of environmental resources.				
4.9 Discusses the available standards, assumptions and value systems which can be used to assess significance.				
4.10 Where there are no generally accepted standards or criteria for the evaluation of significance, alternative approaches are discussed and, if so, a clear distinction is made between fact, assumption and professional judgement.				
4.11 Discusses the significance of effects taking into account the appropriate national and international				

Evaluation criteria	Required by EIA R/G	EIA report P/A	Assessment C/A/I	Comment
standards or norms, where these are available. Otherwise the magnitude, location and duration of the effects are discussed in conjunction with the value, sensitivity and rarity of the resource.				
4.12 Differentiates project-generated impacts from other changes resulting from non-project activities and variables.				
4.13 Includes a clear indication of which impacts may be significant and which may not and provides justification for this distinction.				
Review area evaluation:				

Review area 5: Alternatives

Evaluation criteria	Required by EIA R/G	EIA report P/A	Assessment C/A/I	Comment
5.1 Provides an outline of the main alternatives and gives and an indication of the main reasons for their choice, taking into account the environmental effects.				
5.2 Considers the “no action” alternative, alternative processes, scales, layouts, designs and operating conditions where available at any early stage of project planning, and investigates their main environmental advantages and disadvantages.				
5.3 If unexpectedly severe adverse impacts are identified during the course of the investigation, which are difficult to mitigate, alternatives rejected in the earlier planning phases are re-appraised.				
5.4 The alternatives are realistic and genuine.				
5.5 Compares the alternatives’ main environmental impacts clearly and objectively with those of the proposed project and with the likely future environmental conditions without the project.				

Evaluation criteria	Required by EIA R/G	EIA report P/A	Assessment C/A/I	Comment
Review area evaluation:				

Review area 6: Mitigation and monitoring

Evaluation criteria	Required by EIA R/G	EIA report P/A	Assessment C/A/I	Comment
Description of mitigation measure.				
6.1 Provides a description of the measures envisaged in order to avoid, reduce and, if possible, remedy significant adverse effects.				
6.2 Mitigation measures considered include modification of project design, construction and operation, the replacement of facilities/resources, and the creation of new resources, as well as “end-of-pipe” technologies for pollution control.				
6.3 Describes the reasons for choosing the particular type of mitigation, and the other options available.				
6.4 Explains the extent to which the mitigation methods will be effective. Where the effectiveness is uncertain, or where mitigation may not work, this is made clear and data are introduced to justify the acceptance of these assumptions.				
6.5 Indicates the significance of any residual or unmitigated impacts remaining after mitigation and justifies why these impacts should not be mitigated.				
Commitment to mitigation and monitoring.				
6.6 Gives details of how the mitigation measures will be implemented and function over the time span for which they are necessary.				
6.7 Proposes monitoring arrangements for all significant impacts, especially where uncertainty exists, to check the environmental impact resulting from the implementation of the project and its conformity with the predictions made.				

Evaluation criteria	Required by EIA R/G	EIA report P/A	Assessment C/A/I	Comment
6.8 The scale of any proposed monitoring arrangements corresponds to the potential scale and significance of deviation from expected impacts.				
Environmental effects of mitigation.				
6.9 Investigates and describes any adverse environmental effects of mitigation measures.				
6.10 Considers the potential for conflict between the benefits of mitigation measures and their adverse impacts.				
Review area evaluation:				

Review area 7: Non-technical summary

Evaluation criteria	Required by EIA R/G	EIA report P/A	Assessment C/A/I	Comment
7.1 The non-technical summary contains at least a brief description of the project and the environment, an account of the main mitigation measures to be undertaken by the developer, and a description of any remaining or residual impacts.				
7.2 The summary avoids technical terms, lists of data and detailed explanation of scientific reasoning.				
7.3 The summary presents the main findings of the assessment and covers all the main issues raised in the information.				
7.4 The summary includes a brief explanation of the overall approach to the assessment.				
7.5 The summary indicates the confidence which can be placed in the results.				
Review area evaluation:				

Review area 8: Organisation and presentation of information

Evaluation criteria	Required by EIA R/G	EIA report P/A	Assessment C/A/I	Comment
Organization of information.				
8.1 Logically arranges the information in sections.				
8.2 Identifies the location of information in a table or list of contents.				
8.3 There are chapter or section summaries outlining the main findings of each phase of the investigation.				
8.4 When information from external sources has been introduced, a full reference to the source is included.				
Presentation of information.				
8.5 Mentions the relevant EIA legislation, name of the developer, name of the competent authority(ies), name of organization preparing the EIR, and name, address and contact number of a contact person.				
8.6 Includes an introduction briefly describing the project, the aims of the assessment, and the methods used.				
8.7 The assessment is presented as an integrated whole. Data presented in appendices are fully discussed in the main body of the text.				
8.8 Offers information and analysis to support all conclusions drawn.				
8.9 Presents information so as to be comprehensible to the non-specialist. Uses maps, tables, graphical material and other devices as appropriate. Avoids unnecessarily technical or obscure language.				
8.10 Discusses all the important data in an integrated fashion.				
8.11 Avoids superfluous information not needed for making decisions.				
8.12 Presents the information in a concise form with a consistent terminology and logical links between different sections.				

Evaluation criteria	Required by EIA R/G	EIA report P/A	Assessment C/A/I	Comment
8.13 Gives prominence and emphasis to severe adverse impacts, substantial environmental benefits, and controversial issues.				
8.14 Defines technical terms, acronyms and initials.				
8.15 The information is objective and does not lobby for any particular point of view. Adverse impacts are not disguised euphemism or platitudes.				
Difficulties compiling the information.				
8.16 Indicates any gaps in the required data and explains the means used to deal with them in the assessment.				
8.17 Acknowledges and explains any difficulties in assembling or analysing the data needed to predict impacts, and any basis for questioning assumption, data or information.				
Review area evaluation:				

Table 4: Evaluation of EIA report legal requirement

Review area	EIA requirements
Description of the development	
Description of the environment	
Scoping, consultation, and impact identification	
Prediction and evaluation of impacts	
Alternatives	
Mitigation and monitoring	
Non-technical summary	
Organisation and presentation of information	
Overall evaluation	

Table 5: Evaluation of EIA reports preparation

Review area	EIA review area evaluation
Description of the development	
Description of the environment	
Scoping, consultation, and impact identification	
Prediction and evaluation of impacts	
Alternatives	
Mitigation and monitoring	
Non-technical summary	
Organisation and presentation of information	
EIAr evaluation	

Country context indicators

Table 6: Country legal context indicator and evaluation criteria

Evaluation criteria	Results		Source of data
	Description	Comments	
<i>Constitutional directives on;</i> <ul style="list-style-type: none"> • <i>Environmental policies,</i> • <i>Environmental laws, and</i> • <i>Sustainable development.</i> 			
<i>Availability of Environmental Action Plan and/or Policy to promote sustainable development by impact assessment tools.</i>			
<i>Availability of relevant environmental legislations.</i>			
Availability of environmental standards. (Kolhoff et al. 2009)			
Existence of competent judiciary body to prosecute environmental issues.			

Evaluation criteria	Results		Source of data
	Description	Comments	
(Marara et al. 2011)			
Constitutional directive on; <ul style="list-style-type: none"> • Access to information and administrative justice, • role of public in decision-making, and • transparency and accountability in decision-making. (Kolhoff et al. 2009)			

Table 7: Political indicator and evaluation criteria

Evaluation criteria	Results		Source of data
	Results	Comments	
<i>Country's political participation in the international agreements (conventions, treaties, and protocols) of environmental assessment.</i>			
<i>Political influence on enactment and reform of EIA legislation</i>			
<i>Political influence on EIA administration.</i> <ul style="list-style-type: none"> • <i>Autonomy of responsible authority (independency and political appointment of managers), and</i> • <i>Allocation of funding and resources.</i> 			
<i>Political influence on EIA decision-making.</i> <ul style="list-style-type: none"> • <i>EIA decision-making during screening, scoping, and environmental approval of EIA report.</i> 			

Table 8: Socio-economic indicator and evaluation criteria

Evaluation criteria	Results	Source of data
	Description (year of 2020)	
<i>Human Development Index (HDI).</i>		
<i>Life expectancy index.</i>		
<i>Gross National Income (GNI) per capita (constant 2017 PPP\$).</i>		
<i>Gross Domestic Product (GDP) per capita (2017 PPP\$).</i>		
<i>Unemployment, total (% of labour force).</i>		
<i>Population in multidimensional poverty, headcount (%).</i>		
<i>Total population (millions)(Data refers to 2030).</i>		
<i>Education index.</i>		
<i>Literacy rate, adult (% ages 15 and older)</i>		

Table 9: Environmental condition indicator and evaluation criteria

Evaluation criteria	Results		Source of data
	Description	Comments	
<i>Land issues.</i>			
<i>Biodiversity and ecosystem issues.</i>			
<i>Water issues.</i>			
<i>Aquatic system issues.</i>			
<i>Air quality issues.</i>			
<i>Climate change issue.</i>			

Table 10: EIA stakeholders' capacity indicator and evaluation criteria

Evaluation criteria	Results		Source of data
	Description	Comments	
EIA competent authority staff competency. (Kolhoff et al. 2009; Kolhoff et al. 2016)			
EIA consultant and specialist competency. (Kolhoff et al. 2009; Marara et al. 2011)			
Project proponent/developer competency (Kolhoff et al. 2009)			
Interested and affected party's competency. (Kolhoff et al. 2009; Marara et al. 2011)			

Interviews questions

1- Could you please tell a bit about your role and work with EIA particularly in your country and broadly in the southern African region?

Probe for- EAP's responsibilities and duties in accordance with relevant legislation in the country, EAP's experience nationally and in the southern African region if there is, and factors influencing EAP's capacity and performance.

2- Could you please briefly describe the EIA system in your county?

Probe for- which are the relevant policies and legislations requiring EIA? who is the competent authority? what are the procedural steps of EIA? which projects require EIA? Who are the EIA stakeholders and what are their capacities? And are there other EIA system requirements implemented such as the World Bank requirements? And why?

3- In your experience, to what extent do EIA policy and legislation influence EIA performance?

Probe for- are the EIA's policy and legislation appropriate and effectively implemented? what are the legislative shortcomings affecting EIA performance? for instance, classification of EIA projects, EIA report content, public participation, timeframes for decision-making, cost effectiveness of the process, etc. What is it legally needed to support EIA performance?

4- In your experience, to what extent does the competent authority's competence affect EIA performance?

Probe for- what are the roles and duties of the competent authority? Are they effectively accomplished? How do they influence EIA performance? For instance, developing EIA guidelines, accountability and transparency, decision-making criteria and process, intra-interagency collaboration, supporting EIA stakeholders, availability of financial resources, staff's capacity, etc.

5- How do you think the country context (political, socioeconomic, and environmental conditions) for instance political instability, need for employment, education, and health service affect EIA system performance? Could you please give some examples?

Probe for- is there any lack of political commitment to improve EIA policy and legislation (EIA legal amendments) to protect the environment and natural resources? Is there any political influence on EIA administrative decision-making (corruption)? Is there any lack of EIA regulation enforcement caused by socioeconomic issues (Corona influence)? Is sustainable development given a priority in decision-making? And do socioeconomic issues (poverty, unemployment, etc) affect EIA administrative decision-making?

6- How do you think the influence of country context on EIA system performance can be addressed to promote sustainable development?

Probe for- should EIA system be improved to suit the African context? how do you think that can be achieved? And what are the risks and benefits associated with the improvement of EIA?

Section B: The data of the South African case study

Table 1: EIA legislation indicator and evaluation criteria

Evaluation criteria	Results		Source of data
	Description	Comment	Document review
<i>Availability of Environmental Legislation.</i>	<p>-The National Environmental Management Act, No. 107 of 1998 (NEMA).</p> <p>-NEMA was commenced <i>“to provide for co-operative environmental governance by establishing principles for decision-making on a matter affecting the environment, institutions that will promote co-operative governance and procedures for co-ordinating environmental functions exercised by organs of state; to provide for certain aspects of the administration and enforcement of other environmental management laws; and to provide for matters connected therewith.”</i></p> <p>-NEMA also defined the environment as <i>“the surroundings within which humans exist and that are made up of- (i) the land, water and atmosphere of the earth; (ii) micro-organisms, plant and animal life; (iii) any part or combination of (i) and (ii) and the interrelationships among and between them: and (iv) the physical, chemical, aesthetic and cultural properties and conditions of the foregoing that influence human health and well-being;”</i></p>	<p>It was promulgated to give effect to the National Environmental Management Policy (1997), and section 24 was included in the Bill of Rights in Chapter 2 of the Constitution of the Republic of South Africa (1996).</p> <p>-Before NEMA of 1998, the Environment Conservation Act (ECA), No. 73 of 1989 was the legal regime that supported EIA in the South African country context.</p>	<p>-The National Environmental Management Act, No. 107 of 1998 (NEMA) (RSA 1998a).</p> <p>-Section 1 (definitions) of NEMA No.107 of 1998 (RSA 1998a).</p>
<i>Legislative directive on sustainable development.</i>	<p>- NEMA defined sustainable development as <i>“means the integration of social, economic and environmental factors into planning, implementation and decision-making so as to ensure that development serves present and future generations;”</i></p>	<p>-NEMA defined sustainable development and relevant factors to consider the integration of sustainable development elements (social, economic, and environmental elements) into the planning, implementation, and decision-making of development projects.</p>	<p>-Section 1 (definitions) of NEMA, No.107 of 1998 (RSA 1998a).</p> <p>-Section 2 (4)(a), Chapter 1 of NEMA No.107 of 1998 (RSA 1998a).</p>

Evaluation criteria	Results		Source of data
	Description	Comment	Document review
Legal provisions for EIA. (Ahmad and Wood 2002)	-Chapter 5 of NEMA established the legal mandate for EIA in South Africa. -The purpose of EIA Regulations was to regulate EIA procedures and criteria in compliance with Chapter 5 of NEMA.	-EIA was considered an environmental management tool/instrument to identify, predict, and evaluate the actual and potential impact on the environment and socio-economic condition in decision-making. -EIA Regulations defined EIA as 'a systematic process of identifying, assessing and reporting environmental impacts associated with an activity and includes basic assessment and scoping and environmental impact reporting'.	-Section 24(1) and (4A), Chapter 5 of NEMA, No.107 of 1998 (RSA 1998a). -Regulations (1)(d) and 2, Chapter 1 of EIA Regulations of 2014, GNR 982 (RSA 2014a)
<i>Legislative directive on sustainable development promotion by EIA.</i>	-NEMA promoted sustainable development through the integrated environmental management of activities and ensuring the application of environmental management tools. -EIA Regulations stated the purpose of EIA in relation to promoting sustainable development.	-NEMA stated sustainable development as one of the national environmental management principles. It also promoted the integration of environmental management principles into decision-making by ensuring the integrated management of activities, which relies on environmental management tools such as EIA.	-Section 2 (4)(a), Chapter 1 of NEMA No.107 of 1998 (RSA 1998a). -Section 23(1)(2), Chapter 5 of NEMA, No.107 of 1998 (RSA 1998a). -Regulation 2, Chapter 1 of EIA Regulations of 2014, GNR 982 (RSA 2014a).
<i>Availability of EIA guidelines.</i>	-Guidelines on the implementation of the EIA Regulations, 2010.	-There were also EIA guidelines on public participation, appeals, and sectoral guidelines such as EIA guidelines for aquaculture, renewable energy, and mining. -NEMA provided a procedure for publishing and implementing guidelines regarding listed activities activity or areas by the Minister.	-Section 24J, Chapter 5 of NEMA No.107 of 1998 (RSA 1998a). -(DEA 2010).

Evaluation criteria	Results		Source of data
	Description	Comment	Document review
		-No new guidelines were published on the 2014 NEMA-EIA Regulations.	
<i>Regulations specify the type of development projects that require EIA.</i>	-NEMA provided a legal mandate to establish a List of Activities by the competent authority, which may not commence without environmental authorisation. -EIA Regulations included a List of Activities that require conducting an EIA (Scoping and Environmental Impact Reporting) (S&EIR).	-NEMA provided a procedure for specifying a Listing of Activities or areas by the Minister and also the involvement of the interested parties.	-EIA Regulations: Listing Notice 2 of 2014, GNR.984 (RSA 2014b). -Section 24A and 24D, Chapter 5 of NEMA No.107 of 1998 (RSA 1998a).
<i>Legislation on EIA public participation.</i>	-NEMA defined the public participation process and ensures public participation in decision-making. -EIA Regulations provided a detailed procedure for conducting public participation during EIA implementation.	-Public participation is undertaken place at two stages of EIA implementation (scoping and EIA report preparation). -Interested and affected part in terms of NEMA meant ' <i>an interested and affected party which includes any person, group of persons or organisation interested in or affected by such operation or activity; and any organ of state that may have jurisdiction over any aspect of the operation or activity</i> '.	-Section 1 (definitions) of NEMA No. 107 of 1998 (RSA 1998a). -Section 2(4)(f)(g), Chapter 1 of NEMA, No.107 of 1998 (RSA 1998a). -Section 23(2)(d), Chapter 5 of NEMA No. 107 of 1998 (RSA 1998a). -Section 24(4)(a)(v), Chapter 5 of NEMA, No.107 of 1998 (RSA 1998a). -Regulations 39 to 44, Chapter 6 of EIA Regulations, 2014, GNR 982 (RSA 2014a).
<i>Legislation on Environmental Impact Assessment report and</i>	-NEMA provided for a required detailed content of EMPr to be considered during the environmental authorisation process of an application.	-Appendices 3 and 4 in EIA regulations provided detailed content of the EIA report and EMP report.	-Section 24N, Chapter 5 of NEMA No.107 of 1998 (RSA 1998a).

Evaluation criteria	Results		Source of data
	Description	Comment	Document review
<i>Environmental Management Programme.</i>	-EIA Regulations described the content of the EIA report and EMPr in accordance with NEMA requirements.		-Regulation 23, part 3, of EIA Regulations, 2014, GNR 982 (RSA 2014a). -Appendices 3 and 4 of EIA Regulations, 2014, GNR 982 (RSA 2014a).
<i>Legislation specifies the competent authority responsible for EIA decision-making (environmental authorization) and its duties.</i>	-NEMA defined the competent authority as ' <i>in respect of a listed activity or specified activity, means the organ of state charged by this Act with evaluating the environmental impact of that activity and, where appropriate, with granting or refusing an environmental authorisation in respect of that activity;</i> ' -NEMA also defined environmental authorisation as ' <i>when used in Chapter 5, means the authorisation by a competent authority of a listed activity or specified activity in terms of this Act, and includes a similar authorisation contemplated in a specific environmental management Act;</i> '	-NEMA described the identification of competent authorities in relation to environmental authorization and their roles. -EIA Regulations illustrated the duties of the specified competent authority.	-Section 1 (definitions) of NEMA No.107 of 1998 (RSA 1998a). -Section 24 and 24C, Chapter 5 of NEMA, No.107 of 1998 (RSA 1998a). -Regulations 7,8, and 9, part 1, Chapter 3 of EIA Regulations, 2014, GNR 982 (RSA 2014a)
<i>Legislation on project proponent/applicant duties and responsibilities.</i>	-NEMA defined the applicant as ' <i>a person who has submitted an application for an environmental authorisation to the competent authority and has paid the prescribed fees;</i> ' -NEMA illustrated the required duties of the project proponent/applicant in terms of complying with the Act's requirements such as meeting application submission, reports content, and public participation prescribed requirements. -EIA regulations described in more detail the project proponent/applicant duties in compliance with NEMA chapter 5.	-The Act and EIA Regulations clearly describe the applicant's responsibilities in conducting EIAs.	-Section 1 (definitions) of NEMA No.107 of 1998 (RSA 1998a). -Section 24, Chapter 5 of NEMA No. 107 of 1998 (RSA 1998a). -Regulations 10, 11, and 12, part 2, Chapter 3 of EIA Regulations, 2014, GNR 982 (RSA 2014a).
<i>Legislation on EIA professional's registration, responsibilities, and duties.</i>	-NEMA defined Environmental Assessment Practitioners (EAPs) and specifies their role in applying for environmental authorisation.	-The Act did not require certain criteria for EAP's registration in the association.	-Section 1 (definitions) of NEMA No. 107 of 1998 (RSA 1998a).

Evaluation criteria	Results		Source of data
	Description	Comment	Document review
	<p>-NEMA defined the EAP as <i>'the individual responsible for the planning, management, coordination or review environmental impact assessments, strategic environmental assessment, environmental management programmes or any other appropriate environmental instruments introduced through regulations;'</i></p> <p>-NEMA also provided a legal mandate for all EAPs in terms of GNR.849 of 2016 of NEMA to register with the Environmental Assessment Practitioners Association of South Africa.</p> <p>-EIA Regulations described the appointment of EAPs, their requirement, responsibilities, and liabilities.</p>	<p>-The registration authority of EAPs is called the Environmental Assessment Practitioners Association of South Africa (EAPASA).</p> <p>-The process of registering EAPs in the association is still ongoing.</p>	<p>-Section 24(5)(e), Chapter 5 of NEMA, No.107 of 1998 (RSA 1998a).</p> <p>-Section 24H, Chapter 5 of NEMA, No.107 of 1998 (RSA 1998a).</p> <p>-Regulations 12, 13, 14, and 15, part 2, Chapter 3 of EIA Regulations, 2014, GNR 982 (RSA 2014a).</p>
Provisions for appeal by the developer or the public against decisions. (Ahmad and Wood 2002)	<p>-NEMA provided the legal mandate for appeal rights against competent authority decisions</p> <p>-EIA Regulations illustrate the right of interested and affected parties and the applicant to be notified about making appeals against decisions.</p>	<p>-Appeal process was regulated by the National Appeal Regulations of 2014 (GNR.993) under NEMA.</p> <p>Note, appeals were received by the same competent authority that makes the decisions.</p>	<p>-Section 43, Chapter 9 of NEMA No. 107 of 1998 (RSA 1998a).</p> <p>-Regulations 4(1)(c) and 4(2)(b), Chapter 2 of EIA Regulations, 2014, GNR 982 (RSA 2014a).</p> <p>-National Appeal Regulations of 2014 (GNR.993) (RSA 2014c).</p>
Legal or procedural specification of time limits. (Ahmad and Wood 2002)	<p>-EIA Regulations demonstrated the timeframe for conducting EIA implementation (application submission, scoping, EIA and EMP reports review, and decision-making).</p>	<p>-Timeframes were specified for conducting EIAs throughout all stages.</p>	<p>-Regulation 3, Chapter 2 of EIA Regulations, 2014, GNR 982 (RSA 2014a).</p> <p>-Regulations 21 to 24, Chapter 4 of EIA Regulations, 2014, GNR 982 (RSA 2014a).</p>

Evaluation criteria	Results		Source of data
	Description	Comment	Document review
Legal provision for funding. (Kolhoff et al. 2009)	<p>-NEMA provided a legal mandate for EIA financial fees to be determined by EIA competent authority, which is required to be paid to obtain environmental authorization by the applicant.</p> <p>-NEMA mentioned fee requirement in the applicant definition which is <i>'a person who has submitted an application for an environmental authorisation to the competent authority and has paid the prescribed fees;'</i></p>	<p>-Fees were regulated under NEMA, which are prescribed for the consideration and processing of applications for environmental authorisation and amendments.</p> <p>-Note, for mining activities, there were other financial provisions (Financial Provisioning Regulations of 2015 under NEMA) related to management, rehabilitation, and remediation of environmental impacts.</p>	<p>-Section 1 (definitions) of NEMA No. 107 of 1998 (RSA 1998a).</p> <p>-Section 24(5)(c), Chapter 5 of NEMA, No.107 of 1998 (RSA 1998a).</p>
Legislation on penalties and offences.	<p>-NEMA provided a legal mandate for not complying with NEMA and EIA Regulations requirements in terms of the integrated environmental management of activities.</p>	<p>-Note, no information was found about what procedure is conducted to investigate offences and impose penalties.</p>	<p>-Section 49A and 49B, Chapter 10 of NEMA No. 107 of 1998 (RSA 1998a).</p> <p>-Regulation 48, Chapter 7 of EIA Regulations, 2014, GNR 982 (RSA 2014a).</p>
<i>Legislation on compliance with conditions of approval of the environmental authorization, amendment, and auditing.</i>	<p>-NEMA provided a legal mandate for compliance with and auditing of the conditions of the environmental authorisation.</p> <p>-NEMA required the designation of environmental management inspector by the minister for monitoring compliance with environmental authorisation conditions.</p> <p>-EIA Regulations required compliance with the conditions of the environmental authorisation and EMPr and require an Environmental Audit Report as described in Appendix 7 of the Regulations.</p>	<p>-According to EIA Regulations, the environmental audit report must be prepared by an independent auditor who could be appointed by both the holder of environmental authorisation and the competent authority.</p> <p>-The Act and Regulations did not provide for a mechanism to conduct monitoring and at which stage of the project life cycle.</p>	<p>-Section 24, 24E, 24N, 24G, and 24Q, Chapter 5 of NEMA, No.107 of 1998 (RSA 1998a).</p> <p>-Section 31B/C, part 2, Chapter 7 of NEMA No.107 of 1998 (RSA 1998a).</p> <p>-Regulation 26(f), part 3, Chapter 4 of EIA Regulations, 2014, GNR 982 (RSA 2014a).</p>

Evaluation criteria	Results		Source of data
	Description	Comment	Document review
EIA provisions incorporated in relevant related legislation. (Kolhoff et al. 2009)	-National Environmental Management: Waste Act (NEMWA), No. 59 of 2008 sections 19 and 20 -Mineral and Petroleum Resources Development Act (MPRDA), No. 28 of 2004	-The relevant environmental legislation required the undertaken of EIA in accordance with EIA Regulation made under NEMA.	-NEMWA. No. 59 Of 2008 (RSA 2008). -MPRDA, No. 28 of 2002 (RSA 2002)

Table 2: EIA competent authority indicator and evaluation criteria

Evaluation criteria	Results		Source of data
	Description	Comments	Document review
Existence of EIA competent authority. (Ahmad and Wood 2002)	-According to NEMA, the National Department of Forestry, Fisheries, and the Environment (DFFE) was responsible for policy and legislation formulation, legislation amendment, guidelines formulation, and EIA decision-making for national priority activities. -DFFE provincial departments and EIA decision-making for activities devolved to their provinces. -According to NEMA, the National Department of Mineral Resources and Energy (DMRE) was responsible for EIA decision-making on mining activities.	-The Minister of DFFE and Environmental Affairs provincial departments were responsible for the authorisation of the EIA Listed Activities except for the EIA for mining activities which were governed by the Minister of DMRE.	-Section 24 and 24C, Chapter 5 of NEMA, No.107 of 1998 (RSA 1998a). -Section 38A (1), Chapter 4 of MPRDA, No.28 of 2002 (RSA 2002) -Handbook on Environmental Assessment Legislation in Selected Countries in Sub-Saharan Africa (Walmsley and Hussleman 2020).
Autonomy of EIA competent authority. (Marara et al. 2011)	-According to NEMA and MPRDA, the DFFE and DMRE were the main competent authorities responsible for EIA decision-making. -Autonomy was uncertain even though the DFFE and DMRE were very high-profile ministries, which fall under the Executive Cabinet of South Africa.	-There were diverse levels of EIA decision-making by related competent authorities at the national, provincial, and sector levels. This poses a question about the quality of the decision-making process and the type	-Section 24 and 24C, Chapter 5 of NEMA, No.107 of 1998 (RSA 1998a). -Section 38A (1), Chapter 4 of MPRDA,

Evaluation criteria	Results		Source of data
	Description	Comments	Document review
		of decision-making criteria at each level.	No.28 of 2002 (RSA 2002).
<i>Responsibility for environmental policy, legislation, and guidelines formulation and amendment.</i>	-The DFFE was responsible for the formulation of environmental policy, commencement, and amendments of the EIA Act, Regulations, and guidelines.	-The process of the EIA Act, Regulations, and guidelines commencement and amendment involved public participation.	-Section 24(5) and 24J, Chapter 5 of NEMA, No.107 of 1998 (RSA 1998a). -Section 44, Chapter 9 of NEMA, No.107 of 1998 (RSA 1998a). -Handbook on Environmental Assessment Legislation in Selected Countries in Sub-Saharan Africa (Walmsley and Hussleman 2020).
<i>Responsibility for issuing/approving Term of References.</i>	-EIA Regulations of 2015 defined the Terms of Reference (Plan of Study) as ' <i>means a study contemplated in regulation 22 which forms part of a scoping report and sets out how an environmental impact assessment will be conducted;</i> ' -According to EIA Regulations, the EAP was responsible for preparing the Plan of Study as part of the scoping report. -Plan of Study content was specified in Appendix 2 of EIA Regulations.	-Terms of Reference in SA called Plan of Study. The DFFE is responsible for publishing and approving the plan of study for EIA.	-Regulation 1(b)(ii), Chapter 1 of EIA Regulations, 2014, GNR.982 (RSA 2014a). -Regulation 22, part 3, Chapter 4 of EIA Regulations, 2014, GNR.982 (RSA 2014a). -Appendix 2(2)(h) of EIA Regulations, 2014, GNR.982 (RSA 2014a).
Responsibility for decision-making (screening, scoping, <i>environmental authorisation</i>).	-The competent authority (DFFE) and its provincial departments were the decision-makers for EIA screening, scoping, review, and authorisation.	-EIA for related mining and petroleum activities is conducted in accordance with EIA Regulations of NEMA. The EIA and EMP reports for mining and	-Section 24, 24C, and 24P, Chapter 5 of NEMA, No.107 of 1998 (RSA 1998a).

Evaluation criteria	Results		Source of data
	Description	Comments	Document review
(Kolhoff et al. 2009)	-The DMRE was the competent authority responsible for all EIA decision-making of EIA stages of the related mining and petroleum activities.	petroleum activities must contain the requirements about financial provision for rehabilitation, closure, and post-closure made in NEMA	-Section 38A (1), Chapter 4 of MPRDA, No.28 of 2002 (RSA 2002).
Review body for EIA and EMP reports. (Ahmad and Wood 2002)	-The competent authority (DFFE) and its provincial departments were responsible for EIA report reviews. -The DMRE was the competent authority responsible for the EIA report review of the related mining and petroleum activities.	-EIA Regulations of 2014 provided for the submission and consideration of EIA and EMP reports, which mainly focus on timeframes for the review process. -The Regulations also described the requirement for EIA and EMP reports preparation as stated in appendix 3 and 4 of the 2014 NEMA-EIA Regulation. -DMRE was the responsible body for EIA and EMP reports review. -Note, Section 24I of NEMA required the appointment of an external specialist reviewer in case of high-quality reports and the absence of staff's capacity to review. -Note, review of EIA and EMP reports were conducted by the competent authority in accordance with the requirements of the reports stated in the EIA Regulations of 2014 and Section 24 of NEMA.	-Section 24 and 24I, Chapter 5 of NEMA, No.107 of 1998 (RSA 1998a). -Regulation 23, part 3, Chapter 4 of EIA Regulations, 2014, GNR.982 (RSA, 2014a). -Section 38A (1), Chapter 4 of MPRDA, No.28 of 2004. -Part III, Chapter 2 of the Mineral and Petroleum Resources Development Regulations of 2004, GNR.527 (RSA 2004a).
<i>Availability of administrative law to promote environmental justice in administrative actions (EIA decision-making) and access to information.</i>	-Promotion of Administrative Justice Act 3 (PAJA) of 2000. -The promotion of Access to Information Act 2 (PAIA) of 2000.	-Administrative justice was guaranteed by section 33 of the Constitution of the Republic of South Africa. -The rights of access to information held by the DFFE were guaranteed by section 32 of the constitution.	-Constitution of the Republic of South Africa, 1996 (RSA 1996). -PAJA 3 of 2000 (RSA 2000a). -PAIA 2 of 2000 (RSA 2000b).

Evaluation criteria	Results		Source of data
	Description	Comments	Document review
<i>EIA decision-making criteria followed by the competent authority.</i>	-NEMA section 24O provided for decision-making criteria to be taken into account when considering EIA applications for environmental authorisation by DFFE and DMRE.	-The criteria were generally ensuring compliance with NEMA and EIA Regulations requirements. -Note, no data was found on EIA decision-making criteria in terms of the accuracy and reliability of the information presented in the EIA and EMP reports.	-Section 24O, Chapter 5 of NEMA, No.107 of 1998 (RSA 1998a). -Regulation 24, part 3, Chapter 4 of EIA Regulations, 2014, GNR.982 (RSA 2014a).
Specification of sectoral responsibilities in the EIA process. (Ahmad and Wood 2002)	-Section 23A of NEMA required the Minister (competent authority) to promote and facilitate integrated, environmentally sustainable, and sound management by engaging with organizations or sectors concerned with the use of environmental management instruments.	-There was no clear indication of cooperation between the sectoral authorities, and it seemed that the EIA application is managed from the beginning to the end (accepting applications, reviewing reports, and decision-making) by the DFFE and DMRE. -The applicant was required to obtain other licenses such as a water use license or waste management license as part of the environmental authorisation depending on the type of activity from the relevant authorities.	-Section 23A(3)(a), Chapter 5 of NEMA, No.107 of 1998 (RSA 1998a).
Coordination with other lead agencies. (Marara et al. 2011)	-NEMA section 24K highlighted the role of consultation between the related competent authorities. -NEMA section 24L described the alignment of environmental authorisations (Integrated Environmental Authorisation) in terms of applications that require authorisation from other related competent authorities. -According to EIA Regulations of 2014, the competent authority (DFFE) was required to facilitate environmental cooperative governance across all spheres of government.	-NEMA section 50A described the agreement between the related competent authorities to regulate the related environmental aspects through One Environmental System (OES). -There was no clear indication of coordination between the EIA-related competent authorities and other lead agencies.	-Section 24(4)(i), 24K and 24L, Chapter 5 of NEMA, No.107 of 1998 (RSA 1998a). -Section 50A, Chapter 10 of NEMA, No.107 of 1998 (RSA 1998a). -Regulation 7, part 3, Chapter 4 of EIA Regulations, 2014, GNR.982 (RSA 2014a).

Evaluation criteria	Results		Source of data
	Description	Comments	Document review
<i>Established mechanism for cooperation with project proponent and EIA professionals.</i>	-NEMA and EIA Regulations defined and describe the responsibilities and duties of EAPs and project proponents without clearly stating the cooperation of the EIA-related competent authority with EIA stakeholders.	-There was no legal information available from the Act and the EIA-related competent authorities to illustrate the cooperation between the EIA-related competent authorities and other EIA stakeholders.	-Section 24 (1A), Chapter 5 of NEMA No. 107 of 1998 (RSA 1998a). -Section 24(5)(e), Chapter 5 of NEMA, No.107 of 1998 (RSA 1998a). -Regulations 12, 13, 14, and 15, part 2, Chapter 3 of EIA Regulations, 2014, GNR 982 (RSA 2014a) -Regulations 10, 11, and 12, part 2, Chapter 3 of EIA Regulations, 2014, GNR 982 (RSA 2014a).
<i>Preparation of EIA best practice principles for good practice.</i>	-There was no information available to describe the EIA competent authority's responsibility for EIA best practice principles preparation.	-	-
<i>Preparation of Environmental standards.</i>	-NEMA stated the legal mandate to the competent authority to develop norms and standards.	-The competent authority (DFFE) published a List of Activities and associated minimum emission standards.	-Section 24 (10)(a), Chapter 5 of NEMA, No.107 of 1998 (RSA 1998a).
<i>Mechanism for inspection of Environmental Management Plan (EIA follow-up and auditing).</i>	-NEMA provided a legal mandate for monitoring, auditing, and performance assessment as a condition for an environmental authorisation conducted by the holder. -NEMA also required the designation of Environmental Management Inspector. -The Environmental Management Inspector (EMI) or the Green Scorpions under DFFE is the department responsible for compliance and enforcement capacity established in terms of NEMA.	-The EMI was designated to conduct compliance and enforcement functions with national environmental legislation including environmental authorisation conditions. -There was no available information on the procedure for conducting EIA follow-up and auditing mechanism.	-Section 31B, 31BA, 31BB, and 31C, part 2, Chapter 7 of NEMA, No.107 of 1998 (RSA 1998a). -Section 24Q, Chapter 5 of NEMA, No.107 of 1998. -Section 24N(7)(d), Chapter 5 of NEMA,

Evaluation criteria	Results		Source of data
	Description	Comments	Document review
			No.107 of 1998 (RSA 1998a).

Table 3: EIA procedural steps indicator and evaluation criteria

Evaluation criteria	Results		Source of data
	Description	Comments	Document review
Specified screening categories. (Ahmad and Wood 2002)	-EIA Regulations included a List of Activities that trigger conducting an EIA (Scoping and Environmental Impact Reporting) (S&EIR).	-Screening stage of the South African environmental assessment process was done based on the List of Activities that trigger (S&EIR) (GNR 984) and Basic Assessment (BA) (GNR 983 and 985).	-EIA Regulations of 2014, GNR.982 (RSA 2014a) -EIA Regulations: Listing Notice 1 of 2014, GNR.983(RSA 2014d) -EIA Regulations: Listing Notice 2 of 2014, GNR.984 (RSA 2014b). -EIA Regulations: Listing Notice 3 of 2014, GNR.985 (RSA 2014e)
Systematic scoping approach. (Ahmad and Wood 2002)	-EIA Regulations required the applicant within 44 days of submitting the S&EIR application to submit Scoping Report that incorporates public participation to the competent authority.	-EIA Regulations provided the required content of the Scoping Report, the timeframe for considering the report by the competent authority as well as exceptional circumstances for scoping report submission.	-Regulation 22, part 3, Chapter 4 of EIA Regulations, 2014, GNR.982 (RSA 2014a).
<i>Terms of Reference (ToR) preparation and approval.</i>	-Terms of Reference in SA called Plan of Study. The DFFE is responsible for approving the plan of study for EIA.	-Plan of the Study content is specified in appendix 2 of EIA Regulations.	-Regulation 22, part 3, Chapter 4 of EIA Regulations, 2014, GNR.982 (RSA 2014a).

Evaluation criteria	Results		Source of data
	Description	Comments	Document review
	-According to EIA Regulations, the EAP was responsible for preparing the plan of study as part of the scoping report.		-Appendix 2(2)(h) of EIA Regulations, 2014, GNR.982 (RSA 2014a).
Requirement for public participation in the scoping stage of EIA implementation. (Kolhoff et al. 2009)	-EIA Regulations required public participation in the scoping stage of EIA implementation of at least 30 days.	-EIA Regulations provided the process of undertaking public participation.	-Regulation 21(1), part 3, Chapter 4 of EIA Regulations, 2014, GNR 982 (RSA 2014a). -Regulations 39 to 44, Chapter 6 of EIA Regulations, 2014, GNR 982 (RSA 2014a).
Requirement for public participation in reviewing EIA report. (Kolhoff et al. 2009)	-EIA Regulations required public participation in reviewing EIA reports of at least 30 days.	-EIA Regulations provided the process of undertaking public participation.	-Regulation 23(1)(a), part 3, Chapter 4 of EIA Regulations, 2014, GNR 982 (RSA 2014a). -Regulations 39 to 44, Chapter 6 of EIA Regulations, 2014, GNR 982 (RSA 2014a).
Requirement for specified EIA report content. (Ahmad and Wood 2002)	-EIA Regulations provided the required content of the EIA report.	-	-Appendix 3(3) of EIA Regulations, 2014, GNR 982(RSA 2014a).
Requirement for systematic EIA report review process. (Ahmad and Wood 2002)	-EIA Regulations stated the timeframe for EIA decision-making on the EIA report.	-EIA report reviewed by the competent authority, which is conducted in terms of compliance with the required content of the report stated in the EIA Regulations, and decision-making criteria provided in NEMA.	-Section 24O, Chapter 5 of NEMA, No.107 of 1998 (RSA 1998a). -Regulation 24, part 3, Chapter 4 of EIA Regulations, 2014, GNR.982 (RSA 2014a).

Evaluation criteria	Results		Source of data
	Description	Comments	Document review
			-Appendix 3(3) of EIA Regulations, 2014, GNR 982(RSA 2014a).
<i>Specialist report requirement.</i>	-EIA Regulations described the content of specialist reports.	-	-Appendix 6 of EIA Regulations, 2014, GNR 982 (RSA 2014a).
Requirement for Environmental Management Plan/Programme (EMP). (Ahmad and Wood 2002)	-EIA Regulations required the submission of EIA reports including EMP reports.	-EMPr preparation was required in accordance with appendix 4 of EIA Regulations in compliance with section 24N of NEMA.	-Regulation 23, part 3, Chapter 4 of EIA Regulations, 2014, GNR 982 (RSA 2014a). -Appendix 4 of EIA Regulations, 2014, GNR 982 (RSA 2014a). -Section 24N, Chapter 5 of NEMA, No.107 of 1998 (RSA 1998a).
<i>Requirement for EIA follow-up and auditing.</i>	-EIA Regulations and NEMA provided for EIA follow-up and auditing. -EIA Regulations required the holder of the environmental authorisation to frequently submit environmental audit reports. -EIA Regulations also provided the content required for environmental audit report preparation.	-According to EIA Regulations, the environmental audit report must be prepared by an independent auditor who could be appointed by both the holder of environmental authorisation and the competent authority. -There was no available information on the procedure for conducting EIA follow-up and auditing during the project life cycle. The EIA Regulations require submitting the environmental audit report to the relevant competent authority for the period during which the environmental authorisation and EMPr, and where applicable the closure plan.	-Section 24N, Chapter 5 of NEMA, No.107 of 1998 (RSA 1998a). -Regulation 26(f), part 3, Chapter 4 of EIA Regulations, 2014, GNR.982 (RSA 2014a). -Regulation 23, part 3, Chapter 4 of EIA Regulations, 2014, GNR 982 (RSA 2014a). Regulation 34, part 3, Chapter 5 of EIA Regulations, 2014,

Evaluation criteria	Results		Source of data
	Description	Comments	Document review
			GNR 982 (RSA 2014a). -Appendix 4 of EIA Regulations, 2014, GNR 982 (RSA 2014a). -Appendix 7 of EIA Regulations, 2014, GNR 982 (RSA 2014a).

Table 4: EIA implementation output indicator (EIA report legal requirements/Evaluated using the IAU's review package/Appendix A)

Review area	EIA legal requirements (NEMA-EIA Regulations of 2014)
Description of the development	EIA Regulations of 2014 provide the legal mandate for EIA report requirements on which the preparation of the EIA report must be formulated. Appendix 3 of the 2014 EIA Regulations imposes the description of the proposed development or activity. However, the required description of the proposed activity is limited to the location, plan, and scope of the proposed development and its associated structure and infrastructure. The required description of the proposed development in EIA Regulations is deficient in terms of describing the proposed activity inputs such as the type and quantity of materials needed during the life cycle of the activity. It is also lacking a description of the proposed activity outcomes such as the type and quantity of generated activity wastes, emissions, and residues.
Description of the environment	The required description of the environment in the EIA Regulations of 2014 is associated with the location of the proposed activity and its prescribed alternatives. It requires a description of the environmental attributes of the development footprints focusing on the geographical, physical, biological, social, economic, heritage, and cultural attributes. The Regulations do not directly denote the description of the environment in terms of describing the land uses, the broad environment surrounding the development footprint, environmental investigation method, environmental future conditions, and description of data sources.
Scoping, consultation, and impact identification	EIA Regulations of 2014 require the implementation of the EIA process in accordance with the Plan of Study determined in the scoping stage of S&EIR. The scoping process ends up with the scoping report, which includes for instance impacts identification and management. Public participation is clearly stated in EIA Regulations, particularly in terms of timeframes and processes during the scoping phase and review of the EIA report. The 2014 EIA Regulations broadly require the description of the process conducted to identify activity impacts.

Review area	EIA legal requirements (NEMA-EIA Regulations of 2014)
	However, the Regulations do not require in specific detail the source of data, relevance, and type of impacts during the activity life cycle, justification of impacts selection methodology, and consideration of impacts from the activity and non-activity impacts in the development area.
Prediction and evaluation of impacts	Prediction and evaluation in 2014 EIA Regulations particularly in terms of requiring the description of the methodology used to determine the significance of impacts, and impacts description such as nature, consequence, extent, and duration are legally stated. However, the justification of impacts and risk assessment methodology and data used appear not to be well-covered in the Regulations.
Alternatives	Consideration of alternatives of the proposed development in the preparation of the EIA report is required in the 2014 EIA Regulations in terms of development footprint alternatives, positive and negative impacts of the proposed activity, and its alternatives. Regardless of alternative considerations in the Regulations, the Regulations tend to focus on development footprint alternatives rather than broadly considering other activity alternatives such as activity design and process alternatives. Also, the regulations do not appropriately address the justification of alternatives selection methodology as well as a comprehensive comparison of activity alternatives including the likely future of the environment without the activity.
Mitigation and monitoring	The incorporation of mitigation and monitoring measures in the EIA report is briefly stated in the EIA Regulations of 2014. The Regulations broadly mention the consideration of mitigation and monitoring measures without appropriately considering justification of the selected mitigation and monitoring measures, the effectiveness of mitigation and monitoring measures, consideration of mitigation and monitoring measures during the activity life cycle (design, construction, operation, and decommissioning), consideration of potential adverse environmental impacts and conflict with the benefits of mitigation measures.
Non-technical summary	The non-technical summary is not required to be included in the EIA report by the EIA Regulations of 2014.
Organisation and presentation of information	The legal requirements of EIA report preparation in the 2014 EIA Regulations have met a few of the aspects of EIA report organization and presentation of information such as the related policy and legislative context of the proposed development, EAP's details, and objectivity of EIA report content prepared by the EAP. However, EIA Regulations do not directly consider the appropriateness of the report organization and presentation, particularly considering any gaps in the data used to prepare the report and explaining any difficulties in assembling or analysing the data.
Overall evaluation	NEMA-EIA Regulations of 2014 met to a considerable extent the criterion of the review areas of the EIA report review package. However, there were still some gaps in the legal requirements of EIA report preparation that could influence the quality of EIA report preparation and ultimately EIA system performance. These gaps were observed in the development and environment descriptions areas, scoping and impacts identification, prediction, and evaluation of impacts, alternatives, mitigation and monitoring, non-technical summary, organizations, and presentation of the S&EIR report.

Table 5: EIA implementation output indicator (EIA report preparation/Evaluated using the IAU's review package/Appendix A)

Review area	EIAr 1	EIAr 2	EIAr 3	EIAr 4	EIAr 5	EIAr 6	EIAr 7	EIAr 8	EIAr 9	EIAr 10	EIA review area evaluation
Description of the development	I	I	A	A	A	I	C	I	I	A	I
Description of the environment	A	A	A	A	A	A	A	A	I	A	A
Scoping, consultation, and impact identification	C	A	I	A	A	I	C/A	I	I	I	I
Prediction and evaluation of impacts	I	I	I	I	A	A	C	I	I	I	I
Alternatives	A	A	A	A	I	A	A	A	I	I	A
Mitigation and monitoring	I	I	I	I	I	I	I	I	I	I	I
Non-technical summary	A	I	I	I	A	I	C	A	I	A	I
Organization and presentation of information	A	C	C	C	C	A	C	C	I	C	C
EIAr evaluation	A	I	I	A	A	A/I	C	I	I	I	I/I
Assessment Symbols: C: Complete for decision-making A: Adequate (not complete but adequate for decision-making) I: Inadequate (not adequate for decision-making)											

Table 6: Country legal context indicator and evaluation criteria

Evaluation criteria	Results		Source of data
	Description	Comments	Document review/ literature review
<i>Constitutional directives on;</i> <ul style="list-style-type: none"> • <i>Environmental policies,</i> • <i>Environmental laws, and</i> • <i>Sustainable development.</i> 	-Section 24 of chapter 2 (the Bill of Rights) of the Constitution of the Republic of South Africa represented the constitutional directive for environmental rights and sustainable development in the South African legal context.	-In 1997, the Environmental Management Policy of South Africa was developed to give effect to constitutional environmental rights. -In 1998, NEMA was promulgated as an environmental law to give effect to the Environmental Management Policy (1997),	-Section 24(b)(iii), Chapter 2 of the Constitution of the Republic of South Africa (RSA 1996).

Evaluation criteria	Results		Source of data
	Description	Comments	Document review/ literature review
	- Section 24 of the Constitution stated that <i>'Everyone has the right- (a) to an environment that is not harmful to their health or well-being; and (b) to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that- (i) prevent pollution and ecological degradation; (ii) promote conservation; and (iii) secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development'</i> .	and section 24 was included in the Bill of Rights in chapter 2 of the Constitution of the Republic of South Africa (1996).	-National Environmental Management Act, No. 107 of 1998 (RSA 1998a)
<i>Availability of Environmental Action Plan and/or Policy to promote sustainable development by impact assessment tools.</i>	-The National Environmental Management Policy (1998) of South Africa was introduced to ensure the essential role of sustainable development in resource management and utilization in South Africa <i>'integrated and sustainable management of the environment, now and in the future, is the essential basis of sustainable development in all areas of human activity'</i> .	-EIA was mentioned in the policy as an integrated environmental management and planning instrument that facilitates informed decision-making for effective environmental management and promotion of sustainable development.	-The Department of Environmental Affairs and Tourism, 1998 (White Paper on Environmental Management Policy) (DEAT 1998).
<i>Availability of relevant environmental legislation.</i>	-There were other related environmental legislations in South Africa such as. -The National Water Act provided for the conservation and protection of water resources, -The National Environmental Management: Waste Act that dealt with waste and waste management activities, -The National Environmental Management: Air Quality Act dealt with the protection of ambient air quality.	-The related environmental legislation is legally required to conduct an environmental assessment in accordance with NEMA.	-National Water Act, No. 36 of 1998 (RSA 1998b). -National Environmental Management: Waste Act, No. 59 of 2008 (RSA 2008). -The National Environmental Management: Air Quality Act, No. 39 of 2004 (RSA 2004b).

Evaluation criteria	Results		Source of data
	Description	Comments	Document review/ literature review
Availability of environmental standards. (Kolhoff et al. 2009)	-There were available standards for greenhouse gas emissions, solid waste, water quality, and noise.	-NEMA stated the legal mandate to the competent authority to develop norms and standards. -The competent authority (DFFE) published the list of activities and associated minimum emission standards.	-Section 24 (10)(a), Chapter 5 of NEMA, No.107 of 1998 (RSA 1998a)
Existence of competent judiciary body to prosecute environmental issues. (Marara et al. 2011)	-The Environmental Management Inspector (EMI) was empowered to prosecute environmental crimes in court and pass them to National Prosecuting Authority for prosecution (Green Scorpion). -There was no existing judiciary body to prosecute environmental issues.	-South African Environmental Court (2003) in Western Cape province was established to prosecute wildlife poaching and damaging coastal marine parks. However, the Environmental Court was shut down in 2007 because of a lack of legal mandate for its establishment.	-Section 31B/C, part 2, Chapter 7 of NEMA (RSA 1998a). -(Lesser 2018).
Constitutional directive on; <ul style="list-style-type: none"> • Access to information and administrative justice, • role of public in decision-making, and • transparency and accountability in decision-making. (Kolhoff et al. 2009)	-The South African Constitution provided a directive to give the right of access to any information held by the state and any information that is held by another person. -The constitution ensured the right to administrative decision-making that is lawful, reasonable, and procedurally fair. -The constitution also provided the right to facilitate public participation and involvement in the law-making processes at the national, provincial, and local levels. -In terms of accountability and transparency, the constitution required all government levels and organs of state within each sphere to ' <i>provide effective, transparent, accountable and coherent government for the Republic as a whole;</i> '	-The promotion of the Access to Information Act 2 (PAIA) of 2000 -Promotion of Administrative Justice Act 3 (PAJA) of 2000	-Section 32(1)(a)(B), of the Constitution of the Republic of South Africa, 1996 (RSA 1996). -Section 33 of the Constitution of the Republic of South Africa, 1996 (RSA 1996). -Sections 42(2), 59, 72, 118 of the Constitution of the Republic of South Africa, 1996 (RSA 1996). -Section 41(1)(c) of the Constitution of the Republic of South Africa, 1996 (RSA 1996).

Table 7: Political indicator and evaluation criteria

Evaluation criteria	Results		Source of data
	Description	Comments	Document review/ Literature review
<i>Country's political participation in the international agreements (conventions, treaties, and protocols) of environmental assessment.</i>	<p>-The Constitution of South Africa supported the country's commitment to international agreements that the country is committed to.</p> <p>-NEMA in chapter 6 described the incorporation of international environmental instruments that are bound by SA into the legislative framework of the country.</p> <p>-The National Environmental Management Policy of SA described the country's interest and commitment to international environmental treaties and agreements.</p> <p>-South Africa was a party to a number of environmental conventions such as the Framework Convention on Climate Change, the Convention on Biology Diversity, and the Convention to Combat Desertification.</p>	<p>-EIA was regulated in South Africa, without a clear indication of the country's ratifying a significant convention on EIA (such as the Convention on Environmental Impact Assessment in a Transboundary Context (Espoo)).</p>	<p>-Sections 231, 232, 233 of Chapter 4 of the Constitution of the Republic of South Africa (RSA 1996).</p> <p>-Section 25, Chapter 6 of NEMA, No.107 of 1998 (RSA 1998a).</p> <p>-Department of Environmental Affairs and Tourism (DEAT 2005).</p> <p>- Department of Environmental Affairs and Tourism (DEAT 1998).</p>
<i>Political influence on enactment and reform of EIA legislation.</i>	<p>-According to NEMA, the competent authority (currently DFFE) shared the process of EIA Act and Regulations amendment with the public and interested parties by allowing them to participate and make comments on the amendment drafts before endorsement and commencement of EIA regulations.</p> <p>-There was no clear indication of the political influence of EIA regulatory reform.</p>	<p>-The Regulations of EIA in South Africa were first formalised in 1997 in terms of the Environment Conservation Act (ECA), No.73 of 1989.</p> <p>-EIA Regulations had been amended in 2006, 2010, 2014, and 2017 in terms of NEMA No.107 of 1998.</p>	<p>-Department of Environmental Affairs (DEA 2018a).</p> <p>-National Environmental Management Act, No. 107 of 1998 (RSA 1998a)</p>

Evaluation criteria	Results		Source of data
	Description	Comments	Document review/ Literature review
<i>Political influence on EIA administration.</i> <ul style="list-style-type: none"> • <i>Autonomy of responsible authority (independency and political appointment of managers), and</i> • <i>Allocation of funding and resources.</i> 	-It was indicated that there is a concern regarding political interference in the EIA administration, lack of political commitment to environmental management, lack of financial and human resources, a sign of corruption within competent authorities, and lack of governmental support.	-Very few pieces of literature briefly discussed the political influence of the EIA administration in South Africa.	(Duthie 2001; DEAT 2008; Sandham and Pretorius 2008; Patel 2009; Saidi 2010).
<i>Political influence on EIA decision-making.</i> <ul style="list-style-type: none"> • <i>EIA decision-making during screening, scoping, and environmental approval of EIA report.</i> 	-It was indicated that there is pressure on EIA decision-making within the EIA competent authority from the applicant, government, political appointee, consultants, and local authorities to speed up the environmental authorization of activities.	--Very few pieces of literature briefly discussed the political influence on EIA decision-making in South Africa.	-(Duthie 2001; DEAT 2008; Sandham and Pretorius 2008; Saidi 2010).

Table 8: Socio-economic indicator and evaluation criteria

Evaluation criteria	Results	Source of data
	Description (the year of 2019-2021)	Document review
<i>Human Development Index (HDI)</i>	0.713	-(UNDP 2021a).
<i>Life expectancy index</i>	0.679	-(UNDP 2021a).
<i>Gross National Income (GNI) per capita (constant 2017 PPP\$)</i>	12.129	-(UNDP 2021a).
<i>Gross Domestic Product (GDP) per capita (2017 PPP\$)</i>	12.482	-(RSA 2022).
<i>Unemployment, total (% of labour force)</i>	34.5	-(UNDP 2021a).

Evaluation criteria	Results	Source of data
	Description (the year of 2019-2021)	Document review
<i>Population in multidimensional poverty, headcount (%)</i>	6.3	-(UNDP 2021a).
<i>Total population (millions) (Data refers to 2030)</i>	66.0	-(UNDP 2021a).
<i>Education index</i>	0.724	-(UNDP 2021a).
<i>Literacy rate, adult (% ages 15 and older)</i>	87.0	-(UNDP 2021a).

Table 9: Environmental condition indicator and evaluation criteria

Evaluation criteria	Results		Source of data
	Description	Comments	Document review
<i>Land issues.</i>	<ul style="list-style-type: none"> -Land degradation. -Loss of natural habitat. -Soil erosion. -Invasive alien plants. 	<ul style="list-style-type: none"> -Resulting from unemployment, poverty, and poor land use. -Resulting from urban expansion, mining, and agricultural activities. -Soil erosion due to land degradation (70% of South Africa's land is affected by erosion). -Invasive alien plants have overspread more than 10% of land in SA, and it increases by 5% per year. 	-(DEA 2012; DEA 2018b; Skowno et al. 2019).
<i>Biodiversity and ecosystem issues.</i>	<ul style="list-style-type: none"> -Loss of natural habitat. -Overexploitation of species. -Threatened species. -Deteriorating terrestrial ecosystems. -Deteriorating freshwater ecosystems. -Deteriorating marine ecosystems. -Ecological footprint. 	<ul style="list-style-type: none"> -Resulting from urban expansion, mining, and agricultural activities. -Due to unsustainable harvesting. -South African endemic species condition is deteriorating. -Resulting from urban expansion, mining, and agricultural activities. -Freshwater in SA is scarce and stressed to meet development targets. -Marine ecosystems are deteriorating due to pollution and human development. -SA has a footprint of 2.32 global ha per capita and an ecological deficit of 1.18 (natural resources do not meet human demands). 	-(DEA 2012; DEA 2018b; Skowno et al. 2019).

Evaluation criteria	Results		Source of data
	Description	Comments	Document review
<i>Water issues.</i>	-Deteriorating water availability and quality.	-Due to scarcity of water, human development activities (urbanisation, mining, agriculture), and associated pollution issues such as Acid Mine Drainage.	-(DEA 2012; DEA 2018b; Skowno et al. 2019).
<i>Aquatic system issues.</i>	-Pollution issues. -Depletion of fish supply. -Sea level raise.	-Wastewater discharge. -Due to overexploitation of fish stocks.	-(DEA 2012; DEA 2018b; Skowno et al. 2019).
<i>Air quality issues.</i>	-Increasing indoor and outdoor air pollution. -Increasing emissions of ozone-depleting substances.	-Due to the increasing level of human development activities emissions such as carbon dioxide, sulfur dioxide, nitrogen dioxide, and ozone.	-(DEA 2012; DEA 2018b; Skowno et al. 2019).
<i>Climate change issue.</i>	-Increasing greenhouse gas emissions. -Increasing temperature.	-Estimates of a 20% increase in greenhouse gas emissions between 2000 and 2010.	-(DEA 2012; DEA 2018b; Skowno et al. 2019).

Table 10: EIA stakeholders' capacity indicator and evaluation criteria

Evaluation criteria	Results		Source of data
	Description	Comments	Document review / literature review
EIA competent authority staff competency. (Kolhoff et al. 2009; Kolhoff et al. 2016)	-It was highlighted that there is uncertainty about the number, qualifications, and skills of the government officials accountable for EIA decision-making (competent authorities). -There was also an indication of an insufficient number of skilled staff, lack of experience, and lack of motivation due to poor salaries. -It was pointed out that EIA competent authorities lack staff capacity and experience. -It was mentioned that EIA competent authorities lack financial resources. -It was indicated that EIA competent authorities lack efficiency in terms of complying with EIA	-Issue of EIA administrative staff capacity resulted in time and cost implications for the project developer due to the lengthy process of environmental authorisation.	-Alberts, 2020). -(Duthie 2001). -(Sandham et al. 2005). -(Sampson 2007). -(Sandham and Pretorius 2008). -(Hulett and Diab 2002). -(Patel 2009). -(Retief et al. 2011). -(Retief et al. 2011). -(DEAT 2008) -(DEA 2018a)

Evaluation criteria	Results		Source of data
	Description	Comments	Document review / literature review
	<p>timeframes as well as loss of EIA documentation.</p> <ul style="list-style-type: none"> -There was also an issue of lack of cooperation between competent authority's staff and EAPs. -It was indicated that EIA officials were under pressure from the project proponent which influence the objective evaluation of EIA by the official. 		
<p>EIA consultants and specialist competency. (Kolhoff et al. 2009; Marara et al. 2011)</p>	<ul style="list-style-type: none"> -There was an indication of uncertainty about EIA professionals' number, qualifications, and experience working in the public and private sectors in South Africa despite the availability of the EIA professional body (EAPASA). -There was an indication of a lack of EIA professionals' EIA knowledge and experience, therefore, there is a need for capacity building. -There was an indication of uncertainty about specialists' number, qualifications, and experience. -It was mentioned that due to the pressure from project proponents EAPs' independence is undermined affecting EIA quality 	<ul style="list-style-type: none"> -In the context of South Africa, EIA professionals who practice their duties as EAPs were not necessarily specialized as environmental scientists. Many EAPs are holders of engineering degrees or other related sciences but they are conducting EIAs. This might have a negative implication on the quality of EIA due to the limited knowledge of environmental science that such EAPs hold. -There is a concern about some EAPs who assign other junior EAPs with limited skills and experience to conduct the EIA study. 	<ul style="list-style-type: none"> -(Alberts 2020). -(Sampson 2007). -(Morrison-Saunders and Retief 2012). -(Abdulla 2002). -(DEAT 2008). -(DEA 2018a).
<p>Project proponent/developer competency. (Kolhoff et al. 2009)</p>	<ul style="list-style-type: none"> -It was mentioned that there is a lack of project proponent commitment to EIA trying to avoid transparent assessment. -There was also a lack of project proponent commitment to cover the cost of the EIA process and pay the EAPs fee. -It was indicated that the proponent/developer lack EIA awareness in terms of process and related cost. 	<ul style="list-style-type: none"> -Project proponents tended to focus on obtaining EIA approval in a brief time than meeting the legal requirements of EIA. -Large companies tended to be more environmentally aware and prepared to comply with EIA requirements, while small companies or private project 	<ul style="list-style-type: none"> -(Sampson 2007). -(DEAT 2008). -(DEA 2018a).

Evaluation criteria	Results		Source of data
	Description	Comments	Document review / literature review
	<p>-There was also a lack of commitment to provide the EAPs with sufficient information about the proposed development.</p> <p>-It was indicated that the project proponent interferes in the EIA process which influences the independence of EAPs and the objective evaluation of EIA by officials.</p>	<p>proponents with limited financial capacity are not capable of conducting EIA.</p>	
<p>Interested and affected party's competency. (Kolhoff et al. 2009; Marara et al. 2011)</p>	<p>-It was mentioned that there is a lack of stakeholders' capacity to understand the technical nature of EIA.</p> <p>-There was also an issue of conflict of interest between key stakeholders leading to making public participation a lengthy and costly process, as well as a lack of capacity to make informed decisions, which affects EIA and public participation processes.</p>	<p>-Interested and affected parties were sometimes represented by community leaders and representatives, which indicates manipulation of communities by their social structure and leadership.</p> <p>-Low environmental awareness.</p>	<p>-(McDaid and Kruger 2004). -(DEA 2018a). -(Kaekae 2019). -(Sandham et al. 2019).</p>

APPENDIX B: LIST OF THE EIA REPORTS FOR THE CASE STUDY COUNTRIES

South Africa
Application for Mining Right for the Proposed Bloemendal Opencast Coal Mine, Gauteng Province
Proposed Mokolo and Crocodile River (West) Water Augmentation Project (Phase 2A) (MCWAP-2A)
Proposed Boulders Wind Farm, West Coast District Municipality, Western Cape Province
The Bayview Wind Farm Near Port Elizabeth, Eastern Cape Province
Bulk Sampling Activities for Offshore Marine Diamonds, West Coast
Proposed Mookodi-Mahikeng 400KV Powerline, North West Province
Exploration Drilling within Block ER236, off the East Coast of South Africa
The Proposed Extension of Necsa's Pipe Storage Facility for Safari-1 Spent Fuel and NTP Uraniferous Waste, Madibeng Local Municipality, North West Province
The Proposed Formalisation and Proclamation of Sites at Saselamani CBD on the Remainder of Tshikundu's Location 262 MT, and the Remainder of Portion 1 of Tshikundu's Location 262, Collins Chabane Local Municipality, Limpopo Province
Pilanesberg Platinum Mine on Tuschenkomst 135JP and Witkleifontein 136JP
Namibia
Proposed Township Establishment-on Portion A of Okalongo Settlement Farmland, Omusati Region
The Proposed Development of Portion K of Okahandja Town and Townlands No.57 – Otjozondjupa Region
For the Construction and Commissioning of an Eco-friendly Seawater Desalination Plant at Farm Hentiesbaai Town and Townlands No.133 in Henties Bay, Erongo Region
Development of Residential & Retail (including Tourism) activities on Erf 4747 in Swakopmund, Erongo Region
Establishing Agricultural projects within the Oranjemund Constituency
Exclusive Prospecting Licenses (EPLs) No.7430, 7587, 7629-7631 & 7633-7635 Located Southeast of Aus in the Karas Region
Closure & Rezoning of Erven 379, 402, 403, 404 and 410 from Public Open Spaces to Private Open Space, Swakopmund Proper
The proposed Construction of Chief Hosea Kutako Homestead Shrine and Memorial Museum in Toasis, Aminuis constituency, Omaheke Region
The Proposed 10MW Solar PV Park Comprising Two (2) 5MW Plants next to each other with an 22KV Overhead Powerline and Access Road, Okahandja Townlands, Otjozondjupa Region
Exclusive Prospecting License (EPL) No.6031 and 6917 near Rehoboth Town in the Hardap Region
Proposed Nampower Anixas II Power Project, Walvis Bay
Proposed Township Establishment-Rezoning from Undetermined to Residential Portion A of Omungwelume Settlement Land, Ohangwena Region
Exclusive Prospecting License (EPL) No.4866 Located North West of Opuwo, Kunene Region
Offshore Exclusive Prospecting License (EPL) No.6526 Located near Luderitz, Karas Region
Exclusive Prospecting License (EPL) No.7720 Located Northeast of Karibib, Erongo Region
Proposed 10MW Solar PV Park Comprising two (2) 5MW Plants next to each other with an 11/22KV Overhead Powerline and Access Road, Usakos Townlands, Erongo Region
Proposed Changes to the Dordabis Iron Ore Mining Project and Associated Infrastructure and a Proposed New 132 KV Powerline to the Mine
The Establishment of Rubber Boots, Shoes and Related Products on ERF 1132, Arandis, Erongo Region
The Rezoning of ERF X of ERF RE/805, Outjo, Kunene Region from "Local Authority" to "General Business"
Proposed New Fuel Retail Facility at Outapi, Omusati Region
Malawi
Environmental and Social Impact Assessment for the Proposed Development of Santhe Irrigation Scheme and Processing Factory

Environmental and Social Impact Assessment for The Installation and Operation of a Granular Fertilizer Production Factory in Liwonde, Machinga
Environmental and Social Impact Assessment (ESIA) Report for Construction of Shops and Offices Complex on Plot 2/742, Lilongwe City
Environmental and Social Impact Assessment for Construction of Dam and Irrigation System at Chitakale Estate, Mangochi District
Environmental and Social Impact Assessment of the Proposed Rock Aggregate Quarry, Chimwenje Village, T/A Chadza in Lilongwe District
Environmental and Social Impact Assessment for the Proposed Construction and Operation of Chamakala Quarry at Kwanthewa Village, Traditional Authority M'nyanja in Kasungu District
Environmental and Social Impact Assessment for the Proposed Chiweta Coal Mine Project, Chiweta, Traditional Authority Mwalweni and Mwamlowe in Rumphu District
Environmental and Social Impact Assessment for Proposed Construction and Operation of Kaulwe Quarry at Samuel Mphemo Village, Traditional Authority Kapingo Sibande in Mzimba District
Environmental and Social Impact Assessment for Construction and Operation of a Three-Story Building on Plot Number Bwaila 2/EAST Motors in Lilongwe City
Environmental and Social Impact Assessment for Tchanga Irrigation Scheme, Dedza District
Environmental and Social Impact Assessment for the Proposed Rehabilitation of the Blantyre-Zomba (M3) Road
Environmental and Social Impact Assessment for the Proposed Construction of the Lilongwe Western Bypass Road
Environmental and Social Impact Assessment for the Proposed Improvement of Mzimba Turn Off Mzuzu-Kacheche (M1) Road
Environmental and Social Impact Assessment for the Proposed Extension of Mangochi Potable water Supply Project
Environmental and Social Impact Assessment for the Proposed Matoponi Irrigation Scheme, Zomba District
Environmental and Social Impact Assessment for the Proposed Upgrade of Thabwa-Chitseko-Seven Road (S152) in Chikwawa District
Tanzania
Environmental and Social Impact Assessment of the Proposed Karanga Leather Industries Project at Magereza Area, Karanga Ward, Moshi Municipal Council in Kilimanjaro Region
Environmental and Social Impact Assessment of the Proposed Construction of Petrol Filling Station and Service Station in Gezaulole Area, Temeke Municipality, Dar ES Salaam Region
Environmental Impact Statement on The Proposed Retail Fuel Service Station at Proposed Retail Fuel Service Station at Plot NO 102, Mbulu Ward, Kahama Town, Shinyanga Region,
Consultancy Services for Review and Update of Documents for Improvement of Water and Sanitation Services in Morogoro Municipality
Environmental and Social Impact Assessment for the Proposed Rehabilitation of Lusahunga-Rusumo Road (92KM) to Bitumen Standard, Biharamulo and Ngara Districts
Environmental and Social Impact Assessment for the Proposed Standard Gauge Railway Line (SGR) Project, Dar es Salaam, Makutupora
The Proposed Aluminium, Copper and Lead Battery Recycling Plant, Kisemvule Village, Vikindu Ward, Mkuranga District in Pwani Region
The Proposed Concrete Poles Production Facility Located on Plots NO. 2&3 Block J, Sanzale Area, Maji Coast Harmlet, Magomeni Ward, Bagamoyo District in Pwani Region (ARN 9654)
The Proposed Hatchery and Breeder Farm to be Located on Plot 1682 Pangani Area, Pangani MTAA, Pangani Ward, Kibaha Town Council, Pwani Region (AR NO.4278)
The Proposed Steel Industry, Plot Number 6 Block B, Kisemvule Village, Kisemvule Area, Vikindu Ward, Mkuranga District, Pwani Region
The Proposed Liquefied Petroleum Gas Filling Plant at Mangamba JUU MTAA, Mtawanya Ward, Mtwara-Mikindani Municipality, Mtwara Region

APPENDIX C: ETHICS CLEARANCE CERTIFICATE



Research Office

HUMAN RESEARCH ETHICS COMMITTEE (NON-MEDICAL)
R14/49 Aljareo

CLEARANCE CERTIFICATE

PROTOCOL NUMBER: H21/04/03

PROJECT TITLE

Environmental Impact Assessment system performance in an African context: Case studies from Southern Africa (South Africa, Namibia, Malawi, and Tanzania)

INVESTIGATOR(S)

Mr A Aljareo

SCHOOL/DEPARTMENT

Animal, Plant, and Environmental Sciences/

DATE CONSIDERED

16 April 2021

DECISION OF THE COMMITTEE

Approved
Risk Level: Minimal

EXPIRY DATE

21 June 2024

DATE

22 June 2021

CHAIRPERSON

A handwritten signature in blue ink, appearing to read 'J Knight', written over a horizontal line.

(Professor J Knight)

cc: Supervisor : Dr U Schwaibold

DECLARATION OF INVESTIGATOR(S)

To be completed in duplicate and **ONE COPY** returned to the Secretary at Room 10004, 10th Floor, Senate House, University. Unreported changes to the application may invalidate the clearance given by the HREC (Non-Medical)

I/We fully understand the conditions under which I am/we are authorized to carry out the abovementioned research and I/we guarantee to ensure compliance with these conditions. Should any departure to be contemplated from the research procedure as approved I/we undertake to submit an amendment of the protocol to the Committee. **I agree to completion of a regular progress report. For Minimal and Low studies, this is due annually on 31 December. For Medium and High Risk studies, this is due twice annually on 30 June and 31 December.**

A handwritten signature in black ink, written over a horizontal line.

Signature

23 / 06 / 2021
Date

PLEASE QUOTE THE PROTOCOL NUMBER ON ALL ENQUIRIES

APPENDIX D: SOUTH AFRICAN CASE STUDY FINDINGS

Table D–1: EIA legislation indicator and evaluation criteria

Evaluation criteria	Results		Source of data
	Description	Comment	Document review
<i>Availability of Environmental Legislation.</i>	<p>-The National Environmental Management Act, No. 107 of 1998 (NEMA). -NEMA was commenced “to provide for co-operative environmental governance by establishing principles for decision-making on a matter affecting the environment, institutions that will promote co-operative governance and procedures for co-ordinating environmental functions exercised by organs of state; to provide for certain aspects of the administration and enforcement of other environmental management laws; and to provide for matters connected therewith.” -NEMA also defined the environment as “the surroundings within which humans exist and that are made up of- (i) the land, water and atmosphere of the earth; (ii) micro-organisms, plant and animal life; (iii) any part or combination of (i) and (ii) and the interrelationships among and between them: and (iv) the physical, chemical, aesthetic and cultural properties and conditions of the foregoing that influence human health and well-being;”</p>	<p>It was promulgated to give effect to the National Environmental Management Policy (1997), and section 24 was included in the Bill of Rights in Chapter 2 of the Constitution of the Republic of South Africa (1996). -Before NEMA of 1998, the Environment Conservation Act (ECA), No. 73 of 1989 was the legal regime that supported EIA in the South African country context.</p>	<p>-The National Environmental Management Act, No. 107 of 1998 (NEMA) (RSA 1998a). -Section 1 (definitions) of NEMA No.107 of 1998 (RSA 1998a).</p>
<i>Legislative directive on sustainable development.</i>	<p>- NEMA defined sustainable development as “means the integration of social, economic and environmental factors into planning, implementation and decision-making so as to ensure that development serves present and future generations;”</p>	<p>-NEMA defined sustainable development and relevant factors to consider the integration of sustainable development elements (social, economic, and environmental elements) into the planning, implementation, and decision-making of development projects.</p>	<p>-Section 1 (definitions) of NEMA, No.107 of 1998 (RSA 1998a). -Section 2 (4)(a), Chapter 1 of NEMA No.107 of 1998 (RSA 1998a).</p>
Legal provisions for EIA. (Ahmad and Wood 2002)	<p>-Chapter 5 of NEMA established the legal mandate for EIA in South Africa.</p>	<p>-EIA was considered an environmental management tool/instrument to</p>	<p>-Section 24(1) and (4A), Chapter 5 of</p>

Evaluation criteria	Results		Source of data
	Description	Comment	Document review
	-The purpose of EIA Regulations was to regulate EIA procedures and criteria in compliance with Chapter 5 of NEMA.	identify, predict, and evaluate the actual and potential impact on the environment and socio-economic condition in decision-making. -EIA Regulations defined EIA as 'a systematic process of identifying, assessing and reporting environmental impacts associated with an activity and includes basic assessment and scoping and environmental impact reporting'.	NEMA, No.107 of 1998 (RSA 1998a). -Regulations (1)(d) and 2, Chapter 1 of EIA Regulations of 2014, GNR 982 (RSA 2014a)
<i>Legislative directive on sustainable development promotion by EIA.</i>	-NEMA promoted sustainable development through the integrated environmental management of activities and ensuring the application of environmental management tools. -EIA Regulations stated the purpose of EIA in relation to promoting sustainable development.	-NEMA stated sustainable development as one of the national environmental management principles. It also promoted the integration of environmental management principles into decision-making by ensuring the integrated management of activities, which relies on environmental management tools such as EIA.	-Section 2 (4)(a), Chapter 1 of NEMA No.107 of 1998 (RSA 1998a). -Section 23(1)(2), Chapter 5 of NEMA, No.107 of 1998 (RSA 1998a). -Regulation 2, Chapter 1 of EIA Regulations of 2014, GNR 982 (RSA 2014a).
<i>Availability of EIA guidelines.</i>	-Guidelines on the implementation of the EIA Regulations, 2010.	-There were also EIA guidelines on public participation, appeals, and sectoral guidelines such as EIA guidelines for aquaculture, renewable energy, and mining. -NEMA provided a procedure for publishing and implementing guidelines regarding listed activities activity or areas by the Minister. -No new guidelines were published on the 2014 NEMA-EIA Regulations.	-Section 24J, Chapter 5 of NEMA No.107 of 1998 (RSA 1998a). -(DEA 2010).

Evaluation criteria	Results		Source of data
	Description	Comment	Document review
<i>Regulations specify the type of development projects that require EIA.</i>	<p>-NEMA provided a legal mandate to establish a List of Activities by the competent authority, which may not commence without environmental authorisation.</p> <p>-EIA Regulations included a List of Activities that require conducting an EIA (Scoping and Environmental Impact Reporting) (S&EIR).</p>	<p>-NEMA provided a procedure for specifying a Listing of Activities or areas by the Minister and also the involvement of the interested parties.</p>	<p>-EIA Regulations: Listing Notice 2 of 2014, GNR.984 (RSA 2014b).</p> <p>-Section 24A and 24D, Chapter 5 of NEMA No.107 of 1998 (RSA 1998a).</p>
<i>Legislation on EIA public participation.</i>	<p>-NEMA defined the public participation process and ensures public participation in decision-making.</p> <p>-EIA Regulations provided a detailed procedure for conducting public participation during EIA implementation.</p>	<p>-Public participation is undertaken place at two stages of EIA implementation (scoping and EIA report preparation).</p> <p>-Interested and affected part in terms of NEMA meant '<i>an interested and affected party which includes any person, group of persons or organisation interested in or affected by such operation or activity; and any organ of state that may have jurisdiction over any aspect of the operation or activity</i>'.</p>	<p>-Section 1 (definitions) of NEMA No. 107 of 1998 (RSA 1998a).</p> <p>-Section 2(4)(f)(g), Chapter 1 of NEMA, No.107 of 1998 (RSA 1998a).</p> <p>-Section 23(2)(d), Chapter 5 of NEMA No. 107 of 1998 (RSA 1998a).</p> <p>-Section 24(4)(a)(v), Chapter 5 of NEMA, No.107 of 1998 (RSA 1998a).</p> <p>-Regulations 39 to 44, Chapter 6 of EIA Regulations, 2014, GNR 982 (RSA 2014a).</p>
<i>Legislation on Environmental Impact Assessment report and Environmental Management Programme.</i>	<p>-NEMA provided for a required detailed content of EMPr to be considered during the environmental authorisation process of an application.</p> <p>-EIA Regulations described the content of the EIA report and EMPr in accordance with NEMA requirements.</p>	<p>-Appendices 3 and 4 in EIA regulations provided detailed content of the EIA report and EMP report.</p>	<p>-Section 24N, Chapter 5 of NEMA No.107 of 1998 (RSA 1998a).</p> <p>-Regulation 23, part 3, of EIA Regulations,</p>

Evaluation criteria	Results		Source of data
	Description	Comment	Document review
			2014, GNR 982 (RSA 2014a). -Appendices 3 and 4 of EIA Regulations, 2014, GNR 982 (RSA 2014a).
<i>Legislation specifies the competent authority responsible for EIA decision-making (environmental authorization) and its duties.</i>	-NEMA defined the competent authority as <i>'in respect of a listed activity or specified activity, means the organ of state charged by this Act with evaluating the environmental impact of that activity and, where appropriate, with granting or refusing an environmental authorisation in respect of that activity;'</i> -NEMA also defined environmental authorisation as <i>'when used in Chapter 5, means the authorisation by a competent authority of a listed activity or specified activity in terms of this Act, and includes a similar authorisation contemplated in a specific environmental management Act;'</i>	-NEMA described the identification of competent authorities in relation to environmental authorization and their roles. -EIA Regulations illustrated the duties of the specified competent authority.	-Section 1 (definitions) of NEMA No.107 of 1998 (RSA 1998a). -Section 24 and 24C, Chapter 5 of NEMA, No.107 of 1998 (RSA 1998a). -Regulations 7,8, and 9, part 1, Chapter 3 of EIA Regulations, 2014, GNR 982 (RSA 2014a)
<i>Legislation on project proponent/applicant duties and responsibilities.</i>	-NEMA defined the applicant as <i>'a person who has submitted an application for an environmental authorisation to the competent authority and has paid the prescribed fees;'</i> -NEMA illustrated the required duties of the project proponent/applicant in terms of complying with the Act's requirements such as meeting application submission, reports content, and public participation prescribed requirements. -EIA regulations described in more detail the project proponent/applicant duties in compliance with NEMA chapter 5.	-The Act and EIA Regulations clearly describe the applicant's responsibilities in conducting EIAs.	-Section 1 (definitions) of NEMA No.107 of 1998 (RSA 1998a). -Section 24, Chapter 5 of NEMA No. 107 of 1998 (RSA 1998a). -Regulations 10, 11, and 12, part 2, Chapter 3 of EIA Regulations, 2014, GNR 982 (RSA 2014a).
<i>Legislation on EIA professional's registration, responsibilities, and duties.</i>	-NEMA defined Environmental Assessment Practitioners (EAPs) and specifies their role in applying for environmental authorisation. -NEMA defined the EAP as <i>'the individual responsible for the planning, management, coordination or review</i>	-The Act did not require certain criteria for EAP's registration in the association. -The registration authority of EAPs is called the Environmental Assessment	-Section 1 (definitions) of NEMA No. 107 of 1998 (RSA 1998a). -Section 24(5)(e), Chapter 5 of NEMA,

Evaluation criteria	Results		Source of data
	Description	Comment	Document review
	<p><i>environmental impact assessments, strategic environmental assessment, environmental management programmes or any other appropriate environmental instruments introduced through regulations;</i></p> <p>-NEMA also provided a legal mandate for all EAPs in terms of GNR.849 of 2016 of NEMA to register with the Environmental Assessment Practitioners Association of South Africa.</p> <p>-EIA Regulations described the appointment of EAPs, their requirement, responsibilities, and liabilities.</p>	<p>Practitioners Association of South Africa (EAPASA).</p> <p>-The process of registering EAPs in the association is still ongoing.</p>	<p>No.107 of 1998 (RSA 1998a).</p> <p>-Section 24H, Chapter 5 of NEMA, No.107 of 1998 (RSA 1998a).</p> <p>-Regulations 12, 13, 14, and 15, part 2, Chapter 3 of EIA Regulations, 2014, GNR 982 (RSA 2014a).</p>
<p>Provisions for appeal by the developer or the public against decisions. (Ahmad and Wood 2002)</p>	<p>-NEMA provided the legal mandate for appeal rights against competent authority decisions</p> <p>-EIA Regulations illustrate the right of interested and affected parties and the applicant to be notified about making appeals against decisions.</p>	<p>-Appeal process was regulated by the National Appeal Regulations of 2014 (GNR.993) under NEMA.</p> <p>Note, appeals were received by the same competent authority that makes the decisions.</p>	<p>-Section 43, Chapter 9 of NEMA No. 107 of 1998 (RSA 1998a).</p> <p>-Regulations 4(1)(c) and 4(2)(b), Chapter 2 of EIA Regulations, 2014, GNR 982 (RSA 2014a).</p> <p>-National Appeal Regulations of 2014 (GNR.993) (RSA 2014c).</p>
<p>Legal or procedural specification of time limits. (Ahmad and Wood 2002)</p>	<p>-EIA Regulations demonstrated the timeframe for conducting EIA implementation (application submission, scoping, EIA and EMP reports review, and decision-making).</p>	<p>-Timeframes were specified for conducting EIAs throughout all stages.</p>	<p>-Regulation 3, Chapter 2 of EIA Regulations, 2014, GNR 982 (RSA 2014a).</p> <p>-Regulations 21 to 24, Chapter 4 of EIA Regulations, 2014, GNR 982 (RSA 2014a).</p>
<p>Legal provision for funding. (Kolhoff et al. 2009)</p>	<p>-NEMA provided a legal mandate for EIA financial fees to be determined by EIA competent authority, which is</p>	<p>-Fees were regulated under NEMA, which are prescribed for the consideration and processing of</p>	<p>-Section 1 (definitions) of NEMA No. 107 of 1998 (RSA 1998a).</p>

Evaluation criteria	Results		Source of data
	Description	Comment	Document review
	<p>required to be paid to obtain environmental authorization by the applicant.</p> <p>-NEMA mentioned fee requirement in the applicant definition which is <i>'a person who has submitted an application for an environmental authorisation to the competent authority and has paid the prescribed fees;'</i></p>	<p>applications for environmental authorisation and amendments.</p> <p>-Note, for mining activities, there were other financial provisions (Financial Provisioning Regulations of 2015 under NEMA) related to management, rehabilitation, and remediation of environmental impacts.</p>	<p>-Section 24(5)(c), Chapter 5 of NEMA, No.107 of 1998 (RSA 1998a).</p>
Legislation on penalties and offences.	<p>-NEMA provided a legal mandate for not complying with NEMA and EIA Regulations requirements in terms of the integrated environmental management of activities.</p>	<p>-Note, no information was found about what procedure is conducted to investigate offences and impose penalties.</p>	<p>-Section 49A and 49B, Chapter 10 of NEMA No. 107 of 1998 (RSA 1998a).</p> <p>-Regulation 48, Chapter 7 of EIA Regulations, 2014, GNR 982 (RSA 2014a).</p>
<i>Legislation on compliance with conditions of approval of the environmental authorization, amendment, and auditing.</i>	<p>-NEMA provided a legal mandate for compliance with and auditing of the conditions of the environmental authorisation.</p> <p>-NEMA required the designation of environmental management inspector by the minister for monitoring compliance with environmental authorisation conditions.</p> <p>-EIA Regulations required compliance with the conditions of the environmental authorisation and EMPr and require an Environmental Audit Report as described in Appendix 7 of the Regulations.</p>	<p>-According to EIA Regulations, the environmental audit report must be prepared by an independent auditor who could be appointed by both the holder of environmental authorisation and the competent authority.</p> <p>-The Act and Regulations did not provide for a mechanism to conduct monitoring and at which stage of the project life cycle.</p>	<p>-Section 24, 24E, 24N, 24G, and 24Q, Chapter 5 of NEMA, No.107 of 1998 (RSA 1998a).</p> <p>-Section 31B/C, part 2, Chapter 7 of NEMA No.107 of 1998 (RSA 1998a).</p> <p>-Regulation 26(f), part 3, Chapter 4 of EIA Regulations, 2014, GNR 982 (RSA 2014a).</p>
EIA provisions incorporated in relevant related legislation. (Kolhoff et al. 2009)	<p>-National Environmental Management: Waste Act (NEMWA), No. 59 of 2008 sections 19 and 20</p> <p>-Mineral and Petroleum Resources Development Act (MPRDA), No. 28 of 2004</p>	<p>-The relevant environmental legislation required the undertaken of EIA in accordance with EIA Regulation made under NEMA.</p>	<p>-NEMWA. No. 59 Of 2008 (RSA 2008).</p> <p>-MPRDA, No. 28 of 2002 (RSA 2002)</p>

Evaluation criteria	Results		Source of data
	Description	Comment	Document review

Table D–2: EIA competent authority indicator and evaluation criteria

Evaluation criteria	Results		Source of data
	Description	Comments	Document review
Existence of EIA competent authority. (Ahmad and Wood 2002)	<ul style="list-style-type: none"> -According to NEMA, the National Department of Forestry, Fisheries, and the Environment (DFFE) was responsible for policy and legislation formulation, legislation amendment, guidelines formulation, and EIA decision-making for national priority activities. -DFFE provincial departments and EIA decision-making for activities devolved to their provinces. -According to NEMA, the National Department of Mineral Resources and Energy (DMRE) was responsible for EIA decision-making on mining activities. 	-The Minister of DFFE and Environmental Affairs provincial departments were responsible for the authorisation of the EIA Listed Activities except for the EIA for mining activities which were governed by the Minister of DMRE.	<ul style="list-style-type: none"> -Section 24 and 24C, Chapter 5 of NEMA, No.107 of 1998 (RSA 1998a). -Section 38A (1), Chapter 4 of MPRDA, No.28 of 2002 (RSA 2002) -Handbook on Environmental Assessment Legislation in Selected Countries in Sub-Saharan Africa (Walmsley and Hussleman 2020).
Autonomy of EIA competent authority. (Marara et al. 2011)	<ul style="list-style-type: none"> -According to NEMA and MPRDA, the DFFE and DMRE were the main competent authorities responsible for EIA decision-making. -Autonomy was uncertain even though the DFFE and DMRE were very high-profile ministries, which fall under the Executive Cabinet of South Africa. 	-There were diverse levels of EIA decision-making by related competent authorities at the national, provincial, and sector levels. This poses a question about the quality of the decision-making process and the type of decision-making criteria at each level.	<ul style="list-style-type: none"> -Section 24 and 24C, Chapter 5 of NEMA, No.107 of 1998 (RSA 1998a). -Section 38A (1), Chapter 4 of MPRDA, No.28 of 2002 (RSA 2002).

Evaluation criteria	Results		Source of data
	Description	Comments	Document review
<i>Responsibility for environmental policy, legislation, and guidelines formulation and amendment.</i>	-The DFFE was responsible for the formulation of environmental policy, commencement, and amendments of the EIA Act, Regulations, and guidelines.	-The process of the EIA Act, Regulations, and guidelines commencement and amendment involved public participation.	-Section 24(5) and 24J, Chapter 5 of NEMA, No.107 of 1998 (RSA 1998a). -Section 44, Chapter 9 of NEMA, No.107 of 1998 (RSA 1998a). -Handbook on Environmental Assessment Legislation in Selected Countries in Sub-Saharan Africa (Walmsley and Hussleman 2020).
<i>Responsibility for issuing/approving Term of References.</i>	-EIA Regulations of 2015 defined the Terms of Reference (Plan of Study) as ' <i>means a study contemplated in regulation 22 which forms part of a scoping report and sets out how an environmental impact assessment will be conducted;</i> ' -According to EIA Regulations, the EAP was responsible for preparing the Plan of Study as part of the scoping report. -Plan of Study content was specified in Appendix 2 of EIA Regulations.	-Terms of Reference in SA called Plan of Study. The DFFE is responsible for publishing and approving the plan of study for EIA.	-Regulation 1(b)(ii), Chapter 1 of EIA Regulations, 2014, GNR.982 (RSA 2014a). -Regulation 22, part 3, Chapter 4 of EIA Regulations, 2014, GNR.982 (RSA 2014a). -Appendix 2(2)(h) of EIA Regulations, 2014, GNR.982 (RSA 2014a).
Responsibility for decision-making (screening, scoping, <i>environmental authorisation</i>). (Kolhoff et al. 2009)	-The competent authority (DFFE) and its provincial departments were the decision-makers for EIA screening, scoping, review, and authorisation. -The DMRE was the competent authority responsible for all EIA decision-making of EIA stages of the related mining and petroleum activities.	-EIA for related mining and petroleum activities is conducted in accordance with EIA Regulations of NEMA. The EIA and EMP reports for mining and petroleum activities must contain the requirements about financial provision	-Section 24, 24C, and 24P, Chapter 5 of NEMA, No.107 of 1998 (RSA 1998a). -Section 38A (1), Chapter 4 of MPRDA,

Evaluation criteria	Results		Source of data
	Description	Comments	Document review
		for rehabilitation, closure, and post-closure made in NEMA	No.28 of 2002 (RSA 2002).
Review body for EIA and EMP reports. (Ahmad and Wood 2002)	-The competent authority (DFFE) and its provincial departments were responsible for EIA report reviews. -The DMRE was the competent authority responsible for the EIA report review of the related mining and petroleum activities.	-EIA Regulations of 2014 provided for the submission and consideration of EIA and EMP reports, which mainly focus on timeframes for the review process. -The Regulations also described the requirement for EIA and EMP reports preparation as stated in appendix 3 and 4 of the 2014 NEMA-EIA Regulation. -DMRE was the responsible body for EIA and EMP reports review. -Note, Section 24I of NEMA required the appointment of an external specialist reviewer in case of high-quality reports and the absence of staff's capacity to review. -Note, review of EIA and EMP reports were conducted by the competent authority in accordance with the requirements of the reports stated in the EIA Regulations of 2014 and Section 24 of NEMA.	-Section 24 and 24I, Chapter 5 of NEMA, No.107 of 1998 (RSA 1998a). -Regulation 23, part 3, Chapter 4 of EIA Regulations, 2014, GNR.982 (RSA, 2014a). -Section 38A (1), Chapter 4 of MPRDA, No.28 of 2004. -Part III, Chapter 2 of the Mineral and Petroleum Resources Development Regulations of 2004, GNR.527 (RSA 2004a).
<i>Availability of administrative law to promote environmental justice in administrative actions (EIA decision-making) and access to information.</i>	-Promotion of Administrative Justice Act 3 (PAJA) of 2000. -The promotion of Access to Information Act 2 (PAIA) of 2000.	-Administrative justice was guaranteed by section 33 of the Constitution of the Republic of South Africa. -The rights of access to information held by the DFFE were guaranteed by section 32 of the constitution.	-Constitution of the Republic of South Africa, 1996 (RSA 1996). -PAJA 3 of 2000 (RSA 2000a). -PAIA 2 of 2000 (RSA 2000b).

Evaluation criteria	Results		Source of data
	Description	Comments	Document review
<i>EIA decision-making criteria followed by the competent authority.</i>	-NEMA section 24O provided for decision-making criteria to be taken into account when considering EIA applications for environmental authorisation by DFFE and DMRE.	-The criteria were generally ensuring compliance with NEMA and EIA Regulations requirements. -Note, no data was found on EIA decision-making criteria in terms of the accuracy and reliability of the information presented in the EIA and EMP reports.	-Section 24O, Chapter 5 of NEMA, No.107 of 1998 (RSA 1998a). -Regulation 24, part 3, Chapter 4 of EIA Regulations, 2014, GNR.982 (RSA 2014a).
Specification of sectoral responsibilities in the EIA process. (Ahmad and Wood 2002)	-Section 23A of NEMA required the Minister (competent authority) to promote and facilitate integrated, environmentally sustainable, and sound management by engaging with organizations or sectors concerned with the use of environmental management instruments.	-There was no clear indication of cooperation between the sectoral authorities, and it seemed that the EIA application is managed from the beginning to the end (accepting applications, reviewing reports, and decision-making) by the DFFE and DMRE. -The applicant was required to obtain other licenses such as a water use license or waste management license as part of the environmental authorisation depending on the type of activity from the relevant authorities.	-Section 23A(3)(a), Chapter 5 of NEMA, No.107 of 1998 (RSA 1998a).
Coordination with other lead agencies. (Marara et al. 2011)	-NEMA section 24K highlighted the role of consultation between the related competent authorities. -NEMA section 24L described the alignment of environmental authorisations (Integrated Environmental Authorisation) in terms of applications that require authorisation from other related competent authorities. -According to EIA Regulations of 2014, the competent authority (DFFE) was required to facilitate environmental cooperative governance across all spheres of government.	-NEMA section 50A described the agreement between the related competent authorities to regulate the related environmental aspects through One Environmental System (OES). -There was no clear indication of coordination between the EIA-related competent authorities and other lead agencies.	-Section 24(4)(i), 24K and 24L, Chapter 5 of NEMA, No.107 of 1998 (RSA 1998a). -Section 50A, Chapter 10 of NEMA, No.107 of 1998 (RSA 1998a). -Regulation 7, part 3, Chapter 4 of EIA Regulations, 2014, GNR.982 (RSA 2014a).

Evaluation criteria	Results		Source of data
	Description	Comments	Document review
<i>Established mechanism for cooperation with project proponent and EIA professionals.</i>	-NEMA and EIA Regulations defined and describe the responsibilities and duties of EAPs and project proponents without clearly stating the cooperation of the EIA-related competent authority with EIA stakeholders.	-There was no legal information available from the Act and the EIA-related competent authorities to illustrate the cooperation between the EIA-related competent authorities and other EIA stakeholders.	-Section 24 (1A), Chapter 5 of NEMA No. 107 of 1998 (RSA 1998a). -Section 24(5)(e), Chapter 5 of NEMA, No.107 of 1998 (RSA 1998a). -Regulations 12, 13, 14, and 15, part 2, Chapter 3 of EIA Regulations, 2014, GNR 982 (RSA 2014a) -Regulations 10, 11, and 12, part 2, Chapter 3 of EIA Regulations, 2014, GNR 982 (RSA 2014a).
<i>Preparation of EIA best practice principles for good practice.</i>	-There was no information available to describe the EIA competent authority's responsibility for EIA best practice principles preparation.	-	-
<i>Preparation of Environmental standards.</i>	-NEMA stated the legal mandate to the competent authority to develop norms and standards.	-The competent authority (DFFE) published a List of Activities and associated minimum emission standards.	-Section 24 (10)(a), Chapter 5 of NEMA, No.107 of 1998 (RSA 1998a).
<i>Mechanism for inspection of Environmental Management Plan (EIA follow-up and auditing).</i>	-NEMA provided a legal mandate for monitoring, auditing, and performance assessment as a condition for an environmental authorisation conducted by the holder. -NEMA also required the designation of Environmental Management Inspector. -The Environmental Management Inspector (EMI) or the Green Scorpions under DFFE is the department responsible for compliance and enforcement capacity established in terms of NEMA.	-The EMI was designated to conduct compliance and enforcement functions with national environmental legislation including environmental authorisation conditions. -There was no available information on the procedure for conducting EIA follow-up and auditing mechanism.	-Section 31B, 31BA, 31BB, and 31C, part 2, Chapter 7 of NEMA, No.107 of 1998 (RSA 1998a). -Section 24Q, Chapter 5 of NEMA, No.107 of 1998. -Section 24N(7)(d), Chapter 5 of NEMA,

Evaluation criteria	Results		Source of data
	Description	Comments	Document review
			No.107 of 1998 (RSA 1998a).

Table D–3: EIA procedural steps indicator and evaluation criteria

Evaluation criteria	Results		Source of data
	Description	Comments	Document review
Specified screening categories. (Ahmad and Wood 2002)	-EIA Regulations included a List of Activities that trigger conducting an EIA (Scoping and Environmental Impact Reporting) (S&EIR).	-Screening stage of the South African environmental assessment process was done based on the List of Activities that trigger (S&EIR) (GNR 984) and Basic Assessment (BA) (GNR 983 and 985).	-EIA Regulations of 2014, GNR.982 (RSA 2014a) -EIA Regulations: Listing Notice 1 of 2014, GNR.983(RSA 2014d) -EIA Regulations: Listing Notice 2 of 2014, GNR.984 (RSA 2014b). -EIA Regulations: Listing Notice 3 of 2014, GNR.985 (RSA 2014e)
Systematic scoping approach. (Ahmad and Wood 2002)	-EIA Regulations required the applicant within 44 days of submitting the S&EIR application to submit Scoping Report that incorporates public participation to the competent authority.	-EIA Regulations provided the required content of the Scoping Report, the timeframe for considering the report by the competent authority as well as exceptional circumstances for scoping report submission.	-Regulation 22, part 3, Chapter 4 of EIA Regulations, 2014, GNR.982 (RSA 2014a).
<i>Terms of Reference (ToR) preparation and approval.</i>	-Terms of Reference in SA called Plan of Study. The DFFE is responsible for approving the plan of study for EIA.	-Plan of the Study content is specified in appendix 2 of EIA Regulations.	-Regulation 22, part 3, Chapter 4 of EIA Regulations, 2014, GNR.982 (RSA 2014a).

Evaluation criteria	Results		Source of data
	Description	Comments	Document review
	-According to EIA Regulations, the EAP was responsible for preparing the plan of study as part of the scoping report.		-Appendix 2(2)(h) of EIA Regulations, 2014, GNR.982 (RSA 2014a).
Requirement for public participation in the scoping stage of EIA implementation. (Kolhoff et al. 2009)	-EIA Regulations required public participation in the scoping stage of EIA implementation of at least 30 days.	-EIA Regulations provided the process of undertaking public participation.	-Regulation 21(1), part 3, Chapter 4 of EIA Regulations, 2014, GNR 982 (RSA 2014a). -Regulations 39 to 44, Chapter 6 of EIA Regulations, 2014, GNR 982 (RSA 2014a).
Requirement for public participation in reviewing EIA report. (Kolhoff et al. 2009)	-EIA Regulations required public participation in reviewing EIA reports of at least 30 days.	-EIA Regulations provided the process of undertaking public participation.	-Regulation 23(1)(a), part 3, Chapter 4 of EIA Regulations, 2014, GNR 982 (RSA 2014a). -Regulations 39 to 44, Chapter 6 of EIA Regulations, 2014, GNR 982 (RSA 2014a).
Requirement for specified EIA report content. (Ahmad and Wood 2002)	-EIA Regulations provided the required content of the EIA report.	-	-Appendix 3(3) of EIA Regulations, 2014, GNR 982(RSA 2014a).
Requirement for systematic EIA report review process. (Ahmad and Wood 2002)	-EIA Regulations stated the timeframe for EIA decision-making on the EIA report.	-EIA report reviewed by the competent authority, which is conducted in terms of compliance with the required content of the report stated in the EIA Regulations, and decision-making criteria provided in NEMA.	-Section 24O, Chapter 5 of NEMA, No.107 of 1998 (RSA 1998a). -Regulation 24, part 3, Chapter 4 of EIA Regulations, 2014, GNR.982 (RSA 2014a).

Evaluation criteria	Results		Source of data
	Description	Comments	Document review
			-Appendix 3(3) of EIA Regulations, 2014, GNR 982(RSA 2014a).
<i>Specialist report requirement.</i>	-EIA Regulations described the content of specialist reports.	-	-Appendix 6 of EIA Regulations, 2014, GNR 982 (RSA 2014a).
Requirement for Environmental Management Plan/Programme (EMP). (Ahmad and Wood 2002)	-EIA Regulations required the submission of EIA reports including EMP reports.	-EMPr preparation was required in accordance with appendix 4 of EIA Regulations in compliance with section 24N of NEMA.	-Regulation 23, part 3, Chapter 4 of EIA Regulations, 2014, GNR 982 (RSA 2014a). -Appendix 4 of EIA Regulations, 2014, GNR 982 (RSA 2014a). -Section 24N, Chapter 5 of NEMA, No.107 of 1998 (RSA 1998a).
<i>Requirement for EIA follow-up and auditing.</i>	-EIA Regulations and NEMA provided for EIA follow-up and auditing. -EIA Regulations required the holder of the environmental authorisation to frequently submit environmental audit reports. -EIA Regulations also provided the content required for environmental audit report preparation.	-According to EIA Regulations, the environmental audit report must be prepared by an independent auditor who could be appointed by both the holder of environmental authorisation and the competent authority. -There was no available information on the procedure for conducting EIA follow-up and auditing during the project life cycle. The EIA Regulations require submitting the environmental audit report to the relevant competent authority for the period during which the environmental authorisation and EMPr, and where applicable the closure plan.	-Section 24N, Chapter 5 of NEMA, No.107 of 1998 (RSA 1998a). -Regulation 26(f), part 3, Chapter 4 of EIA Regulations, 2014, GNR.982 (RSA 2014a). -Regulation 23, part 3, Chapter 4 of EIA Regulations, 2014, GNR 982 (RSA 2014a). Regulation 34, part 3, Chapter 5 of EIA Regulations, 2014,

Evaluation criteria	Results		Source of data
	Description	Comments	Document review
			GNR 982 (RSA 2014a). -Appendix 4 of EIA Regulations, 2014, GNR 982 (RSA 2014a). -Appendix 7 of EIA Regulations, 2014, GNR 982 (RSA 2014a).

Table D–4: EIA implementation output indicator (EIA report legal requirements/Evaluated using the IAU’s review package/Appendix A)

Review area	EIA legal requirements (NEMA-EIA Regulations of 2014)
Description of the development	EIA Regulations of 2014 provide the legal mandate for EIA report requirements on which the preparation of the EIA report must be formulated. Appendix 3 of the 2014 EIA Regulations imposes the description of the proposed development or activity. However, the required description of the proposed activity is limited to the location, plan, and scope of the proposed development and its associated structure and infrastructure. The required description of the proposed development in EIA Regulations is deficient in terms of describing the proposed activity inputs such as the type and quantity of materials needed during the life cycle of the activity. It is also lacking a description of the proposed activity outcomes such as the type and quantity of generated activity wastes, emissions, and residues.
Description of the environment	The required description of the environment in the EIA Regulations of 2014 is associated with the location of the proposed activity and its prescribed alternatives. It requires a description of the environmental attributes of the development footprints focusing on the geographical, physical, biological, social, economic, heritage, and cultural attributes. The Regulations do not directly denote the description of the environment in terms of describing the land uses, the broad environment surrounding the development footprint, environmental investigation method, environmental future conditions, and description of data sources.
Scoping, consultation, and impact identification	EIA Regulations of 2014 require the implementation of the EIA process in accordance with the Plan of Study determined in the scoping stage of S&EIR. The scoping process ends up with the scoping report, which includes for instance impacts identification and management. Public participation is clearly stated in EIA Regulations, particularly in terms of timeframes and processes during the scoping phase and review of the EIA report. The 2014 EIA Regulations broadly require the description of the process conducted to identify activity impacts.

Review area	EIA legal requirements (NEMA-EIA Regulations of 2014)
	However, the Regulations do not require in specific detail the source of data, relevance, and type of impacts during the activity life cycle, justification of impacts selection methodology, and consideration of impacts from the activity and non-activity impacts in the development area.
Prediction and evaluation of impacts	Prediction and evaluation in 2014 EIA Regulations particularly in terms of requiring the description of the methodology used to determine the significance of impacts, and impacts description such as nature, consequence, extent, and duration are legally stated. However, the justification of impacts and risk assessment methodology and data used appear not to be well-covered in the Regulations.
Alternatives	Consideration of alternatives of the proposed development in the preparation of the EIA report is required in the 2014 EIA Regulations in terms of development footprint alternatives, positive and negative impacts of the proposed activity, and its alternatives. Regardless of alternative considerations in the Regulations, the Regulations tend to focus on development footprint alternatives rather than broadly considering other activity alternatives such as activity design and process alternatives. Also, the regulations do not appropriately address the justification of alternatives selection methodology as well as a comprehensive comparison of activity alternatives including the likely future of the environment without the activity.
Mitigation and monitoring	The incorporation of mitigation and monitoring measures in the EIA report is briefly stated in the EIA Regulations of 2014. The Regulations broadly mention the consideration of mitigation and monitoring measures without appropriately considering justification of the selected mitigation and monitoring measures, the effectiveness of mitigation and monitoring measures, consideration of mitigation and monitoring measures during the activity life cycle (design, construction, operation, and decommissioning), consideration of potential adverse environmental impacts and conflict with the benefits of mitigation measures.
Non-technical summary	The non-technical summary is not required to be included in the EIA report by the EIA Regulations of 2014.
Organisation and presentation of information	The legal requirements of EIA report preparation in the 2014 EIA Regulations have met a few of the aspects of EIA report organization and presentation of information such as the related policy and legislative context of the proposed development, EAP's details, and objectivity of EIA report content prepared by the EAP. However, EIA Regulations do not directly consider the appropriateness of the report organization and presentation, particularly considering any gaps in the data used to prepare the report and explaining any difficulties in assembling or analysing the data.
Overall evaluation	NEMA-EIA Regulations of 2014 met to a considerable extent the criterion of the review areas of the EIA report review package. However, there were still some gaps in the legal requirements of EIA report preparation that could influence the quality of EIA report preparation and ultimately EIA system performance. These gaps were observed in the development and environment descriptions areas, scoping and impacts identification, prediction, and evaluation of impacts, alternatives, mitigation and monitoring, non-technical summary, organizations, and presentation of the S&EIR report.

Table D–5: EIA implementation output indicator (EIA report preparation/Evaluated using the IAU’s review package/Appendix A)

Review area	EIAr 1	EIAr 2	EIAr 3	EIAr 4	EIAr 5	EIAr 6	EIAr 7	EIAr 8	EIAr 9	EIAr 10	EIA review area evaluation
Description of the development	I	I	A	A	A	I	C	I	I	A	I
Description of the environment	A	A	A	A	A	A	A	A	I	A	A
Scoping, consultation, and impact identification	C	A	I	A	A	I	C/A	I	I	I	I
Prediction and evaluation of impacts	I	I	I	I	A	A	C	I	I	I	I
Alternatives	A	A	A	A	I	A	A	A	I	I	A
Mitigation and monitoring	I	I	I	I	I	I	I	I	I	I	I
Non-technical summary	A	I	I	I	A	I	C	A	I	A	I
Organisation and presentation of information	A	C	C	C	C	A	C	C	I	C	C
EIAr evaluation	A	I	I	A	A	A/I	C	I	I	I	I/I
Assessment Symbols: C: Complete for decision-making A: Adequate (not complete but adequate for decision-making) I: Inadequate (not adequate for decision-making)											

Table D–6: Country legal context indicator and evaluation criteria

Evaluation criteria	Results		Source of data
	Description	Comments	Document review/ literature review
<i>Constitutional directives on;</i> <ul style="list-style-type: none"> • <i>Environmental policies,</i> • <i>Environmental laws, and</i> • <i>Sustainable development.</i> 	-Section 24 of chapter 2 (the Bill of Rights) of the Constitution of the Republic of South Africa represented the constitutional directive for environmental rights and sustainable development in the South African legal context.	-In 1997, the Environmental Management Policy of South Africa was developed to give effect to constitutional environmental rights. -In 1998, NEMA was promulgated as an environmental law to give effect to the Environmental Management Policy (1997),	-Section 24(b)(iii), Chapter 2 of the Constitution of the Republic of South Africa (RSA 1996).

Evaluation criteria	Results		Source of data
	Description	Comments	Document review/ literature review
	- Section 24 of the Constitution stated that <i>'Everyone has the right- (a) to an environment that is not harmful to their health or well-being; and (b) to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that- (i) prevent pollution and ecological degradation; (ii) promote conservation; and (iii) secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development'</i> .	and section 24 was included in the Bill of Rights in chapter 2 of the Constitution of the Republic of South Africa (1996).	-National Environmental Management Act, No. 107 of 1998 (RSA 1998a)
<i>Availability of Environmental Action Plan and/or Policy to promote sustainable development by impact assessment tools.</i>	-The National Environmental Management Policy (1998) of South Africa was introduced to ensure the essential role of sustainable development in resource management and utilization in South Africa <i>'integrated and sustainable management of the environment, now and in the future, is the essential basis of sustainable development in all areas of human activity'</i> .	-EIA was mentioned in the policy as an integrated environmental management and planning instrument that facilitates informed decision-making for effective environmental management and promotion of sustainable development.	-The Department of Environmental Affairs and Tourism, 1998 (White Paper on Environmental Management Policy) (DEAT 1998).
<i>Availability of relevant environmental legislation.</i>	-There were other related environmental legislations in South Africa such as. -The National Water Act provided for the conservation and protection of water resources, -The National Environmental Management: Waste Act that dealt with waste and waste management activities, -The National Environmental Management: Air Quality Act dealt with the protection of ambient air quality.	-The related environmental legislation is legally required to conduct an environmental assessment in accordance with NEMA.	-National Water Act, No. 36 of 1998 (RSA 1998b). -National Environmental Management: Waste Act, No. 59 of 2008 (RSA 2008). -The National Environmental Management: Air Quality Act, No. 39 of 2004 (RSA 2004b).

Evaluation criteria	Results		Source of data
	Description	Comments	Document review/ literature review
Availability of environmental standards. (Kolhoff et al. 2009)	-There were available standards for greenhouse gas emissions, solid waste, water quality, and noise.	-NEMA stated the legal mandate to the competent authority to develop norms and standards. -The competent authority (DFFE) published the list of activities and associated minimum emission standards.	-Section 24 (10)(a), Chapter 5 of NEMA, No.107 of 1998 (RSA 1998a)
Existence of competent judiciary body to prosecute environmental issues. (Marara et al. 2011)	-The Environmental Management Inspector (EMI) was empowered to prosecute environmental crimes in court and pass them to National Prosecuting Authority for prosecution (Green Scorpion). -There was no existing judiciary body to prosecute environmental issues.	-South African Environmental Court (2003) in Western Cape province was established to prosecute wildlife poaching and damaging coastal marine parks. However, the Environmental Court was shut down in 2007 because of a lack of legal mandate for its establishment.	-Section 31B/C, part 2, Chapter 7 of NEMA (RSA 1998a). -(Lesser 2018).
Constitutional directive on; <ul style="list-style-type: none"> • Access to information and administrative justice, • role of public in decision-making, and • transparency and accountability in decision-making. (Kolhoff et al. 2009)	-The South African Constitution provided a directive to give the right of access to any information held by the state and any information that is held by another person. -The constitution ensured the right to administrative decision-making that is lawful, reasonable, and procedurally fair. -The constitution also provided the right to facilitate public participation and involvement in the law-making processes at the national, provincial, and local levels. -In terms of accountability and transparency, the constitution required all government levels and organs of state within each sphere to ' <i>provide effective, transparent, accountable and coherent government for the Republic as a whole;</i> '	-The promotion of the Access to Information Act 2 (PAIA) of 2000 -Promotion of Administrative Justice Act 3 (PAJA) of 2000	-Section 32(1)(a)(B), of the Constitution of the Republic of South Africa, 1996 (RSA 1996). -Section 33 of the Constitution of the Republic of South Africa, 1996 (RSA 1996). -Sections 42(2), 59, 72, 118 of the Constitution of the Republic of South Africa, 1996 (RSA 1996). -Section 41(1)(c) of the Constitution of the Republic of South Africa, 1996 (RSA 1996).

Table D–7: Political indicator and evaluation criteria

Evaluation criteria	Results		Source of data
	Description	Comments	Document review/ Literature review
<i>Country's political participation in the international agreements (conventions, treaties, and protocols) of environmental assessment.</i>	<p>-The Constitution of South Africa supported the country's commitment to international agreements that the country is committed to.</p> <p>-NEMA in chapter 6 described the incorporation of international environmental instruments that are bound by SA into the legislative framework of the country.</p> <p>-The National Environmental Management Policy of SA described the country's interest and commitment to international environmental treaties and agreements.</p> <p>-South Africa was a party to a number of environmental conventions such as the Framework Convention on Climate Change, the Convention on Biology Diversity, and the Convention to Combat Desertification.</p>	<p>-EIA was regulated in South Africa, without a clear indication of the country's ratifying a significant convention on EIA (such as the Convention on Environmental Impact Assessment in a Transboundary Context (Espoo)).</p>	<p>-Sections 231, 232, 233 of Chapter 4 of the Constitution of the Republic of South Africa (RSA 1996).</p> <p>-Section 25, Chapter 6 of NEMA, No.107 of 1998 (RSA 1998a).</p> <p>-Department of Environmental Affairs and Tourism (DEAT 2005).</p> <p>- Department of Environmental Affairs and Tourism (DEAT 1998).</p>
<i>Political influence on enactment and reform of EIA legislation.</i>	<p>-According to NEMA, the competent authority (currently DFFE) shared the process of EIA Act and Regulations amendment with the public and interested parties by allowing them to participate and make comments on the amendment drafts before endorsement and commencement of EIA regulations.</p> <p>-There was no clear indication of the political influence of EIA regulatory reform.</p>	<p>-The Regulations of EIA in South Africa were first formalised in 1997 in terms of the Environment Conservation Act (ECA), No.73 of 1989.</p> <p>-EIA Regulations had been amended in 2006, 2010, 2014, and 2017 in terms of NEMA No.107 of 1998.</p>	<p>-Department of Environmental Affairs (DEA 2018a).</p> <p>-National Environmental Management Act, No. 107 of 1998 (RSA 1998a)</p>

Evaluation criteria	Results		Source of data
	Description	Comments	Document review/ Literature review
<i>Political influence on EIA administration.</i> <ul style="list-style-type: none"> • <i>Autonomy of responsible authority (independency and political appointment of managers), and</i> • <i>Allocation of funding and resources.</i> 	-It was indicated that there is a concern regarding political interference in the EIA administration, lack of political commitment to environmental management, lack of financial and human resources, a sign of corruption within competent authorities, and lack of governmental support.	-Very few pieces of literature briefly discussed the political influence of the EIA administration in South Africa.	(Duthie 2001; DEAT 2008; Sandham and Pretorius 2008; Patel 2009; Saidi 2010).
<i>Political influence on EIA decision-making.</i> <ul style="list-style-type: none"> • <i>EIA decision-making during screening, scoping, and environmental approval of EIA report.</i> 	-It was indicated that there is pressure on EIA decision-making within the EIA competent authority from the applicant, government, political appointee, consultants, and local authorities to speed up the environmental authorization of activities.	--Very few pieces of literature briefly discussed the political influence on EIA decision-making in South Africa.	-(Duthie 2001; DEAT 2008; Sandham and Pretorius 2008; Saidi 2010).

Table D–8: Socio-economic indicator and evaluation criteria

Evaluation criteria	Results	Source of data
	Description (the year of 2019-2021)	Document review
<i>Human Development Index (HDI)</i>	0.713	-(UNDP 2021a).
<i>Life expectancy index</i>	0.679	-(UNDP 2021a).
<i>Gross National Income (GNI) per capita (constant 2017 PPP\$)</i>	12.129	-(UNDP 2021a).
<i>Gross Domestic Product (GDP) per capita (2017 PPP\$)</i>	12.482	-(RSA 2022).
<i>Unemployment, total (% of labour force)</i>	34.5	-(UNDP 2021a).

Evaluation criteria	Results	Source of data
	Description (the year of 2019-2021)	Document review
<i>Population in multidimensional poverty, headcount (%)</i>	6.3	-(UNDP 2021a).
<i>Total population (millions) (Data refers to 2030)</i>	66.0	-(UNDP 2021a).
<i>Education index</i>	0.724	-(UNDP 2021a).
<i>Literacy rate, adult (% ages 15 and older)</i>	87.0	-(UNDP 2021a).

Table D–9: Environmental condition indicator and evaluation criteria

Evaluation criteria	Results		Source of data
	Description	Comments	Document review
<i>Land issues.</i>	<ul style="list-style-type: none"> -Land degradation. -Loss of natural habitat. -Soil erosion. -Invasive alien plants. 	<ul style="list-style-type: none"> -Resulting from unemployment, poverty, and poor land use. -Resulting from urban expansion, mining, and agricultural activities. -Soil erosion due to land degradation (70% of South Africa’s land is affected by erosion). -Invasive alien plants have overspread more than 10% of land in SA, and it increases by 5% per year. 	-(DEA 2012; DEA 2018b; Skowno et al. 2019).
<i>Biodiversity and ecosystem issues.</i>	<ul style="list-style-type: none"> -Loss of natural habitat. -Overexploitation of species. -Threatened species. -Deteriorating terrestrial ecosystems. -Deteriorating freshwater ecosystems. -Deteriorating marine ecosystems. -Ecological footprint. 	<ul style="list-style-type: none"> -Resulting from urban expansion, mining, and agricultural activities. -Due to unsustainable harvesting. -South African endemic species condition is deteriorating. -Resulting from urban expansion, mining, and agricultural activities. -Freshwater in SA is scarce and stressed to meet development targets. -Marine ecosystems are deteriorating due to pollution and human development. -SA has a footprint of 2.32 global ha per capita and an ecological deficit of 1.18 (natural resources do not meet human demands). 	-(DEA 2012; DEA 2018b; Skowno et al. 2019).

Evaluation criteria	Results		Source of data
	Description	Comments	Document review
<i>Water issues.</i>	-Deteriorating water availability and quality.	-Due to scarcity of water, human development activities (urbanisation, mining, agriculture), and associated pollution issues such as Acid Mine Drainage.	-(DEA 2012; DEA 2018b; Skowno et al. 2019).
<i>Aquatic system issues.</i>	-Pollution issues. -Depletion of fish supply. -Sea level raise.	-Wastewater discharge. -Due to overexploitation of fish stocks.	-(DEA 2012; DEA 2018b; Skowno et al. 2019).
<i>Air quality issues.</i>	-Increasing indoor and outdoor air pollution. -Increasing emissions of ozone-depleting substances.	-Due to the increasing level of human development activities emissions such as carbon dioxide, sulfur dioxide, nitrogen dioxide, and ozone.	-(DEA 2012; DEA 2018b; Skowno et al. 2019).
<i>Climate change issue.</i>	-Increasing greenhouse gas emissions. -Increasing temperature.	-Estimates of a 20% increase in greenhouse gas emissions between 2000 and 2010.	-(DEA 2012; DEA 2018b; Skowno et al. 2019).

Table D–10: EIA stakeholders’ capacity indicator and evaluation criteria

Evaluation criteria	Results		Source of data
	Description	Comments	Document review / literature review
EIA competent authority staff competency. (Kolhoff et al. 2009; Kolhoff et al. 2016)	-It was highlighted that there is uncertainty about the number, qualifications, and skills of the government officials accountable for EIA decision-making (competent authorities). -There was also an indication of an insufficient number of skilled staff, lack of experience, and lack of motivation due to poor salaries. -It was pointed out that EIA competent authorities lack staff capacity and experience. -It was mentioned that EIA competent authorities lack financial resources. -It was indicated that EIA competent authorities lack efficiency in terms of complying with EIA	-Issue of EIA administrative staff capacity resulted in time and cost implications for the project developer due to the lengthy process of environmental authorisation.	-(Alberts, 2020). -(Duthie 2001). -(Sandham et al. 2005). -(Sampson 2007). -(Sandham and Pretorius 2008). -(Hulett and Diab 2002). -(Patel 2009). -(Retief et al. 2011). -(Retief et al. 2011). -(DEAT 2008) -(DEA 2018a)

Evaluation criteria	Results		Source of data
	Description	Comments	Document review / literature review
	<p>timeframes as well as loss of EIA documentation.</p> <ul style="list-style-type: none"> -There was also an issue of lack of cooperation between competent authority's staff and EAPs. -It was indicated that EIA officials were under pressure from the project proponent which influence the objective evaluation of EIA by the official. 		
<p>EIA consultants and specialist competency. (Kolhoff et al. 2009; Marara et al. 2011)</p>	<ul style="list-style-type: none"> -There was an indication of uncertainty about EIA professionals' number, qualifications, and experience working in the public and private sectors in South Africa despite the availability of the EIA professional body (EAPASA). -There was an indication of a lack of EIA professionals' EIA knowledge and experience, therefore, there is a need for capacity building. -There was an indication of uncertainty about specialists' number, qualifications, and experience. -It was mentioned that due to the pressure from project proponents EAPs' independence is undermined affecting EIA quality 	<ul style="list-style-type: none"> -In the context of South Africa, EIA professionals who practice their duties as EAPs were not necessarily specialized as environmental scientists. Many EAPs are holders of engineering degrees or other related sciences but they are conducting EIAs. This might have a negative implication on the quality of EIA due to the limited knowledge of environmental science that such EAPs hold. -There is a concern about some EAPs who assign other junior EAPs with limited skills and experience to conduct the EIA study. 	<ul style="list-style-type: none"> -(Alberts 2020). -(Sampson 2007). -(Morrison-Saunders and Retief 2012). -(Abdulla 2002). -(DEAT 2008). -(DEA 2018a).
<p>Project proponent/developer competency. (Kolhoff et al. 2009)</p>	<ul style="list-style-type: none"> -It was mentioned that there is a lack of project proponent commitment to EIA trying to avoid transparent assessment. -There was also a lack of project proponent commitment to cover the cost of the EIA process and pay the EAPs fee. -It was indicated that the proponent/developer lack EIA awareness in terms of process and related cost. 	<ul style="list-style-type: none"> -Project proponents tended to focus on obtaining EIA approval in a brief time than meeting the legal requirements of EIA. -Large companies tended to be more environmentally aware and prepared to comply with EIA requirements, while small companies or private project 	<ul style="list-style-type: none"> -(Sampson 2007). -(DEAT 2008). -(DEA 2018a).

Evaluation criteria	Results		Source of data
	Description	Comments	Document review / literature review
	<p>-There was also a lack of commitment to provide the EAPs with sufficient information about the proposed development.</p> <p>-It was indicated that the project proponent interferes in the EIA process which influences the independence of EAPs and the objective evaluation of EIA by officials.</p>	<p>proponents with limited financial capacity are not capable of conducting EIA.</p>	
<p>Interested and affected party's competency. (Kolhoff et al. 2009; Marara et al. 2011)</p>	<p>-It was mentioned that there is a lack of stakeholders' capacity to understand the technical nature of EIA.</p> <p>-There was also an issue of conflict of interest between key stakeholders leading to making public participation a lengthy and costly process, as well as a lack of capacity to make informed decisions, which affects EIA and public participation processes.</p>	<p>-Interested and affected parties were sometimes represented by community leaders and representatives, which indicates manipulation of communities by their social structure and leadership.</p> <p>-Low environmental awareness.</p>	<p>-(McDaid and Kruger 2004). -(DEA 2018a). -(Kaekae 2019). -(Sandham et al. 2019).</p>

APPENDIX E: NAMIBIAN CASE STUDY FINDINGS

Table E–1: EIA legislation indicator and evaluation criteria

Evaluation criteria	Results		Source of data
	Description	Comments	Document review
<i>Availability of Environmental legislation.</i>	<p>-Environmental Management Act, No.7 of 2007 (EMA)</p> <p>-The Act stated that it <i>'to promote the sustainable development of the environment and the use of natural resources by establishing principles for decision-making on matters affecting the environment; to establish the Sustainable Development Advisory Council; to provide for the appointment of the Environmental Commissioner and environmental officer; to provide for a process of assessment and control of activities which may have significant effects on the environment, and to provide for incidental matters'</i>.</p>	<p>-It was brought into force on 6 February 2012 by Government Notice (GN) 28/2012 (Government Gazette (GG) 4878).</p> <p>-In 2016, a series of stakeholder consultations on the amendment of the EMA was undertaken. The amendments to the EMA were considered by the MEFT. The amended legislation awaits cabinet approval before commencement.</p>	<p>-The Environmental Management Act, No.7 of 2007 (EMA) (GRN 2007).</p>
<i>Legislative directive on sustainable development.</i>	<p>-EMA was promulgated to promote sustainable development, providing a definition for sustainable development, incorporating sustainable development into the environmental management principles, and creating of Sustainable Development Advisory Council.</p>	<p>-Sustainable development was defined in EMA as <i>'human use of a natural resource, whether renewable or non-renewable, or the environment, in such a manner that it may equitably yield the greatest benefit to present generations while maintaining its potential to meet the needs and aspirations of future generations including the maintenance and improvement of the capacity of the environment to produce renewable resources and the natural capacity for regeneration of such resources.'</i></p>	<p>-Section 1 (definitions), part I of EMA, No.7 of 2007 (GRN 2007).</p> <p>-Section 3(2)(a)(f), part II, EMA, No.7 of 2007 (GRN 2007).</p> <p>-Section 7(a), part IV, EMA, No.7 of 2007 (GRN 2007).</p>
Legal provisions for EIA. (Ahmad and Wood 2002)	<p>-EMA, No.7 of 2007 provided for the legal framework of the EIA system in Namibia. It defined EIA as <i>'the process of identifying,</i></p>	<p>-Part VII of the act established environmental assessment in terms of Listing Activities,</p>	<p>-Section 1 (definitions), part I of EMA, No.7 of 2007 (GRN 2007).</p>

Evaluation criteria	Results		Source of data
	Description	Comments	Document review
	<i>predicting and evaluating – (a) the significant effects of activities on the environment; (b) the risks and consequences of activities and their alternatives and options for mitigation with a view to minimise the effects of activities on the environment and to maximise the benefits and to promote compliance with the principles set out in section 3;'</i>	exemptions, the procedure for identifying competent authorities, and authorization. -Part VIII of the Act constituted the process of environmental assessment. -EIA Regulations of 2012 described the EIA system in Namibia in terms of the procedural steps, EIA stakeholders' capacity roles and duties, public participation, environmental authorization, etc.	-Part VII and VIII of EMA, No.7 of 2007 (GRN 2007). -EIA Regulations of 2012 made in terms of EMA (GRN 2012).
<i>Legislative directive on sustainable development promotion by EIA.</i>	-EIA system legislative framework stipulated the promotion of sustainable development by EIA as specified in the EMA.	-Section 1, part I of EMA required EIA to comply with the environmental management principles stated in section 3 of the Act which incorporated sustainable development.	-Section 1(definitions), part I of EMA, No.7 of 2007 (GRN 2007). -Section 3(2)(a)(f), part II, EMA, No.7 of 2007 (GRN 2007).
<i>Availability of EIA guidelines.</i>	-There were three types of guidelines related to the EIA system in Namibia. -Firstly, guidelines to the EMA, No.7 of 2007 which described the Act without covering the EIA Regulations. -Secondly, guidelines for the EIA process and EMP. -Thirdly, sector guidelines for EIA practice.	-Guidelines for EIA Regulations of 2012 did not exist. The sector EIA guidelines were very limited to a few sectors such as forestry and bushing harvesting projects.	-(Directorate of Environmental Affairs 2008; MET 2008; Ministry of Agriculture, Water and Forestry and Ministry of Environment and Tourism 2017)
<i>Regulations specify the type of development projects that require EIA.</i>	-EIA Regulations of 2012 included a List of Activities that may not be undertaken without an Environmental Clearance Certificate by conducting the EIA process.	-The List of Activities in the Regulations developed under section 27 of EMA following a consultation process stipulated in section 44 of EMA. The list is considered a discretionary screening list by which the undertaken of EIA for a project activity is decided.	-Section 27, part VII of EMA, No.7 of 2007 (GRN 2007). -Annexure, EIA Regulations of 2012 (GRN 2012).
<i>Legislation on EIA public participation.</i>	-EMA required public consultation process during the EIA process as mentioned in section 36 of the Act. -EIA Regulations of 2012 defined public participation as ' <i>a process referred to in regulation 21, in which potential interested and</i>	- Regulations 17, 21, 22, 23, and 24 demonstrated the related parts of public participation during EIA, but no guideline is available.	-Section 36. Part VIII of EMA, No.7 of 2007 (GRN 2007). -Regulation 1 (definitions) of EIA Regulations of 2012 (GRN 2012).

Evaluation criteria	Results		Source of data
	Description	Comments	Document review
	<p><i>affected parties are given an opportunity to comment on, or raise issues relevant to, specific matters;</i></p> <p>-The Regulations also described the interested and affected party as <i>'any person, group of persons or organisation interested in or affected by an activity; and any organ of state that may have jurisdiction over any aspect of activity;'</i></p>		-Regulations 17, 21, 22, 23, and 24 of EIA Regulations of 2012 (GRN 2012).
<p><i>Legislation on Environmental Impact Assessment report and Environmental Management Programme.</i></p>	<p>-EMA defined the EIA report as <i>'a report that represents the procedures and findings of an assessment;'</i></p> <p>-EIA Regulations of 2012 defined EMP as <i>'a plan that describes how activities that may have significant environments effects on the environment are to be mitigated, controlled and monitored;'</i></p>	<p>-Regulation 8(j) of EIA Regulations 2012 described EMP content as part of the EIA scoping report.</p> <p>-Regulation 15 of EIA Regulations 2012 required the EIA report and demonstrate its content without clearly including EMP and quality assurance checks.</p> <p>-There are no guidelines exist on the preparation of the EIA report and the implementation of the EMP report.</p>	<p>-Section 1(definitions), part I of EMA, No.7 of 2007 (GRN 2007).</p> <p>-Regulation 1 (definitions) of EIA Regulations of 2012 (GRN 2012).</p> <p>-Regulations 8 and 15 EIA Regulations of 2012 (GRN 2012).</p>
<p><i>Legislation specifies the competent authority responsible for EIA decision-making (environmental authorization) and its duties.</i></p>	<p>-EMA defined the competent authority as <i>'an organ of state which is responsible, under any law, for granting or refusing an authorisation; or the competent authority identified in terms of section 30;'</i></p>	<p>-Section 30, part VII of EMA described the procedure for identifying the competent authorities.</p> <p>-Regulation 10 of EIA Regulations 2012 illustrated the responsibilities of the competent authority.</p>	<p>-Section 1(definitions), part I of EMA, No.7 of 2007 (GRN 2007).</p> <p>-Section 30, part VII of the EMA No.7 of 2007 (GRN 2007).</p> <p>-Regulation 10 of EIA Regulations of 2012 (GRN 2012).</p>
<p><i>Legislation on project proponent/applicant duties and responsibilities.</i></p>	<p>-EMA defined the proponent as <i>'a person who proposes to undertake a listed activity;'</i></p> <p>-Regulation 3 of the EIA Regulations of 2012 demonstrated the duties of proponents.</p>	<p>- Regulation 3 specified the responsibility of the project proponent to appoint the EAP, provide the EAP with access to project information, and comply with EIA requirements and processes stipulated in the regulations</p>	<p>-Section 1(definitions), part I of EMA, No.7 of 2007 (GRN 2007).</p> <p>-Regulation 3 of EIA Regulations of 2012 (GRN 2012).</p>

Evaluation criteria	Results		Source of data
	Description	Comments	Document review
<i>Legislation on EIA professional registration, responsibilities, and duties.</i>	<ul style="list-style-type: none"> -EIA Regulations defined the EAP as ‘a person designated by a proponent to manage the assessment process;’ -Regulation 4 stipulates the general requirements of EAPs. 	<ul style="list-style-type: none"> - Regulation 4 indicated that the EAPs must have the knowledge and experience to conduct EIA, objectivity in conducting EIA, compliance with the Regulations, and accountability in information disclosing to the related players. -EIA legal framework in Namibia did not require EAPs registration or certification by a recognized body. 	<ul style="list-style-type: none"> -Regulation 1 (definitions) of EIA Regulations of 2012 (GRN 2012). -Regulation 4 of EIA Regulations of 2012 (GRN 2012).
Provisions for appeal by the developer or the public against decisions. (Ahmad and Wood 2002)	<ul style="list-style-type: none"> -Sections 50 and 51 of EMA No.7 of 2007 established the legal mandate for appeal rights that can be made against decisions made by the Environmental Commissioner or appeal decisions made by the Minister. -Regulations 25 and 26 of EIA Regulations 2012 described the appeal process and its timeframes. 	<ul style="list-style-type: none"> -The first stage of making an appeal application was to submit an appeal application to MEFT against decisions made by the Environmental Commissioner. -The second stage was to make an appeal to High Court against the Minister’s decision. 	<ul style="list-style-type: none"> -Sections 50 and 51, part X of the EMA No.7 of 2007 (GRN 2007). -Regulations 25 and 26 of EIA Regulations of 2012 (GRN 2012).
Legal or procedural specification of time limits. (Ahmad and Wood 2002)	<ul style="list-style-type: none"> -EIA Regulations of 2012 described the timeframes for considering the scoping report, submitting the EIA report, decision-making, public participation, and Environmental Clearance Certificate (ECC) transfer. 	<ul style="list-style-type: none"> -The legal framework of the EIA system in Namibia was not very clear on the time limits of the screening, scoping, and reviewing of EIA report stages. -The timeframes were provided for different stages of the EIA process, but no guidelines exist on the total time required to conduct the EIA. 	<ul style="list-style-type: none"> - EIA Regulations of 2012 (GRN 2012).
Legal provision for funding. (Kolhoff et al. 2009)	<ul style="list-style-type: none"> -Section 32 of EMA No.7 of 2007 stipulated the legal mandate for fee payments associated with the EIA process and authorization. -Regulations 29 and Annexure 2 of EIA Regulations of 2012 described the process and the payment required associated with EIA under EMA. 	<ul style="list-style-type: none"> -No guidelines exist on how it can be implemented. 	<ul style="list-style-type: none"> -Section 32, part VIII of EMA No.7 of 2007 (GRN 2007). Regulations 29 and Annexure 2 of EIA Regulations of 2012 (GRN 2012).
<i>Legislation on penalties and offences.</i>	<ul style="list-style-type: none"> -Section 20(e), 53(2), and 56(2) of EMA No.7 of 2007 established the legal requirement to 	<ul style="list-style-type: none"> -Note, no information was found about what procedure is conducted to investigate offences and impose penalties. 	<ul style="list-style-type: none"> -Section 20(e), 53(2), and 56(2), part X of EMA No.7 of 2007 (GRN 2007).

Evaluation criteria	Results		Source of data
	Description	Comments	Document review
	impose a penalty for any contravention or failure to comply with the Act. -Regulation 30 of the EIA Regulations of 2012 indicated the conditions for laying penalties and offences on ECC holders.		-Regulation 30 of EIA Regulations of 2012 (GRN 2012).
<i>Legislation on compliance with conditions of approval of the environmental authorization, amendment, and auditing.</i>	-Section 20(2)(b) of EMA No.7 of 2007 stated the compliance with the conditions made in the ECC. -Sections 39 and 42 of EMA described the amendment of ECC conditions and the suspension of ECC in case of not complying with ECC conditions	-Note, no information was found about what procedure is conducted to investigate compliance with ECC conditions. -Monitoring is not mentioned in the EIA Regulations and is vaguely mentioned in EMA.	-Section 20(2)(b), part V of EMA No.7 of 2007 (GRN 2007). -Sections 39 and 42, part VIII of EMA No.7 of 2007 (GRN 2007).
EIA provisions incorporated in relevant related legislation. (Kolhoff et al. 2009)	-Article 12 of the Petroleum (Exploitation and Production) Act No.11 of 1997 allow the Minister to require environmental impact studies in considering a licence application. -Water Resources Management Act, No.11 of 2013.	-EIA was not appropriately considered in most of the relevant environmental legislation in Namibia.	-Article 12 of the Petroleum (Exploitation and Production) Act No.11 of 1997 (GRN 1997). -(GRN 2013).

Table E–2: EIA competent authority indicator and evaluation criteria

Evaluation criteria	Results		Source of data
	Description	Comments	Document review
Existence of EIA competent authority. (Ahmad and Wood 2002)	-EMA defined the competent authority as ' <i>an organ of state which is responsible, under any law, for granting or refusing an authorisation; or the competent authority identified in terms of section 30;</i> ' -Section 30, part VII of EMA described the procedure for identifying the competent authorities.	-The MEFT was established in 1990 based on a legal mandate derived from the Namibian Constitution chapter 11 (Principles of State Policy), Article 95 (Promotion of the Welfare of the People) with the mission to promote sustainable development in Namibia. -The main objective of DEA was " <i>to promote environmental sustainability across all other ministries, the private sector and non-</i>	-Section 1(definitions), part I of EMA, No.7 of 2007 (GRN 2007). -Section 30, part VII of the EMA No.7 of 2007 (GRN 2007). -Regulation 10 of EIA Regulations of 2012 (GRN 2012).

Evaluation criteria	Results		Source of data
	Description	Comments	Document review
	-The competent authority that supervises EIA application makes the final EIA decision, and grants Environmental Clearance Certificate is the Department of Environmental Affairs (Office of the Environmental Commissioner) under the Ministry of Environment, Forestry, and Tourism (MEFT).	<i>governmental organizations with regard to giving effect to Article 95 (L) of the Constitution,”</i> -Regulation 10 of EIA Regulations 2012 illustrated the responsibilities of the competent authority. However, they are not well-described.	-(MEFT 2021).
Autonomy of EIA competent authority. (Marara et al. 2011)	-According to section 37 of part VIII of EMA No.7 of 2007, EIAs were guided, reviewed, and decided by the office of the Environmental Commissioner through DEA, which also falls under the MEFT. The administration hierarchy of MEFT within which EIA decision-makers are affiliated might compromise the autonomy of the decision-making process of EIA due to different levels of administration and decision-making within the Ministry.	-There was no clear evidence that highlights the autonomy of EIA competent authority.	-Section 37, part VIII of EMA No.7 of 2007 (GRN 2007). -(MEFT 2021)
<i>Responsibility for environmental policy, legislation, and guidelines formulation and amendment.</i>	-The MEFT was the responsible authority that regulates and reforms the related environmental policies, legislation, and guidelines.	-EIA legal framework has been in a process of revision since 2016. Up to this point of time of the study, the updated Act and Regulations have not been revealed.	-EMA No.7 of 2007 (GRN 2007). -(MEFT 2021).
<i>Responsibility for issuing/approving Term of References.</i>	-Regulation 9 of EIA Regulations 2012 described the content of the Terms of Reference to describe the assessment approach the project proponent intends to implement.	-There was no information available nor guidelines that describe the process needed to develop the Terms of Reference of the assessment.	-Regulation 9 of EIA Regulations of 2012 (GRN 2012).
Responsibility for decision-making (screening, scoping, environmental authorisation). (Kolhoff et al. 2009)	-Regulations 14, 15, and 18 of EIA Regulations 2012 stipulated the right of the Environmental Commissioner to make decisions on the EIA scoping report and EIA report, and issue ECC.	-The competent authority that makes the final EIA decision and grants Environmental Clearance Certificate is the Department of Environmental Affairs (Office of the Environmental Commissioner) under the Ministry of Environment, Forestry, and Tourism (MEFT).	-Regulations 14, 15, and 18 of EIA Regulations of 2012 (GRN 2012).

Evaluation criteria	Results		Source of data
	Description	Comments	Document review
Review body for EIA and EMP reports. (Ahmad and Wood 2002)	-According to sections 36, 44, and 45 of EMA No.7 of 2007 and Regulation 11 of EIA Regulations the Environmental Commissioner was the review body of EIA and EMP reports with a requirement for a consultation process with other related authorities and the assistance of an external specialist if needed.	-There was no information available nor guidelines that describes how the consultation process works between the competent authority and the relevant entities.	-Section 36, part VIII of EMA No.7 of 2007 (GRN 2007). -Sections 44 and 45, part IX of EMA No.7 of 2007 (GRN 2007). -Regulations 11 of EIA Regulations of 2012 (GRN 2012).
<i>Availability of administrative law to promote environmental justice in administrative actions (EIA decision-making) and access to information.</i>	-There was no information available on the MEFT website that describes the commitment of MEFT to the administrative justice law and access to information if it existed.	-	-(MEFT 2021).
<i>EIA decision-making criteria followed by the competent authority.</i>	-EIA legal framework did not specify any criteria for EIA decision-making.	-There was no information available in the EIA legal framework and on the MEFT website that describes the following decision-making criteria.	-EMA No.7 of 2007 (GRN 2007). -EIA Regulations of 2012 (GRN 2012). -(MEFT 2021).
Specification of sectoral responsibilities in the EIA process. (Ahmad and Wood 2002)	-EMA and EIA Regulations described the requirement of conducting a process of consultation with the relevant authorities in terms of the listed activity concerned during the EIA process.	-There were no Regulations available or guidelines that demonstrate how the competent authority is communicating and cooperating with other related authorities.	-Section 44, part IX of EMA No.7 of 2007 (GRN 2007). -Regulations 11 of EIA Regulations of 2012 (GRN 2012). -(MEFT 2021).
Coordination with other lead agencies. (Marara et al. 2011)	-Section 44 of EMA highlighted the requirement to conduct a consultation process with the relevant organ of state or any interested or affected person.	-There was no information available that illustrates the coordination between MEFT or the Environmental Commissioner with any other leading agencies.	-Section 44, part IX of EMA No.7 of 2007 (GRN 2007). -(MEFT 2021).
<i>Established mechanism for cooperation with</i>	-EMA defined the proponent as 'a person who proposes to undertake a listed activity;'	-There was no information available on the MEFT website that describe the framework of cooperation between the EIA competent	-Section 1(definitions), part I of EMA, No.7 of 2007 (GRN 2007).

Evaluation criteria	Results		Source of data
	Description	Comments	Document review
<i>project proponent and EIA professionals.</i>	-Regulation 3 of the EIA Regulations of 2012 demonstrated the duties of proponents.	authority, project proponent, and EIA professionals.	-Regulation 3 of EIA Regulations of 2012 (GRN 2012). -(MEFT 2021).
<i>Preparation of EIA best practice principles for good practice.</i>	-There was no information available on the MEFT website that describe the preparation of EIA best practice principles for good practice.	-	-(MEFT 2021).
<i>Preparation of environmental standards.</i>	-There was no information available on the MEFT website that describes environmental standards preparation.	-	-(MEFT 2021).
<i>Mechanism for inspection of Environmental Management Plan (EIA follow-up and auditing).</i>	-EMA unclearly mentioned EIA follow-up and auditing, while it was not mentioned in the EIA Regulations.	-There was no information available on the MEFT website that describe EIA follow-up and auditing.	-EMA No.7 of 2007 (GRN 2007). -EIA Regulations of 2012 (GRN 2012). -(MEFT 2021).

Table E–3: EIA procedural steps indicator and evaluation criteria

Evaluation criteria	Results		Source of data
	Description	Comments	Document review
Specified screening categories. (Ahmad and Wood 2002)	-Section 27 of EMA, No.7 of 2007 stipulated the Listed Activities that require conducting the EIA process to obtain ECC. -Regulation 5 of the 2012 EIA Regulations described the process of determining if the proposed activity is a Listed Activity or not. -EIA Regulations of 2012 included a List of Activities that may not be undertaken without an Environmental Clearance Certificate by conducting the EIA process.	-The process of deciding on a Listed Activity was based on the List of Activities provided in EMA and EIA Regulations by the proponent and the competent authority. This process was conducted by consulting with the competent authority. If the activity is a Listed Activity the proponent must apply for ECC by applying the form as provided in Annexure 1 (Form 1) of the Regulations. -There was no guideline available to describe the consultation process between the project	-Section 27, part VII of EMA, No.7 of 2007 (GRN 2007). -Regulation 5 of EIA Regulations of 2012 (GRN 2012). -Annexure 1, EIA Regulations of 2012 (GRN 2012). -Annexure 1, EIA Regulations of 2012 (GRN 2012).

Evaluation criteria	Results		Source of data
	Description	Comments	Document review
		proponent and the competent authority about the EIA screening stage.	
Systematic scoping approach. (Ahmad and Wood 2002)	<ul style="list-style-type: none"> -After submitting the ECC application form Regulation 7 of 2012 EIA Regulations described the scoping stage including the preparation of the scoping report, in which its required content is provided. -Regulation 8 of the 2012 EIA Regulations described the required information that should be stated in the scoping report for decision-making. -Regulation 12 of the 2012 EIA Regulations demonstrated the consideration process of the scoping report to decide if the assessment is not required (as mentioned in Regulation 13) or the assessment is required (as mentioned in Regulation 14). 	<ul style="list-style-type: none"> -The timeframes of scoping stage stated in the Regulations were indicated for decision-making on the scoping report and public participation. However, the duration of conducting scoping stage and preparing the scoping report was not mentioned. -There was no guideline available to demonstrate the undertaken of the EIA scoping stage. 	-Regulations 7, 8, 12, 13, and 14 of EIA Regulations of 2012 (GRN 2012).
<i>Terms of Reference (ToR) preparation and approval.</i>	<ul style="list-style-type: none"> -Section 35 of EMA No.7 of 2007 described the right of the Environmental Commissioner to determine Terms of Reference preparation. -Regulation 9 of EIA Regulations 2012 provided the content of the Terms of Reference to describe the assessment approach the project proponent intends to implement. 	-There was no information available that describes the process needed to assign the Terms of Reference of the assessment (competent authority vs project proponent) or any cooperation with the proponent in terms of developing the Terms of Reference.	<ul style="list-style-type: none"> -Section 35, part VIII of EMA No.7 of 2007 (GRN 2007). -Regulation 9 of EIA Regulations of 2012 (GRN 2012).
Requirement for public participation in the scoping stage of EIA implementation. (Kolhoff et al. 2009)	-Regulation 7 of 2012 EIA Regulations indicated the undertaken of the public consultation process in accordance with Regulation 21 during the scoping phase and the review of the scoping report.	<ul style="list-style-type: none"> -The time framework of public participation in the scoping stage and the review of the scoping report was indicated. -No guideline was available. 	-Regulations 7 and 21 of EIA Regulations of 2012 (GRN 2012)
Requirement for public participation in reviewing EIA report. (Kolhoff et al. 2009)	<ul style="list-style-type: none"> -Section 36 of EMA required public consultation in the review of the EIA report. -Regulations 17, 21, and 23 of 2012 EIA Regulations stipulated that the interested and 	<ul style="list-style-type: none"> -The time framework for public participation in the preparation and review of the EIA report was indicated. -No guideline was available. 	-Section 36, part VIII of EMA No.7 of 2007 (GRN 2007).

Evaluation criteria	Results		Source of data
	Description	Comments	Document review
	affected party is entitled to comment on all submissions made by the proponent to the Environmental Commissioners including EIA report, amendment of EIA report, and final reports of the specialist reviewers.		-Regulations 17, 21, and 23 of EIA Regulations of 2012 (GRN 2012).
Requirement for specified EIA report content. (Ahmad and Wood 2002)	-Regulation 15 of the 2012 EIA Regulations described the content of the EIA report.	-The timeframe work for EIA report preparation was 21 days.	-Regulation 15 of 2012 EIA Regulations (GRN 2012).
Requirement for systematic EIA report review process. (Ahmad and Wood 2002)	-According to sections 36, 44, and 45 of EMA No.7 of 2007 and Regulation 11 of EIA Regulations the Environmental Commissioner was the review body of EIA and EMP reports with the requirement for a consultation process with other related authorities and the assistance of an external specialist if needed.	-There was no information available or guidelines in the EIA legal framework and on the MEFT website that describes the followed review process of the EIA report or decision-making criteria. -There was no timeline available for decision-making.	-Section 36, part VIII of EMA No.7 of 2007 (GRN 2007). -Sections 44 and 45, part IX of EMA No.7 of 2007 (GRN 2007). -Regulations 11 of EIA Regulations of 2012 (GRN 2012). -(MEFT 2021).
<i>Specialist report requirement.</i>	-There was no specialist report requirement in the legislative framework of the EIA system in Namibia.	-	-
Requirement for Environmental Management Plan/Programme (EMP). (Ahmad and Wood 2002)	-Regulation 15 of EIA Regulations 2012 requires the EIA report and demonstrated its content without clearly including EMP. -Regulation 8(j) of EIA Regulations 2012 described EMP content as part of the EIA scoping report.	-EMP was not included as a requirement in the final EIA report. Meanwhile, EMP content was briefly mentioned as part of the EIA scoping report. -There was a brief guideline exists on EMP preparation.	-Regulations 8 and 15 of EIA Regulations of 2012 (GRN 2012).
<i>Requirement for EIA follow-up and auditing.</i>	-There was no information available on the requirement for EIA follow-up and auditing.	-EMA inexplicitly referred to monitoring and compliance in sections 4(d), 7(d), and 17 (2). -There was a brief guideline exists on the EIA follow-up and auditing.	- EMA No.7 of 2007 (GRN 2007).

Table E–4: EIA implementation output indicator (EIA report legal requirements/Evaluated using the IAU’s review package/Appendix A)

Review area	EIA legal requirements (EMA-EIA Regulations of 2012 / procedurals and guidelines for EIA and EMP of 2008)
Description of the development	<p>EIA Regulations of 2012 and the EIA guidelines of 2008 provide the legal mandate for EIA report requirements on which the preparation of the EIA report must be formulated.</p> <p>A detailed description of the proposed listed activity is required in terms of describing the proposed activity objectives of the EIA Regulations of 2012. EIA guidelines of 2008 are broader than the Regulations in terms of requiring the description of the project’s geographic, ecological, social, and temporal context, including any off-site investments required by the development project. However, the required description of the proposed development in EIA Regulations and guidelines is not sufficient. For instance, the duration of each stage of the project life cycle, the project design, and the size are required. Also, the development inputs such as the type and quantity of materials needed during the life cycle of the activity. It is also lacking a description of the proposed activity outcomes such as the type and quantity of generated activity wastes, emissions, and residues.</p>
Description of the environment	<p>A detailed description of the environment is required in the EIA Regulations of 2012 and EIA guidelines of 2008. It is required that the environmental aspects (physical, biological, social, economic, and cultural) should be described, including the current proposed development activities in the study area. The evaluation criteria of the environment description against the legal requirement showed that the description of the environment in terms of describing the land uses, the broad environment surrounding the development footprint, environmental investigation method, environmental future conditions, and description of data sources is not legally required.</p>
Scoping, consultation, and impact identification	<p>EIA Regulations of 2012 and EIA guidelines of 2008 require scoping consultation and impact identification. For example, identification of the environmental issues, a list of EIA stakeholders, and the means of conducting the consultation process are required. However, there are some gaps in this review area such as the data required to identify the impact, justification of the methods used to identify the impacts, consideration of direct and indirect impacts, and impacts that might arise from non-standard operating conditions, accidents, and emergencies.</p>
Prediction and evaluation of impacts	<p>EIA Regulations of 2012 and EIA guidelines of 2008 require impacts description in terms of cumulative effect, nature, extent, duration, reversibility, irreplaceable loss of resources, and mitigation. It also requires an indication of the methodology used to determine the significance of impacts. According to the evaluation criteria, this area has some shortcomings such as the lack of including the likelihood of impacts, describing the data and justification of the method used, and a detailed evaluation of the impact’s significance. This means that EIA Regulations have not appropriately met the evaluation criteria of the prediction and evaluation of the impacts review area.</p>
Alternatives	<p>A comparative assessment of all identified alternatives is required in the EIA Regulations of 2012 and the guidelines of 2008. They require a systematic comparison of the proposed activity design, site, technology, and operational alternatives in terms of their potential environmental impacts; capital and recurrent costs; alternative monitoring requirements; environmental costs and benefits; economic values; and alternative selection methods. Nevertheless, there are some gaps in the alternative’s legal requirements such as a lack of considering the no-action alternative; unexpected severe adverse impacts identified during the investigation, which are difficult to mitigate; alternatives rejected in the earlier planning phases are re-appraised.</p>

Review area	EIA legal requirements (EMA-EIA Regulations of 2012 / procedurals and guidelines for EIA and EMP of 2008)
Mitigation and monitoring	EIA Regulations of 2012 and EIA guidelines of 2008 require providing mitigation and monitoring measures. They require a description of the identified, feasible, and cost-effective mitigation measures; description of the impractical mitigation measures; description of the monitoring measures in terms of type and cost. However, there are some gaps such as a lack of considered mitigations measures concerning modification of project design, construction and operation, the replacement of facilities/resources, and the creation of new resources, describing the reasons for choosing the particular type of mitigation, and the other options available; lack of describing the extent to which the mitigation methods will be effective. Where the effectiveness is uncertain, or where mitigation may not work; lack of investigating and describing any adverse environmental effects of mitigation measures; lack of considering the potential for conflict between the benefits of mitigation measures and their adverse impacts.
Non-technical summary	EIA Regulations of 2012 and EIA guidelines of 2008 require the non-technical summary inclusion in the report without providing clarification on the structure of the non-technical summary. This means that EIA Regulations have not appropriately met the evaluation criteria of the non-technical summary review area.
Organisation and presentation of information	EIA Regulations of 2012 and EIA guidelines indirectly require the organisation and presentation of information. For instance, the inclusion of the curriculum vitae of the EAP and the description of the assumptions, uncertainties, gaps in knowledge, the related policy, and the legislative context of the proposed development is required in the EIA report. However, the logical arrangement of information, location of tables and figures, source of information and data, the objectivity of the report content, description of the project, and aim of the assessment and its methods are not included.
Overall evaluation	EMA-EIA Regulations of 2012 and EIA guidelines of 2008 have partially met some of the criteria of the review areas of the EIA report review package. However, there are still some gaps in the legal requirements of EIA report preparation that could influence the quality of EIA report preparation and ultimately EIA system performance. These gaps were observed in the development and environment descriptions areas, scoping, consultation, impacts identification, prediction and evaluation of impacts, alternatives, mitigation and monitoring, non-technical summary, organizations, and presentation of the EIA report.

Table E–5: EIA implementation output indicator (EIA report preparation/Evaluated using the IAU’s review package/Appendix A)

Review area	EIAr 1	EIAr 2	EIAr 3	EIAr 4	EIAr 5	EIAr 6	EIAr 7	EIAr 8	EIAr 9	EIAr 10	EIAr 11	EIAr 12	EIAr 13	EIAr 14	EIAr 15	EIAr 16	EIAr 17	EIAr 18	EIAr 19	EIAr 20	EIA review area evaluation
Description of the development	I	I	I	I	I	A/I	I	I	I	I	I	I	A/I	A/I	A/I	I	A	I	I	I	I
Description of the environment	I	I	I	A	I	A	I	A/I	A	A	A	I	A	A	A	A	A	I	I	I	A
Scoping, consultation, and impact identification	I	I	I	I	I	I	I	A/I	I	I	I	I	I	I	I	I	A	I	I	I	I

Review area	EIAr 1	EIAr 2	EIAr 3	EIAr 4	EIAr 5	EIAr 6	EIAr 7	EIAr 8	EIAr 9	EIAr 10	EIAr 11	EIAr 12	EIAr 13	EIAr 14	EIAr 15	EIAr 16	EIAr 17	EIAr 18	EIAr 19	EIAr 20	EIA review area evaluation
Prediction and evaluation of impacts																					
Alternatives																					
Mitigation and monitoring																					
Non-technical summary																	A				
Organisation and presentation of information								A/I									A				
EIAr evaluation																	A				I/I

Assessment Symbols:
C: Complete for decision-making
A: Adequate (not complete but adequate for decision-making)
I: Inadequate (not adequate for decision-making)

Table E-6: Country legal context indicator and evaluation criteria

Evaluation criteria	Results		Source of data
	Description	Comments	Document review/ Literature Interview
<i>Constitutional directives on;</i> <ul style="list-style-type: none"> <i>Environmental policies,</i> <i>Environmental laws, and</i> <i>Sustainable development.</i> 	<p>-The Constitution of the Republic of Namibia of 1990 provided the basis for the development of development policies and legislation and promotion of sustainability in Namibia.</p> <p>-Article 91(c) of the Constitution stated that <i>'the duty to investigate complaints concerning the over-utilization of living natural resources, the irrational exploitation of non-renewable resources, the degradation and destruction of ecosystems and failure to protect the beauty and character of Namibia;'</i></p> <p>-Article 95(l) of the Constitution stated that <i>'maintenance of ecosystems, essential</i></p>	<p>-The relevant environmental policies and legislation were commenced based on Constitutional directives such as EMA and environmental policies.</p>	<p>-Articles 91(c) and 95(l) of the Constitution of the Republic of Namibia of 1990 (GRN 1990).</p>

Evaluation criteria	Results		Source of data
	Description	Comments	Document review/ Literature Interview
	<i>ecological processes and biological diversity of Namibia and utilization of living natural resources on a sustainable basis for the benefit of all Namibians, both present and future; in particular, the Government shall provide measures against the dumping or recycling of foreign nuclear and toxic waste on Namibian territory’.</i>		
<i>Availability of Environmental Action Plan and/or Policy to promote sustainable development by impact assessment tools.</i>	<p>-Namibia Green Plan Policy was initiated in 1992 by the Ministry of Environment and Tourism (MET) which was represented at the Rio Earth Summit in 1992.</p> <p>-In 1994, The MET initiated the 12-Point Plan for Integrated and Sustainable Environmental Management.</p> <p>- Namibia’s Environmental Assessment Policy of 1995 was promulgated to promote and maintain sustainable development principles to sustainably utilise Namibia’s natural resources for the benefit of both present and future generations.</p> <p>-Namibia Vision 2030 was represented in 2001 to guide the country’s five-year development plans, and provide direction to government ministries, the private sector, NGOs, civil society, and regional and local government authorities.</p>	<p>-The Environmental Assessment Policy of Namibia represents the country’s recognition of the importance of environmental assessment tools mainly EIA in promoting sustainable development.</p> <p>-The Environmental Assessment Policy was approved in August 1994. It provides a definition of EIA and its procedural steps as well as the required content of the EIA report. It was used as the basis for the EIA system after the independence of Namibia in 1990 till the promulgation of EMA in 2007.</p>	<p>-(GRN 1994a).</p> <p>-(GRN 1994b).</p> <p>-(MET 1995).</p> <p>-(NPC 2001).</p>
<i>Availability of relevant environmental legislations.</i>	<p>-The relevant environmental legislations in Namibia such as:</p> <p>-Water Resources Management Act, No.11 of 2013.</p> <p>-Atmospheric Pollution Prevention Ordinance, No.11 of 1976.</p> <p>-Petroleum (Exploration and Production) Amendment Act, No.11 of 1997.</p>	<p>-These Acts considered the protection of the environment in relation to the planned development projects taking place within the sectoral legislation sovereignty.</p>	<p>-(GRN 2013).</p> <p>-(GRN 1976).</p> <p>-(GRN 1997).</p>

Evaluation criteria	Results		Source of data
	Description	Comments	Document review/ Literature Interview
Availability of environmental standards. (Kolhoff et al. 2009)	-There was no information on the availability of environmental standards on the website of MEFT.	-	-(MEFT 2021).
Existence of competent judiciary body to prosecute environmental issues. (Marara et al. 2011)	-There was no information on the availability of a specialised judiciary body responsible to prosecute environmental matters in Namibia.	-	-(Lesser 2018).
Constitutional directive on; <ul style="list-style-type: none"> • Access to information and administrative justice, • role of public in decision-making, and • transparency and accountability in decision-making. (Kolhoff et al. 2009)	<p>- Article 18 of the Namibian Constitution supported administrative justice by stating a constitutional foundation for administrative actions and decisions which should be fair, reasonable, and done in compliance. with imposed requirements upon the administrative bodies and officials.</p> <p>-The Constitution did not guarantee the right of access to information and transparency and public participation in decision-making.</p> <p>- Article 41 of the Constitution briefly highlighted the accountability of administrative decisions at the Ministerial level.</p>	-There was no information on the availability of Laws and Acts that regulate administrative justice, access to information, public participation in decision-making, transparency, and accountability of decision-making.	-(GRN 1990).

Table E–7: Political indicator and evaluation criteria

Evaluation criteria	Results		Source of data
	Results	Comments	Document review/ Literature review
<i>Country's political participation in the international agreements (conventions, treaties, and protocols) of environmental assessment.</i>	-The Constitution of the Republic of Namibia supported the country's commitment to international agreements (such as international environmental agreements) that the country is committed to as stipulated in Articles 91(c) and 95(l).	-The commitment of the Namibian government to the international conventions, agreements, and protocols related to environmental assessment was highlighted in the Constitution and EMA. Namibia was a signatory to many international	<p>-Article 143 of the Constitution of the Republic of Namibia, 1990 (GRN 1990).</p> <p>-Section 48 of part IX of EMA No.7 of 2007 (GRN 2007).</p> <p>-(Joseph 2018).</p>

Evaluation criteria	Results		Source of data
	Results	Comments	Document review/ Literature review
	-EMA supported giving effect to the international environmental agreements to which Namibia is a party.	environmental agreements such as the 1992 United Nations Framework Convention on Climate Change, the 1992 Convention on Biological Diversity, and the 1994 United Nations Convention to Combat Desertification in those Countries Experiencing serious Drought and/or Desertification, particularly in Africa.	
<i>Political influence on enactment and reform of EIA legislation</i>	-EIA policy and legal framework in Namibia consisted of the Environmental Assessment Policy of 1995, EMA No.7 of 2007, and EIA Regulations of 2012. -EMA has been in a process of revision since 2016 as well as EIA regulations.	-There was no clear evidence that describes the influence of the country's political system on the development of the EIA legal regime. However, there was an indication that the development of EIA legislation is influenced by the conflict of interest of different groups.	-(Nakwaya-Jacobus et al. 2021).
<i>Political influence on EIA administration.</i> <ul style="list-style-type: none"> • <i>Autonomy of responsible authority (independency and political appointment of managers), and</i> • <i>Allocation of funding and resources.</i> 	-There was no clear evidence that indicates the influence of the political country system on the autonomy of the competent authority. -There was an indication that the financial and technical resources available for the competent authority to achieve its duties and responsibilities were not adequate.	-There was an indication that the current institutional arrangement of EIA competent authority under a government ministry (MEFT) in Namibia lacked independence and autonomy in EIA administration and made the competent authority more susceptible to government interference and political pressure.	-(Nakwaya-Jacobus et al. 2021).
<i>Political influence on EIA decision-making.</i> <ul style="list-style-type: none"> • <i>EIA decision-making during screening, scoping, and environmental approval of EIA report.</i> 	-It was indicated that the current decision-making process on EIA applications undertaken mainly by the head of the DEA (Environmental Commissioner) lacked transparency, and accountability, and was susceptible to possible political interference, bribery, and corruption.	-The Environmental Commissioner was the decision-maker on EIA applications without inputs from the review committee. So, the process was led by one individual in the Namibian context.	-(Nakwaya-Jacobus et al. 2021).

Table E–8: Socio-economic indicator and evaluation criteria

Evaluation criteria	Results	Source of data
	Description (the year 2019-2021)	Document review
<i>Human Development Index (HDI).</i>	0.615	-(UNDP 2021b).
<i>Life expectancy index.</i>	0.672	-(UNDP 2021b).
<i>Gross National Income (GNI) per capita (constant 2017 PPP\$).</i>	9.357	-(UNDP 2021b).
<i>Gross Domestic Product (GDP) per capita (2017 PPP\$).</i>	9.637	-(UNDP 2021b).
<i>Unemployment, total (% of labour force).</i>	33.4	-(Namibia Statistics Agency 2019).
<i>Population in multidimensional poverty, headcount (%).</i>	40.9	-(UNDP 2021b).
<i>Total population (millions) (Data refers to 2030).</i>	3.0	-(UNDP 2021b).
<i>Education index.</i>	0.584	-(UNDP 2021b).
<i>Literacy rate, adult (% ages 15 and older)</i>	91.5	-(UNDP 2021b).

Table E–9: Environmental condition indicator and evaluation criteria

Evaluation criteria	Results		Source of data
	Description	Comments	Document review/ Literature review
<i>Land issues.</i>	-Land degradation -Soil erosion -Soil contamination -Deforestation -Desertification -Droughts	-Land issues in Namibia are caused by climatic variations, household farming, agriculture activities, infrastructure development activities, overstocking, and overgrazing.	-(Byers 1997; Halle and Bruzon 2007; Darkoh 2009; Van Wyk 2011; Pakarinen 2012; World Bank 2021c).
<i>Biodiversity and ecosystem issues.</i>	-Loss of natural resources -Deforestation -Wildlife poaching	-loss of natural resources in Namibia caused by household farming, agriculture, mining, overstocking, and overgrazing.	-(Byers 1997; Halle and Bruzon 2007; Darkoh 2009; Van Wyk 2011; World Bank 2021c).

Evaluation criteria	Results		Source of data
	Description	Comments	Document review/ Literature review
	-Habitat fragmentation	-Deforestation is caused by cutting trees for land use for agriculture, infrastructure development, cutting wood for fuel and domestic use, and uncontrolled wildfires.	
<i>Water issues.</i>	-Water scarcity and shortage of supply -Surface and groundwater pollution -Floodings	-Namibia is a highly arid country that suffers from the scarcity of water exacerbated by low rainfall and high evaporation rates. The water availability and issue of pollution are caused by population growth, industrial development, mining, and agriculture activities.	-(Byers 1997; Van Wyk 2011; Pakarinen 2012; World Bank 2021c).
<i>Aquatic system issues.</i>	-Pollution issues -Loss of fish stock	-Low level of oxygen in water and water contamination by sulfurous anoxic	-(Byers 1997; Halle and Bruzon 2007).
<i>Air quality issues.</i>	-Air pollution	-Air quality issues are mainly caused by economic development	-(Halle and Bruzon 2007; Darkoh 2009; Van Wyk 2011).
<i>Climate change issue.</i>	-Namibia is highly vulnerable to climate change. -Increasing greenhouse gas emissions. -Long periods of drought -Extreme heat	-Climate change in Namibia is expected to have an impact on water and sanitation, health, agriculture, fisheries and marine ecosystems, forestry, energy, and human settlements.	-(Byers 1997; MET 2011; Van Wyk 2011; Pakarinen 2012; World Bank 2021c).

Table E–10: EIA stakeholders’ capacity indicator and evaluation criteria

Evaluation criteria	Results		Source of data
	Description	Comments	Document review/ Literature review
EIA competent authority staff competency. (Kolhoff et al. 2009; Kolhoff et al. 2016)	-It was indicated that EIA competent authority in Namibia faces numerous challenges such as insufficient human and financial resources, incompetent staff, lack of experience and training, lack of EIA evaluators, and lack of cooperation with EAPs and other related	-It was highlighted that this issue of EIA competent authority staff incompetency was causing time delays in terms of EIA application review and approval as well as a financial burden on the project proponent.	-(Halle and Bruzon 2007; Olagunju and Gunn 2015; Husselmann 2016; Joseph 2018; Nakwaya-Jacobus et al. 2021).

Evaluation criteria	Results		Source of data
	Description	Comments	Document review/ Literature review
	sectoral authorities. These issues were considered barriers to EIA system performance.		
EIA consultant and specialist competency. (Kolhoff et al. 2009; Marara et al. 2011)	-It was indicated that there is no evidence about the competency of EIA consultants in Namibia as there was no official body that regulates the EAPs in Namibia. This was leading to allowing anyone to conduct an EIA, and this affects the rates of EIA cost charged by the EAPs making some EAPs less interested in conducting EIAs. It also harmed the quality of the implemented EIAs. -There was no information available on the competency of the specialists in Namibia.	-There was no official body responsible for the registration and certification of the EAPs in Namibia. -It was indicated that the monetary relationship between the developer and EAPs is not based on a regulatory framework. Therefore, there was no protection for EAPs and that may affect the quality of EIA implementation because of the proponent's control over EIA practice.	-(Hipondoka et al. 2016; Husselmann 2016; Nakwaya-Jacobus et al. 2021).
Project proponent/developer competency. (Kolhoff et al. 2009)	-It was highlighted that there were some issues associated with the competency of the project proponents such as a lack of awareness and compliance with the EIA system and EIA authorization conditions, and excessive power over EIA implementation and the EAPs.	-It was indicated that private and public project proponents tended to lack the appropriate awareness of impact assessment legal framework and practice.	-(Van Gils 2015; Husselmann 2016; Nakwaya-Jacobus et al. 2021).
Interested and affected party's competency. (Kolhoff et al. 2009; Marara et al. 2011)	-The competency of the interested and affected parties was regarded as very low, including other related sectoral authorities and public institutions. However, some environmental activists and groups have shown a considerable level of awareness and competency.	-Challenges related to EIA and public competency were the lack of IAP's database, lack of awareness, illiteracy, communication and language, leadership, and cultural and traditional practices.	-(Halle and Bruzon 2007; Husselmann 2016; Joseph 2018; Nakwaya-Jacobus et al. 2021).

APPENDIX F: MALAWIAN CASE STUDY FINDINGS

Table F–1: EIA legislation indicator and evaluation criteria

Evaluation criteria	Results		Source of data
	Description	Comments	Document review
<i>Availability of Environmental legislation.</i>	<p>-Environment Management Act (EMA).</p> <p>-EMA stated that <i>'An Act to make provision for the protection and management of the environment and the conservation and sustainable utilization of natural resources and for matters connected herewith and incidental thereto'</i>.</p> <p>-EMA defined the environment as <i>'the physical factors of the surrounding of the human being including land, water, atmosphere, climate, sound, odour, taste; the biological factors of fauna and flora; and includes the cultural, social and economic aspects of human activity, the natural and the built environment;'</i></p>	<p>-EMA was enacted in 1996 (EMA, No. 23 of 1996).</p> <p>-The 1996-EMA was repealed by the Parliament in 2017 (EMA, No.19 of 2017).</p> <p>-The 2017-EMA entered into force in November 2019.</p>	<p>-EMA, No.23 of 1996 (GoM 1996).</p> <p>-Section 2, part I of EMA, No.19 of 2017 (GoM 2017a).</p>
<i>Legislative directive on sustainable development.</i>	<p>-EMA defined sustainable utilization of natural resources as <i>'the use or exploitation of natural resources which guards against the extinction, deletion or degradation of any natural resources of Malawi and permits the Replenishment of natural resources by natural means or otherwise'</i>.</p>	<p>-EMA indicated that <i>'Every person shall take all necessary and appropriate measures to protect and manage the environment, to conserve natural resources and to promote sustainable utilization of natural resources following this Act and any other written law or policy relating to the protection and management of the environment or the conservation and sustainable utilization of natural resources'</i>.</p>	<p>-Section 2, part I of EMA, No.19 of 2017 (GoM 2017a).</p> <p>-Section 3, part II of EMA, No.19 of 2017 (GoM 2017a).</p>
Legal provisions for EIA. (Ahmad and Wood 2002)	<p>-EMA of 2017 provided the legal mandate of EIA as the Environmental and Social Impact Assessment (ESIA).</p> <p>-ESIA is defined in EMA as <i>'means a systematic evaluation of a project to determine its impact on the physical and ecological environment and the</i></p>	<p>-ESIA was described in EMA in terms of ESIA reports, environmental audits, monitoring, and fees.</p>	<p>-Section 2, part I of EMA, No.19 of 2017 (GoM 2017a).</p> <p>-Part VI of EMA, No.19 of 2017 (GoM 2017a).</p>

Evaluation criteria	Results		Source of data
	Description	Comments	Document review
	<i>conservation of natural resources on the social and socio-economic fabric of a particular community and any social change process that may be associated with any project’.</i>		
<i>Legislative directive on sustainable development promotion by EIA.</i>	-ESIA is required as a tool for the protection and management of the environment or the conservation and sustainable utilisation of natural resources.		-Section 3, part II of EMA, No.19 of 2017 (GoM 2017a).
<i>Availability of EIA guidelines.</i>	-EIA guidelines of 1997 were developed to describe the implementation of EIA under the EMA of 1996.	-The ESIA guidelines of the 2017-EMA were not publicly available at the time of conducting this research.	-EIA Guidelines of Environmental Impact Assessment (GoM 1997).
<i>Regulations specify the type of development projects that require EIA.</i>	-EIA guidelines of 1997 described the list of activities that require or may require an EIA -EIA guidelines provided a list (A) of projects for which EIA is mandatory and a list (B) of projects for which EIA may be required.	-No EIA Regulations were publicly available for the 1996-EMA as well as ESIA Regulations for the 2017-EMA despite the stipulated requirement for EIA Regulations establishment in both Acts at the time of conducting this research.	-Section 77, part XIII of EMA, No.23 of 1996 (GoM 1996). -Section 117, part XVII of EMA, No.19 of 2017 (GoM 2017a). -Appendix B, EIA Guidelines of Environmental Impact Assessment (GoM 1997).
<i>Legislation on EIA public participation.</i>	-The 2017- EMA required public participation during environmental decision-making processes. -EMA of 2017 defined participation as ‘ <i>means the opportunity and ability of any member of the public to influence outcome of decision-making processes and implementation Thereof;</i> ’ and public as ‘ <i>includes individuals, non-governmental organizations and private and public institutions concerned with environmental management and related issues;</i> ’ -EMA of 2017 defined public ‘ <i>includes individuals, non-governmental organizations and private and public institutions concerned with environmental management and related issues;</i> ’	-EIA guidelines of 1997 described the undertaken of public participation during EIA (ESIA) implementation following EMA of 1996. -There was no description of public participation during ESIA following the EMA of 2017. This was due to the unavailability of ESIA Regulations and guidelines in line with the 2017-EMA at the time of conducting this research.	-Section 2, part I of EMA, No.19 of 2017 (GoM 2017a). -Section 5, part II of EMA, No.19 of 2017 (GoM 2017a). -Appendix B, EIA Guidelines of Environmental Impact Assessment (GoM 1997).

Evaluation criteria	Results		Source of data
	Description	Comments	Document review
<i>Legislation on Environmental Impact Assessment report and Environmental Management Programme.</i>	-EMA of 2017 indicated the ESIA and ESMP reports without giving details of the contents of the reports.	-There was no description of the ESIA and ESMP reports contents following the EMA of 2017. This was due to the unavailability of ESIA Regulations and guidelines in line with the 2017-EMA at the time of conducting this research.	-Sections 31, 32, and 33, part VI of EMA, No.19 of 2017 (GoM 2017a).
<i>Legislation specifies the competent authority responsible for EIA decision-making (environmental authorization) and its duties.</i>	-EMA of 2017 described the competent authority responsible for ESIA in Malawi, which is the Malawi Environment Protection Authority (MEPA). It also described its powers, functions, and structure.		-Part III of EMA, No.19 of 2017 (GoM 2017a).
<i>Legislation on project proponent/applicant duties and responsibilities.</i>	-EMA of 2017 defined the developer as ‘ <i>means a person who has proposed or has undertaken to implement a project;</i> ’	-EMA of 2017 required the project developers to prepare and be responsible for the ESMP. -ESIA Regulations and guidelines in line with the 2017-EMA were unavailable publicly at the time of conducting this research.	-Section 2, part I of EMA, No.19 of 2017 (GoM 2017a). -Sections 31 and 32, part VI of EMA, No.19 of 2017 (GoM 2017a)
<i>Legislation on EIA professional registration, responsibilities, and duties.</i>	-EMA currently did not provide a legal mandate for EIA consultant's certification and registration. -EMA also did not describe what are the duties and responsibilities of EIA consultants in Malawi.	-The EAD maintained a list of local, regional, and international EIA consultants. However, there was no legal basis for this list nor a formal criterion on which an EIA consultant can be registered or removed. -EIA guidelines of 1997 indicated that the EIA consultant should be recognised by the Minister and meet the EIA quality standards expected by the Director of Environmental Affairs. -ESIA Regulations and guidelines in line with the 2017-EMA were unavailable publicly at the time of conducting this research.	-EMA, No.19 of 2017 (GoM 2017a). -Appendix F, EIA Guidelines of Environmental Impact Assessment (GoM 1997).

Evaluation criteria	Results		Source of data
	Description	Comments	Document review
Provisions for appeal by the developer or the public against decisions. (Ahmad and Wood 2002)	-EMA of 2017 stated the establishment of an Environmental Tribunal which considers an appeal application against the decisions made by the competent authority. The Act also highlights making an appeal against the Environmental Tribunal decisions to the High Court.	-The Act provided an explanation of the Environmental Tribunal establishment including a time framework for the appeal process.	-Part XVI of EMA, No.19 of 2017 (GoM 2017a).
Legal or procedural specification of time limits. (Ahmad and Wood 2002)	-EMA of 2017 lacked a description of the ESIA time framework. -The EIA guidelines of 1996 described some time limits in the EIA process related to decision-making. -The timeframes were inadequately provided for some stages of the EIA process such as making decisions on the Project Brief and ToR. There were no guidelines exist on the total time required to conduct the EIA nor the cost.	--ESIA Regulations and guidelines in line with the 2017-EMA were unavailable publicly at the time of conducting this research.	-EMA, No.19 of 2017 (GoM 2017a). -EIA Guidelines of Environmental Impact Assessment (GoM 1997).
Legal provision for funding. (Kolhoff et al. 2009)	-EMA of 2017 gave the competent authority the legal mandate to determine the fees associated with conducting ESIA. -EMA of 2017 described the source of funds for the competent authority such as fees, penalties, and fines related to ESIA.		-Section 34, part VI of EMA, No.19 of 2017 (GoM 2017a). -Section 86, part XIII of EMA, No.19 of 2017 (GoM 2017a).
<i>Legislation on penalties and offences.</i>	-EMA of 2017 indicated the offences related to ESIA, which come in the form of monetary fine and imprisonment for ten years		-Section 99, part XV of EMA, No.19 of 2017 (GoM 2017a)
<i>Legislation on compliance with conditions of approval of the environmental authorization, amendment, and auditing.</i>	-EMA of 2017 defined environmental monitoring as <i>'the continuous or periodic assessment of the actual and potential impact of any activity on the environment;'</i> and environmental audit as <i>the systematic documentation and periodic and objective evaluation of the protection and management of the environment and the conservation and sustainable utilization of natural resources;'</i>	-EMA of 2017 required the competent authority to conduct the necessary environmental auditing and monitoring measures to ensure compliance with the conditions of the ESIA certificate. -There was no information available to describe the model for conducting environmental auditing and monitoring.	-Section 2, part I of EMA, No.19 of 2017 (GoM 2017a). -Sections 32 and 33, part VI of EMA, No.19 of 2017 (GoM 2017a).

Evaluation criteria	Results		Source of data
	Description	Comments	Document review
EIA provisions incorporated in relevant related legislation. (Kolhoff et al. 2009)	-There was no clear indication of EIA incorporation into relevant environmental legislation.		

Table F–2: EIA competent authority indicator and evaluation criteria

Evaluation criteria	Results		Source of data
	Description	Comments	Document review
Existence of EIA competent authority. (Ahmad and Wood 2002)	-EMA of 2017 described the competent authority responsible for ESIA, which is MEPA. The Act illustrates the formalization and structure of MEPA such as its establishment, powers, functions, and composition. Currently, MEPA holds the mandate to become the strong and credible environmental regulator in Malawi.	-MEPA is completely responsible for ESIA from the start of the process to the decision-making stage. -There was no information available on the official websites of the Government of Malawi on the establishment and operation of MEPA. -MEPA was formulated to address the deficiencies of the former EIA competent authority (EAD) such as weak EIA implementation and enforcement.	-Part III of EMA, No.19 of 2017 (GoM 2017a). -(Seager 2020).
Autonomy of EIA competent authority. (Marara et al. 2011)	-The EMA of 2017 gave the competent authority (MEPA) more independence in terms of environmental management and protection and to be financially more independent by giving it the power to manage its administrative and financial resources.	-According to EMA of 2017, the MEPA's Chairperson, Vice-Chairperson, and five Body Members shall be appointed by the President. -Based on the political role in the appointment of the MEPA administration, and the relationship between the Malawian government and MEPA the degree of independence and autonomy of MEPA was unknown.	-Part III of EMA, No.19 of 2017 (GoM 2017a). -Section 86, part XIII of EMA, No.19 of 2017 (GoM 2017a).

Evaluation criteria	Results		Source of data
	Description	Comments	Document review
<i>Responsibility for environmental policy, legislation, and guidelines formulation and amendment.</i>	-The 2017-EMA described the functions of MEPA such as advising the Minister on the formulation and implementation of environmental policies and sustainable utilization of natural resources. -EMA of 2017 also indicated the MEPA's responsibility for initiating environmental legislative proposals, standards, and guidelines.	-The role of public participation in the decision-making of environmental management processes was clearly stated.	-Section 9, part III of EMA, No.19 of 2017 (GoM 2017a).
<i>Responsibility for issuing/approving Term of References.</i>	-There was no information available that describes the responsibility of MEPA in terms of issuing or approving ESIA Terms of Reference under EMA of 2017.	-The ESIA Regulations and guidelines of the 2017-EMA regime were not revealed publicly at the time of conducting this research.	-EMA, No.19 of 2017 (GoM 2017a).
Responsibility for decision-making (screening, scoping, environmental authorisation). (Kolhoff et al. 2009)	-According to the 2017 EMA, MEPA was the competent authority that is completely responsible for every stage of ESIA decision-making. However, the Act did not provide the process and decision-making criteria for any EIA stage.	-The ESIA Regulations and guidelines of the 2017-EMA regime were not revealed publicly at the time of conducting this research.	-Section 9, part III of EMA, No.19 of 2017 (GoM 2017a).
Review body for EIA and EMP reports. (Ahmad and Wood 2002)	-EMA of 2017 stipulated that MEPA is the responsible body for ESIA and ESMP reports review. -The 2017 EMA also indicated the right for MEPA to engage with external advisers, consultants, reviewers, and technical experts to conduct its responsibilities.	-There was no information available that describes the review process under 2017-EMA because the ESIA Regulations and guidelines of the 2017-EMA regime were not revealed publicly at the time of this conducting research.	-Section 9, part III of EMA, No.19 of 2017 (GoM 2017a).
<i>Availability of administrative law to promote environmental justice in administrative actions (EIA decision-making) and access to information.</i>	-EMA of 2017 indicated the right for every person to access information held by MEPA related to this act. -EMA of 2017 defined access to environmental information as 'a free or inexpensive means to obtain environmental information held by a public authority, the private sector or non-governmental organization;'	-There was no information available that describes the commitment of MEPA to administrative justice and access to information.	-Section 2, part I of EMA, No.19 of 2017 (GoM 2017a). -Section 85, part XII of EMA, No.19 of 2017 (GoM 2017a).
<i>EIA decision-making criteria followed by the competent authority.</i>	-EMA of 2017 did not clearly describe the ESIA decision-making process and criteria.	-There was no information available that describes the decision-making criteria and process under 2017-EMA because	-EMA, No.19 of 2017 (GoM 2017a).

Evaluation criteria	Results		Source of data
	Description	Comments	Document review
		<p>the ESIA Regulations and guidelines of the 2017-EMA regime were revealed publicly at the time of this conducting research.</p> <p>-The EIA guidelines of 1996 provided criteria for the screening and reviewing of EIA report stages.</p>	<p>-Appendices D and H, EIA Guidelines of Environmental Impact Assessment (GoM 1997).</p> <p>-(Walmsley and Hussleman 2020).</p>
<p>Specification of sectoral responsibilities in the EIA process. (Ahmad and Wood 2002)</p>	<p>-EMA of 2017 indicated that MEPA <i>'shall coordinate, monitor, supervise, and consult with all relevant stakeholders on all activities relating to the utilization and management of the environment and natural resources'</i>.</p>	<p>-There was no information available that describes the engagement of related sectors in the EIA process.</p> <p>-The ESIA Regulations and guidelines of the 2017-EMA regime were not revealed publicly at the time of this conducting research.</p>	<p>-Section 9, part III of EMA, No.19 of 2017 (GoM 2017a).</p> <p>-Sections 24 and 25, part IV of EMA, No.19 of 2017 (GoM 2017a).</p>
<p>Coordination with other lead agencies. (Marara et al. 2011)</p>	<p>-The 2017 EMA indicated the cooperation between MEPA and leading agencies under this Act.</p>	<p>-There was no information available that describes the structure and mechanism of coordination between the MEPA and the leading agencies.</p> <p>-The ESIA Regulations and guidelines of the 2017-EMA regime were not revealed publicly at the time of this conducting research.</p>	<p>-Sections 24 and 25, part IV of EMA, No.19 of 2017 (GoM 2017a).</p>
<p><i>Established mechanism for cooperation with project proponent and EIA professionals.</i></p>	<p>-EMA of 2017 did not indicate any kind of cooperation framework between the competent authority and the project proponent or developer.</p>	<p>-There was no information available that demonstrates the mechanism of cooperation between the project developer/proponent and MEPA.</p> <p>-The ESIA Regulations and guidelines of the 2017-EMA regime were not revealed publicly at the time of this conducting research.</p>	<p>-EMA, No.19 of 2017 (GoM 2017a).</p>
<p><i>Preparation of EIA best practice principles for good practice.</i></p>	<p>-EMA of 2017 indirectly considered the EIA practical principles by mentioning the role of MEPA as the competent authority in the promotion of general principles of environmental management.</p>	<p>-There was no information available about the existence of EIA best practice principles.</p>	<p>-Section 9, part III of EMA, No.19 of 2017 (GoM 2017a).</p>

Evaluation criteria	Results		Source of data
	Description	Comments	Document review
<i>Preparation of Environmental standards.</i>	-EMA of 2017 demonstrated that the preparation of environmental standards falls under the jurisdiction of MEPA in liaison with relevant lead agencies.	-The available environmental standards were developed by the Malawi Bureau of Standards such as drinking water quality standards, and water quality standards for boreholes and well water.	-Sections 35 and 36, part VII of EMA, No.19 of 2017 (GoM 2017a). -(Walmsley and Hussleman 2020).
<i>Mechanism for inspection of Environmental Management Plan (EIA follow-up and auditing).</i>	-EMA of 2017 defined environmental auditing and monitoring. The Act also included environmental auditing and monitoring in the ESIA process.	-There was no information available about the framework for conducting the ESMP. -The ESIA Regulations and guidelines of the 2017-EMA regime were not revealed publicly at the time of this conducting research.	-Section 2, part I of EMA, No.19 of 2017 (GoM 2017a). -Sections 32 and 33, part VI of EMA, No.19 of 2017 (GoM 2017a).

Table F–3: EIA procedural steps indicator and evaluation criteria

Evaluation criteria	Results		Source of data
	Description	Comments	Document review
Specified screening categories. (Ahmad and Wood 2002)	-EIA guidelines of 1997 illustrated the screening stage of the ESIA. It is based on the screening criteria, a List of Prescribed Projects, and the Project Brief. -EIA guidelines of 1997 provided a list (A) of projects for which EIA is mandatory and a list (B) of projects for which EIA may be required. -EIA guidelines of 1997 described the content of the Project Brief.	-EMA of 2017 did not provide appropriate information on the specification and requirements for conducting the screening step of the ESIA. -The time limit needed to conduct the screening stage was not indicated. However, the decision-making time required on the Project Brief is 15 working days. -The ESIA Regulations and guidelines of the 2017-EMA regime were not revealed publicly at the time of this conducting research.	-EMA, No.19 of 2017 (GoM 2017a). -Appendices B, C, and D, EIA Guidelines of Environmental Impact Assessment (GoM 1997).

Evaluation criteria	Results		Source of data
	Description	Comments	Document review
Systematic scoping approach. (Ahmad and Wood 2002)	-The EIA guidelines of 1997 defined the scoping phase of EIA, its aim, the responsibility of scoping preparation and method of conduct, and the scoping report content.	-The 2017 EMA did not indicate ESIA scoping stage. -The time limit needed to conduct the scoping stage was not indicated. -The ESIA Regulations and guidelines of the 2017-EMA regime were not revealed publicly at the time of this conducting research.	-EMA, No.19 of 2017 (GoM 2017a). -Appendix E, EIA Guidelines of Environmental Impact Assessment (GoM 1997).
<i>Terms of Reference (ToR) preparation and approval.</i>	-The minimum content and a model of Terms of Reference were stipulated in the EIA guidelines of 1997	-The 2017 EMA did not indicate the ToR. -The time limit needed to prepare the ToR was not indicated. However, the ToR decision-making time is 10 working days. -The ESIA Regulations and guidelines of the 2017-EMA regime were not revealed publicly at the time of this conducting research.	-EMA, No.19 of 2017 (GoM 2017a). -Appendix F, EIA Guidelines of Environmental Impact Assessment (GoM 1997).
Requirement for public participation in the scoping stage of EIA implementation. (Kolhoff et al. 2009)	-The EIA guidelines of 1997 required public participation during the scoping phase of EIA. -The 1997 guidelines of EIA illustrated the importance of stakeholder engagement, described the method of public consultation, and provided guidelines for conducting public participation.	-The 2017 EMA did not indicate public participation during the scoping stage. -The time limits for public consultation during the scoping stage were not indicated. -The ESIA Regulations and guidelines of the 2017-EMA regime were not revealed publicly at the time of this conducting research.	-EMA, No.19 of 2017 (GoM 2017a). -Appendix G, EIA Guidelines of Environmental Impact Assessment (GoM 1997).
Requirement for public participation in reviewing EIA report. (Kolhoff et al. 2009)	-The EIA guidelines of 1997 required public consultation during the review of the EIA report and illustrated the importance of stakeholder engagement, described the method of public consultation, and provided guidelines for conducting public participation.	-The 2017-EMA did not indicate the requirement for public participation in reviewing EIA (ESIA) report. -The time limits for public consultation during the review of the EIA report were not indicated. -The ESIA Regulations and guidelines of the 2017-EMA regime were not revealed	-EMA, No.19 of 2017 (GoM 2017a). -Appendix G, EIA Guidelines of Environmental Impact Assessment (GoM 1997).

Evaluation criteria	Results		Source of data
	Description	Comments	Document review
		publicly at the time of this conducting research.	
Requirement for specified EIA report content. (Ahmad and Wood 2002)	-EIA guidelines of 1997 described the structure and content of the EIA report under 1996-EMA.	-The 2017 EMA did not indicate the requirement for specified EIA report content. -The time limits required for preparing the EIA report were not indicated. -The ESIA Regulations and guidelines of the 2017-EMA regime were not revealed publicly at the time of this conducting research.	-EMA, No.19 of 2017 (GoM 2017a). -Appendixes A (A.2) and C (C.3), EIA Guidelines of Environmental Impact Assessment (GoM 1997).
Requirement for systematic EIA report review process. (Ahmad and Wood 2002)	-EMA of 2017 stipulated that MEPA is the responsible body for ESIA and ESMP reports review.	-There was no information available that describes the review process under 2017-EMA because of the ESIA. -The EIA guidelines of 1997 provided the evaluation criteria for the EIA report. -The time limit required to decide on the EIA report was 75 working days.	-Section 9, part III of EMA, No.19 of 2017 (GoM 2017a). -Appendix H, EIA Guidelines of Environmental Impact Assessment (GoM 1997).
<i>Specialist report requirement.</i>	-There was no information available on the specialist report requirement in the Act.		
Requirement for Environmental Management Plan/Programme (EMP). (Ahmad and Wood 2002)	-The EMA of 2017 required the EMP, however, there were no existing Regulations or guidelines to describe the content and process of preparing the EMP. -The EIA guidelines of 1997 required the EMP as part of the ToR and the EIA report.	-The time limit required to decide on the EMP was 40 working days.	-Sections 32 and 33, part VI of EMA, No.19 of 2017 (GoM 2017a). -Appendices C and E, EIA Guidelines of Environmental Impact Assessment (GoM 1997).
<i>Requirement for EIA follow-up and auditing.</i>	- The EMA of 2017 briefly described environmental auditing and monitoring. -EIA guidelines of 1997 briefly indicated the importance of EIA follow-up and auditing.	-There was no information available that describes EIA (ESIA) follow-up and auditing under 2017-EMA -The time limits required for EIA follow-up and auditing were not indicated.	-Section 32, part VI of EMA, No.19 of 2017 (GoM 2017a).

Evaluation criteria	Results		Source of data
	Description	Comments	Document review
		-The ESIA Regulations and guidelines of the 2017-EMA regime were not revealed publicly at the time of this conducting research.	-EIA Guidelines of Environmental Impact Assessment (GoM 1997)

Table F–4: EIA implementation output indicator (EIA report legal requirements/Evaluated using the IAU’s review package/Appendix A)

Review area	EIA legal requirements (EMA of 2017 and EIA guidelines of 1997)
Description of the development	<p>EMA of 2017 and the EIA guidelines of 1997 provide the legal mandate for EIA report requirements and give guidance on what an EIA report should contain.</p> <p>A description of the development is required in the EIA guidelines of 1997. It should include the type of project proposed, project location, size, and layout, the background of the project and the reasons or necessity for it, project inputs (raw materials), project output (products), project processes and major types of equipment, maps, flow diagrams and photographs of the project, summary of technical, economic, and environmental features essential to the project understanding. The EIA guidelines are not specific in terms of describing the purpose(s) and objectives of the development, the estimated duration of the construction, the operational, and decommissioning of the project life cycle, the methods of construction, production, and type of activities involved in the project operation, project additional services, the project’s potential for accidents, hazards, and emergencies, the nature and quantities of materials needed, the types and quantities of waste matter, energy, and residual materials generated during construction and operation of the project, and rate at which these will be produced, and the methods by which the quantities of residuals and wastes were estimated.</p>
Description of the environment	<p>A description of the environment is required EIA Guidelines of 1997. It should include the spatial and temporal boundaries within which the environmental setting was considered, the existing condition of the physical, biological, and human environments of the project area, and the anticipated future environmental conditions with and without the project. The EIA guidelines do not indicate describing the land uses on the site and in surrounding areas, and the methods used to investigate the affected environment.</p>
Scoping, consultation, and impact identification	<p>Scoping, public participation, and the identified impacts of the proposed activity are part of the EIA legal report requirements according to the EIA guidelines of 1997. Identification of the direct and indirect impacts during the scoping stage, sources of data, the objectives, methods, and results of public consultation during the EIA, and a complete record of all parties consulted are required as part of the report content. There are no requirements for describing and justifying the scoping method used, considering direct and indirect/secondary effects of constructing, operating, and, where</p>

Review area	EIA legal requirements (EMA of 2017 and EIA guidelines of 1997)
	relevant, after-use or decommissioning of the project (including positive and negative impacts), describing the methods/approaches used for impacts identification and the rationale for using them, considering impacts which may not themselves be significant, but which may contribute incrementally to a significant effect, and considering impacts arise from non-standard operating conditions, accidents and emergencies.
Prediction and evaluation of impacts	The EIA guidelines of 1997 require prediction and evaluation of impacts. It should include a discussion of the sources or causes of the impacts, the severity of impacts (magnitude, extent, and duration), the likelihood of impacts, the significance of the impacts, methods used to forecast the impacts, the data gathered, and the methods and criteria used to judge impact severity and significance. Prediction of the timescale over which the effects will occur, differentiating project-generated impacts from other changes resulting from non-project activities and variables, a clear indication of which impacts may be significant, and which may not, and provides justification for this distinction are not incorporated into the report content.
Alternatives	Alternatives are legally part of the EIA report content according to the EIA guidelines of 1997. Project alternatives should include design and implementation strategies, size, site, technology, layout, raw materials, energy sources, and products. However, considering no action alternative, providing an outline of the main alternatives and gives and an indication of the main reasons for their choice, taking into account the environmental effects, comparing the alternatives' main environmental impacts with those of the proposed project and with the likely future environmental conditions without the project are not legally required.
Mitigation and monitoring	The EIA guidelines of 1997 require the inclusion of mitigation and monitoring measures in the EIA report during the project implementation and the activities that should be undertaken by the proponent or the government. There are gaps in the legal requirements of the mitigation and monitoring measures such as a lack of description of the measures envisaged to avoid, reduce and, if possible, remedy significant adverse effects, considering the mitigation measures in terms of modification of project design, construction and operation, the replacement of facilities/resources, and the creation of new resources, as well as "end-of-pipe" technologies for pollution control, describing the reasons for choosing the particular type of mitigation, and the other options available, giving details of how the mitigation measures will be implemented and function over the period for which they are necessary, investigating and describing any adverse environmental effects of mitigation measures, and considering the potential for conflict between the benefits of mitigation measures and their adverse impacts.
Non-technical summary	The non-technical summary is indirectly indicated in the EIA guidelines of 1997, which focuses on the expected impacts and management measures and should not exceed three pages long. The non-technical summary does not contain a brief description of the project and the environment, a brief explanation of the overall approach to the assessment, the main findings of the assessment and covers all the main issues raised in the information, and a description of any remaining or residual impacts.
Organisation and presentation of information	The organisation and presentation of information are partially covered in the EIA guidelines of 1997. It should include sources of data and information, names, qualifications, and roles of the team members who carried out the EIA study. There are no legal requirements for incorporating the relevant EIA legislation, name of the developer, name of the competent authorities, address, and contact number of the contact persons who conducted the EIA. Likewise, an introduction briefly describing the project, the aims of the assessment, and the methods and data used are not indicated.

Review area	EIA legal requirements (EMA of 2017 and EIA guidelines of 1997)
	The inclusion of any gaps in the required data and explaining the means used to deal with them in the assessment, explaining any difficulties in assembling or analysing the data needed to predict impacts are not required.
Overall evaluation	According to the findings, the development description review area conformed to a large extent to the evaluation criteria. Meanwhile, the other review areas such as the environment description, scoping, consultation, impact identification, alternative, and mitigation and monitoring measures have not met most of the evaluation criteria provided in the review package.

Table F–5: EIA implementation output indicator (EIA report preparation/Evaluated using the IAU’s review package/Appendix A)

Review area	EIAr 1	EIAr 2	EIAr 3	EIAr 4	EIAr 5	EIAr 6	EIAr 7	EIAr 8	EIAr 9	EIAr 10	EIAr 11	EIAr 13	EIAr 14	EIAr 15	EIAr 16	EIA review area evaluation
Description of the development	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Description of the environment	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Scoping, consultation, and impact identification	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Prediction and evaluation of impacts	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Alternatives	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Mitigation and monitoring	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Non-technical summary	I	I	A	A	I	I	I	I	I	I	A	A	I	I	I	I
Organisation and presentation of information	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
EIAr evaluation	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I/I
Assessment Symbols:																
C: Complete for decision-making																

Review area	EIAr 1	EIAr 2	EIAr 3	EIAr 4	EIAr 5	EIAr 6	EIAr 7	EIAr 8	EIAr 9	EIAr 10	EIAr 11	EIAr 13	EIAr 14	EIAr 15	EIAr 16	EIA review area evaluation
A: Adequate (not complete but adequate for decision-making)																
I: Inadequate (not adequate for decision-making)																

Table F–6: Country legal context indicator and evaluation criteria

Evaluation criteria	Results		Source of data
	Description	Comments	Document review/ Literature review
<p><i>Constitutional directives on;</i></p> <ul style="list-style-type: none"> • <i>Environmental policies,</i> • <i>Environmental laws, and</i> • <i>Sustainable development.</i> 	<p>-Section 11(d), principles of the national policy, Chapter III (fundamental principles) of the Constitution of the Republic of Malawi provided the mandate for sustainable development, environmental protection, and environmental management. The Constitution states that:</p> <p><i>'(i) prevent the degradation of the environment;</i></p> <p><i>(ii) provide a healthy living and working environment for the people of Malawi;</i></p> <p><i>(iii) accord full recognition to the rights of future generations by means of environmental protection and sustainable development of natural resources; and</i></p> <p><i>(iv) conserve and enhance the biological diversity of Malawi'.</i></p>	<p>-The Constitution of the Republic of Malawi demonstrated the importance of the environment in the country and the importance of sustainable development leading to the development of environmental Acts and policies to promote sustainable development in the Malawi country context.</p> <p>-The Constitutional mandate for sustainable development in Malawi led to the development of the following Acts and policies:</p> <ul style="list-style-type: none"> • EMA, No.23 of 1996, • EMA, No.19 of 2017 • The National Environmental Action Plan of 1994, • The National Environmental Policy of 1996 (revised in 2004), • Malawi's Vision 2020 of 1998 (The National Long-Term Development Perspective), and • The Malawi Growth and Development Strategy (MGDS) III (2017-2022). 	<p>-Section 11(d), Chapter III of the Constitution of the Republic of Malawi of 1994 (GoM 1994a).</p> <p>-EMA, No.23 of 1996 (GoM 1996).</p> <p>-EMA, No.19 of 2017 (GoM 2017a).</p> <p>-(GoM 1994b).</p> <p>-(GoM 2004).</p> <p>-(National Economic Council 2000).</p> <p>-(GoM 2017b).</p>

Evaluation criteria	Results		Source of data
	Description	Comments	Document review/ Literature review
<i>Availability of Environmental Action Plan and/or Policy to promote sustainable development by impact assessment tools.</i>	-The National Environmental Action Plan and the National Environmental Policy indicated the importance of EIA's role and implementation at the project level to promote sustainable development in Malawi.	-EIA's objectives, guiding principles, and strategies were demonstrated in the National Environmental Policy.	-(GoM 1994b). -(GoM 2004).
<i>Availability of relevant environmental legislations.</i>	-The relevant environmental legislation such as: <ul style="list-style-type: none"> • Water Resources Act, No.2 of 2013, • Mines and Mineral Act, 2019, and • National Parks and Wildlife Act, No.11 of 2017. 	-These Acts considered the protection of the environment in the planned development projects taking place within the sectoral legislation sovereignty.	-Water Resources Act, No.2 of 2013 (GoM 2013). -Mines and Mineral Act, 2019 (GoM 2019). -National Parks and Wildlife Act, No.11 of 2017 (GoM 2017c).
Availability of environmental standards. (Kolhoff et al. 2009)	-EMA of 2017 demonstrated that the preparation of environmental standards falls under the jurisdiction of MEPA in liaison with relevant lead agencies.	-The available environmental standards were developed by the Malawi Bureau of Standards such as the standards for drinking water, boreholes and well water quality, noise pollution (tolerance limits), and industrial effluents.	-Sections 35 and 36, part VII of EMA, No.19 of 2017 (GoM 2017a). -(Walmsley and Hussleman 2020).
Existence of competent judiciary body to prosecute environmental issues. (Marara et al. 2011)	-Part XVI of EMA of 2017 stated the establishment of an Environmental Tribunal which considers any appeals against any decisions or actions related to the environment made by the Authority, lead agency, Director General, or inspector. The Act also highlighted making an appeal against the Environmental Tribunal decisions to the High Court. This Environmental Tribunal.	-There was no information available about the existence and functionality of the Environmental Tribunal.	-Part XVI of EMA, No.19 of 2017 (GoM 2017a).
Constitutional directive on; <ul style="list-style-type: none"> • Access to information and administrative justice, • role of public in decision-making, and 	-Section 37 of the Constitution described the right for every person to access information held by the State or any of its organs at any level of Government. -Section 43 of the Constitution indicated the right of every person to lawful and procedurally fair administrative action.	-Administrative General Act, 1967. -Access to Information Act, 2017	-Articles 11(o), 37, and 43 of the Constitution of the Republic of Malawi of 1994 (GoM 1994a). -(GoM 1967). -(GoM 2017d)

Evaluation criteria	Results		Source of data
	Description	Comments	Document review/ Literature review
<ul style="list-style-type: none"> transparency and accountability in decision-making. (Kolhoff et al. 2009) 	-Section 11(o) of the Constitution spoke about the introduction of measures that will guarantee accountability and transparency in public institutions.		

Table F–7: Political indicator and evaluation criteria

Evaluation criteria	Results		Source of data
	Results	Comments	Document review/ Literature review
<i>Country's political participation in the international agreements (conventions, treaties, and protocols) of environmental assessment.</i>	-EMA of 2017 described the commitment of the Government of Malawi and the responsible authority (MEPA) to the international environmental conventions, treaties, and agreements related to environmental protection and management, nature conservation, and sustainable development.	-Malawi's involvement in international environmental conventions, treaties, and agreements such as: <ul style="list-style-type: none"> Stockholm Declaration of 1972, The 1992 Rio Declaration, Water, Energy, Health, Agriculture, and Biodiversity principles of 2002, Malawi is a signatory to several international environmental conventions and protocols such as the Convention on International Plant Protection and the African Convention on Conservation of Nature and Natural Resources. 	-Section 9, part III of EMA, No.19 of 2017 (GoM 2017a). -(GoM 2004).
<i>Political influence on enactment and reform of EIA legislation</i>	-There was no clear evidence of the political influence of the development and amendment of the EIA legal framework in Malawi. However, there is an indication of a weak motive to strengthen the EIA legal framework (Act, Regulations, and guidelines), because the first EIA act was	-There were concerns that political and economic considerations have influenced the development and integrity of the EIA legislation in Malawi. Therefore, the EMA of 2017 was developed to empower the EIA competent authority to develop a more	-EMA, No.23 of 1996 (GoM 1996). -EMA, No.19 of 2017 (GoM 2017a). -(GoM 1997). -(World Bank 2019).

Evaluation criteria	Results		Source of data
	Results	Comments	Document review/ Literature review
	enacted in 1996 (EMA, No.23 of 1996) and amended in 2017 (EMA, No.19 of 2017), which came into effect in 2019. Furthermore, the EIA guidelines of 1997 were updated once in 2011 which were pretty much the same, and there are no available EIA Regulations up to this point of this research.	effective EIA legal regime that becomes more resistant to political economy pressures.	
<p><i>Political influence on EIA administration.</i></p> <ul style="list-style-type: none"> • <i>Autonomy of responsible authority (independency and political appointment of managers), and</i> • <i>Allocation of funding and resources.</i> 	<p>-The EAD was under the Ministry of Natural resources, Energy, and Mining. So, the EAD was not independent in terms of administrative structure and financial resources.</p> <p>-The MEPA is currently the responsible body for ESIA, which is supposed to be independent according to 2017-EMA. However, according to the Act, the Body Members of MEPA who are responsible for the EIA final decision are politically appointed. This could indicate to some extent the possibility of political interference in EIA decision-making and question the independence and autonomy of the EIA competent authority.</p>	<p>-The EAD was not having adequate financial resources as it was relying on government support. This undermined the ability of EAD to function properly causing significant delays in the EIA process due to a lack of human resources and equipment.</p> <p>-According to the 2017 EMA, the MEPA is financially empowered. This is supposed to improve MEPA's capacity in terms of human resources and equipment.</p>	<p>-EMA, No.23 of 1996 (GoM 1996).</p> <p>-EMA, No.19 of 2017 (GoM 2017a).</p> <p>-(World Bank 2019).</p> <p>-(Seager 2020).</p>
<p><i>Political influence on EIA decision-making.</i></p> <ul style="list-style-type: none"> • <i>EIA decision-making during screening, scoping, and environmental approval of EIA report.</i> 	<p>-There was no clear evidence of political influence on EIA decision-making under the MEPA. However, it was indicated that EIA applications for government projects get approval faster than private projects. It is also indicated that in some cases government projects were commenced without EIA approval. This condition happened under the EMA of 1996 regime in which EIA application supervision and decision-making were under the EAD.</p>	<p>-Based on the political role in the appointment of the MEPA administration (decision-makers), the degree of political influence on the EIA decision-making was not evident as the MEPA is not fully operational.</p>	<p>-EMA, No.23 of 1996 (GoM 1996).</p> <p>-EMA, No.19 of 2017 (GoM 2017a).</p> <p>-(World Bank 2019).</p> <p>-(Seager 2020).</p>

Table F–8: Socio-economic indicator and evaluation criteria

Evaluation criteria	Results	Source of data
	Description (the year 2019-2021)	Document review
<i>Human Development Index (HDI).</i>	0.512	-(UNDP 2021c).
<i>Life expectancy index.</i>	0.681	-(UNDP 2021c).
<i>Gross National Income (GNI) per capita (constant 2017 PPP\$).</i>	1.035	-(UNDP 2021c).
<i>Gross Domestic Product (GDP) per capita (2017 PPP\$).</i>	1.060	-(UNDP 2021c).
<i>Unemployment, total (% of labour force).</i>	7.02	-(World Bank 2021a).
<i>Population in multidimensional poverty, headcount (%).</i>	54.2	-(UNDP 2021c).
<i>Total population (millions)(Data refers to 2030).</i>	24.8	-(UNDP 2021c).
<i>Education index.</i>	0.470	-(UNDP 2021c).
<i>Literacy rate, adult (% ages 15 and older)</i>	62.1	-(UNDP 2021c).

Table F–9: Environmental condition indicator and evaluation criteria

Evaluation criteria	Results		Source of data
	Description	Comments	Document review
<i>Land issues.</i>	<ul style="list-style-type: none"> -Land degradation, -Soil erosion, -Loss of soil nutrients/fertility, -Salinization, -Soil pollution. -Desertification, and -Deforestation. 	<ul style="list-style-type: none"> -The primary causes were; -human activities such as agriculture and overgrazing activities, -urbanization, -rapid population growth, -inadequate land use. -poverty, -land ownership, -economic growth, -climate extreme events, and -culture and beliefs. 	-(GoM 2010; World Bank 2019).

Evaluation criteria	Results		Source of data
	Description	Comments	Document review
<i>Biodiversity and ecosystem issues.</i>	<ul style="list-style-type: none"> -Loss of biodiversity, -Loss of ecosystem diversity, -Declining species diversity, and -Declining genetic diversity. 	<ul style="list-style-type: none"> -The primary causes were; -human activities such as agriculture and overgrazing activities, -land degradation, -deforestation and forest degradation, -wildfires, -invasive alien species, -urbanization, -rapid population growth, -poverty, -economic growth, and -climate change. 	-(GoM 2010; World Bank 2019).
<i>Water issues.</i>	<ul style="list-style-type: none"> -Surface and groundwater pollution, -Loss of water quality and sources, -Increased water-borne diseases, 	<ul style="list-style-type: none"> -The primary causes were; -human activities such as industrial, inadequate waste management, mining, agriculture, and overgrazing activities, -poor sanitation structure, -population and economic growth, -over-abstraction of surface and groundwater, -poverty, and -climate change, 	-(GoM 2010; World Bank 2019).
<i>Aquatic system issues.</i>	<ul style="list-style-type: none"> -Water quality deterioration and pollution issues in rivers and streams, -Reduction in fish yields. 	<ul style="list-style-type: none"> The primary causes were; -deforestation, -unsustainable agriculture activities, -settlements, -mining, -industry and commerce, -tourism, -climate change, and -overfishing practices, 	-(GoM 2010; World Bank 2019).
<i>Air quality issues.</i>	<ul style="list-style-type: none"> -Outdoor and indoor air pollution. 	<ul style="list-style-type: none"> -The primary causes were; -economic growth, -urbanization, -industrial and motor vehicle emissions, 	-(GoM 2010; World Bank 2019).

Evaluation criteria	Results		Source of data
	Description	Comments	Document review
		-mining, -Fossil fuel burning, and -Firwood and charcoal burning.	
<i>Climate change issue.</i>	-Increasing temperature, -Decreasing rainfall, -Increasing frequency and intensities of extreme weather and climate events such as floods and droughts, -deforestation and forest degradation, -Climate change-related impacts such as socioeconomic and ecological implications.	-The primary causes were; -economic development, -population growth and poverty, -industrial and agricultural activities, -Fossil fuel burning, and -Firwood and charcoal burning.	-(GoM 2010; World Bank 2019).

Table F–10: EIA stakeholders’ capacity indicator and evaluation criteria

Evaluation criteria	Results		Source of data
	Description	Comments	Document review/ Literature review
EIA competent authority staff competency. (Kolhoff et al. 2009; Kolhoff et al. 2016)	-It was indicated that the EIA competent authority (previously EAD) in Malawi faced numerous challenges such as insufficient human and financial resources, lack of experience and appropriate qualifications, particularly at the district level, lack of training capacity programmes, lack of cooperation with EAPs and other related sectoral authorities. -The MEPA was still not completely operational as the transitional process between EAD, and MEPA is still ongoing. However, the MEPA was taking over the responsibility and staff of EAD. This could	-Consequently, the time taken for processing ESIA implementation is long, and there is a lack of active enforcement of ESIA follow-up, auditing, and monitoring. -There was also an issue of subjectivity in reviewing ESIA and ESMP reports.	-(Mhango 2005). -(Kosamu 2011). -(Kosamu et al. 2013). -(Banda 2018). -(World Bank 2019). -(Hartley-Louis 2020).

Evaluation criteria	Results		Source of data
	Description	Comments	Document review/ Literature review
	indicate that MEPA might face the same issue of insufficient human and financial resources, and the lack of staff capacity in the short term.		
EIA consultant and specialist competency. (Kolhoff et al. 2009; Marara et al. 2011)	-There is a lack of knowledge, qualifications, understanding of ESIA requirements, training, experience, and commitment to good EIA practice among the ESIA consultants and specialists in Malawi.	-No Act regulates the ESIA consultants and specialists in Malawi. Also, there is no official or recognized organization or authority for ESIA consultants in Malawi. Despite the list of registered ESIA consultants provided on the website of EAD, there was no indication of the type of requirements or criteria which were used to register or deregister ESIA consultants by the EAD.	-(Mhango 2005). -(Kosamu 2011). -(World Bank 2019). -(Hartley-Louis 2020).
Project proponent/developer competency. (Kolhoff et al. 2009)	-Lack of capacity among ESIA stakeholders, in general, was a serious constraint to effective ESIA performance in Malawi. The project proponent/developer whether private or public (government) lacked appropriate awareness of ESIA and lack of ESIA implementation and enforcement. This was indicated in cases in which projects were being conducted bypassing EIA approval.	-The issues associated with project proponents were exacerbated by the inadequate capacity of EAD.	-(Mhango 2005). -(Kosamu 2011). -(World Bank 2019). -(Hartley-Louis 2020).
Interested and affected party's competency. (Kolhoff et al. 2009; Marara et al. 2011)	-The role of interested and affected parties in Malawi during the EIA process was not adequate. The awareness of EIA and environmental protection was not appropriate vs the high interest in employment opportunities during EIA public participation.	-Poor consultation and public participation in the EIA process were indicated due to limited capacity across EIA stakeholders.	-(Mhango 2005). -(World Bank 2019). -(Hartley-Louis 2020).

APPENDIX G: TANZANIAN CASE STUDY FINDINGS

Table G–1: EIA legislation indicator and evaluation criteria

Evaluation criteria	Results		Source of data
	Description	Comments	Documents review
<i>Availability of Environmental legislation.</i>	-Environmental Management Act (EMA), No.20 of 2004. -EMA was defined as <i>'to provide for legal and institutional framework for sustainable management of environment; to outline principles for management, impact and risk assessments, prevention and control of pollution, waste management, environmental quality standards, public participation, compliance and enforcement; to provide basis for implementation of international instruments on environment; to provide for implementation of the National Environment Policy; to repeal the National Environment Management Act, 1983 and provide for continued existence of the National Environment Management Council; to provide for the establishment of the National Environmental Fund and to provide for other related matters'</i> .	-The EMA, No.20 of 2004 repealed the National Environmental Management Act, No.19 of 1983. -EMA of 2004 was developed by a study called the <i>'Institutional and Legal Framework for Environmental Management Project'</i> . This study was initiated and funded by the WB to strengthen the environmental legislation in Tanzania.	-Environmental Management Act (EMA), No.20 of 2004 (URT 2004). -(Walmsley and Hussleman 2020).
<i>Legislative directive on sustainable development.</i>	-The EMA of 2004 defined sustainable development as <i>'development that meets the needs of the present generation without compromising the ability of future generations to meet their needs by maintaining the carrying capacity of the supporting ecosystems;'</i>	-EMA provided a set of environmental and sustainable development principles to be followed by any entity under EMA.	-Section 3, part I of EMA, No.20 of 2004 (URT 2004). -Section 5(3), part II of EMA, No.20 of 2004 (URT 2004).
Legal provisions for EIA. (Ahmad and Wood 2002)	-The EMA of 2004 provided the legal basis for the development of EIA Regulations and guidelines as well as the undertaking of EIA in accordance with the EIA and Audit Regulations.	-EIA was defined in EMA as <i>'a systematic examination conducted to determine whether or not a programme, activity or project will have any adverse impacts on the environment;'</i>	-Section 3, part I of EMA, No.20 of 2004 (URT 2004).

Evaluation criteria	Results		Source of data
	Description	Comments	Documents review
	<ul style="list-style-type: none"> -The EIA and Audit Regulations were introduced in 2005. -The Environmental Management (EIA and Audit) (Amendment) Regulations were introduced in 2018. -The EIA and Audit Regulations of 2018 shall be read as one with the EIA and Audit Regulations of 2005, which are referred to as the “principal Regulations”. 		<ul style="list-style-type: none"> -Section 82(1), part VI of EMA, No.20 of 2004 (URT 2004). -Section 230 (2)(h) and (q), part XX of EMA, No.20 of 2004 (URT 2004). -The EIA and Audit Regulations of 2005 (URT 2005). -The Environmental Management (EIA and Audit)(Amendment) Regulations of 2018 (URT 2018).
<i>Legislative directive on sustainable development promotion by EIA.</i>	-The EIA and Audit Regulations of 2005 indicated that the promotion of sustainable development is an objective of the EIA.	-The EIA’s objectives included ‘ <i>to promote development that is sustainable and optimises resources use and management opportunities</i> ’.	-Regulation 12(g), part IV of EIA and Audit Regulations of 2005 (URT 2005).
<i>Availability of EIA guidelines.</i>	<ul style="list-style-type: none"> -EIA and Audit Regulations described the steps for conducting EIA. -Draft of EIA Guidelines and Procedure. -Procedure for carrying EIA and Audit. -Environmental Impact Assessment Training Manual. -Sectoral EIA guidelines such as roads, national parks, and marine parks and reserves. 	<ul style="list-style-type: none"> -The EIA guidelines were not comprehensive as they focused on the steps of the EIA process without providing a detailed explanation of each step -There were no updated guidelines for EIA and Audit Regulation of 2018. 	<ul style="list-style-type: none"> -The Forth Schedule made in the EIA and Audit Regulations of 2005 and amendment of 2018 (URT 2005; URT 2018). -(NEMC 2005) -(URT n.d.). -(NEMC 2004). -(Walmsley and Hussleman 2020).
<i>Regulations specify the type of development projects that require EIA.</i>	<ul style="list-style-type: none"> -Projects under the 2018 EIA and Audit (Amendment) Regulations were classified into the following categories: (a) “A” category for Mandatory Projects; (b) “B1” category for Borderline Projects; (c) “B2” category for Non-Mandatory; and 	-The types of development projects for which EIA is required fall under category A, and a special category. EIA shall be required for category B1 depending on the information presented in the Scoping Report and the decision of the NEMC.	-Regulations 4(A), part III, and the First Schedule made in the EIA and Audit (Amendment) Regulations of 2018 (URT 2018).

Evaluation criteria	Results		Source of data
	Description	Comments	Documents review
	(d) "Special Category."		Regulations of 2018 (URT 2018).
<i>Legislation on EIA public participation.</i>	<p>-Participation was defined in the EMA of 2004 as 'opportunity and ability, to influence the outcome of a decision-making process;'</p> <p>-EMA of 2004 defined the public as 'individuals, civil society organizations and institutions, community based organizations, public and private institutions;'</p>	-Public participation in the EIA is legally required. The EIA and Audit Regulations described stakeholders' involvement in the scoping, EIA report preparation, and review.	<p>-Section 3, part I of EMA, No.20 of 2004 (URT 2004).</p> <p>-EIA and Audit Regulations of 2005 and amendment of 2018 (URT 2005; URT 2018).</p>
<i>Legislation on Environmental Impact Assessment report and Environmental Management Programme.</i>	<p>-EMA of 2004 made a legal requirement for the EIA statement.</p> <p>EIA and Audit Regulations of 2005 described the content and format of the EIA statement.</p> <p>-EIA statement was defined as 'the statement produced at the end of the environmental impact assessment process in accordance with the requirements of section 86 of the Act and Part IV of these Regulations;'</p> <p>-EMP was defined as 'all details of project activities, impacts, mitigation measures, time schedule, costs, responsibilities and commitments proposed to minimize environmental impacts of activities, including monitoring and environmental audits during implementation and decommission phases of a project;'</p>	<p>-The content of EMP was not indicated in the Act and the EIA and Audit Regulations.</p> <p>-EMP was required as a part of the scoping report and EIA statement.</p>	<p>-Section 86, part VI of the EMA, No.20 of 2004 (URT 2004).</p> <p>-Regulation 3, part I of EIA and Audit Regulations of 2005 (URT 2005).</p> <p>-Regulation 18, part V of EIA and Audit Regulations of 2005 (URT 2005).</p>
<i>Legislation specifies the competent authority responsible for EIA decision-making (environmental authorization) and its duties.</i>	-EMA of 2004 described the institutional arrangement and duties of the EIA competent authority.	-The NEMC is responsible for overseeing the EIA study and providing recommendations to the Minister on the EIA reports for decision-making.	<p>-Part II of EMA, No.20 of 2004 (URT 2004).</p> <p>-Part VII of EIA and Audit Regulations of 2005 (URT 2005).</p>
<i>Legislation on project proponent/applicant duties and responsibilities.</i>	-EMA of 2004 defined the developer as 'person who is developing a project which is subject to	-EMA and EIA and Audit Regulations described the duties and responsibilities	-Section 3, part I of EMA, No.20 of 2004 (URT 2004).

Evaluation criteria	Results		Source of data
	Description	Comments	Documents review
	<p><i>an environmental impact assessment process under this Act;</i></p> <p>-EMA of 2004 also defined the proponent as ‘a person proposing or executing a project, programme or an undertaking specified in the Third Schedule of the Act;’</p>	<p>of the project proponent in terms of complying with EIA requirements.</p>	<p>-EIA and Audit Regulations of 2005 and amendment of 2018 (URT 2005; URT 2018).</p>
<p><i>Legislation on EIA professional registration, responsibilities, and duties.</i></p>	<p>-EMA and EIA and Audit Regulations provided a legal mandate for conducting EIAs by registered and certified environmental experts by NEMC.</p> <p>-The Environmental (Registration of Environmental Experts) Regulations, 2005 established the objectives of the certification process, the establishment of the Environmental Experts Advisory committee, the certification process of environmental experts, the registration process by the NEMC, the code of practice, and disciplinary procedures.</p>	<p>-Environmental Expert as defined in the regulations as “an individual person or firm of consultants duly certified and registered under the Environmental (Registration of Environmental experts) Regulations, 2005 to conduct environmental impact assessment study or environmental audit.”</p> <p>-The NEMC decides to grant an Environmental Experts Certificate.</p> <p>-Although the Fifth Schedule of the Registration Environmental Experts Regulations of 2005 ensures the Code of Practice and Professional Ethics (conflict of interest) of the Certified Environmental Experts, there are no specific requirements stating that the Certified Environmental Experts have to be independent of the developer.</p>	<p>-Section 83, part VI of EMA, No.20 of 2004 (URT 2004).</p> <p>-Regulation 3, part I of EIA and Audit Regulations of 2005 (URT 2005).</p> <p>-Regulation 14, part IV of EIA and Audit Regulations of 2005 (URT 2005).</p>
<p>Provisions for appeal by the developer or the public against decisions. (Ahmad and Wood 2002)</p>	<p>-Section 18(3), part III(d) of EMA gave a legal right to any person to appeal against any decisions made by the NEMC to the Minister.</p> <p>-Section 95, part VI of EMA described the right of any person to appeal against the Minister’s decision to the Environmental Appeal Tribunal.</p> <p>-Section 204, part XVII of EMA stated the establishment of the Environmental Appeal Tribunal.</p>	<p>-Regulation 61, part XII of EIA and Audit Regulations described the appeal process against decisions.</p> <p>-The Act and the EIA and Audit Regulations specified timeframes for appeal against decisions.</p>	<p>-Section 18(3), part III(d) of EMA, No.20 of 2004 (URT 2004).</p> <p>-Section 95, part VI of EMA, No.20 of 2004 (URT 2004).</p> <p>-Section 204, part XVII of EMA, No.20 of 2004 (URT 2004).</p>

Evaluation criteria	Results		Source of data
	Description	Comments	Documents review
	-Section 209, part XVII of EMA gave the legal right to any party to appeal against the Environmental Appeal Tribunal decisions to the High Court.		-Section 209, part XVII of EMA, No.20 of 2004 (URT 2004). -Regulation 61, part XII of EIA and Audit Regulations of 2005 (URT 2005).
Legal or procedural specification of time limits. (Ahmad and Wood 2002)	-According to the EIA and Audit Regulations and relevant guidelines the total period for the determination of an EIA application at all stages by the NEMC and the Minister is at most 150 working days.	-the time frames provided were mainly describing the time required for the decision-making of each stage of the EIA process such as screening, scoping, and EIA statement review. -The time taken to carry out every stage of the EIA process was not provided in the EIA legal regime.	-EIA and Audit Regulations of 2005 and amendment of 2018 (URT 2005; URT 2018). -(NEMC 2004).
Legal provision for funding. (Kolhoff et al. 2009)	-The sources of funds of the NEMC were prescribed in the EMA of 2004.	-The fees associated with the following stages of the EIA process such as the application submission and project registration, EIS submission, changing the terms and conditions of the EIA certificate and transfer of ownership, and making an appeal were illustrated in the relevant EIA guidelines.	-Section 217, part XIX of EMA, No.20 of 2004 (URT 2004). -(NEMC 2004).
<i>Legislation on penalties and offences.</i>	-EMA of 2004 stated the compliance and enforcement offences and penalties related to EIA. -EIA and Audit Regulations of 2005 described the offences related to the EIA certificate.		-Sections 184 and 191, part XVI of EMA, No.20 of 2004 (URT 2004). -Regulation 60, part XII of EIA and Audit Regulations of 2005 (URT 2005)
<i>Legislation on compliance with conditions of approval of the environmental authorization, amendment, and auditing.</i>	-EIA and Audit Regulations defined environment audit as <i>'a systematic evaluation of activities and processes of a project to determine how far these activities and programmes conform with the approved environmental management plan of that specific project and sound environmental</i>	-Environmental monitoring and auditing shall be conducted by the NEMC to evaluate the performance of the mitigation and monitoring measures, adherence to the approved environmental standards, and compliance with the terms and conditions set out in the EIA certificate.	-Part VI and part XVI of EMA, No.20 of 2004 (URT 2004). -Regulation 3, part I of EIA and Audit Regulations of 2005 (URT 2005).

Evaluation criteria	Results		Source of data
	Description	Comments	Documents review
	<i>management practices and applicable environment standards;</i> -Part X and part XI of EIA and Audit Regulations described monitoring and the content of the audit report to check compliance with the conditions of approval of the EIA certificate and audit of the environmental and social management plan.	-The contents of the Audit and Monitoring Reports were provided in the EIA and Audit Regulations of 2005.	-Part X and part XI of EIA and Audit Regulations of 2005 (URT 2005). The Environmental Management (EIA and Audit)(Amendment) Regulations of 2018 (URT 2018)
EIA provisions incorporated in relevant related legislation. (Kolhoff et al. 2009)	-Provisions for EIA included in the Marine Parks and Reserves Act.	-Limited incorporation of EIA into other relevant environmental legislation.	-Marine Parks and Reserves Act, No.27 of 1994 (URT 1994a).

Table G–2: EIA competent authority indicator and evaluation criteria

Evaluation criteria	Results		Source of data
	Description	Comments	Document review
Existence of EIA competent authority. (Ahmad and Wood 2002)	-EMA of 2004 defined the NEMC as the EIA competent authority. -In Tanzania, the EIA administration falls under the Vice-President's Office, the National Environmental Advisory Committee, the Minister responsible for the Environment, the Director of Environment, the NEMC, and the Directorate of EIA within NEMC.	-According to EIA legal regime, The NEMC's responsibilities were to ensure the implementation of EIA in compliance with the Act, develop the relevant EIA guidelines, cooperate with the EIA stakeholders, facilitate public participation in the EIA process, review EIA reports, undertake EIA monitoring and auditing, and make recommendations to the Minister for approval or disapproval of the EIA reports.	-Part II of EMA, No.20 of 2004 (URT 2004). -Part VII of EIA and Audit Regulations of 2005 (URT 2005).
Autonomy of EIA competent authority. (Marara et al. 2011)	-According to the administration and institutional hierarchy described in part II of EMA of 2004, the EIA process is administered and reviewed by NEMC, which forwards its recommendations with regards to the authorisation of EIA	-Despite placing EIA competent authority in a high-profile office under the Vice-President's Office, there was no clear evidence that highlights the autonomy and independence of NEMC.	-Part II of EMA, No.20 of 2004 (URT 2004).

Evaluation criteria	Results		Source of data
	Description	Comments	Document review
	application to the Minister of the Environment for decision-making under the mandate of the Vice-President's Office.		
<i>Responsibility for environmental policy, legislation, and guidelines formulation and amendment.</i>	As the NEMC was responsible for the administration of the EIA application, it was also responsible in cooperation with other related authorities for the publication of guidelines relating to environmental management and prevention including EIA guidelines. -Environmental policy and legislation responsibility fall under the Vice-President's Office and the Minister of the Environment.		-Part II of EMA, No.20 of 2004 (URT 2004).
<i>Responsibility for issuing/approving Term of References.</i>	-According to Regulation 13 of EIA and Audit Regulations of 2005, Terms of Reference are prepared by the project proponent or developer and approved by the NEMC	-The EIA and Audit (Amendment) Regulations of 2018 mentioned that the NEMC may prepare guidelines for Sector Specific Terms of References to guide the developer or the proponent in preparation of ToR for conducting the EIA study. -Sector Specific guidelines for the ToR were not available.	-Regulation 13, part IV of EIA and Audit Regulations of 2005 (URT 2005). -Regulation 10, part III of the Environmental Management (EIA and Audit)(Amendment) Regulations of 2018 (URT 2018)
Responsibility for decision-making (screening, scoping, environmental authorisation). (Kolhoff et al. 2009)	-EIA application submission, screening, scoping, and report review were the NEMC's responsibility. -EIA decision-making and final approval were made by the Ministry of the Environment under the Vice President's Office.	-This is an indication of a long process of approval and different role players in the process of EIA until decision-making, which may undermine the subjectivity and quality of the EIA process.	-Part II and VI of EMA, No.20 of 2004 (URT 2004). -Part VII of EIA and Audit Regulations of 2005 (URT 2005).
Review body for EIA and EMP reports. (Ahmad and Wood 2002)	-EMA and EIA and Audit Regulations illustrated that NEMC is the review body of EIA and EMP reports. -The legislation also allowed the NEMC to create a cross-sectoral technical advisory committee to review the EIA report when it is needed.	-The review process included stakeholders' involvement, on-site visit, and review criteria.	-section 87, part VI of EMA, No.20 of 2004 (URT 2004). -Part VI of EIA and Audit Regulations of 2005 (URT 2005).

Evaluation criteria	Results		Source of data
	Description	Comments	Document review
<i>Availability of administrative law to promote environmental justice in administrative actions (EIA decision-making) and access to information.</i>	<ul style="list-style-type: none"> -EMA of 2004 in its general principles described the right of access by any citizen to environmental information and administrative justice in decision-making. -EMA of 2004 also denoted that every citizen has the freedom of access to information relating to the implementation of EMA. -Public participation in environmental decision-making is legislated in the EMA of 2004. -EIA and Audit Regulations of 2005 described the right to the freedom of access to environmental information related to EIA documents by the public. 	<ul style="list-style-type: none"> -There was no information available on the NEMC website that describes the commitment of NEMC to the administrative justice law and access to information. 	<ul style="list-style-type: none"> -Part II of EMA, No.20 of 2004 (URT 2004). -Section 172, part XIII of EMA, No.20 of 2004 (URT 2004). -Section 178, part XIV of EMA, No.20 of 2004 (URT 2004). -Regulation 39, part VIII of EIA and Audit Regulations of 2005 (URT 2005). -(NEMC 2021).
<i>EIA decision-making criteria followed by the competent authority.</i>	<ul style="list-style-type: none"> -EIA and Audit Regulations of 2005 stipulated the EIA decision-making criteria for approving and issuing EIA Certificates. EMA defined the decision-making process as <i>'institutionalized processes or procedures initiated by public or private institutions to make decisions with the potential to have socio-economic and environmental consequences;'</i> 	<ul style="list-style-type: none"> -The mentioned criteria guided the practice of decision-making by the Minister. However, the criteria are more kind of broad criteria that do not aid to scrutinize the validity and credibility of the information provided in the final EIA document. 	<ul style="list-style-type: none"> -Part I of EMA, No.20 of 2004 (URT 2004). -Regulation 32, part VII of EIA and Audit Regulations of 2005 (URT 2005). Section 3, part I of EMA, No.20 of 2004 (URT 2004).
Specification of sectoral responsibilities in the EIA process. (Ahmad and Wood 2002)	<ul style="list-style-type: none"> -EIA and Audit Regulations of 2005 described the legal mandate of NEMC to form a cross-sectoral technical advisory committee. However, there was no information available on the NEMC website that describe the roles of sectors in the specified stages of the EIA process. 	<ul style="list-style-type: none"> -There was no information available on the website of NEMC that describe the process of consultation between the NEMC and other related sectors. 	<ul style="list-style-type: none"> -Part VI and X of EIA and Audit Regulations of 2005 (URT 2005). -(NEMC 2021).
Coordination with other lead agencies. (Marara et al. 2011)	<ul style="list-style-type: none"> -EMA of 2004 described the duty of NEMC in the cooperation process with other related sectors, regional offices, and local authorities. -EIA and Audit Regulations of 2005 described that the NEMC shall conduct a consultation with relevant sector ministries, Government departments, agencies, or institutions in environmental aspects. 	<ul style="list-style-type: none"> -There was no information available on the website of NEMC that describe the process of consultation between the NEMC and other lead agencies. 	<ul style="list-style-type: none"> -Part I of EMA, No.20 of 2004 (URT 2004). -Part XI of EIA and Audit Regulations of 2005 (URT 2005). -(NEMC 2021).

Evaluation criteria	Results		Source of data
	Description	Comments	Document review
<i>Established mechanism for cooperation with project proponent and EIA professionals.</i>	-The EIA and Audit Regulations of 2005 indicated in different parts the opportunity for the project proponent or developer to consult with the competent authority. For instance, the project proponent or developer can consult with the NEMC in terms of identifying the stakeholders that should be part of the public participation process,	-There was no information available on the website of NEMC that describe the process of consultation between NEMC and developers.	-EIA and Audit Regulations of 2005 (URT 2005). -(NEMC 2021).
<i>Preparation of EIA best practice principles for good practice.</i>	-There was no information available on the website of NEMC that describe the responsibility for preparing the EIA best practice principles for good practice.		-(NEMC 2021).
<i>Preparation of Environmental standards.</i>	-EMA of 2004 described the role of the National Environmental Standards Committee of the Tanzanian Bureau of Standards to develop, review, and submit environmental standards and criteria to the Minister of the environment	-NEMC had no role in developing environmental standards and criteria.	-Section 140, part X of EMA, No.20 of 2004 (URT 2004). -(NEMC 2021).
<i>Mechanism for inspection of Environmental Management Plan (EIA follow-up and auditing).</i>	-The EIA legal regime prescribed that the NEMC is responsible for the enforcement of the EIA. The Act described the roles of the NEMC during the monitoring and auditing processes of EIA.	-There was no information available that describes how the NEMC ensures EIA enforcement.	-Part VI and part XVI of EMA, No.20 of 2004 (URT 2004). -Part X and part XI of EIA and Audit Regulations of 2005 (URT 2005). -(NEMC 2021).

Table G–3: EIA procedural steps indicator and evaluation criteria

Evaluation criteria	Results		Source of data
	Description	Comments	Document review
Specified screening categories. (Ahmad and Wood 2002)	-The screening process was based on the project categories, and screening criteria	-The Second Schedule of the Regulations presented the project screening criteria.	-Regulations 4(A), part III of EIA and Audit (Amendment)

Evaluation criteria	Results		Source of data
	Description	Comments	Document review
	<p>stipulated in the EIA and Audit (Amendment) Regulations of 2018.</p> <p>-Project categories are:</p> <p>(a) "A" in which EIA is mandatory;</p> <p>(b) "B1" Borderline Projects may require an EIA, but the screening process shall be used to determine the category of the project either type "A" or "B2" project;</p> <p>(c) "B2" in which EIA is not mandatory but rather requires a Project Brief which is described in the Regulations;</p> <p>(d) Special Category that required an EIA, which is consisted of projects that may cause uncertain impacts, therefore should be treated as the projects in category "A".</p>	<p>-The Fourth Schedule set out in the EIA and Audit (Amendment) Regulations described the step required to conduct the EIA process.</p> <p>-The time frame for conducting the screening step was not prescribed.</p>	<p>Regulations, 2018 (URT 2018)</p> <p>-The Second Schedule made in the EIA and Audit (Amendments) Regulations of 2018 (URT 2018).</p> <p>-The Forth Schedule is made in the EIA and Audit (Amendments) Regulations of 2018 (URT 2018).</p>
<p>Systematic scoping approach. (Ahmad and Wood 2002)</p>	<p>-The scoping approach and scoping report content were stipulated in the EIA and Audit (Amendment) Regulations of 2018.</p>	<p>-The scoping process was required for projects listed in the "A", "B1" & Special Projects categories.</p> <p>-The scoping process was described in the Fourth Schedule of the Audit Regulations.</p> <p>-The time frame for conducting the scoping step was not prescribed.</p>	<p>-The Third Schedule (Form No.4) made in the EIA and Audit (Amendments) Regulations of 2018 (URT 2018).</p> <p>-The Forth Schedule is made in the EIA and Audit (Amendments) Regulations of 2018 (URT 2018).</p>
<p><i>Terms of Reference (ToR) preparation and approval.</i></p>	<p>-According to Regulation 13 of EIA and Audit Regulations of 2005, Terms of Reference are prepared by the project proponent or developer and approved by the NEMC</p> <p>-The amended EIA and Audit Regulations of 2018 reinstated the role of the project proponent in preparing the Terms of Reference, but the amended Audit Regulations stipulated in Regulation 11 developing guidelines for sector-</p>	<p>-EIA guidelines and procedures provided a model for the Terms of Reference and what the Terms of Reference should include.</p> <p>-There was no indication found about the sector-specific guidelines for the Terms of the Reference preparation, and it seems that the project developer is still responsible for the preparation of the</p>	<p>-Regulation 13, part IV of EIA and Audit Regulations of 2005 (URT 2005)</p> <p>-Regulation 11, part III of EIA and Audit Regulations of 2018 (URT 2018).</p> <p>-(URT n.d.).</p>

Evaluation criteria	Results		Source of data
	Description	Comments	Document review
	specific Terms of Reference to guide preparing it by the proponent.	terms of reference with the assistance of EIA experts (EAPs).	
Requirement for public participation in the scoping stage of EIA implementation. (Kolhoff et al. 2009)	-Public participation during the scoping process was required within the scoping report content and the Fourth Schedule prescribed in the Regulations.	-Timeframes for the public participation process during the undertaken of EIA were not indicated in the Act and the Audit Regulations. The process was also quite generic for public participation during the specified stages of EIA without providing a distinction between public participation during the scoping or EIA report review stages.	-The Third Schedule (Form No.4) made in the EIA and Audit (Amendments) Regulations of 2018 (URT 2018). -The Forth Schedule is made in the EIA and Audit (Amendments) Regulations of 2018 (URT 2018).
Requirement for public participation in reviewing EIA report. (Kolhoff et al. 2009)	-Regulation 23, part VI of EIA and Audit Regulations of 2005, and the Fourth Schedule of EIA and Audit Regulations of 2018 illustrated the legal mandate for public involvement and participation in the review process of the EIA report/statement. -Regulation 26, part VI of EIA and Audit Regulations of 2005 described the discretion of the NEMC to conduct a public hearing on the EIA statement and received comments in certain conditions determined by the NEMC.	-Timeframes for the public participation process during the undertaken of EIA were not indicated in the Act and the Audit Regulations. The process is also quite generic for public participation during the specified stages of EIA without providing a distinction between public participation during the scoping or EIA report review stages.	-Regulation 23, part VI of EIA and Audit Regulations of 2005 (URT 2005). -Regulation 26, part VI of EIA and Regulations of 2005 (URT 2005). -The Forth Schedule is made in the EIA and Audit (Amendments) Regulations of 2018 (URT 2018).
Requirement for specified EIA report content. (Ahmad and Wood 2002)	-EIA and Audit Regulations of 2005 delineated the content of the EIA statement, format, cover page, and executive summary layout.	-The Fourth Schedule of EIA and Audit (Amendment) Regulations of 2018 also guided EIA statement content.	- Part V of EIA and Audit Regulations of 2005 (URT 2005). -The Forth Schedule is made in the EIA and Audit (Amendments) Regulations of 2018 (URT 2018).
Requirement for systematic EIA report review process.	-Regulation 24 of EIA and Audit Regulations of 2005 stated that the EIA statement review shall	-The review areas covered a description of the development and environmental	-Regulation 24, part VI of EIA and Audit

Evaluation criteria	Results		Source of data
	Description	Comments	Document review
(Ahmad and Wood 2002)	be conducted in accordance with review criteria, which are based on four review areas	baseline condition, impacts identification, alternatives and EMP, and results of stakeholders' participation. -The Fourth Schedule of EIA and Audit (Amendment) Regulations of 2018 also provided a brief description of the EIA statement review. -Lack of guidelines to describe the review process of the EIA report.	Regulations, 2005 (URT 2005). -The Forth Schedule is made in the EIA and Audit (Amendments) Regulations of 2018 (URT 2018).
<i>Specialist report requirement.</i>	-There was no requirement for the specialist report in the EIA legal regime.	-There was no information available on the website of NEMC that describe the specialist report requirement.	-EMA, No.20 of 2004 (URT 2004). -EIA and Audit Regulations of 2005 (URT 2005). -(NEMC 2021).
Requirement for Environmental Management Plan/Programme (EMP). (Ahmad and Wood 2002)	-The EMP was required as part of the scoping report and EIA statement as stipulated in the EIA and Audit Regulations of 2005 and its (Amendment) Regulations of 2018.	-EMP report content was not indicated in the EIA and Audit Regulations.	Section 86, part VI of the EMA, No.20 of 2004 (URT 2004). -Regulation 18, part V of EIA and Audit Regulations of 2005 (URT 2005). -The Third Schedule (Form No.4) made in the EIA and Audit (Amendments) Regulations of 2018 (URT 2018). -The Forth Schedule made in in the EIA and Audit (Amendments) Regulations of 2018 (URT 2018).
<i>Requirement for EIA follow-up and auditing.</i>	-EIA follow-up and auditing were a legal requirement demonstrated in the EIA legal regime. The Act and relevant Regulations	-There was no indication of timeframes required for the EIA follow-up and auditing.	-Part VI and part XVI of EMA, No.20 of 2004 (URT 2004).

Evaluation criteria	Results		Source of data
	Description	Comments	Document review
	defined and described the EIA monitoring and auditing. Also, provided the contents of the monitoring and auditing reports.		-Regulation 3, part I of EIA and Audit Regulations of 2005 (URT 2005). -Part X and part XI of EIA and Audit Regulations of 2005 (URT 2005).

Table G–4: EIA implementation output indicator (EIA report legal requirements/Evaluated using the IAU’s review package/Appendix A)

Review area	EIA requirements (EIA and Audit Regulations of 2005)
Description of the development	<p>EIA and Audit Regulations of 2005 provide the legal mandate for EIA report requirements and give guidance on what an EIA report should contain.</p> <p>A description of the development is required in the EIA and Audit Regulations of 2005. It shall include a description of the project and its associated activities and objectives, project location, implementation technology, procedures, and processes, materials to be used in the development construction, and implementation, the generated products, by-products, and wastes of the project. A description of any hazards or accidents associated with the project is also required. However, there are no specific requirements for the following: the estimated duration of the construction, operational, and where appropriate, decommissioning phase, and the programme within these phases; the development comprising information on the site, design, and size of the development; the diagrams, plans or maps and photographs to aid the description of the development; any additional services (water, electricity, emergency services etc.); the reinstatement and after-use of land take during construction; the nature and quantities of materials needed during the construction and operational phases; the number of workers and visitors entering the project site during both construction and operation; the types and quantities of waste matter, energy and residual materials generated during construction and operation of the project, and rate at which these will be produced; how these wastes and residual materials are expected to be handled/treated prior to release/disposal, and the routes by which they will eventually be disposed of to the environment.</p>
Description of the environment	<p>A description of the environment is required in the EIA and Audit Regulations of 2005. It shall include a description of the potentially affected environment, the significant environmental effects, and the necessary information for identifying and assessing the effects. There is a lack of the following requirements: defining the area expected to be significantly affected by the various aspects of the project with the aid of suitable maps; describing the land uses on the site(s) and in surrounding areas; defining the affected environment broadly enough to include any potentially significant effects</p>

Review area	EIA requirements (EIA and Audit Regulations of 2005)
	occurring away from the immediate areas of construction and operation; describing the methods used to investigate the affected environment and sources of data; predicting the likely future environmental conditions in the absence of the project.
Scoping, consultation, and impact identification	Scoping, Consultation, and impact identification are insufficiently required in the relevant EIA Regulations of 2005. Stakeholders' involvement in the EIA process is required in terms of including the list of the consultees approached. There are no requirements for describing valued environmental attributes based on the consultation process; providing a copy or summary of the main comments from consultees and the public; measures taken to respond to these comments; or describing and justifying the scoping method and data used to identify the project impacts.
Prediction and evaluation of impacts	Prediction and evaluation of impacts are inadequately covered in the EIA and Audit Regulations of 2005. The prediction of impact magnitude is limited to describing impacts in terms of direct, indirect, cumulative, irreversible, short- and long-term effects anticipated. There are no requirements to describe the impacts in terms of the nature and magnitude of the change occurring and the nature, location, number, value, and sensitivity of the affected receptors; describe the impact predictions in quantitative terms or qualitative; describe the likelihood of impacts occurring, and the level of uncertainty attached to the result; provide the data and method required to assess and predict the main effects which the development is likely to have on the environment in terms the nature, size, and scale of the impacts. Furthermore, the evaluation of impact significance is lacking in the legal requirements of the EIA report.
Alternatives	Alternatives in terms of the project site, design, technologies, processes, and reasons for choosing the alternatives are prescribed by the EIA and Audit Regulations of 2005. However, considering the "no action" alternative, alternative scales, layouts, and operating conditions were available at an early stage of project planning, and investigating their main environmental advantages and disadvantages are not stipulated in the EIA Regulations. Also, a comparison of the alternatives' main environmental impacts clearly and objectively with those of the proposed project and with the likely future environmental conditions without the project is not required.
Mitigation and monitoring	Mitigation and monitoring measures are included in the environmental and social management and monitoring plan required by the relevant EIA Regulations. It shall include measures for preventing, eliminating, minimising, and mitigating the impacts including the cost, timeframe, and responsibility to implement the measures. There are deficiencies in the required mitigation and monitoring plans such as describing the mitigation measures in terms of the modification of project design, construction, operation, technologies, processes, and resources. Describe the reasons for choosing the particular type of mitigation, and the other options available. Explaining the extent to which the mitigation methods will be effective, uncertain, or where mitigation may not work. Describing the monitoring arrangements for all significant impacts, especially where uncertainty exists, to check the environmental impact resulting from the implementation of the project and its conformity with the predictions made. Describing any adverse environmental effects of mitigation measures.
Non-technical summary	The non-technical summary is well-described in the EIA and Audit Regulations of 2005. It shall include a project description and the environment, developer, and EIA consultant details, public participation conducted, major impacts identified and assessed, alternatives considered, mitigation and monitoring measures, and decommissioning of the proposed development. However, there are no requirements to avoid technical terms, a list of data, and a detailed explanation of scientific reasoning in the non-technical summary.

Review area	EIA requirements (EIA and Audit Regulations of 2005)
Organisation and presentation of information	The organisation and presentation of information are well-described in the EIA and Audit Regulations of 2005. It shall include the following: defining the acronyms; introduction; policy, administrative, and legal frameworks; sources and references of information; names and contact details of the developer and EIA consultant; identifying any gaps and difficulties in assembling or analysing the data needed to predict impacts. However, the indication of any gaps in the required data and explain the means used to deal with them in the assessment are not required.
Overall evaluation	According to the findings, the review areas of the development description, non-technical summary, organisation, and presentation of information have met to a large extent the evaluation criteria. Meanwhile, the other review areas such as the environment description, scoping, consultation, impact identification, prediction and evaluation of impacts, alternative, and mitigation and monitoring measures have not met most of the evaluation criteria provided in the review package.

Table G–5: EIA implementation output indicator (EIA report preparation/Evaluated using the IAU’s review package/Appendix A)

Review area	EIAr 1	EIAr 2	EIAr 3	EIAr 4	EIAr 5	EIAr 6	EIAr 7	EIAr 8	EIAr 9	EIAr 10	EIAr 11	EIA review area evaluation
Description of the development	A	I	A	I	A	A	A	I	I	I	I	I
Description of the environment	I	I	I	I	I	A	A	I	I	I	I	I
Scoping, consultation, and impact identification	I	I	I	I	I	A	A/I	A/I	I	I	A/I	I
Prediction and evaluation of impacts	I	I	I	I	I	A	I	I	I	I	I	I
Alternatives	I	I	I	I	I	I	I	I	I	I	I	I
Mitigation and monitoring	I	I	I	I	I	I	I	I	I	I	I	I
Non-technical summary	A	A	I	A	I	I	A/I	A/I	A/I	A/I	I	I
Organisation and presentation of information	I	A/I	I	I	I	A	A/I	A/I	A/I	A/I	A/I	I
EIAr evaluation	I	I	I	I	I	A	I	I	I	I	I	I/I

Review area	EIAr 1	EIAr 2	EIAr 3	EIAr 4	EIAr 5	EIAr 6	EIAr 7	EIAr 8	EIAr 9	EIAr 10	EIAr 11	EIA review area evaluation
Assessment Symbols: C: Complete for decision-making A: Adequate (not complete but adequate for decision-making) I: Inadequate (not adequate for decision-making)												

Table G–6: Country legal context indicator and evaluation criteria

Evaluation criteria	Results		Source of data
	Description	Comments	Document review/ Literature review
<i>Constitutional directives on;</i> <ul style="list-style-type: none"> • <i>Environmental policies,</i> • <i>Environmental laws, and</i> • <i>Sustainable development.</i> 	<p>-The Constitution of the United Republic of Tanzania of 1998 provided ensured the conservation of natural resources.</p> <p>-Article 27(1) <i>'Every person has the duty to protect the natural resources of the United Republic, the property of the state authority, all property collectively owned by the people, and also to respect another person' property'.</i></p> <p>-Article 27(2) <i>'All persons shall be required by law to safeguard the property of the state authority and all property collectively owned by the people, to combat all forms of waste and squander, and to manage the national economy assiduously with the attitude of people who are masters of the destiny of their nation'</i></p>	<p>- Based on the Constitution directive, the relevant environmental action plan, policies, and legislation were introduced.</p>	<p>-Article 27(1)(2), part III of the Constitution of the United Republic of Tanzania of 1998 (URT 1977).</p>
<i>Availability of Environmental Action Plan and/or Policy to promote sustainable development by impact assessment tools.</i>	<p>-The National Environmental Action Plan of 1994 promoted the incorporation of environmental consideration into planning and development in Tanzania.</p> <p>-The National Environmental Policy of 1997 was developed based on the NEAP to support the consideration of environmental aspects in decision-making.</p>	<p>-The NEAP stated EIA is a key policy instrument to promote sustainable development.</p> <p>-The National Environmental Policy mentioned EIA as an environmental policy planning tool that is used to integrate environmental considerations into the decision-making process.</p>	<p>-(URT 1994a). -(URT 1997a).</p>

Evaluation criteria	Results		Source of data
	Description	Comments	Document review/ Literature review
<i>Availability of relevant environmental legislations.</i>	-The relevant environmental legislation such as: -Plant Protection Act, No. 13 of 1997. -Land Act, No.4 of 1999. -Forestry Act, No.14 of 2002. -Water Resources Management Act, 2009. -Marine Parks and Reserves Act, No.27 of 1994.	-These Acts considered the protection of the environment in relation to the planned development projects taking place within the sectoral legislation sovereignty.	-Plant Protection Act, No. 13 of 1997 (URT 1997b). -Land Act, No.4 of 1999 (URT 1999). -Forestry Act, No.14 of 2002 (URT 2002). -Water Resources Management Act, 2009 (URT 2009). -Marine Parks and Reserves Act, No.27 of 1994 (URT 1994b).
Availability of environmental standards. (Kolhoff et al. 2009)	-Section 140, part X of EMA described the role of the National Environmental Standards Committee of the Tanzanian Bureau of Standards to develop, review, and submit environmental standards and criteria to the Minister of the environment	-Environmental standards such as; -Permissible limits for municipal and industrial wastewater (860:2006(E)), -Drinking water standards (789:2003), -Ambient air quality standards (845:2012(E)).	-Section 140, part X of EMA, No.20 of 2004 (URT 2004). -(Tanzanian Bureau of Standards 2006). -(Tanzanian Bureau of Standards 2003). -(Tanzanian Bureau of Standards 2012).
Existence of competent judiciary body to prosecute environmental issues. (Marara et al. 2011)	-Section 95, part VI of EMA described the right of any person to appeal against the Minister's decision to the Environmental Appeals Tribunal. -Section 204, part XVII of EMA stated the establishment of the Environmental Appeal Tribunal. -Section 209, part XVII of EMA gave the legal right to any party to appeal against the Environmental Appeal Tribunal decisions to the High Court.	-There was no clear information on the establishment of the Environmental Appeals Tribunal. -There was no clear indication in EMA about the scope of the Environmental Appeals Tribunal's responsibilities.	-Section 95, part VI of EMA, No.20 of 2004 (URT 2004). -Section 204, part XVII of EMA, No.20 of 2004 (URT 2004). -Section 209, part XVII of EMA, No.20 of 2004 (URT 2004).
Constitutional directive on; • Access to information and	-Article 18 of the Constitution stated the right of access to information.	-There was no clear indication in the Constitution with regards to administrative justice, transparency, and accountability in decision-making.	-Articles 18 and 21(2) of the Constitution of the United Republic of

Evaluation criteria	Results		Source of data
	Description	Comments	Document review/ Literature review
administrative justice, <ul style="list-style-type: none"> • role of public in decision-making, and • transparency and accountability in decision-making. (Kolhoff et al. 2009)	-Article 21(2) of the Constitution described the right of every citizen to participate in the decision-making process.	However, EMA and the related EIA Regulations ensured the right of access by any citizen to environmental information and access to administrative justice in decision-making.	Tanzania of 1998 (URT 1977).

Table G–7: Political indicator and evaluation criteria

Evaluation criteria	Results		Source of data
	Results	Comments	Document review/ Literature review
<i>Country's political participation in the international agreements (conventions, treaties, and protocols) of environmental assessment.</i>	-Article 63(3)(e), part I, Chapter three of the Constitution supported the country's commitment to international agreements that the country is committed to. -Part XV of EMA supported giving effect to the international environmental agreements to which Tanzania is a party.	-Examples of the major conventions to which Tanzania was a party are: -Convention on Biological Diversity (Ratified-1996), -United Nations Framework Convention on Climate Change (Ratified-1996), -Ramsar Convention on Wetlands (Ratified-1975), -Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal (Ratified-1992), and -Convention on Sustainable Development of Lake Tanganyika (Ratified-2004). -Note, there was no information available about the commitment of The Republic of Tanzania to the Convention on EIA in a Transboundary Context (Espoo, 1991).	-Article 63(3)(e), part I, Chapter three of the Constitution of the United Republic of Tanzania of 1998 (URT 1977). -Part XV of EMA, No.20 of 2004 (URT 2004). -(URT 2019)

Evaluation criteria	Results		Source of data
	Results	Comments	Document review/ Literature review
<i>Political influence on enactment and reform of EIA legislation</i>	-There was no clear evidence that describes the influence of the country's political system on the development of the EIA system. However, it was indicated that the EIA regime in Tanzania is dependent on the government's political will and commitment among other factors.	-It was high relative to mention that environmental decisions in Tanzania are subject to political pressure, which could influence the development of the EIA regime. This could be an indication of the negative political influence of EIA legal regime development.	-(Ringia and Porter 1999). -(Mwalyosi 2004). -(Katima 2008).
<i>Political influence on EIA administration.</i> <ul style="list-style-type: none"> • <i>Autonomy of responsible authority (independency and political appointment of managers), and</i> • <i>Allocation of funding and resources.</i> 	-There was no clear evidence of the independence of the EIA competent authority. However, according to EMA, the board members of the EIA competent authorities are appointed by the President (political appointment). -It was mentioned that the EIA competent authority is challenged by limited financial resources.	-It was indicated that the NEMC faces political influence. It was mentioned that the NEMC main members should not be appointed and accountable by the President to limit the government's influence on EIA's competent authority. -The limited financial capacity was a limiting factor to the NEMC to conduct its responsibilities such as monitoring and evaluation of EMP.	-Part III of EMA, No.20 of 2004 (URT 2004). -(Pallangyo 2005). -(Nyihirani et al. 2014). -(Yhdego 2015). -(Mwanga 2022).
<i>Political influence on EIA decision-making.</i> <ul style="list-style-type: none"> • <i>EIA decision-making during screening, scoping, and environmental approval of EIA report.</i> 	-It was indicated that EIA decision-making for some development projects is politically and socio-economically motivated. Some projects were approved by the government despite their environmental and social impacts.	-This can be interpreted as an indication of the country's political system's influence on the decision-making process taken by the competent authority.	-(Ringia and Porter 1999). -(Katima 2003). -(Brogaard et al. 2008) -(Katima 2008). -(Makauki 2017)

Table G–8: Socio-economic indicator and evaluation criteria

Evaluation criteria	Results	Source of data
	Description (the year 2019-2021)	Document review
<i>Human Development Index (HDI).</i>	0.549	-(UNDP 2021d).

<i>Life expectancy index.</i>	0.699	-(UNDP 2021d).
<i>Gross National Income (GNI) per capita (constant 2017 PPP\$).</i>	2.600	-(UNDP 2021d).
<i>Gross Domestic Product (GDP) per capita (2017 PPP\$).</i>	2.660	-(UNDP 2021d).
<i>Unemployment, total (% of labour force).</i>	2.649	-(World Bank 2021b).
<i>Population in multidimensional poverty, headcount (%).</i>	55.4	-(UNDP 2021d).
<i>Total population (millions)(Data refers to 2030).</i>	79.2	-(UNDP 2021d).
<i>Education index.</i>	0.429	-(UNDP 2021d).
<i>Literacy rate, adult (% ages 15 and older)</i>	77.9	-(UNDP 2021d).

Table G–9: Environmental condition indicator and evaluation criteria

Evaluation criteria	Results		Source of data
	Description	Comments	Document review
<i>Land issues.</i>	<ul style="list-style-type: none"> -Land degradation, -Soil erosion, -Loss of soil nutrients/fertility, -Salinization, -Soil pollution. -Desertification, and -Deforestation, 	<ul style="list-style-type: none"> -The primary causes were; -human activities such as agriculture and overgrazing activities, -urbanization, -rapid population growth, -inadequate land use. -poverty, -land ownership, -economic growth, -climate extreme events, and -culture and beliefs. 	-(URT 2019).
<i>Biodiversity and ecosystem issues.</i>	<ul style="list-style-type: none"> -Loss of biodiversity, -Loss of ecosystem diversity, -Declining species diversity, and -Declining genetic diversity. 	<ul style="list-style-type: none"> -The primary causes were; -human activities such as agriculture and overgrazing activities, -land degradation, -deforestation and forest degradation, -wildfires, -invasive alien species, -urbanization, -rapid population growth, 	-(URT 2019).

Evaluation criteria	Results		Source of data
	Description	Comments	Document review
		-poverty, -economic growth, and -climate change.	
<i>Water issues.</i>	-Water pollution, -Loss of water quality and sources, and -Increased water-borne diseases,	-The primary causes were; -human activities such as industrial, inadequate waste management, mining, agriculture, and overgrazing activities, -population and economic growth, -increased water demand, -poverty, and -climate change,	-(URT 2019).
<i>Aquatic system issues.</i>	-Water quality deterioration and pollution issues, -Erosion and shoreline exposure, -Reduction in fish yields. and -Loss of marine ecosystems and biodiversity.	The primary causes were; -human activities such as agriculture and settlements, -deforestation -population and economic growth, -poverty, -climate change, -destructive fishing practices, and -inadequate waste management,	-(URT 2019).
<i>Air quality issues.</i>	Air pollution.	-The primary causes were; -economic growth, -urbanization, -industrial and motor vehicle emissions, -burning of waste and fossil fuels.	-(URT 2019).
<i>Climate change issue.</i>	-Increasing temperature, -decreasing rainfall, -increasing frequency and intensities of extreme weather and climate events such as floods and droughts, -Climate change related impacts such as socio-economic and ecological implications.	-The primary causes were; -economic development, -population growth and poverty, -industrial and agricultural activities, -deforestation and forest degradation, and -fossil fuel burning	-(URT 2019).

Table G–10: EIA stakeholders’ capacity indicator and evaluation criteria

Evaluation criteria	Results		Source of data
	Description	Comments	Document review/ Literature review
EIA competent authority staff competency. (Kolhoff et al. 2009; Kolhoff et al. 2016)	-It was indicated that EIA competent authority in Tanzania faces numerous challenges such as insufficient human and financial resources, and a lack of staff competency in terms of experience, training, and appropriate qualifications, particularly at the provincial level.	-The main issue associated with EIA competent authority incompetency of staff was the long-time taken for processing EIA applications and auditing by NEMC. This issue was exacerbated by the delay in EIA decision-making for the EIA certificate of the Minister. -There was an issue of corruption whereby some of the competent authority staff issued fake EIA certificates.	-(Katima 2003). -(Pallangyo 2005). -(Brogaard et al. 2008). -(Sosovele 2011). -(Nyihirani et al. 2014). -(Kishai 2014). -(Nsiima 2015). -(Yhdego 2015). -(Makauki 2017). -(DAILY NEWS 2019).
EIA consultants and specialist competency. (Kolhoff et al. 2009; Marara et al. 2011)	-It was mentioned that the EIA consultants and specialists generally were lacking competency in terms of knowledge, skills, experience, and attitudes for undertaking EIAs (Code of Practice and Professional Ethics).	-There was a concern raised about the credibility and validity of specialist studies results and the used methods for data collection and analysis (subjectivity of EIA reports). -EIA consultants faced issues with time and resources to provide scientific details on the identified impacts and EMPs.	-(Yhdego 2015).
Project proponent/developer competency. (Kolhoff et al. 2009)	-There was a lack of environmental awareness and compliance with the EIA system and the conditions of EIA authorization.	-EIA was considered by the proponent as an added cost to the investment and an impediment to the development.	-(Yhdego 2015).

Evaluation criteria	Results		Source of data
	Description	Comments	Document review/ Literature review
Interested and affected party's competency. (Kolhoff et al. 2009; Marara et al. 2011)	-The competency of the interested and affected parties was regarded as very low (lack of awareness).	-I&APs' participation in the public consultation of EIA is low. -I&APs were generally not interested in the environment when they participate. They did not receive any feedback on the EIA report and EMP implementation. -Factors that influenced EIA public participation such as illiteracy, language barriers, cultural differences, and lack of political will.	-(Sosovele 2011). -(Kishai 2014). -(Yhdego 2015). -(Mwanyoka et al. 2019).