

EVALUATION OF THE PERFORMANCE, QUALITY, AND  
EFFECTIVENESS OF ENVIRONMENTAL IMPACT ASSESSMENT IN NAMIBIA

A DISSERTATION SUBMITTED IN  
FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF  
DOCTOR OF PHILOSOPHY IN  
AGRICULTURE: ENVIRONMENT & NATURAL RESOURCE MANAGEMENT  
OF  
THE UNIVERSITY OF NAMIBIA

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April 2025

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## **ABSTRACT**

Environmental Impact Assessment (EIA) has become an important environmental management tool used in planning and decision-making since the 1970s. However, its effectiveness has come under scrutiny in developing countries, where systems are often copied from developed countries with minimal consideration of the contextual factors in the country of implementation. Environmental protection was enshrined in the Namibian Constitution in 1990, and EIA was formally introduced through the Environmental Management Act (2007) and the EIA Regulations (2012). Namibia's EIA system has now been in place for over a decade; however, little research has been undertaken to review the functioning of this system. This study aims to assess and evaluate the status, performance, quality, and effectiveness of Namibia's EIA system and the extent to which it is achieving the set goals of environmental protection and sustainable development. Data was collected through literature review and document analysis, alongside surveys and interviews. Quantitative data was analysed using descriptive statistics and qualitative data using thematic analysis. The study reveals that Namibia has a functional EIA system grounded in a good legal basis, a regulated EIA process and sound institutional arrangements. EIA in Namibia has proven to be beneficial and has had a preventive effect on some proposed developments. However, the study highlights several implementation weaknesses including limited and inadequate scoping, public participation, monitoring, and implementation of the EMP. Other areas that are lacking include a lack of guidelines on public participation, strategic assessment, and enforcement. Based on actors' perceptions, the EIA process is inadequate, only partially satisfies good governance principles, with poor ranks on transparency and accountability. The EIA process also partially contributes to good environmental decisions, learning, and sustainability. The case studies analysis revealed notable gaps including deficiencies in addressing cumulative impacts and poor review and decision making. These weaknesses and gaps present an opportunity to improve the system. With timely improvements and targeted legislation reform, EIA can effectively facilitate good environmental decisions and sustainable development in Namibia. For improvement, the Government needs to demonstrate political will and support by mobilizing national and international funding

required for EIA system implementation, monitoring, and decentralising EIA services to regional and traditional authorities. Such interventions can facilitate acceptance of EIA, environmental literacy, and the emergence of EIA champions in communities.

**Keywords:** Namibia, environmental governance, effectiveness, EIA system

## LIST OF PUBLICATIONS

**Nakwaya-Jacobus, D. N.**, Hipondoka, M., Angombe, S., Stringer, L. C., & Dougill, A. J. (2024). Good governance quality in Namibia's environmental impact assessment process. *Impact Assessment and Project Appraisal*, 1-12.

**Nakwaya-Jacobus, D. N.**, Hipondoka, M., Angombe, S., Stringer, L. C., & Dougill, A. J. (2023). Substantive, normative and transactive effectiveness of EIA: perception of key actors in Namibia. *Impact Assessment and Project Appraisal*, 41(4), 280-300.

**Nakwaya-Jacobus, D. N.**, Hipondoka, M., Angombe, S., Stringer, L. C., & Dougill, A. J. (2021). Evaluating the performance and procedural effectiveness of Namibia's Environmental Impact Assessment system. *Environmental Impact Assessment Review*, 91, 106670.

### **Under review (Revision underway)**

**Nakwaya-Jacobus, D. N.**, Hipondoka, M., Angombe, S., Stringer, L. C., & Dougill, A. J. (2025). The Assessment of the Namibia EIA process: The case of marine phosphate mining and ReconAfrica oil drilling. Ref.: Ms. No. TIAP-2024-0165 (242871034). *Impact Assessment and Project Appraisal*

## CONFERENCE PROCEEDINGS

**Nakwaya-Jacobus D.N,** (2022). Good Governance in Namibia EIA process. 7th Annual Research Conference. Sam Nujoma Marine & Coastal Resources Centre (SANUMARC), Henties Bay, Namibia

**Nakwaya-Jacobus D.N,** Evaluation of EIA in Namibia (2019). 8th Annual conference, White Rose Social sciences DTP. University of Leeds, Leeds, UK

**Nakwaya-Jacobus D.N (2018).** EIA review in Namibia. 18th International Association for Impact Assessment (IAIA): Environmental Justice in Societies in Transition Durban, South Africa.

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## **LIST OF ACRONYMS**

<b>CAC</b>	Command and Control
<b>DEA</b>	Department of Environmental Affairs
<b>EA</b>	Environmental Assessment
<b>EC</b>	Environmental Commissioner
<b>ECC</b>	Environmental Clearance certificate
<b>EIA</b>	Environmental Impact Assessment
<b>EMA</b>	Environmental Management Act
<b>FAO</b>	Food and Agriculture Organisation
<b>GEF</b>	Global Environment Facility
<b>GG</b>	Good Governance
<b>HIA</b>	Health Impact Assessment
<b>IAIA</b>	International Association for Impact Assessment
<b>MEFT</b>	Ministry of Environment, Forestry and Tourism
<b>NEPA</b>	National Environmental Policy Act
<b>NGOs</b>	Non-governmental Organisations
<b>NPC</b>	National Planning Commission
<b>NSA</b>	Namibia Statistics Agency
<b>OHCHR</b>	Office of the High Commissioner for Human Rights
<b>OECD</b>	Organisation for Economic Co-operation and Development
<b>RA</b>	Risk Assessment
<b>SA</b>	Sustainability Assessment
<b>SADC</b>	Southern African Development Community
<b>SEA</b>	Strategic Environmental Assessment

<b>SIA</b>	Social Impact Assessment
<b>TOR</b>	Terms of Reference
<b>UNCED</b>	United Nations Conference on Environment and Development
<b>UNDP</b>	United Nations Development Programme
<b>UNEP</b>	United Nations Environment programme
<b>USAID</b>	United States Agency for International Development
<b>WSSD</b>	World Summit on Sustainable Development

## ACKNOWLEDGEMENTS

Foremost I thank God almighty, *Jehovah El Shaddai* for a vision of Daniel 1:5. Through this study period, I was set apart, trained, and consecrated. Thank you, Lord, for the apostolic grounding, preparations, and release.

I would like to thank the British government and the University of Leeds for the kind scholarship and acceptance, through this opportunity, I have become a Commonwealth scholar of note.

I am deeply grateful to my supervisors, both from the University of Namibia and the University of Leeds. Prof. Hipondoka thank you for always having time to read through every draft, Prof Stringer thank you for being the ignition- your guidance and friendly support gave me much strength. Thank you, Prof. Dougill, for directing this writing for believing in me, and for agreeing to supervise from the first email. Thank you, Dr Angombe, for your guidance and patience. Dear supervisors, your timely response to every email steered this work and your encouragement bore this much fruit.

To the Department of Fisheries and Ocean Sciences and the management of the Sam Nujoma Campus, thank you for your support and encouragement and for approving papers related to this work. Thank you to the colleagues who kept asking how far the dissertation is and for the kind encouragement, especially Dr Gabriel, Dr Mupambwa, and Prof Iitembu for continuously speaking about Scopus, impact factors, and publications which made me sad at times, yet it yielded these publications. Thank you to my dear research assistants Rauna and Yolandi who helped during the interviews and data cleaning. Your dedication has encouraged me in so many ways.

A big thank you to my entire family, my mother Meme Paskalia Nakathila for all she has put into my education, and my dear grandmother Meekulu Mkwangombe Ningeisheni ya Nandunda for nurturing and cherishing me throughout my life and study period. To my Dad, Tate Petrus Nakwaya, although he died very young, this great work is for you, for Meekulu Nakwalondo did all and said all for me.

My heartfelt thanks go to my husband, Tate Neesy, thank you for the support and for taking care of our son Nathan in my time away. Thank you to Aunty Pwapo and Tooleni for taking good care of my children during the study period.

Gratitude goes to the saints of Elohim our Home Ministry, a bible study group that I lead. Thank you for your prayers and faith and for maturing into ECM. Thank you to a dear friend and prayer partner Ndahafa Bensley for listening to the tales about this writing, thank you for wisdom and obedience. To Linea, thank you for being a chauffeur and friend. I am grateful to the talented Jacobine, for her kind support in making sure this work is of good standard. My warm thanks go to all my friends for moral support during the study period. Special thanks go to my cheering folks, Paul and Mweneni Mungeyi. Final gratitude goes to a cyber friend Carlos Lokos, who cheered this PhD when it was only a thought.

## **DEDICATION**

I dedicate this work to my sons Nathan and Sergio. Studying took up much and I did not spend as much time as I would have loved to with you. This is for you. And to the girl child growing up in the village and raised by a grandmother, this is dedicated to you.

**DECLARATIONS**

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## **CHAPTER 1. INTRODUCTION**

### **1.1 Background of the Study**

Environmental management has become an important concept and has been encompassed in the global agenda through various environmental governance mechanisms. By the end of the 20<sup>th</sup> century, many of the old, authoritarian governing practices had been replaced by more dynamic and inclusive approaches to management (Toikka, 2009). The era marked the move from a government-centered approach to a good governance style and subsequently to good environmental governance. Unlike the former government-centric approach, environmental governance approaches require the inclusion of public and private actors in policy and decision-making (Franks & Vanclay, 2013; Ganahl, 2012). Since the introduction of environmental assessment (EA), specific forms of impact assessment developed including Social Impact Assessment (SIA), Health Impact Assessment (HIA), Risk Assessment (RA), Sustainability Assessment (SA), Regulatory Impact Assessment (RIA), Environmental Impact Assessment (EIA) and Strategic Environmental Assessment (SEA) (Morgan, 2012).

EA has been defined as both a technical tool for analysing the consequences of a planned intervention and a legal and institutional procedure linked to the decision-making process of a planned intervention (IAIA, 2009). The term Environmental Assessment is herein used as a generic term that includes environmental impact assessment (EIA) for projects and strategic environmental assessment (SEA) for policies, plans, and programmes. However, the subject of this thesis is environmental impact assessment (EIA) which is the oldest and most established mechanism among EA tools (Esteves et al., 2012; Senécal et al., 1999) and is of interest in the Namibian context.

The concept of EIA dates to the 1960s, when nations started to realise the impact of human activities on the atmosphere and natural resources (Morgan, 2012). EIA is rooted in the desire that human activities performed in the quest to achieve individual and collective economic development should not harm the environment (Drayson et al., 2017; Gellers & Cheatham, 2018). The process and the outcomes of EIA are thus concerned with technical observation and analysis, with the principles of project design, the application of regulations and law, and the interpretation of local and contextual governance and rights (Bond et al., 2018).

The objective of EIA involves the identification of potential impacts of developmental activities on the environment and devising alternative ways of conducting investment interventions with minimum or no environmental harm (Fischer & Onyango, 2012; Gachechiladze-Bozhesku & Fischer, (2012); Morgan, 2012; Sovacool, 2018). Countries concede that EIA is essential in environmental management and that economic development projects should commence with an EIA to inform stakeholders of the costs and benefits of implementing the project (Fischer et al., 2015).

The world has accepted the adoption of EIA systems to ensure continued protection of the environment and sustainable development. In sub-Saharan Africa, countries such as Kenya, Rwanda, Botswana, South Africa, Zambia, and Namibia have decisively devised EIA legislation. By 2002 about 24 countries in the sub-Saharan region had some form of environmental assessment laws (Bekhechi & Mercier 2002). Despite its widespread adoption, researchers have been criticising the role and effectiveness of EIA in achieving its objectives and outcomes of environmental protection and sustainable development respectively (Cashmore et al., 2010; Marara et al., 2011).

With EIA often being unable to stop environmentally unfriendly projects, researchers have been criticising the role and effectiveness of EIA in achieving its objectives and outcomes of environmental protection and sustainable development (Cashmore et al., 2010; Marara et al., 2011). It was estimated that more than 10,000 refereed papers on EIA have been published over the past 20 years (Fischer and Noble, 2015). However, there is still ample need for further research to develop a distinct EIA theory, to investigate empirical evidence of EIA practices; and to strengthen the interaction between theory and practice (Fischer & Noble, 2015; Kørnø & Thissen, 2000). This study interrogates existing EIA theories and pragmatically contributes to understanding the functioning of the EIA system from a Namibian context.

In recent discourse, EIA effectiveness, performance, and quality are a commonly covered subject. The need to consider context and governance issues has been added as an important layer to EIA evaluation and effectiveness studies. There is a knowledge gap in understanding how the desired functions of EIA could be achieved in actual practice given a variety of governance structures, contextual factors, and their influence on multiple actors and systems (Bond et al., 2018; Drayson et al., 2017, Arts et al., 2012).

One can only understand EIA's performance, quality, and effectiveness in the governance context in which it operates (Bond et al., 2020; Drayson et al., 2017). This is because EIA's performance is connected to the legal, administrative, and procedural function, and effectiveness is coupled to the existing governance mechanisms and contextual elements, (Arts et al., 2012). On the other hand, the quality of the EIA system indicates the process's inputs (Bond et al., 2018). While related, these three key terms are different implying the importance of a country-specific EIA evaluation.

In support of this notion, Loomis and Dziedzic (2018) call for a holistic review of the EIA system to ensure its performance, effectiveness, and efficiency in a country of implementation. This study is an answer to this demand and reviews the performance of the EIA system in Namibia and evaluates the quality and effectiveness thereof.

Namibia's EIA system has been in place for over a decade since its establishment through the Environmental Management Act 7 of 2007 (EMA, Act 7 of 2007) and the Environmental Impact Assessment Regulations 30 of 2012 (EIA Regulations, 30 of 2012). Yet, it has not been evaluated from an academic perspective and the legislative framework has not been reviewed. More than a decade later, there is a need to investigate and monitor the functioning, weaknesses, strengths, and gaps in the EIA system. This dissertation therefore intended to inform the discussion about the status of EIA law and policies in Namibia and to evaluate the performance, quality, and effectiveness of the EIA system, with an emphasis on opportunities for improvement and the accomplishment of the desired goals of environmental protection and sustainable development.

The functioning of the EIA processes encompasses intricate chains of decisions involving multiple actors, with varied interests, goals, and beliefs (Cashmore & Kjørnøy, 2012). EIA is therefore characterised by antagonism over meaning and interpretations thereof (Leknes, 2001; Richardson & Cashmore, 2011; Hansen & Wood, 2016). Consequently, practitioners also hold diverse and divergent understandings of core aspects of EIA mainly due to individual experiences, organisations, and the wide-ranging professional cultures that contribute to assessment processes (Kågström & Richardson, 2015; Morgan et al., 2012). Hansen and Wood (2016) assert that the innate plurality when considering interpretations of the purpose and objectives of EA is critical in shaping the 'frame of reference' employed to evaluate effectiveness.

The views of actors have become valuable in contributing to the debate on EA effectiveness. It is within the context of ‘giving voice’ to these wider communities of EA actors and practitioners that this research evaluates the Namibia EIA system based on the views and perceptions of stakeholders.

In this thesis, the focus is on the broader and holistic view of EIA in the context of Namibia, a developing country that is ambitious with development, yet with a strong constitution on environmental conservation, sustainable development, and good governance. Considering the theories analysed in this chapter, this research contributes to the debates on the need to include and consider the position of EIA systems and processes to reflect good governance and sustainability principles. The study also contributes to the keen need to evaluate EIA effectiveness and performance at national levels, especially in developing countries as echoed by Wood (2003) and Loomis and Dziedzic (2018). The study takes on the evaluation using a combination of literature review, document analysis, and interviews to bring out a holistic and pragmatic review of EIA in Namibia and to include the voice and perception of actors. Lastly, this study developed an evaluation framework and used it to analyse two nationally important case studies from the proposal stage to decision-making, to verify the extent to which the EIA process is implemented and duly followed as per the law.

## **1.2 Statement of the Problem**

EIA is a universally recognised instrument that is firmly embedded in domestic and international environmental laws and used for environmental management (Morgan, 2012). However, the question of whether EIA is achieving its purposes continues in the academic discourse.

Numerous studies have tried to assess the performance and effectiveness of EIA in the developed world, but only a few have attempted this in the developing context, of which only a handful in sub-Saharan Africa, for example, Bhatt, (2023), Drayson et al., (2017), Marara et al., (2011) and Wood (2003). Among the few studies, most of them focused on procedural requirements, evaluating the practice of EIA against current legislation and processes. However, there is increased attention on evaluating the substantive purpose and goals of EIA. Global studies between 1996 and 2016 analysing EIA's effectiveness have encouraged researchers to undertake so systematically by combining more than one effectiveness dimension (Loomis & Dziedzic, 2018).

For Namibia, the importance of environmental management and the use of EIA are embedded in the Namibian Constitution and its national development plans. In addition, Namibia, like many other African countries, is aware of the cost of environmental degradation and the effect of unplanned developments (Tarr, 2003). Other countries in sub-Saharan Africa such as Madagascar (updated in 1995) and South Africa (updated in 2010) have reviewed their initial legal and regulatory EIA frameworks (Ibeh & Walmsley, 2021; Walmsley et al., 2011). However, Namibia is yet to complete the legislation reform process. Since the enactment of the EMA and the EIA Regulations in 2007 and 2012 respectively, the legislation has not been reviewed. In addition, little research has been done on the functioning of Namibia's EIA system. Husselmann (2016) evaluated the procedural performance of the EIA system in Namibia using document analysis and case studies. However, the study only focused on procedural effectiveness, omitting important quality and substantive effectiveness components. Joseph (2018) also evaluated the EIA system but focused on the decision-making procedures for specific case studies in Namibia.

Following the suggestion of Loomis & Dziedzic (2018) to evaluate national EIA systems systematically using more than one effectiveness dimension, the present study builds on and extends on the previous research and takes a holistic approach to evaluate the performance, quality, and effectiveness of EIA by combining four effectiveness dimensions: procedural, substantive, normative, and transactive effectiveness. Following a logic model, the evaluation leads to a deeper understanding of the EIA system's status and the EIA process's functioning in Namibia. While previous studies focused on assessment criteria based on case study analysis, the present study brings novelty by incorporating the perspectives of involved actors and stakeholders on the practices and recommendations to improve the EIA system.

Since independence in 1990, the government of Namibia has strived to develop different economic sectors to provide the citizens with essential services in the drive toward Vision 2030. Vision 2030 includes interventions towards infrastructure development, accelerated economic growth, provision of and access to sanitation, education, and healthcare, and provision of extractive rights for land, water, mineral, and fisheries resources (National Planning Commission [NPC], 2004). Such a plan, if not well implemented, can cause detrimental effects to the resources and the environment. Namibia is therefore faced with the problem of simultaneously developing and growing the economy and offering much-needed services to an impoverished, highly unequal society while maintaining ecosystem integrity. The EIA process can be a useful tool to ensure a balance of environmental and socioeconomic impacts of development but to be effective, such a system must meet the best international practices and have a record of appropriate procedures, goals, and objectives in place.

This thesis provides a holistic investigation of the procedural, substantive normative, and transactive effectiveness of the Namibia EIA system to assess the extent to which it contributes to reducing negative environmental, social, and economic impacts, and enhancing sustainability in development activities.

### **1.3 Research Aim and Questions**

This study aims to investigate and evaluate the performance, quality, and effectiveness of the Namibia EIA system, with an emphasis on implementation gaps and deficiencies, and to point out measures towards improving the system in support of environmental protection and sustainable development goals. The aim is guided by the following research questions:

1. What is the status, and practices of Namibia's EIA system, and to what extent is the system procedurally effective according to the current legislative and administrative framework?
2. What is the quality of the Namibia EIA process and to what extent is the EIA process adequate and conforming to good governance principles?
3. What are the perceptions of different actors on the substantive, transactive, and normative effectiveness of the EIA process and to what extent does EIA achieve its set objectives and desired outcomes of environmental protection and sustainable development?
4. To what extent is the EIA process implemented and duly followed in the two selected case studies, what lessons can be learned from the case studies and how can such lessons be used to improve the EIA system in Namibia?

## **1.4 Significance of the Study**

Conservation and management of the environment are fundamental to the economy of every country (Jhariya et al., 2022). Namibia has some of the most pristine environments in the world and hosts stable wildlife populations. While the country needs to develop different areas and extract and utilise its resources, Namibia also needs to ensure that its development practices are sustainable, and its environment sufficiently protected. With conducive EIA policies and legislation in place, development can be better planned and regulated (Tarr, 2003; Toro et al., 2010). This study seeks to bring out relevant information and recommendations for the improvement of EIA policy and legislation in Namibia.

The government of Namibia started the process of reviewing the EIA policy in 2018, therefore this study contributes to the national process to finalise the amended laws and consequently improve the quality of the EIA process. The questionnaire surveys conducted in this research contribute to awareness of EIA processes amongst the public and stakeholders in Namibia and contribute to the regulatory approach to environmental management information that is important to the Ministry of Environment, Forestry and Tourism, and EIA practitioners. Amidst a global deficiency of research on EIA, this thesis contributes to the body of knowledge on EIA practices in developing countries and sub-Saharan Africa.

Unlike other studies that assessed the effectiveness and quality of EIA using a solely process-based analysis or EIA reports, this study assesses the quality of the Namibia EIA process based on its adequacy of EIA mechanisms and conformance to good governance principles using actors' perceptions.

The inclusion of good governance elements in the evaluation indulges a needed dialogue on the link between EIA effectiveness and governance context. The consideration of good governance qualities also contributes to an important aspect that is often overlooked in numerous EIA evaluation studies (Arts et al., 2012; Cashmore, 2004; Cashmore et al., 2010; Meuleman, 2015). The multidimensional and holistic approach to evaluating the performance, quality, and effectiveness of EIA in Namibia using four effectiveness dimensions, brings rich information about Namibia's EIA system.

The information and knowledge from this study are not useful only to practitioners and the regulatory authority in Namibia but can inform other stakeholders in similar contexts as well as researchers worldwide. The evaluation framework developed in this study is a contribution to a body of knowledge and can be used to evaluate other EIA systems.

Overall, this thesis programmatically contributes to theories of EIA and highlights the importance of evaluating EIA in a specific country of implementation given that governance structures and contextual factors differ across countries. The combination of literature review, document analysis, and the inclusion of actors' views through survey, and semi-structured interviews brings out rich information about the status and development of EIA and precepts of what is yet to be accomplished concerning environmental management in Namibia.

### **1.5 Limitations of the Study**

The study coupled an exploratory cross-sectional analysis with a case study approach. The study therefore does not pretend to include all practitioners, actors, and stakeholders involved in the EIA process at a national level. The sampling technique

employed was specific (convenience sampling), based on non-random selection (snowballing) of specific institutions and actors for specific information hence the selection can be viewed as biased.

While reference is made to EIA in other countries in sub-Saharan Africa, the study was limited to the implementation mechanisms and effectiveness of the EIA process in Namibia only. The case study analysis was only limited to the EIA process from proposal to decision making stage and not in-depth analyses of the project implementation and follow-up phases. Apart from the time and budget constraints to reach as many actors as possible, there were limited experts representing groups such as local authorities. However, this was mainly because many institutions including municipalities and town councils in Namibia only have environmental health officers instead of environmental officers who would know EIA. To increase the response rate, an extra two months (in addition to the initial 3 months) was given to allow more people to fill in the surveys, and monthly reminders were sent. The researcher could only afford two months, as the survey tool was being paid for.

### **1.6 Delimitation of the Study**

The scope of this study was limited to the boundaries of Namibia; hence it was restricted to the EIA process as implemented in Namibia. The two case studies analysed herein also gave valuable information. However, the findings presented in these case studies were only specific to the projects investigated herein and cannot be generalised to other projects.

Only actors who are directly involved with EIAs were consulted for the survey and interviews, therefore excluding the public. This was only an exclusion criterion and it by no means indicates that the public has no view on EIA, or their views are not respected.

## **1.7 Overview of the Dissertation**

The dissertation is divided into eight chapters as follows:

**Chapter 1** provides the introduction and background to the central themes of the dissertation. The research topic is introduced with its rationale; the research aim, questions, and significance of the study are highlighted.

**Chapter 2** presents the literature review on governance and effectiveness of EIA including the theories and concepts from various literature sources to position the current research within broader and specific academic debates. Also, a methodological evaluation of the performance and effectiveness of EIA in other countries is presented to show the different methods and justify why specific methods were selected for the Namibia case study.

**Chapter 3** presents the research methodology adopted for this study. The study took the form of an inductive contextual inquiry based on interviews, a questionnaire survey, and an analysis of documentary sources. A motivation for this mixed (both quantitative and qualitative) research design and approach is provided. Specific methods and research designs are presented in the stand-alone chapters to align with the study research questions.

**Chapter 4** assesses various aspects of its implementation, effectiveness, and efficiency in ensuring sustainable development and environmental protection. Through this evaluation, stakeholders provided insights into the strengths, weaknesses, and areas

for improvement of Namibia's EIA system, and identify strategies for enhancing its performance and procedural effectiveness in the future.

**Chapter 5** assesses various dimensions of governance effectiveness, transparency, accountability, and participation in the EIA system. By evaluating these dimensions of governance quality in Namibia's EIA process, stakeholders can identify strengths, weaknesses, and areas for improvement to enhance transparency, participation, accountability, and equity in environmental decision-making. This, in turn, can contribute to more sustainable and equitable development outcomes and help build public trust and confidence in the EIA process.

**Chapter 6** evaluates the substantive, normative, and transactive effectiveness of EIA to understand the perceptions and experiences of key actors involved in the EIA process in Namibia, including government agencies, project proponents, affected communities, non-governmental organizations (NGOs), and other stakeholders. This chapter can capture the stakeholders' experiences, perspectives, and recommendations for improving the EIA process, ultimately contributing to more effective environmental decision-making and sustainable development in Namibia.

**Chapter 7** provides two illustrative cases in Namibia, one involving a mining project and the other an energy exploration project, by providing valuable insights and lessons learned regarding EIA implementation. Lessons learned from these cases underscore the importance of robust baseline studies, stakeholder engagement, adaptive management, and strategic decision-making to ensure effective EIA implementation and mitigate adverse impacts on the environment and communities.

**Chapter 8** gives a synthesis of the main findings and discussion according to the study questions as well as the overall contribution of the research to the field.

Recommendations and lessons learned are provided as the practical, theoretical, and methodological contributions of the study.

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## **CHAPTER 2. LITERATURE REVIEW**

### **2.1 Introduction**

This chapter presents the literature reviewed to determine the current state of knowledge and the remaining knowledge gaps, providing a rationale for conducting the research. By evaluating reliable books, reports, and journal articles, this chapter provides an overview of the topic of government and governance, and its relation to the implementation, quality, and effectiveness of EIA. Similar evaluation studies are considered to identify appropriate methodologies and fitting criteria for the assessment framework to be used in this evaluation.

This study focuses on evaluating the performance, quality, and effectiveness in Namibia's governance context. In this research, performance pertains to the role of the EIA legislation in applying EIA procedures and achieving process objectives, which are determined by various interlinked factors such as system and contextual factors in the place of implementation (Khan et al., 2020). Quality is described as related to inputs to the EIA process whereas 'effectiveness' refers to the outputs of the EIA process (Bond et al., 2018). In this study, we support this view given that the assumption in this research is that the quality EIA process satisfies good governance principles and aids in delivering substantive, transactive, and normative effectiveness. Good governance is therefore accepted as an input and measure of the quality of the EIA process and effectiveness as an output of the EIA system.

## **2.2 Nature and Evolution of EIA**

Environmental Impact Assessment (EIA) as a tool evolved as a response to public concern and alarm about the environment and human health, after the environmental controversies in the 1950s and early 1960s (Caldwell, 1988). The political intention of the EIA was to establish a process to provide decision-makers with indications of the likely environmental consequences of their actions (Wathern, 1995). This process was used as part of a logical decision-making process and included consideration of environmental values as well as the scientific and technical examination to calculate the project's impact on those environmental standards (Benson, 2003). Caldwell (1988) pointed out that the assumption behind the original setting of EIA is for it to be “a systematic, focused, interdisciplinary use of science to improve the quality of planning and decision making.”

In the United States of America (USA), the signing of the National Environmental Policy Act of 1969 (NEPA), led to the adoption of EIA as a mandatory regulatory mechanism (Office of NEPA Policy and Compliance, n.d.). The US NEPA mandated the government to enforce EIA through legislation for large-scale projects. Following the US initiative, numerous nations including Australia (1974), Thailand (1975), France (1976), the Philippines (1978), Israel (1981), Pakistan (1983), and the European Union (EU) through its 1985 Directive began to establish EIA systems (Shah et al., 2010).

The US NEPA and the EU EIA Directive, recognise the need for impact assessment in the protection of the natural environment and the assurance of human health and wellbeing. The EU EIA Directive (1985) stated that: “the effects of a project on the environment must be assessed to take account of concerns to protect human health, to contribute by means of a better environment to the quality of life, to ensure maintenance

of the diversity of species and to maintain the reproductive capacity of the ecosystem as a basic resource for life” (Wood & Lee, 1988).

The evolution of EIA can be traced back to the first worldwide environmental conference, the United Nations Stockholm Conference on the Human Environment in 1972 (United Nations Environment Programme [UNEP], 2022). In 1992, the United Nations Conference on Environment and Development (UNCED), also known as the Rio Conference (1992) also supported the ideals of good environmental governance. The Rio Conference actively promoted EIA using Agenda 21 as a vehicle to achieve environmental protection and sustainable development, especially in low- and middle-income countries (United Nations, 1992). The resolutions adopted during the conference were compiled into a report known as the Rio Declaration (United Nations, 1992). Principle 17 of the Declaration refers to EIA as a national instrument that shall be undertaken for proposed activities that are likely to have a significant adverse impact on the environment.

In 2002, the World Summit on Sustainable Development (WSSD) hosted in South Africa revitalised the Agenda 21 recommendations by compelling states to establish sound environmental, social, and economic policies with EIA as an instrument for good environmental governance (United Nations, 2002). In support of EIA adoption, countries were required to establish democratic institutions responsive to the needs of the people, the rule of law, anti-corruption measures, gender equality, and an enabling environment for investment as a basis for good governance. The Summit focused on legal, financial, economic, and regulatory mechanisms to accelerate development, improve health, and provide better care for the environment. The WSSD Plan of Implementation calls for an integrated approach to EIA, including its growing use as a tool to promote environmental governance and as an economic and social appraisal tool (Bhatt & Khanal, 2010).

The use of EIA has also been recognised in international organisations and international financial institutions. For example, the United Nations Economic Commission for Europe (UNECE) has negotiated conventions and protocols for EIA (Bosnjakovic, 2001) and the World Bank adopted EIA for major development projects, in which the borrower country had to undertake the Bank supervision and as part of the environmental safeguard measures (World Bank, 2018). EIA has become a heterogeneous process, with varied practices depending on legislation, administration, and procedures in the country of implementation (e.g. Glasson et al., 2012). Several institutions defined EIA to fit their purpose. Table 2. 1 depicts some of the common definitions in the literature.

Table 2. 1: Common Definitions in Environmental Impact Assessment

<b>Institution</b>	<b>Definition</b>
IAIA	“The process of identifying, predicting, evaluating and mitigating the biophysical, social, and other relevant effects of development proposals before major decisions being taken and commitments made” (Senécal et al., 1999).
World Bank	“An instrument to identify and assess the potential environmental impacts of a proposed project, evaluate alternatives, and design appropriate mitigation, management, and monitoring measures” (World Bank Group, 1992).
United Nations	“An assessment of impacts of a planned activity on the environment” (United Nations, 2002).
UNEP	“An examination, analysis and assessment of planned activities with a view to ensuring environmentally sound and sustainable development” (Abaza et al., 2004)
USAID	“Is a formal process for identifying the likely effects of particular activities or projects on the environment and on human health and welfare” (Stoughton & Fisher, 2005).

According to Weaver et al., (2008), EIA has since then evolved to be used increasingly in many countries around the world. Today, EIA is a mandatory environmental governance tool, and more than 140 countries have some form of it in terms of systems, frameworks, or regulatory frameworks. By 2011, EIA was mandated in all countries except North Korea, South Sudan, Brunei, and Somalia (Morgan, 2012). A more recent study by Yang (2019) cited EIA legislation in North Korea, South Sudan, Brunei, and Somalia, therefore concluding that EIA is now universally mandatory around the globe. Yang (2019, p. 569) further suggests that “the EIA norm has also become a general principle of law, a part of public international law”.

EIA is now described as the most widely emulated environmental governance policy innovation of the twentieth century (Bond et al., 2020; Hezri & Nordin Hasan, 2006). It is acknowledged as a successful planning and decision-making tool for conserving the environment and natural resources, and for balancing economic growth with environmental preservation and socioeconomic efficiency (Glasson et al., 2012).

However, some scholars have debated the assumptions underpinning EIA and the results to be achieved using EIA. Bond et al., (2020), Morgan (1998) and Sadler (1996). Ortolano and Shepherd (1995, p. 3) noted that EIA has had “far less influence than their original supporters had hoped they would.” Ortolano and Shepherd (1995) also highlighted areas of concern including the different views about the scope and purpose of EIA, institutional implementation and practice issues including limited or no public participation, and the limited substantive outcome of EIA as a process.

Lawrence (1997, p. 80) observed that the limitation of EIA is that its theoretical grounding is poorly defined and insufficiently developed: “The current theoretical, state of the art of EIA is largely an uneven mix of planning theory, traditional scientific theory, discipline-specific social, economic and biological theories, evaluation theories and procedures, public policy and organisational theory and a loose amalgam of methods, concepts, and frameworks.”

Tang (2007) argues that EIA activities in many countries are limited and often focus on the technical rather than the social and political aspects of a development project. These areas of concern are echoed by Zhang et al. (2013) in a review of literature on EIA, pointing out three areas: the lack of theoretical grounding of EIA, the guidance on the quality of EIA, and the effectiveness of the EIA process. Cashmore et al, (2010) noted that EIA is brief and simple but has numerous problems when implemented due to expanded and varied purposes. The scope of EIA effectiveness has been expanded to cover the impacts that the project may have on the natural environment, and social and economic dimensions (Lawrence, 1997).

EIA shifted from a primarily reactive tool involved in impact identification and mitigation to a more proactive and comprehensive instrument considering sustainability goals, including socio-cultural and economic factors on the environment (Bond and Morrison-Saunders, 2013; Chanchitpricha, et al., 2019); socio-ecological integrity, livelihood sufficiency, intra and inter-generational equity, democratic governance, and integration (Gibson, 2013). The emergence of Strategic Environmental Assessment (SEA) also explicitly extended the application of impact assessment to the decision making of policies, plans, and programs (IAIA, 2009).

Besides environmental impacts, new themes entered the area of impact assessment, some of them leading to independent impact assessment instruments, such as Health Impact Assessment and Social Impact Assessment (see IAIA, 2009).

To contextualise the evolution of EIA. Wood (2003) summarised seven themes from international practices as follows:

- The recognition of the crucial relationship of EIA to its broader decision making and environmental management context, and an acknowledgement of the subjective and political nature of the EIA process.
- A tendency to codify and away from discretion.
- Modification of EIA systems by adopting foundational elements and guidelines.
- A need to increase the quality of assessments and decisions.
- A necessity to increase the effectiveness and efficiency of EIA.
- The linkage of EIA with other functional environmental management systems; and
- The recognition that many variables are already resolved by the time the EIA of projects takes place.

(Simplified from Wood, 2003 pp 5-6).

While these themes were identified over 20 years ago, they suggest that EIA took a more pragmatic approach in its evolution. Therefore, EIA review is important to understand the current context. Presently, EIA has developed into much more than a tool to provide environmental information.

With the ongoing development of institutions, regulations, and guidelines, EIA is now an instrument of influence with wider environmental governance obligations. Meuleman (2015) asserts that EIA's evolution and functioning depend on the associated governance and social contexts where it is occurring. The current EIA discourse indicates a more pluralistic view in terms of the goals and objectives of EIA, different from the initial purpose. Considering that EA goals were developed under the views of conventional scientific rationality and civil science theories (Cashmore, 2004), there is a need to position EA practises into the global good governance and sustainability agenda. Further discussion of EA theories and their linkage to good environmental governance is discussed in section 2.5.2.

### **2.3 Objectives and Benefits of EIA**

EIA's primary goal is to assist the systematic study of environmental concerns as part of development decision making. This is achieved by collecting and evaluating data on the possible environmental consequences of various development projects and how they might be avoided or managed (Raimi, 2020). The assessment takes place before major decisions are taken and, ideally, while feasible alternatives and options to a proposed action are still open. In this context, the decision-making process extends from project initiation to implementation. Thus, there are several key stages at which EIA can build environmental considerations into project planning and design. According to Wang et al., (2003), depending on the EIA system, the approval process may be related to the regulatory authority, including the issuing of permits and licenses, without which a project cannot proceed.

Wood (2003) added that the approval process typically comprises determining if the plan is acceptable and, if so, establishing environmental terms and conditions for project execution. The approval body considers several variables, including the information presented by an EIA, before making its decision.

Environmental impact assessment has its roots in the desire to ensure that all activities that humans perform in the quest to achieve individual and collective development goals do not cause harm to the environment (Drayson et al., 2017). The objective of EIA therefore involves the identification of potential impacts of developmental activities on the environment and devising alternative ways of conducting investment interventions with minimum or no harm to the environment (Fischer & Onyango, 2012; Morgan, 2012; Sovacool, 2018). Its objectives are to incorporate, from an early stage, environmental information, and interpretations into planning and decision-making procedures; to aid informed and balanced decision-making; to alter organisational values, attitudes, and behaviour, and to contribute to more open, systematic, accountable, and effective public participation; and to contribute to achieving broader environmental objectives such as sustainability (Glasson et al., 2012).

Although EIA is undoubtedly often seen as time-consuming and an expensive hurdle to development, EIA can help developers identify the impact and the affected communities, allowing them time to minimise or eliminate adverse impacts (Glasson et al., 2012). The purpose of conducting EIA is to generate evidence for advising decision-makers as well as the public on the implications that the proposed projects would have to inform them to make environmentally viable decisions (Hasan et al., 2018).

Enríquez-de-Salamanca (2018) indicated that EIA offers suggestions for measures that would prevent negative effects and mitigate the adverse consequences of project activities. Barker and Jones (2013) emphasised the potential of EIA to contribute significantly to identifying and managing the diverse effects of activities that developmental projects have on the environment by promoting evidence-based decision-making.

The adoption of EIA therefore is founded on a desire to preserve the ecosystems while ensuring continued sustainable development. Therefore, the short-term objectives of EIA are mainly to make informed decisions and improve environmental protection and the long-term objectives are to achieve fair and democratic participatory process and sustainable development (Barker and Jones 2013, Glasson et al., 2012).

An appropriate EIA is undertaken by a multidisciplinary team integrating the skills, knowledge, and competencies of individual members in identifying direct and indirect as well as cumulative impacts of the development and the potential risks they present (Sánchez & Mitchell, 2017). The team also predicts the possible impact that the project might have in the future (Zhang et al., 2013). According to Retief et al., (2016), the predictions also need to include the future state of the environment provided that the project has not taken place, as a way of justifying whether the project adds value to the community and environment in the long term. That means there is value in conducting EIA because it helps the project proponents to make a comprehensive assessment of the value of their project to the environment (Sánchez & Mitchell, 2017; Zhang et al., 2013).

The evidence generated through EIA is critical to decision-making in projects (Bond et al., 2020). The EIA system benefits the community where the project is implemented, the environment, and the regulatory authorities because it facilitates a balanced approach to decision-making and compensation for the project's impact on the ecosystem. EIA also enhances democracy through public participation, health, a safe environment, improved governance, and good environmental performance (Pope et al., 2018).

Good environmental performance is significantly correlated to good economic performance (Torres, 2014). Evidence suggests further that internal governance mechanisms have a mixed moderating effect on the link between financial performance and environmental performance (Nguyen et al., 2021). Bosun-Fakunle et al., (2023) noted that institutional quality, good governance, and the degree of democracy influence whether environmental performance improves or deteriorates.

## **2.4 Principles of an EIA**

There are two tiers of EIA Principles, namely: basic and operating. The Basic Principles apply to all stages of EIA and apply to SEA of policies, plans, and programmes. The Basic Principles are interdependent and therefore should be applied as a single package to ensure that an EIA fulfils its purpose and is carried out following the internationally accepted standards that guide EIA administration. On the other hand, the Operating Principles describe how the Basic Principles should be applied to the main steps and specific stages of the EIA process, e.g., screening; scoping; identification of impacts, and assessment of alternatives. This study of Namibia's EIA system focuses on specific stages of the process and reviews the extent to which it conforms with the best practices

of an ideal EIA system and the qualities of good governance. Table 2.2 describes EIA's basic principles as accepted by the IAIA (Senécal et al., 1999).

Table 2. 2: Guiding Principles EIA Administration (Source: Senécal et al., (1999).

Guiding principles	Description
1. Purposive	The process should inform decision making and result in appropriate levels of environmental protection and community well-being.
2. Rigorous	The process should apply “best practicable” science, employing methodologies and techniques appropriate to address the problems being investigated.
3. Practical	The process should result in information and outputs that assist with problem-solving and are acceptable to and able to be implemented by proponents.
4. Relevant	The process should provide sufficient, reliable, and usable information for development planning and decision making.
5. Cost-effective	The process should achieve the objectives of EIA within the limits of available information, time, resources, and methodology.
6. Efficient	The process should impose the minimum cost burdens in terms of time and finance on proponents and participants consistent with meeting the accepted requirements and objectives of EIA.
7. Focused	The process should concentrate on significant environmental effects and key issues.
8. Adaptive	The process should be adjusted to the realities, issues, and circumstances of the proposals under review without compromising the integrity of the process, and be iterative, incorporating lessons learned throughout the proposal's life cycle.
9. Participative	The process should provide appropriate opportunities to inform and involve the interested and affected public, and their inputs and concerns should be addressed explicitly in the documentation and decision-making.
10. Interdisciplinary	The process should ensure that the appropriate techniques and experts in the relevant biophysical and socioeconomic disciplines are employed, including the use of traditional knowledge as relevant.
11. Credible	The process should be carried out with professionalism, rigour, fairness, objectivity, impartiality, and balance and be subject to independent checks and verification.
12. Integrated	The process should address the interrelationships of social, economic, and biophysical aspects.
13. Transparent	The process should have clear, easily understood requirements for EIA content; ensure public access to information; identify the factors that are to be considered in decision-making; and acknowledge limitations and difficulties.
14. Systematic	The process should result in full consideration of all relevant information on the affected environment & of proposed alternatives.

## **2.5 Theories and Principles of EIA**

EIA evolved and spread throughout the world, and its application varied considerably from one context to the next. This is because the process evolved from a reactive regulatory tool to an integrative and multidisciplinary nature of the process, which has come to include natural and social sciences, and multiple data-intensive research methods, with a scope of including stakeholders and the public. EIA is now applied in a broad range of decision-making contexts, including international development and trade policy as well as disaster preparedness (Pope et al., 2013). It has been argued that the fast speed at which EIA entered the political arena of different countries worldwide has produced fractured, and at times, conflicting theories, principles, definitions of the goals, and the fundamental purpose(s) of EIA (Cashmore, 2004). In the early days of EIA development, it had been noted that the establishment of IA was influenced by various concepts and principles.

Following the widespread acceptance of EIA, there has been a call for a more coherent EIA theory-building (Lawrence, 1997). Caldwell (1988) noted five converging influences: i) rational planning theory; ii) technology assessment, iii) risk assessment; iv) policy goals of the environmental movement; and v) legislative need to strengthen administrative accountability. Bartlett and Kurian (1999) introduced some possible models for how EIA can affect development. The models are EIA as the information processing model; the political economy model; the organisational politics model; the pluralist politics model; and the institutionalist model. While researchers argue that these models are oversimplified, they provide a useful framing for discussing effectiveness in EIA and what it means. Cashmore (2004) characterizes EIA as a conceptual system of

tenuous models, which are seen as representing the range of views and expectations about its function and purpose.

In this study, we discuss two philosophical positions of EIA from a perspective of rational planning theory and governance administration. The two philosophical positions are interrogated because they support the objective of the study which is to holistically evaluate the quality of governance, performance, and effectiveness of the EIA system.

### **2.5.1 Rational planning theory**

The philosophy and principles of EIA can be traced back to a rationalist approach to decision making that emerged in the 1960s (Gilbuena et al., 2013; Jay et al., 2007; Rathi, 2017). This section elaborates on the rationalist approach, the key arguments and the implications to EIA effectiveness.

According to Caldwell (1988), the initial idea of the NEPA was that EIA is designed as a “systematic, focused, interdisciplinary use of science to improve the quality of planning and decision making”. NEPA requires agencies to prepare environmental impact statements for development activity, and to use the EIA to make decisions. EIA therefore became a procedural requirement for every state. While EIA was set to influence the quality of decisions, some researchers suggest that it is more of a tool to aid decision making, striking debates on whether EIA improves the quality of decisions for environmental protection and sustainable development.

Since the 1970s the subject of rationality in EIA has undergone many changes. Kørnø and Thissen (2000) introduced the concept of procedural and substantive rationality in setting EA objectives. The latter is concerned with attaining the process's objectives as a whole, whereas the former is concerned with the process efficiency.

Fischer (2003) highlighted EIA as a comprehensive rationalistic planning where planners must strike a balance between numerous competing interests based on rational principles and planning standards, including the right of political decision-makers to define priorities within the system. Fischer (2003) defended rationalistic planning as being a form of justice, concerning set priorities and objectives, which outweigh the interests of individuals. According to Fischer (2003), a balance must be done by planners who need to strike a balance on various issues based on planning regulations and rational principles to ensure communicative justice.

Elling (2009) outlined a distinction between procedural and substantive rationality claiming that the two does not include an alternative to a goal-directed process, whether one or the other, as they are both teleological and ultimately based on cognitive-instrumental rationality alone. Kornov and Thissen (2000) noted that for EIA to achieve the intended influence on decision making its approach should be guided by precepts into the nature of decision processes.

Bond et al., (2020) argued that despite the consensus across the globe that EA adds value to the decision-making process when planning to carry out developmental projects, the EA process faces various challenges that hinder rational project decisions and effectiveness. First is the politicisation of project decisions, which diminishes the ability to consider the negative effects of projects holistically in cases where the projects originate from politically connected individuals (Bond et al., 2020). That explains the existence of projects that cause harm to the environment in certain areas because the concerned groups could not raise their concerns to preserve their political ambitions.

Rozema and Bond (2015) suggest that EA ought to present the opportunity for members of the community and project stakeholders to work together in making meaningful decisions regarding potential projects as well as ways in which the projects can proceed with minimum or no disturbance to the ecosystem.

Secondly, EA is criticised as anti-development; costly, regularly of low quality; where the public is often not adequately consulted; and where the final decision may not adequately consider the results and recommendations of EAs (Glasson et al., 2012). In addition, the reliance on permitting conditions to mitigate the impact, and monitoring and enforcement of the decision is often absent or flawed, causing several implementation deficiencies (Marara et al., 2011).

Thirdly, the pursuit of EA as a tool for sustainable development brought a new nexus to EA's rational theory. The use and acceptance of sustainable development as a measure of human development as annotated in the 1987 Brundtland report, drove changes in the normative dimension of EIA theory (Cashmore and Kornov, 2013). The scope of assessment has now expanded to cover the impacts the project may have on the natural environment, social and economic dimensions (Lawrence, 1997), and its application to the decision making of policies, plans, and programmes called Strategic Environmental Assessment (SEA) (IAIA, 2009). The evolution of EIA from the original mission into an integrated assessment for sustainability goals brought problems to EIA theory and effectiveness (Kornov & Thissen, 2000). According to Elling (2009), while the original idea of the EIA planning process begins with the scientific definition or identification of the objectives of the assessment, followed by the examination of the methods and alternatives to reaching the desired results, the rationality model cannot be easily achieved (Elling, 2009).

The fourth point of debate on EA rationality is whether EIA is a science, or an art. Cashmore et al., (2010) highlighted that the discourse underlying EIA development is viewed as a patchwork of planning theory and an uneven mix of a loose amalgam of classical scientific theory, discipline-specific social, economic, and biological theories, public policy, and organizational philosophy, methods, concepts, and frameworks (Lawrence, 1997).

Cashmore (2004) discusses the role of science in environmental assessment and discourses the rationality matter indirectly through an ideal of five different interpretations of the role of science, representing two paradigms. The paradigm that favours natural science methods in predicting environmental impact was characterised as applied science, and the views favouring the inclusion of different stakeholders and interests, values, and dialogue were characterised as civic science. These paradigms can be understood in the way that the former stresses a science-based view that focuses on the application of scientific knowledge and expertise such as analytical science and environmental design, hence favouring positivism and rationalism in goal achievement (Elling, 2009). These perspectives are discussed in the next section.

### **2.5.1.1 EIA as Applied Science**

From the viewpoint of applied science, EIA is considered a process in which scientific information and talents are put to practical use (Ortolano & Shepherd, 1995). According to Cashmore (2004), the scientific model of EIA is based on conventional philosophical traditions that view science as an entirely rational process of objective inquiry. This, however, is the single fundamental similarity between the two models identified within this paradigm (the analytical science model and the environmental design model) because they are based on incommensurate opinions concerning the substantive purposes of EIA. The analytical science model is based on the premise that the scientific method (largely equated to a naturalistic philosophy of science and an epistemology of positivism, provides the foundation for EIA theory and practice (Cashmore, 2004). This does not necessarily mean that EIA is viewed as science itself, but, as a minimum, the process should be based extensively on accepted scientific principles and procedures if it is to be perceived as credible.

The environmental design model under this paradigm highlights that EA is not associated with a specific concept or model within the context of environmental science or design. However, it can provide information on a general concept that might align with the idea of considering environmental factors in design processes (Tsitman & Proshunina, 2019). The second model is based on a critique of the effectiveness and efficiency of the procedural forms of EIA practised in most jurisdictions. This paradigm focuses on EIA documentation and the consent decision creates a perception that EIA is simply a bureaucratic, perfunctory step in obtaining development consent (McDonald & Brown, 1995).

This “passive” model of EIA divorces it from environmental design and management activities, thereby limiting it to reactive analysis and end-of-pipe mitigation hence rendering it ineffective. Also, in consequence, the EIA process predominantly operates in a vacuum as noted by McDonald and Brown (1995 p. 485) that “EIA requires that it be done rather than anything be done by it”.

### **2.5.1.2 EIA as Civic Science**

This model suggests that EIA influences decisions using “pragmatic, inclusive and deliberative” forms of science and art (Cashmore 2004: 410-11). This paradigm takes on a much more ‘civic trait’ and can be seen in its focus on public participation, stakeholder engagement, and transparency in decision making. It allows for decisions to be made subjectively and attempts to be more interpretive of the complex term including sustainable development (Cashmore, 2004). Science in this model is much less conventional, as it is used to empower all stakeholders and not merely measurable and objective natural science-based outcomes to deliberate and make decisions.

Cashmore (2004) discusses the political and social character of policy and decision making including the role of science in EIA. This ideology is emphasised using three models identified within these three paradigms namely the information provision model; the participation model; and the environmental governance model.

The information model EA is viewed as a technique for generating, organising, and communicating information (Cashmore, 2004). The usefulness of information under this model is generally driven by time and resource constraints, with assessments frequently conducted in an atmosphere of political and public controversy (Caldwell, 1991; Dickerson & Montgomery, 1993).

The participation model is based on a broadly similar theory of EIA to the information provision model; however, social values and stakeholder involvement are viewed as integral elements of the rational scientific theory. A significantly more substantial, inclusive, and deliberative role is envisaged for stakeholders in the participation model. The idea is that participation will improve the EIA process in many ways including increased richness of information and creativity for actors and stakeholders; increased acceptance of the result of the assessment and the decision thereof, stimulating shared visions and a sense of ownership among communities; incorporation of the dynamics and allow for emergent insights and learning over time (Jha-Thakur & Fischer, 2016)

In the environmental governance model, EIA is viewed as a decision tool used to empower stakeholders, promote an egalitarian society, and foster a very strong (ecocentric) interpretation of sustainable development (Cashmore, 2004). In this model, EIA must be all the things and take on an advocacy role encapsulated in the notion of civic science: inclusive, deliberative, and participatory, and becomes a framework for conciliation and negotiation. At the same time, EIA under this model is also an acutely political and moral process, used to promote social justice and equality, ensuring transparent decision making and making institutions accountable, minimising losers, and realising community self-governance (Cashmore, 2004; Holder, 2004). Like all political processes, EIA is subject to local political nature and context including the environmental legislation, institutional arrangement, and power setups.

In this study, we agree that EIA is an important environmental governance tool that is informational; can transform values and rules of institutions; is deliberative; and supports the interest of interested and affected parties. Table 2.3 shows these four theories that help EIA to promote intended environmental outcomes. These theories are considered in the selection of criteria for the evaluation framework, developed in this study.

Table 2. 3: Theories on how EIA Promotes Environmental Outcome

<b>Guiding principles</b>	<b>Description</b>
1. Information processing model	Based on the notion that sub-optimal decisions are caused by information failures. By ensuring decision-makers have access to more information, EIA can lead to improved outcomes.
2. Institutional model	EIA can transform the values and rules that govern institutions and thereby help to promote sustainable development. This can occur by requiring decision-makers to gather social and environmental information and consider alternatives. EIA can also provide a medium by which environmental advocates within organisations can exert influence, leading to organisational reform.
3. Deliberative democracy model	EIA provides a forum for deliberative decision making, in which groups and individuals can engage in a meaningful exchange of views and information. Through the process of deliberation, stakeholders can move beyond self-interest and reach collective outcomes that promote sustainability and ecological rationality.
4. Interest group bargaining model	EIA provides a forum in which interest groups can bargain. The process of interest group bargaining can lead to more sustainable outcomes.

(Source: Bartlett & Kurian (1999), Holder (2004), Cashmore (2004), Cashmore et al., (2010); Macintosh (2010)).

### **2.5.2 EIA Administration and Governance**

In this study governance is considered a non-normative way, considering how decisions are made, problems are resolved, and opportunities are created including the role of actors. Governance is a relational concept that includes polity (the institutions,

instruments, and administrative cultures) and politics (the political settings and processes) (Meuleman, 2015). With the increasingly complex nature of today's environmental problems, conventional administrative measures are less sufficient. EIA is seen as an important administrative and governance tool for environmental management. According to Dryzek, (2015), administration rationalism implies a model based on expertise, knowledge, and centralised power. Complex problems including environmental ones defy such a setting of centralisation. Such a crisis of administrative rationalism implies the function and performance of EIA in addressing environmental concerns. The nature of the environment and the type of development and environmental challenges brought a shift from a top-down approach of government to a decentralised, network style of governance and good governance.

In the literature, government and governance are inherently political terms and can be best described through the lens of the significant shifts that occurred in political development in the 20<sup>th</sup> century (Franks & Vanclay, 2013). In this study, government refers to the hierarchical regime characterising traditional visions of the unitary state while governance points to multi-layered points of policy making involving a plurality of public and private actors (Lo, 2017). In the early years of the 20<sup>th</sup> century, governments took a higher profile and produced comprehensive national development plans which were seen as the appropriate, legitimate, and unchallenged vehicles for socioeconomic development (Franks & Vanclay, 2013). Many development projects took on a special significance and were implemented through a top-down exercise with little or no contribution from society (Elgström & Hyden, 2002). However, around the 1960s, practitioners realised that a singular focus on projects in the context of national planning was inadequate (Elgström & Hyden, 2002).

A sectoral approach was then taken to broaden the scope of projects into different programmes. In that era, integrated tools including rural development programmes and EA tools were introduced as instruments of action (Elgström & Hyden, 2002; Glasson et al., 2012).

By the end of the 1970s, it became increasingly clear that governments alone could not undertake all the governing burdens. This was most apparent in sub-Saharan Africa, where some states lacked the technical capacity and infrastructure to undertake development programmes (Wingqvist & Dahlberg, 2008). This led to the birthing of a new regime of governance in the 1990s called *good governance*. Unlike the traditional old governance where the state is the sole custodian of the economy and steering development activities, good governance encompasses forms of rule and the act of power in ways that extend far beyond the institutions and actions of government (Katsamunskaja, 2016).

Good governance encourages interaction between the state and society through a bottom-up approach (Ouyang et al., 2020). A path from government to good governance and environmental good governance describes a shift in the process of decision making and the governing of society and economy. In this study, government refers to the hierarchical regime describing traditional visions of the unitary state while governance points to multi-layered avenues of policy making involving a plurality of public and private actors.

Good governance is based on three pillars of good administration: economic governance, political governance, and administrative governance. Economic governance encompasses decision-making processes that influence a country's economic operations and interactions with other economies (United Nations Development Programme [UNDP], 2009) and has significant consequences for fairness, poverty alleviation, and

quality of life. Political governance on the other hand is the decision-making process used to develop policy, while administrative governance is the mechanism used to implement policy.

For environmental management, a major twist occurred in the 1980s due to the advocacy to achieve the twin goals of economic productivity and environmental protection for sustainable development (World Commission on Environment and Development [WCED], 1987). A new term called environmental governance emerged and is defined as the processes and institutions through which societies make decisions affecting the environment (Wingqvist & Dahlberg, 2008). Lemos and Agrawal (2006) viewed environmental governance as a set of regulatory processes, mechanisms, and organisations through which political actors influence environmental actions and outcomes. Harashima, (2000) added that environmental governance is ‘how societies organise themselves to manage their environment’ highlighting that it concerns interactions among formal and informal institutions and actors within society that influence how environmental problems are identified and framed. This study adopts the latter definition, to embrace critical factors of involvement and capacity of state and non-state actors in environmental management.

Figure 2.1 demonstrates a shift from government to good governance and environmental governance with an emphasis on the involvement of governments, communities (NGOs and civil society), and markets (private sector) highlighting a move from a monocentric and top-down command to a polycentric and a hybrid system that is participatory (Lemos & Agrawal, 2008; Weiss, 2000). Administratively, EIA became a tool befitting the purpose of environmental governance because it’s legislated with a political nature and involves the state and non-state actors.

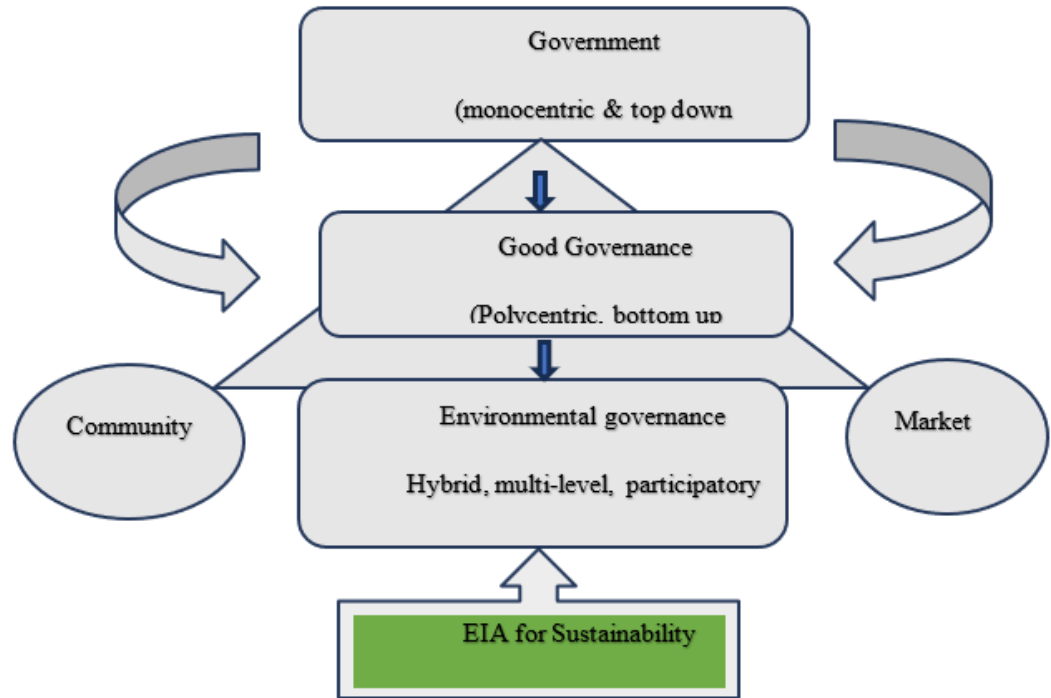


Figure 2. 1: A schematic diagram showing a shift from government to good environmental governance (Drawn by author) (Lemos & Agrawal, 2008; Weiss, 2000).

## 2.6 Types and Frameworks for EIA Evaluation: performance, Effectiveness & quality

Nearly three decades after the introduction of the US NEPA, a wealth of research about the review of EIA procedures and practices in various countries has surfaced. During the 1990s, several comparative studies evaluating the effectiveness and performance of EIA systems in developed and developing countries were published (e.g., Ortolano & Shepherd, 1995; Wood, 1995, 1999; Sadler, 1996; Leu et al., 1997). International donor organizations i.e. World Bank, (1997) have also conducted studies on the performance and effectiveness of their EIA procedures (World Bank, 1997, United Nations, 2002).

These conceptualisations of the effectiveness dimension have been used by other scholars in the EA field since then and many aspects referring to a multitude of contexts, including philosophical, psychosocial, practical, strategic, and project-specific considerations have been incorporated (Bond & Morrison-Saunders, 2012; Cashmore et al., 2010; Chanchitpricha & Bond, 2013). Academics in the field of impact assessment argue that evaluating EA effectiveness is not an easy task (e.g. Wang et al., 2012) and that it is problematic at both a conceptual and methodological level (Cashmore et al., 2004; Cashmore et al., 2010; Retief et al., 2008). Other scholars noted that evaluating the effectiveness of environmental assessment systems is difficult since it is unlikely that a control is available against which to compare the implementation of the tool, and it is not possible to judge likely impacts in the absence of the tool (Cashmore et al., 2010).

Wood (1995) further argues that there has been no reliable quantification of EA effectiveness and therefore it is more desirable and feasible to assess the effectiveness of the EA based on the attitudes and opinions of those directly involved with the EA system. This study uses the perception of actors to obtain information on the functioning, quality, and effectiveness of EIA through surveys and interviews.

According to Cashmore et al., (2010) one of the biggest challenges in evaluation research is the meaning of the concept of 'effectiveness'. The term effectiveness has many different meanings. According to Young and Levy (1999), as cited in Chanchitpricha and Bond (2013:66) "Effectiveness is a matter of the contribution that an organisation makes toward problem-solving and motivates players to invest the necessary energy and time". Wimbush and Watson (2000), as cited in Chanchitpricha and Bond (2013:66), indicated that effectiveness evaluation studies unearthed the unintended and intended effects of programmes, projects, and policies.

This means that based on the outcome of the actions the effectiveness can be observed (Chanchitpricha & Bond, 2013). In this study, different criteria are used to perceive the effectiveness and the extent to which the EIA system is achieving the intended purpose.

Wood (1995) initiated an EIA review of EIA systems. The Wood criteria represent a comprehensive and independent evaluation approach to EIA system review depicting an 'ideal' internationally recognized EIA best practice (Wood, 1995). These criteria were made up of open-ended statements allowing a descriptive evaluation of the system and determining the strengths and weaknesses of a national EIA system. The Wood criteria relate to the legal basis, consideration of alternatives, the EIA process, cost and benefits, and strategic environmental assessment. Since then, a review of national EIA systems against international practices has been beneficial in explaining the nature of a national EIA process based on international best practices to understand the practice and determine the factors that are essential to effectiveness, to lead to valuable suggestions for improvement of the system being examined. The Namibia EIA system is reviewed against the international best practices following Wood and Ahmad (2003).

The development of effectiveness dimensions began with Sadler's 1996 "International Study of the Effectiveness of Environmental Assessment", which is so far from a hallmark of EIA evaluation literature on practice and effectiveness. Sadler (1996, p. 37) defined effectiveness as "how well something works or whether it works as intended and meets the purposes for which it was designed". Sadler (1996) classified three major types of effectiveness dimensions as "the extent to which it works (procedurally); its findings contribute to decision making of project/ programme/plan/policy development, and gain the acceptance and satisfaction of key stakeholders, it achieves its intended aims,

stakeholders can learn, improve their knowledge, and change their views when the impact assessment tool/or process is implemented” (substantively) and based on resources used, results are achieved efficiently (transactive);. This study adopts Sadler's definition of effectiveness. In addition to the three effectiveness dimensions, Baker and McLelland (2003) added a new category of normative effectiveness defined as the extent to which the EIA policy meets the ideal purpose which may include being a mechanism of sustainable development and a fair and democratic participatory process. This evaluation is undertaken following these three effectiveness dimensions.

Cashmore and Morgan (2014) suggested that procedural effectiveness means that the EIA complies with acceptable standards and best practices, substantive effectiveness indicates the achievement of established and expected objectives through the EIA process, and transactive effectiveness determines the extent to which the procedural principles deliver substantive objectives at the least cost and in the minimum time frame (Sadler, 1996).

Additionally, Bond et al., (2013) added pluralism and learning as substantive functions of EIA and a measure of effectiveness (Khosravi et al., 2018). They reasoned that a good EIA ought to change the actors' and stakeholders' values and norms of thinking of actors toward the environment and benefit the EIA process in the future (Bond et al., 2017).

In addition to the four known effectiveness dimensions, Pope et al., (2018, p. 43) added a new criterion of legitimacy and presented corresponding test questions for each as follows:

1. *Procedural effectiveness*: Have appropriate processes been followed that reflect institutional and professional standards and procedures?
2. *Transactive effectiveness*: To what extent, and by whom, is the outcome of conducting the assessment considered to be worth the time and cost involved?
3. *Substantive effectiveness*: To what extent does the assessment lead to changes in process, actions, learning, or outcomes?
4. *Normative effectiveness*: Does the assessment meet the expectations of stakeholders irrespective of the sustainability discourse they align with?
5. *Legitimacy*: Was the assessment process perceived to be legitimate by a wide range of stakeholders?

In the same year, Bond et al., (2018) proposed six dimensions of EIA quality as follows.

- Efficiency – the extent to which the best outcomes possible are achieved through an EA process given existing constraints;
- Optimacy – the extent to which the process follows best practice (e.g. international standards) rather than the minimum requirements in any jurisdiction;
- Conformance – the extent to which an EA complies with set requirements;
- Legitimacy – the extent to which individuals and society regard the process and outcomes of an EA as being reliable and acceptable;

- Equity – the extent to which the impacts or benefits identified in an EA, and the steps taken to address the impacts or benefits, are evenly and fairly distributed across society;

- Capacity maintenance – the extent to which the practitioners of EA maintain the skills and knowledge to achieve the other aspects of quality;

- Transformative capacity – the extent to which the EA has empowered individuals or has changed values (institutional or individual) or increased knowledge and/or understanding;

- Quality management – the extent to which the quality is measured, monitored, and managed by those conducting the EA.

Following Bond et al., (2018), this study assesses the performance of the Namibia EIA system using the element of Conformance – the extent to which an EA complies with ideal requirements (Objective 1 on the status, functioning and procedural effectiveness); the Optimacy – the extent to which the process optimise and satisfies best practice and international accepted standards in this case, the good governance qualities as in (Objective 2 on the extent to which EIA satisfies good governance principles as described by the world Bank (1999). While the World Bank (1999) does not include legitimacy as a good governance quality, the OECD (1997) listed it as a good governance principle.

Following the OECD (1997) legitimacy is evaluated in this study as a good governance quality and is defined as the extent to which individuals and a wide range of stakeholders regard the process and outcomes of an EIA as being reliable and acceptable (Pope et al., 2018). This study also agrees with Bond et al., (2018), that the quality dimension of the EIA process aligns with procedural and transactive effectiveness and

partly aligns with normative effectiveness, but it is distinct from substantive effectiveness but helps to deliver substantive outcomes.

Morrison-Saunders and Arts (2004) categorized EIA evaluation studies, and described three levels at which EIA can be studied as follows:

1. *Meta level*: corresponding to the EIA concept and practice globally, examining whether it is a worthwhile process and asking the question: “Does EIA work?” (Morrison-Saunders & Arts, 2004, p. 6).
2. *Macro level*: corresponding to the EIA system in any given jurisdiction, examining the influence of the process on, inter alia, decision making, and its efficiency; and
3. *Micro level*: corresponding to individual project case studies and relating to specific steps within the process. “A key question is: was the project and the impacted environment managed acceptably?” (Morrison-Saunders & Arts, 2004, p. 6).

This research followed Morrison-Saunders and Arts (2004) and evaluated the performance, quality, and effectiveness of the Namibia EIA system at three levels: meta, macro, and micro level. In addition, the study adopts a combination of effectiveness criteria from Sadler (1996), Baker and McLelland (2003), and Bond et al., (2018). At the meta-level, the study evaluates conformance – the extent to which an EA complies with set requirements. The set requirements refer to the international best practices as per the literature (e.g. Wood, 2003; Fuller, 1999) and are presented as procedural effectiveness and performance in objective 1.

At the macro level, the study evaluates optimacy – the extent to which the process satisfies best practice (e.g. international standards) rather than the minimum requirements in any jurisdiction, presented as the quality of the EIA system measured by good governance qualities (OECD, 1997, World Bank, 1999; UNDP, 2009) in objective 2 and effectiveness – the extent to which the best outcomes possible are achieved through an EA process given existing constraints presented here in objective 3. At the micro level, this research scrutinises the EIA process as undertaken in two important case studies on Marine Phosphate Mining and ReconAfrica oil drilling in Namibia and assesses the extent to which the EIA process is duly followed as per the law.

### **2.6.1 Studies Evaluating Performance and procedural effectiveness of EIA systems.**

Procedural effectiveness focuses on the established provisions through process structure and adherence to the policy and principles (Sadler, 1996). Early examples of EIA evaluation studies include Ortolano, et al., (1987) and Leu, et al., (1996). In the former research, the authors employed control mechanisms using organisational theories and categorised effectiveness into five dimensions: compliance with procedural requirements; adequate preparation of EIA reports; utilisation of proper methods for impact assessments; influence on decision making; and balance between environmental and economic considerations. Leu et al., (1996) highlighted contextual factors in the form of international and national factors affecting an EIA system.

Ortolano and Shepherd (1995, p. 286) described the control mechanisms as “intra-organizational and inter-organizational processes and structures intended to assure that lead agencies and developers account for environmental impact in planning and decision making.” Leu et al., (2008) used the seven quality control mechanisms namely: legislative, procedural, evaluative, professional, public/relevant agency, administrative, and judicial follow up to compare and evaluate the EIA systems of three countries in Southeast Asia, namely Taiwan, Malaysia, and Indonesia.

The most popular method for evaluating EIA systems procedurally has been the 14 criteria of an ideal EIA system established by Wood (1995). Subsequent authors have used these criteria to evaluate EIA systems for individual countries and to compare EIA systems, for example, Ahmed and Ferdausi (2016), Aung (2017), Heinma and Pöder (2010), and Pölönen et al., (2011). Wood (2003) used the 14 criteria to compare the performance of seven EIA systems, namely those of the USA, the UK, the Netherlands, Canada, Australia, and New Zealand. The focus of these evaluation criteria was mainly on the aims and stages of EIA, requirements, and the operation of the EIA systems, identifying their weaknesses and innovations (Wood, 2003). While Wood’s (2003) criteria remain the most employed method, other authors including Clausen et al., (2011) and Gallardo and Bond (2011) have introduced their list of criteria, but the differences are minor.

The most significant modification in terms of additional criteria came from a comparative study of the EIA systems of Egypt, Turkey, and Tunisia by Ahmad and Wood (2002). Ahmad and Wood (2002) introduced 10 additional criteria establishing 23 comprehensive review criteria. According to Fuller (1999), the authors grouped the criteria into two conceptual models: systemic measures and foundation measures.

Fuller (1999) notes the models are descriptively oriented and the systemic measures examine quality assurance in the practice and administration of EIA including both legislative and administrative frameworks as well as aspects of the EIA process such as screening, scoping, alternatives, public participation, and review of EIA reports, mitigation, and monitoring. Foundation measures assess actions undertaken to maintain and improve the effectiveness of the EIA system including the existence of EIA guidelines, training, capacity building, and professional recognition.

Other researchers who used Ahmad and Wood's (2002) criteria to evaluate the EIA system include Khosravi et al., (2019) for Iran; Elvan (2018) for Turkey, Suwanteep et al., (2016) for Thailand, Japan and China; Nadeem and Hameed (2008) for Pakistan, El-Fadl and El-Fadel (2004) for Egypt; Wang et al., (2003) for China; Momtaz (2002) for Bangladesh and Zubair (2001) for Sri Lanka.

Due to their wide application in different contexts as well as their structured nature enabling an in-depth evaluation of the system, Ahmad and Wood's (2002) criteria are selected to analyse the performance and procedural effectiveness of EIA in Namibia in this study. Drayson et al., (2017) argue that the performance and effectiveness of EIA can only be well understood in the governance context where it operates. Arts et al., (2012) added that the effectiveness of EIA is connected to the existing governance mechanisms and contextual elements, implying the importance of country-specific EIA evaluation. Throughout the literature, EIA evaluation studies have been undertaken using different methods. Table 2.5 below shows the different methods used in evaluating the national EIA systems.

Table 2. 4: Different EIA criteria used in reviewing EIA systems

Source	Criteria	EIA system	Method
Wood (1995)	Wood criteria (1995)	UK, USA, the Netherlands, Canada, the Commonwealth of Australia, New Zealand and South Africa.	Literature review
Annandale (2001)	Modified Wood (1995) criteria	Maldives	Literature review
Ahmad and Wood (2002)	Ahmad and Wood Criteria (2002)	Egypt, Turkey, and Tunisia	Interview
El-Fadl and El Fadel (2004)	Ahmad and Wood criteria (2002)	Middle East and North Africa region	Literature review
Nadeem and Hameed (2008)	Adapted from Wood (2003); Ahmad and Wood (2002); Fuller (1999)	Pakistan	Literature review & interview
Badr (2009)	Ahmad and Wood (2002)	Egypt	Interview
Panigrahi and Amirapu (2012)	Ahmad and Wood (2002) adopted	India	Literature review, Analysis of various legal provisions and interview
Wayakone and Makoto (2012)	Adapted from Wood (1995)	Lao PDR	Literature review
Ahmad and Ferdousi (2016)	Annandale's modified Wood criteria	Bangladesh	Literature review
Aung (2017)	Annandale's modified Wood criteria	Myanmar	Literature review & interview
Rebelo (2017)	Adapted from Ahmad and Wood (2002), Wood (1995) & Leu et al., 1997	EU, Kenya, Tanzania, Mozambique, South Africa & Angola	Literature review

The common criteria used to evaluate EIA performance and procedural effectiveness focused on the process and compared the regulatory frameworks, identifying weaknesses, and innovations using literature review and interviews. This study followed this trend and evaluated the performance and procedural effectiveness using a combination of literature review, document analysis of policies and laws, and semi-structured interviews.

### **2.6.2 Studies Evaluating Substantive effectiveness of EIA systems**

Substantive effectiveness examines the degree to which EIA affects project decision-making and whether it reduces the negative impact on the environment (Loomis & Dziedzic, 2018; Sadler, 1996). According to Van Doren et al., (2013), substantive effectiveness examines how EIA can accomplish its purposes and produce intended results. Evaluations of substantive effectiveness have covered diverse topics including the rationality of the EIA process, the assessment of environmental and informed decision-making, sustainability of projects due to EIA, modifications in the knowledge base, and awareness of decision-makers and the public about the environmental implications of the decision, forms of learning, and leadership (Arts et al., 2012; Cashmore, 2004; Loomis & Dziedzic, 2018; van Doren et al., 2013).

Substantive effectiveness has received much less attention than procedural effectiveness in the EA literature (Arts et al., 2012; Cashmore et al., 2010; Meadowcroft, 2007). Morgan (2012) noted that substantive considerations are an important part of the performance and effectiveness evaluation studies, however, it raises more tough questions. This is because the substantive performance is influenced by the context, which differs from system to system and by project. Considerable existing research drew on

decision-making theory and involved stakeholder surveys, interviews, and checklists to evaluate substantive effectiveness. Loomis and Dziedzic (2018) specifically pointed out that studies in the literature focus more on the decisions but rarely examine how EIA can be better integrated into designing and implementing projects, an argument that confirms the likelihood that EIA is more of a preventive than a proactive measure.

Sadler (1996) focused mainly on the substantive outcomes of the EIA process. However, recent studies include more diverse and substantive issues related to context. For example, Arts et al., (2012) assessed the effectiveness of EIA in the UK and Netherlands through the assessment of governance mechanisms and contextual variables. Arts et al., (2012) also added political issues, asserting that they can influence the effectiveness of EIA. Runhaar et al., (2009) specifically pointed out the effects of the values and interests of the main decision-makers on the effectiveness of the EIA and the SEA. Furthermore, Pölonen et al., (2011) argued that substantive effectiveness is a product of clear procedural guidance and clear methods on how EIA findings can be linked to decision-making processes.

Kolhoff et al., (2018) analysed the role and importance of actors' capacities and procedural performance on substantive effectiveness using case studies from Ghana and Georgia. Kolhoff et al., (2018) focused on the capacities of proponents and the EIA authority and contextual factors such as international finance institutes and NGOs. Marara et al., (2011) reviewed EIA in African states and analysed four contextual aspects believed to be critical for EIA performance including political will, environmental awareness of the public, availability of financial resources, and the level of expertise to conduct EIA in Kenya, Rwanda, and Tanzania. Zhang et al., (2013) pointed out the political will and attitude of consultants, the timing and organisation of the EIA process, the resources and

capacities of officials, and communication and understanding between authorities, developers, and the public as critical substantive factors for EIA implementation. Most importantly, evaluations of effectiveness depend entirely upon the perceived purpose of the impact assessment system which include the processes and the mechanisms by which they work (Pope et al., 2013).

From the literature the substantive purpose of environmental assessment is considered important for the following reasons: 1) to influence decision-making (in accordance with the information processing model), which can mean that proposed developments are modified in response to the assessment findings; 2) to enhance knowledge and learning (acknowledging that all stakeholders do and should learn through impact assessment practice) 3) to ensure pluralism (recognising there are different views associated with what effectiveness means within each category and recognising that views differ on how impact assessment does and should work to promote change (Pope et al., 2013, Pope et al., 2018, Bond et al., 2018). This study follows this subscription and evaluates the substantive effectiveness of Namibia's EIA system using these criteria: (a) informed decision-making for environmental protection, (b) knowledge and learning, and (c) pluralism is presented using the change factor of emergence of leadership styles. The criteria are discussed in detail in the next section.

#### **2.6.2.1 Informed Decision Making for Environmental Protection**

The first and immediate purpose of EIA is to improve informed decision-making by providing information about the environmental implications of the proposed project and its alternatives (van Doren et al., 2013).

The intention is that, because of the assessment report, environmental, social, and economic considerations should be fully represented and considered during the decision-making process (van Doren et al., 2013). In facilitating and supporting well-informed decision making, EIA contributes to environmental protection. According to the IAIA, the EIA principles of best practice reflect that the objective of EIA is to “anticipate and avoid, minimise, or offset the adverse significant biophysical, social, and other relevant effects of development proposals” (Senécal et al., 1999). The criteria on informed decision-making are therefore included in this study given that it is the most sought-after goal of EIA and tied to the purpose of EIA in Namibia.

#### **2.6.2.2 Learning**

The role that the EIA process plays in learning remains a softer aspect although with considerable interest from researchers (Bond et al., 2020; Sánchez & Mitchell, 2017). Sandham et al., (2020) argued that EIA can contribute to many types of learning. Sánchez and Mitchell (2017) noted that learning should be treated as a purposeful outcome of EIA. Learning is described as some kind of activity or process of gaining knowledge or skills (Arts et al., 2012). Sánchez and Mitchell (2017) pronounced learning as a process of acquiring new knowledge and skills, as well as new behaviours and values. Experience suggests that informing decisions through EIA should best be characterised as a *learning process* rather than a purely *objective* and *technical* process (Jha-Thakur & Fischer, 2016). An EIA offers considerable potential for deliberation, social learning, and innovation but those opportunities are rarely exploited (Cruz et al., 2018; Jha-Thakur et al., 2009; Jha-Thakur & Fischer, 2016). Rather, assessment is often used as *ex-post* legitimization of policies and decisions (Jha-Thakur et al., 2009).

The main question is: “Is learning a beneficial side-effect of EIA and can robust and mutual learning be achieved within a strict EIA timeframe among diverse affected communities and other stakeholders, decision-makers, and developers?” This study uses learning as a substantive criterion of EIA effectiveness and enquires the extent to which learning is taking place among project developers and their consultants, government regulators, and the public in the EIA process.

### **2.7.2.3 Leadership**

EIA is a decision tool used in environmental governance to empower stakeholders, promote an egalitarian society, and nurture diverse interpretations of sustainable development (Cashmore & Axelsson, 2013). Scholars view EIA as an inclusive, deliberative, participatory, and political and moral process, used to promote social justice and equality, to make decision-making transparent, and institutions accountable to and to realise social self-governance (Cashmore, 2004; Cashmore & Axelsson, 2013). Cashmore and Axelsson (2013) noted that the subject of power has been neglected in EIA scholarship. Scholars highlighted that analysing power can be exploratory and subjective because it rests on moral and ethical questions for example, about how EIA may serve to enhance governance norms and values (Cashmore & Axelsson, 2013; Richardson & Cashmore, 2011).

According to Richardson and Cashmore (2011), several analyses of power in EIA focused on conflict over development and decision making. While conflict is critical, leadership can also be an essential area in the analysis of power dynamics. Little is said about the extent to which EIA contributes to the enhancement of leadership among EIA actors. Țăpurică and Ispășoiu (2013) pointed out that the importance of environmental

leadership mainly related to the provision of a safe working environment, downsizing the pollution costs, and achievement of organisational social goals. Woo and Kang (2020) demonstrated the role of leadership in seeking innovative solutions to environmental, economic, and social problems in the field of environmental sustainability. This is because issues of environmental degradation and disruption can result in hostile cultures, resistance, and lack of community collaboration (Woo & Kang, 2020). The need for leadership in mediating environmental problems is thus critical. This study therefore considers leadership as a criterion of substantive effectiveness and assesses the extent to which the EIA process contributes to the emergence of different leadership styles.

### **2.6.3 Studies Evaluating Transactive effectiveness of EA systems**

Transactive effectiveness addresses timeliness and cost-effectiveness in EIA. This dimension is commonly mentioned in the literature, but it is rarely studied and often only discussed in passing (Loomis & Dziedzic, 2018). Several scholars referred to the importance of transactive effectiveness in EIA (Bond et al., 2020; Sandham et al., 2020). Sadler's (1996) study is one of few with tentative results about the EIA cost, required time, and the length of EIA reports. Theophilou et al., (2010) conducted interviews with SEA practitioners involved in two case studies in the UK and found that transactive effectiveness tends to be weak due to poor substantive effectiveness on the part of the proponent. Middle and Middless (2010) analysed 88 EIAs in Western Australia by EIA lengths and found the preparation of the EIA report to be the longest phase, followed by responding to public comments and appeals.

While these studies address some aspects of transactive effectiveness, there is a research gap in the aspect of costing EIA. There are concerns that EIA causes project delays and cost overruns which may have a negative impact on project development, therefore diminishing the value and respect of EIA policy. This study has included a component of actors' roles, time, and cost of EIA in the context of Namibia to help address this gap.

#### **2.6.4 Studies Evaluating Normative effectiveness of EIA systems**

Normative effectiveness is defined as the extent to which the policy achieves normative goals as represented by the purpose of the policy (Baker & McLelland, 2003). Normative therefore refers to the contribution of EIA to wider policy goals such as fair, equitable, and democratic participatory processes and sustainable development (Baker & McLelland, 2003). The study of Meadowcroft (2007) highlighted that the contentious debate on the definition of sustainability and the vagueness of how to measure it makes it difficult to study sustainable development as a normative goal; therefore, many studies focus on a normative ideal of EIA as a transparent tool for decision making and assessing associated governance issues such as fair and democratic public participation. For example, Glucker et al., (2013); O'Faircheallaigh (2015); Salomons and Hoberg (2014) and Dietz and Sterns (2008) evaluated public participation as a fundamental component and considered its nature and effectiveness in EIA.

In the present study, public participation was treated as a normative goal where the main question was to what extent public participation contributes to the following normative elements: influencing decisions, enhancing the democratic capacity of stakeholders, enhancing social learning, empowering, and emancipating marginalised

groups, harnessing local knowledge, and generating legitimacy. Other elements of sustainable development included in this study include the role of EIA in resolving trade-offs and enhancing power, common visions, and shared values in communities (Robinson et al., 2012). Figure 2.2 shows a schematic diagram of the effectiveness dimensions used in this study, and from which the evaluation framework is derived. The evaluation framework with all criteria is also presented in Table 2.6.

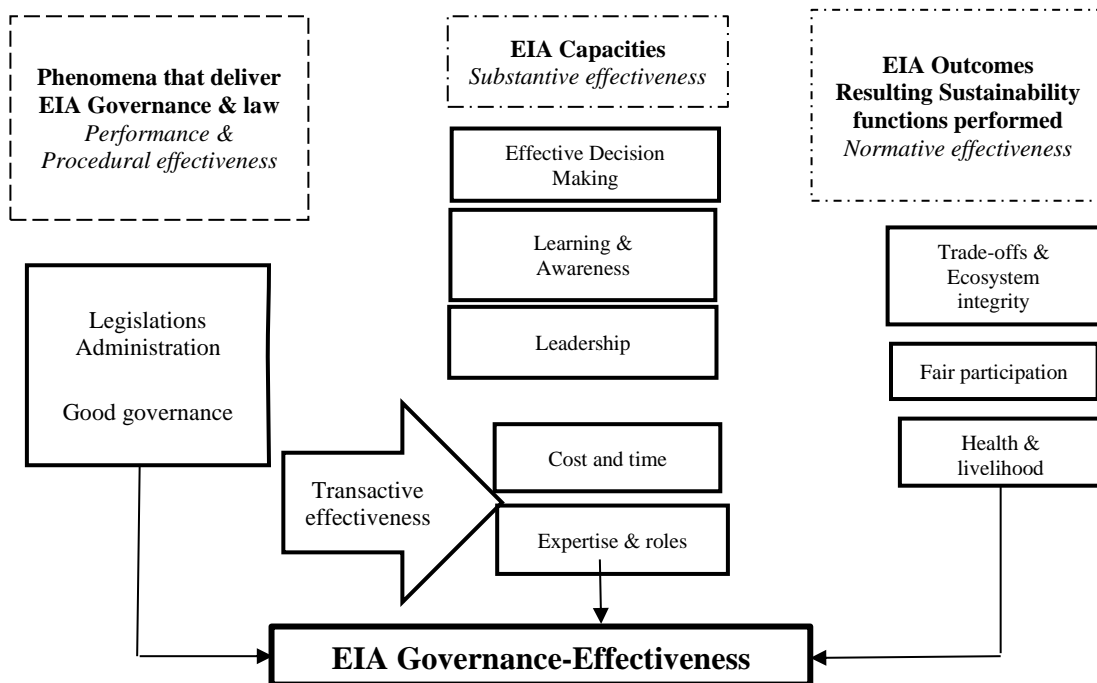


Figure 2. 2: Schematic Diagram of the EIA Governance Effectiveness Framework

### 2.6.5 Studies Evaluating Governance quality of EIA systems

In research, the governance dimension of EIA only recently started receiving substantial attention. This is because EIA scholars and practitioners believed that EIA was a technical process, governed by scientific and technical rationality, comprising the collection of relevant scientific information, and resulting in decisions on, ideally,

technocratic merits rather than any political considerations (Bartlett & Kurian 1999). According to Monteiro et al., (2018) an EIA process that meets good governance qualities can mitigate the hazards of political interests and conflicts and enhance administrative and environmental justice. Arts et al., (2012) illustrated how governance mechanisms including legal requirements, proponent responsibility to prepare EIA, participation of stakeholders in EIA, requirements to develop alternatives and mitigation measures, EIA quality review, and follow-up can impact the effectiveness of EIA. Lockwood (2010) asserted that assessing governance qualities in a programme is important to demonstrate performance and identify where improvement is desirable. On the other hand, Meuleman and Niestroy (2015) discussed EIA quality from a governance perspective and argued that linking EIA and governance sheds new light on multiple ranges of existing problems with the design and implementation of EIA.

Meuleman (2015) and Arts et al., (2012) stressed the importance of governance and how the political and social climate can impact the effectiveness of the EIA system. Meuleman (2015, p. 13) emphasised that “it makes sense to think seriously about the governance context where EIA is carried out.” In terms of effectiveness, Kakonge (2006b) argued that a well-conceived EIA should reflect many of the elements of good governance principles including transparency, sufficient information flows, accountability, responsibility, and stakeholder participation. In this study, we follow the ideology of interest of Kakonge (2006) and evaluate the governance component in Namibia’s EIA system to link EIA and governance.

The assumption in this study is that if the EIA ought to achieve the goals and ambitions set for environmental governance and sustainable development, the EIA system and its processes should satisfy all good governance qualities. To conceptualise the link

between good governance and EIA quality and effectiveness, and to contribute to the theory debate we developed a model shown in Figure 2.2. This model is akin to the notion of civic environmentalism as described by Cashmore (2004) and the political model (Bartlett & Kurian 1999).

The World Bank Group (1992), and UNDP (2009) described nine characteristics of good governance as shown in Table 2.3. These characteristics include: i) rule of law, ii) participation, iii) coordination, iv) transparency, v) responsiveness, vi) consensus orientation, vii) equity, viii) legitimacy, ix) effectiveness and efficiency, and x) accountability.

Table 2. 5: Characteristics of Good Governance (Source: UNDP (2009), World Bank (1992), OECD (1997)).

<b>Characteristic</b>	<b>Description of the characteristic</b>
1. Rule of law	To implement good governance, the legal framework in the country must be enforced impartially, especially concerning human rights law. This means Legal frameworks should be fair and enforced impartially, particularly the laws on human rights.
2. Participation	Participation in the concept of good governance here is an opportunity for everyone to voice their opinions through institutions or representations. In addition, everyone, without exception, has the right to freedom of association and expression. All men and women should have a voice in decision making, either directly or through legitimate intermediate institutions that represent their interests
3. Transparency	Transparency means that every policy taken and implemented by the government must be carried out under existing regulations. In addition, there must be a guarantee that any information related to the policy can be accessed by everyone, especially those who are directly affected by the policy.

<b>Characteristic</b>	<b>Description of the characteristic</b>
	Transparency is built on the free flow of information. Processes, institutions, and information are directly accessible to those concerned with them, and enough information is provided to understand and monitor them.
4. Responsiveness	Good governance needs institutions and processes to attempt to serve all stakeholders within a reasonable time. Institutions and processes try to serve all stakeholders.
5. Consensus orientation	This fifth principle is related to the decision-making process. When the decision-making process cannot accommodate everyone's wishes, then at a minimum, the decision must be a decision that can be accepted by everyone and does not harm anyone. Good governance mediates differing interests to reach a broad consensus on what is in the best interest of the group and, where possible, on policies and procedures.
6. Equity	Good governance ensures justice for the community. Everyone has the same opportunity to maintain and improve their welfare. All men and women have opportunities to improve or maintain their wellbeing.
7. Effectiveness and efficiency	Every decision-making process and its institutions must be able to produce decisions that meet every community's needs. Community resources must also be utilised optimally by the government. Processes and institutions produce results that meet needs while making the best use of resources.
8. Accountability	All institutions involved in good governance have full responsibility to the public for the sake of improving the quality of society. Decision-makers in government, the private sector, and civil society organisations are accountable to the public, as well as to institutional stakeholders.
9. Strategic vision	Leaders and the public have a broad and long-term perspective on good governance and human development, along with a sense of what is needed for such developments.
10. Legitimacy	Legitimacy is a measure of the political acceptability or perceived fairness of an assessment of a user or community.

These principles were selected as the best fit to assess good governance in the EIA system because they can distinguish between weak and good governance and presumably can differentiate between weak and good sustainability and effectiveness. Weak governance is associated with negative outcomes and is closely related to social mishaps such as corruption, social exclusions, and lack of trust in authorities, while good governance has the potential to regulate and enforce sound policies and yield positive outcomes (Wingqvist & Dahlberg, 2008).

The outcomes of good governance include stable, and resilient societies, where services are delivered and reflect the needs of communities, including the voices of the most vulnerable and marginalised non-state actors (UNDP, 2009). The global community agrees that these principles and qualities of good governance stand at the foundation of sustainable development (UNDP, 2009; Wingqvist & Dahlberg, 2008), thus good governance and sustainable development are inextricably linked. For this reason, the relationship between governance and sustainable development needs to find a place in EIA implementation and effectiveness research.

The 10 good governance characteristics and qualities are discussed below in the EA application.

#### **2.6.5.1 Participation**

Participation refers to the opportunity for active involvement by all sectors of society in the decision-making process regarding all issues of interest. Participation is fostered by enabling environments where pertinent information is appropriately disseminated in a timely fashion so that all concerned people can voice their opinions in an unconstrained manner (Bundschuh-Rieseneder, 2008). Participation is an important

component of good governance and a mandatory mechanism in EIA. Environmental impact assessment is one of the few policy tools that supports public participation and stakeholder engagement. It serves as a basis for negotiation between different stakeholders, where the public is made aware of projects and involved in the design, decision, and mitigation measures of development projects in their surrounding area; the government and private sector understand activities and find the measures to restrict activities with potential adverse impact at an early stage of the specific project and make environmentally friendly decisions (Boiral et al., 2020). A participatory process as such can enhance mutual learning, information exchange processes, power sharing, and legitimate decisions (Karrasch et al., 2017).

The assessment can also be an enabling governance tool to build trusting relationships with Indigenous communities before development initiatives and to reconcile biodiversity conservation and human development (Barker & Jones, 2013; Boiral et al., 2020). Meaningful participation implies that individuals may express their views on legislation affecting their health or the environment, that their views will be heard and considered when choices are made, and that elected officials should actively seek feedback from impacted groups (United Nations Human Rights Office of the High Commissioner [OHCHR], n.d.). Several authors highlight different objectives for incorporating the public in conducting EIA (Glucker et al., 2013; Karrasch et al., 2017).

Hasan and Megantara (2021) advocate for public participation in the decision-making process whereby IAPs are provided with plenty of opportunities to express their opinions on EIA. According to O’Faircheallaigh (2010), the broad goals of participation in EA lead to “social goals” that include building trust, educating the public, incorporating

public values and knowledge into decision-making, reducing conflict, and assuring cost-effective decision-making.

#### **2.6.5.2 Rule of Law**

This refers to the exercise of state power using, and guided by, published laws that embody widely supported social values, avoid particularism, and enjoy broad-based public support (Johnston & Kpundeh, 2002). It means that legal frameworks exist, there is law and order, the justice system is independent and effective, property rights and contracts are enforced, human rights norms are implemented, and there are constitutional constraints on the power of the executive (Bundschuh-Rieseneder, 2008).

#### **2.6.5.3 Transparency**

Transparency is found where the process of decision-making by those in power can be scrutinized by concerned members of society. Transparency rests on a partnership where authority should make information available and accessible, and there must be people and groups with reasons and opportunities to put information to use. Key among those is an independent judiciary and a free, competitive, responsible media as well as an active, civil society (Johnston & Kpundeh, 2002). Bisset, (1996) states that a basic principle of EIA is that it should be transparent in that the process should have clear, easily understood requirements for EIA content; it should ensure public access to information; identify the factors that are to be considered in decision making; and acknowledge limitations.

Transparency allows decision makers to have access to accurate and comprehensive information about the potential environmental impacts of a project. This information enables them to make informed choices that consider both the benefits and potential harms to the environment and local communities. According to Hasan et al., (2018), transparent EIA processes build trust among stakeholders, including the public, local communities, NGOs, and businesses. When people perceive that the assessment process is fair and unbiased, they are more likely to accept the outcomes, even if they do not fully agree with them. Transparency helps prevent corruption and unethical practices by exposing any attempts to manipulate or misrepresent data in the assessment process. Moreover, when the EIA process is transparent, it holds project proponents, developers, and regulatory agencies accountable for the accuracy of the assessment and the implementation of mitigation measures (Cotton & Mahroos-Alsaiari, 2015).

#### **2.6.5.4 Responsiveness**

Refers to where institutions and processes readily serve all stakeholders in a timely and appropriate manner so that the interests of all citizens are protected. Responsiveness also refers to identifying and addressing built-in discriminatory practices affecting ethnic or minority groups, including gender responsiveness, and the participation of all genders in a governance system (Bundschuh-Rieseneder, 2008).

According to Emerson et al., (2022), responsiveness in EIA refers to the degree to which the assessment process considers and addresses the concerns, feedback, and input provided by stakeholders, including the public, local communities, NGOs, and relevant experts. It involves actively considering and incorporating these perspectives to improve the quality of the assessment and its outcomes. Hughes (1998) noted that by being

responsive to stakeholder input, an EIA can identify potential environmental and social impacts that might not have been initially considered. This allows for more effective mitigation measures to be developed and implemented. Incorporating responsiveness into the EIA process enhances its effectiveness and legitimacy, leading to more sustainable and socially acceptable outcomes for both the environment and the communities affected by the proposed project or activity (Glucker et al., 2013; Hartz-Karp & Pope, 2011).

#### **2.6.5.5 Consensus Orientation**

This may be one of the most difficult principles to ensure that the existing systems serve the best interests of society considering different viewpoints (Bundschuh-Rieseneder, 2008). Consensus orientation in EIA refers to a collaborative approach to decision-making that seeks to achieve agreement or consensus among everyone affected by the EIA (Elling, 2009). Morgan (2012) added that this approach involves engaging stakeholders in a meaningful and transparent way throughout the EIA process to address their concerns, incorporate their input, and reach a shared understanding of the potential environmental and social impacts of a proposed project. The goal of a consensus-oriented EIA process is to foster a spirit of cooperation and collaboration, aiming to find common ground and balance between different interests (Enserink, 2014). This can lead to more sustainable and acceptable project outcomes by considering a broader range of perspectives and ensuring that all relevant concerns are addressed.

#### **2.6.5.6 Equity**

This is where everyone has opportunities to improve or maintain their well-being. This means that all members of society, especially the most vulnerable are taken into

consideration in policy making, and no one feels alienated, or left behind. Good governance demands that preferential attention is given to the plight of the poor, marginalized and needy (Bundschuh-Rieseneder, 2008).

In the context of EIA, *equity* refers to the fair and just distribution of both benefits and burdens that result from proposed development projects or activities (Walker, 2010). Environmental impact assessment is done to evaluate the potential environmental, social, and economic impacts of a proposed project before it is approved or implemented. According to Simpson et al., (2005), the goal of considering equity in EIA is to ensure that the outcomes of the project do not disproportionately harm or benefit certain groups or communities. Equity in EIA involves assessing and addressing the potential impacts on various stakeholders, including marginalised or vulnerable communities, low-income populations, and other groups that might be disproportionately affected by the project (Ulibarri et al., 2022). This consideration according to Walker (2010), helps prevent environmental injustices, where the negative impacts of development are unfairly borne by specific communities, while the benefits accrue to others.

#### **2.6.5.7 Effectiveness and Efficiency**

This is where processes and institutions make the best use of resources to produce results that meet the needs of society. Effectiveness and efficiency require the enhancement of quality and standardization of public service delivery, the professionalization of the bureaucracy, focusing government efforts on vital functions, and the elimination of redundancies or overlaps in functions and operations (Bundschuh-Rieseneder, 2008).

Researchers have identified both effectiveness and efficiency as the two most important aspects of the EIA process that aim to produce meaningful results while optimising the use of resources and time (Loomis & Dziedzic, 2018; Sadar & Stolte, 1996). In EIA, effectiveness refers to the ability of the EIA process to achieve its intended goals and objectives. In the context of EIA, Wood (2013) noted that effectiveness involves assessing whether the assessment process is successful in identifying and evaluating the potential environmental, social, and economic impacts of a proposed project.

An effective EIA process should provide decision-makers with accurate and comprehensive information to make informed choices about whether to approve, modify, or reject a project. Efficiency refers to the optimal use of resources, including time, money, and expertise, to achieve the desired outcomes of the EIA process (Morrison-Saunders et al., 2007). An efficient EIA process aims to streamline procedures and minimise unnecessary delays while still maintaining the quality and rigour of the assessment. One of the primary indicators of efficiency in EIA is the ability to complete the assessment process within a reasonable timeframe. Bond et al., (2014) noted that delays in the EIA process can lead to increased costs and uncertainties for project proponents and stakeholders.

#### **2.6.5.8 Accountability**

It refers to the answerability or responsibility for one's actions so that systems exist for decision-makers in government, the private sector, and civil society organizations to answer to the public, as well as to institutional stakeholders. Accountability is partly a matter of institutional design, implying that formal checks and balances can and should be built into any constitutional architecture (Johnston & Kpundeh, 2002). Nuesiri (2016)

defines accountability as the requirement for powerful actors to accept responsibility and answer for their actions. Accountability characterises good governance, with the emphasis mostly on the government and the public sector. Thus, accountability is a notion shared by all actors within the governance systems even though the strong players are institutions with decision-making authority as they have more influence over environmental management.

Accountability serves to prevent or mitigate negative social and environmental impacts and protects against abuses of power as it guides the actions of powerholders toward more socially and environmentally sustainable results (Nuesiri, 2016). According to Christie (2018), individuals in charge of public service organisations are accountable to the government for the leadership, direction, and control of the organisations they serve because it is their responsibility to ensure the public interest is addressed within an increasingly complex regulatory framework. EIA systems are therefore employed to increase accountability in environmental decision-making (Bond et al., 2020).

#### **2.6.5.9 Strategic Vision**

A strategic vision typically refers to the long-term goals and objectives that guide the assessment process and its outcomes (Geneletti, 2013). Developing a strategic vision for EIA helps ensure that the assessment aligns with broader environmental, social, and economic sustainability goals. According to Noble (2000), the strategic vision should align with overarching sustainability objectives, such as protecting natural resources, promoting social equity, and supporting economic development. This is an indication that strategic vision should typically emphasise the importance of balancing environmental

protection with economic and social development. This quality can be achieved more through strategic planning through SEA.

#### **2.6.5.10 Legitimacy**

Legitimacy is a measure of the political acceptability or perceived fairness of an assessment to a user. A legitimate assessment process is one which has been conducted in a manner which allows users to be satisfied that their interests have been considered and that the process has been a fair one (Bundschuh-Rieseneder, 2008).

While legitimacy is not listed by the World Bank and UNDP, in their 1997 report on governance the OECD named legitimacy as a good governance characteristic (OECD, 1997). Bond et al., (2016) argued that legitimacy is dependent on the timing of decision information, the exhibited behaviour of the decision maker, and the level of public involvement. Bond et al., (2016) highlighted that providing the opportunity for legitimacy is different from ensuring legitimacy. This description fits legitimacy as a stand-alone dimension. Bond et al., (2018) cited legitimacy as a dimension of quality and defined it as the extent to which individuals and society regard the process and outcomes of an EA as being reliable and acceptable. Following the above studies, legitimacy is accepted as a dimension of quality and therefore best suited to be evaluated as a governance characteristic.

Namibia strives for good governance and democracy in all its systems including environmental sustainability (Kaapama, 2007; Kandetu et al., (2001). Namibia has in place appropriate institutions, structures, and legislations; however, the country faces a governance dilemma about access, responsiveness, and effectiveness of political and

socioeconomic systems. With this understanding, this study assesses the quality and performance of Namibia's EIA process using ten characteristics of good governance.

Table 2. 6: Environmental Assessment Effectiveness Evaluation Framework

<b>Effectiveness dimension</b>	<b>Governance Factor</b>	<b>Criteria cluster</b>	<b>Evaluation criteria</b>	<b>Research methods</b>	<b>Source</b>
<b>Procedural effectiveness</b> How well is EA practiced?	EA legislation	Systemic measures	P1 Legal provisions for EIA P2 Provisions for appeal by the developer or the public against decisions P3 Legal or procedural specification of time limits P4 Formal provisions for SEA	Document analysis, Qualitative interviews with planners and EA expert/ practitioners	Ahmad and Wood, (2002)
	EA Administration	Systemic measure	P5 Competent authority for EIA and determination of environmental acceptability P6 Review body for EIA P7 Specification of sectoral authorities' responsibilities in the EIA process P8 Level of coordination with other planning and pollution bodies.	Document analysis, Qualitative interviews with planners and EA experts/ practitioners.	Ahmad and Wood, (2002)
	EA process	Systemic measures	P9 Specified screening categories. P10 Systematic screening approach P11 Systematic scoping approach P12 Requirement to consider alternatives	Document analysis, Qualitative interviews with planners and EA experts/ practitioners	Ahmad and Wood, (2002)
	EA Process	Systemic measure	13 Specified EIA report content P14 Systematic EIA report review approach P15 Provisions for public participation in EIA process P16 Systematic decision-making approach P17 Requirement for environmental management plans P18 Requirement for mitigation of impacts P19 Requirement for impact monitoring P20 Experience of SEA	Document analysis, Qualitative interviews with planners and EA experts/ practitioners.	Ahmad and Wood, (2002)
	EIA Guidance	Foundation measures	P21 Existence of general and/or specific guidelines including any sectoral authority procedures	Document analysis, Qualitative interviews with	Ahmad and Wood, (2002)

<b>Effectiveness dimension</b>	<b>Governance Factor</b>	<b>Criteria cluster</b>	<b>Evaluation criteria</b>	<b>Research methods</b>	<b>Source</b>
			P22 EA system implementation monitoring P23 Expertise in conducting EA (national universities, institutes, consultancies with EA technical expertise and the quality of EA reports) P24 Training and capacity building.	planners and EA experts/ practitioners.	Lee and Colley (1992); Lee at al., (199); Sandham and Pretorius (2008)
<b>Substantive</b> <b>Does the EA process achieve the set objectives?</b>	Assessment of governance capacities	Effective decision making	S1 The extent to which decision-making bodies have clear goals and objectives S2 The efficiency of decision-making process itself	Document analysis, Qualitative interviews with planners and EA expert/ practitioners)	Chanchitpricha & Bond (2013); O’Fairchellaigh (2010); Glucker et al., (2013); Robinson et al., (2012)
		Learning capacity	S3 Extent to which EA promotes learning & confidence through experience	Document analysis, qualitative interviews with planners, EA expert and practitioners	Chanchitpricha & Bond (2013); O’Fairchellaigh (2010); Glucker et al., (2013); Robinson et al., (2012) Sinclair et al., (2008)
		Leadership	S4 The extent to which the EA system makes room for emergence of leadership of various kinds	Interviews and surveys	
	Assessment of the governance process	Coordination	S6 Coordination and better relations among organizations, institutions and across sectors because of EA	Document analysis & interviews with planners, EA expert and practitioners and public	Chanchitpricha & Bond (2013); O’Fairchellaigh (2010); Glucker et al.,

<b>Effectiveness dimension</b>	<b>Governance Factor</b>	<b>Criteria cluster</b>	<b>Evaluation criteria</b>	<b>Research methods</b>	<b>Source</b>
		Equity	S7 Whether or not the EA process is fair and take account of unequal circumstances in society		(2013); Robinson et al., (2012)
		Deliberations	S8 Extent to which EA enhance stakeholders and decision makers to engage in genuine deliberation		
<b>Good governance</b>	Assessment of the Governance process	Responsiveness	S9 Whether or not EA process show response to society		
		Legitimacy	S10 Whether there is public support for the EA process		
		Accountability	S11 Whether or not the EA process provides accountability procedures		
<b>Normative effectiveness</b>	Assessment of Governance outcomes	Contributing to just power	N1 The extent to which EA has placed limits on the use of coercive power, and how it enhanced power as capacity	Document analysis & interviews with planners, EA experts and practitioners and public.	
		Setting direction	N2 The extent to which EA has established a common vision or direction		Glucker et al., (2013); Robinson et al., et al.,

<b>Effectiveness dimension</b>	<b>Governance Factor</b>	<b>Criteria cluster</b>	<b>Evaluation criteria</b>	<b>Research methods</b>	<b>Source</b>
		Building community	N3 The extent to which EA is helping stakeholders to identify or create shared values and shared identities		O’Fairchellaigh (2010); Glucker et al., (2013); Robinson et al et al., (2012); Chantchipricha and Bond (2013)
		Resolving trade-offs	N4 The extent to which EA resolve tradeoffs among social, economic, and environmental needs		
<b>Transactive</b>	Investing minimum resources and time	Time	T1 EA was carried out within a reasonable time frame without undue delay or within a noticeably short time	Document analysis & interviews with planners, EA experts and practitioners.	Baker & McLelland (2003); Sadler (1996); Chantchipricha and Bond (2013)
		Financial resources	T2 Carrying out the EA did not entail excessive spending		
		Availability of skills; specification of roles	T3 acquiring of skills and personnel required for the EA did not contribute a big burden and were easily accessible; Clearly defined roles.		
		Specification of roles and responsibilities	T4 Responsibilities were clearly defined and allocated, and tasks were undertaken by the most appropriate subjects.		

## **2.7 The EIA Process**

The steps of the EIA process vary depending on the requirements of a country's EIA system. Figure 2.3 shows the UNEP generic EIA process. Nevertheless, Glasson et al., (2012) and Drayson et al., (2017) have distinguished stages that are found in most EIA systems in one form or another: (i) determining whether EIA is needed for the project (screening); (ii) clarifying which issues will be covered (scoping); (iii) considering alternatives; (iv) describing the proposed project and the environmental baseline; (v) predicting impact and assessment of their magnitude and scope; (vi) preparing an assessment report based on findings of the impact analysis; (vii) reviewing the EIA report to evaluate its suitability as a basis for decision making; (viii) making a decision; (ix) determining post-decision impact and (x) auditing the project. The stages are explained and described in detail below as EIA processes. The EIA process entails 10 steps, which are all equally significant in influencing the overall performance of the project. The Namibia EIA process includes all the above stages as discussed in section 2.9.2. These steps of the EIA process are evaluated as part of the procedural effectiveness in objective one and in the case study analysis in objective 4. Figure 2 3 below shows the UNEP (2007) generic EIA process.

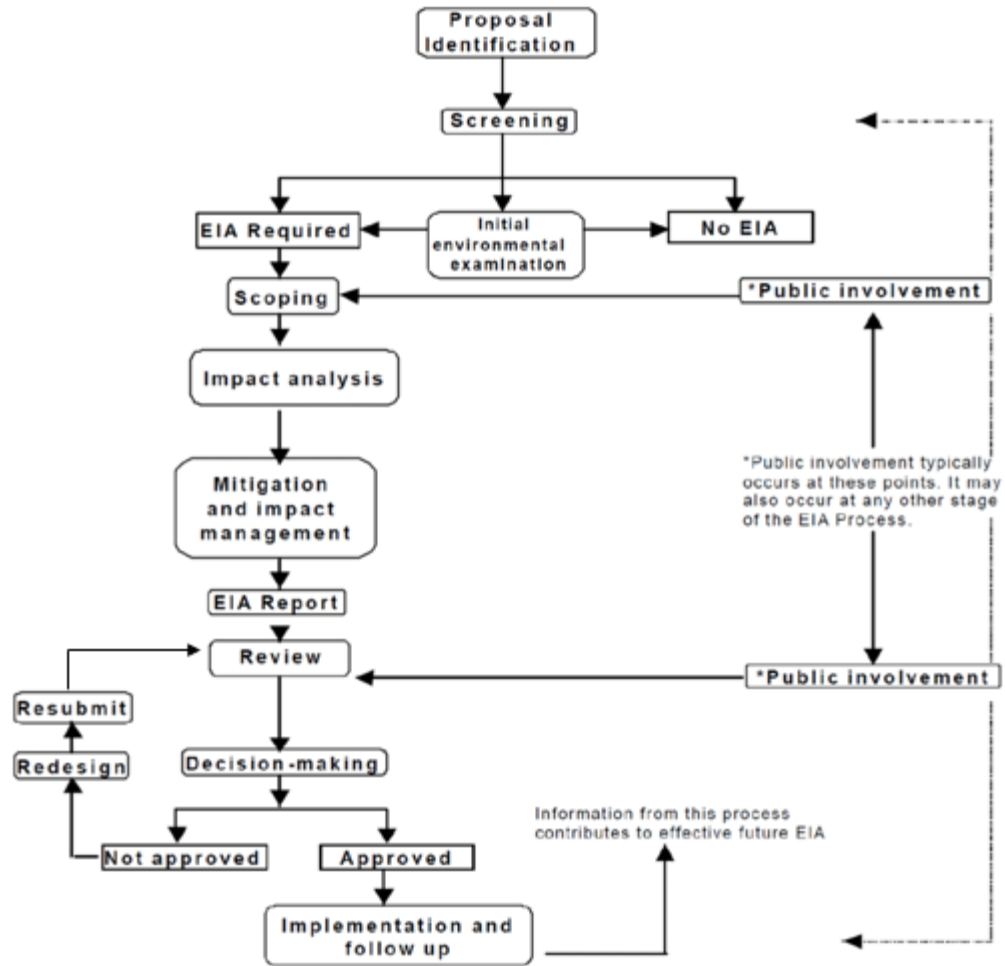


Figure 2. 3: Steps in the EIA Process (Source: UNEP 2007, p 91).

## 2.8 Setting the context of environmental governance

This section sets the context of the functioning of EIA in sub-Saharan Africa and Namibia.

### 2.8.1 EIA in sub-Saharan Africa

The integration of EIA concerns in Africa was first considered in 1982 in South Africa, and most sub-Saharan African governments-initiated programmes to formalize EIA legislation following the Rio Earth Summit in 1992 (Bhatt, 2023).

Some African countries, including Egypt, Ghana, Mauritius, South Africa, Kenya, Ethiopia, and Tanzania, have a high-quality EIA system, in terms of the regulatory framework and have in place regulations or guidelines for Strategic Environmental Assessment (SEA) (El-Fadl & El-Fadel, 2004; Marara et al., 2011; Rebelo & Guerreiro, 2017; Ibeh & Walmsley, 2021). Only a few countries including Somalia, South Sudan, Equatorial Guinea, and the Central African Republic lack formal EIA legislation (Ibeh & Walmsley, 2021).

The Gambia was one of the first sub-Saharan African countries to adopt a national environmental action plan in the 1990s, which paved the way for the National Environment Management Act (NEMA), Act 13 of 1994 (Kakonge, 2006a). Likewise, Ghana started with the National Environmental Management Plan (NEAP) in 1989 and then the Environmental Protection Agency (EPA), Act 490 of 1994 (Appiah-Opoku, 2001). In Kenya, EIA and public participation in environmental law are mandated by the Environmental Management and Coordination Act (EMCA) of 1999 and the Environmental (Impact Assessment and Audit) Regulations of 2003. In Ethiopia, the government issued the Environmental Impact Assessment Proclamation 299 in 2002, accompanied by EIA procedures and guidelines in 2003 (Bhatt, 2023). Tanzania's government established the National Environment Management Council in 1983, which resulted in the passage of the Environmental Management Act (EMA) in 2004 (Bhatt, 2023).

EIA systems in southern Africa are relatively new, being established largely in the 1990s. South Africa has in place a National Environmental Management (NEMA) Act, 107 of 1998, and the EIA Regulations, 2014 (as amended) in April 2017.

Zimbabwe introduced EIA in 1997, followed by Mozambique and Angola in 1998 (Aucamp, 2009) (see Table 2. 7).

Table 2. 7: Introduction of EIA legislation in Southern Africa

<b>Country</b>	<b>Year</b>
The Gambia	1990
Seychelles	1994
Malawi	1996
Zambia	1997
Zimbabwe	1997
Angola	1998
Mozambique	1998
South Africa	1997
Swaziland	2000
Eswatini	2001
Tanzania	2002
Mauritius	2002
Botswana	2004

To achieve EIA objectives, a high-performing and effective EIA system is required. Literature shows that most of the EIA studies have been focused on Western countries as well as Asia and North Africa (e.g. Ahmad & Wood, 2002; Bond & Wathern, 1999; El-Fadl & El-Fadel, 2004; Wood, 1999). Several EIA evaluation studies have been undertaken for sub-Saharan countries including Rwanda, Kenya, and Tanzania (Marara et al., 2011), and South Africa (Wood, 2003). Rebelo and Guerreiro (2017) recently

evaluated and compared EIA performance in Angola, Kenya, Tanzania, South Africa, Mozambique, and the European Union. Some of the common challenges in the EIA system in Africa include lack of enforcement and inconsistencies between legal requirements and actual implementation; highly centralised, understaffed, inexperienced, and poorly funded regulatory authorities; shortage of qualified and certified EIA professionals and consultancies; limited scope of EIA coverage and poor integration of environmental concerns into planning and decision making; and inadequate financing of mitigation plans and EMPs (Bilgin, 2015; Elvan, 2018; Campion & Essel, 2013).

Kolhoff et al., (2018) stress that capacity develops over time and that legislation for EIAs, and SEAs may serve as catalysts by empowering the government or other actors to acquire capacity from various sources (United Nations World Water Assessment Programme & UN-Water, 2018).

Marara et al., (2011) noted that EIA in Africa is treated as a one-size-fits-all approach and most countries copied the EIA system from developed countries without considering factors including the socioeconomic, and political situation and supporting institutions that are mainly context-dependent. As a result, most countries are faced with multiple challenges including a lack of funding, weak administration structures, inadequate screening and scoping, poor quality EIA reports, limited review, inadequate public participation, and limited implementation of mitigation measures and monitoring (Marara, 2011; Rathi, 2017).

Ibeh and Walmsley (2021) highlighted the development of EIA legislation in sub-Saharan Africa and its relation to attaining the sustainable development Goals (SDGs). The study showed that countries that do not have EIA legislation including South Sudan, Central African Republic, Chad, Somalia, and Equatorial Guinea are correspondingly low

on SDG attainment index. Countries such as Mauritius, Botswana, South Africa, and Ghana with sound EIA legislation have the best SDG attainment index and an EIA value of 18 and above (Ibeh & Walmsley, 2021). On the scale based on EIA best practices including provisions of the legislation, early screening, public participation, EMP, and follow-up, countries such as Comoros, Djibouti, Gambia, Mali, Mozambique, Lesotho, Burundi, and Liberia scored the lowest value between 10 and 8 while Namibia received an EIA value of 17 (Ibeh & Walmsley, 2021). In their framework Ibeh and Walmsley, (2021) showed that Namibia has a comprehensive EIA system that covers important aspects of best practices, however, it lacks follow-up and monitoring. Ten years after the EMA (2007), this study undertakes a holistic approach to studying the status and performance, quality, and effectiveness of the Namibia EIA system to fill the research gap on this subject and to provide recommendations for improving the EIA system.

### **2.8.2 EIA in Namibia: Evolution of Environmental Governance**

Namibia's environmental governance has changed from an open resource exploitation that took place during the colonial regime to a more inclusive and sustainable approach in the post-independence era (Adeyanju et al., 2021; Clover & Eriksen, 2009; Nelson & Agrawal, 2008). The section that follows provides a summary of the key turning points in the history of environmental governance in Namibia.

Namibia was governed by Germany from the time Namibia was governed by Germany from 1884–1919 and then by South Africa till independence in 1990 (Grab & Zumthurn, 2018). Natural resources in Namibia were frequently exploited without taking sustainability into account during the colonial era (Fabricius, 2004). However, between the 1960s and 1980s, the importance of environmental conservation became increasingly

clear. At independence, Namibia became the first African country to include environmental protection in its constitution (Ruppel, 2010). The Constituent Assembly established the Namibian Constitution, which came into force on March 21, 1990, included Chapter 11 dealing with “Principles of State Policy”. Chapter 11 includes two clauses on resource utilization and sustainable development (Government of Namibia, 1990).

Article 91 (c), defines the functions of the Ombudsman to include-

*“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.”*

Article 95 (l) stipulates that:

*“The State shall actively promote and maintain the welfare of the people by adopting policies that are aimed at the maintenance of ecosystems, essential ecological processes and biological diversity of Namibia.” These policies should also strive for “the utilization of living natural resources on a sustainable basis for the benefit of all Namibians, both present and future.”*

The same Article further calls on the government to implement “measures against the dumping or recycling of foreign nuclear and toxic waste on Namibian territory” (Ruppel, 2010, p22). To support the constitution, the now Ministry of Environment, Forestry and Tourism (MEFT) originally called the Ministry of Wildlife, Conservation, and Tourism was established in 1990 with a mandate on environmental management. The following frameworks were put in place for environmental management in Namibia.

### **2.8.2.1 Petroleum (Exploration and Production) Act, 1991**

This legal framework governs the exploration for, development, and production of oil and gas in Namibia. Through the Petroleum (Exploration and Production) Act, 1991 (the "Petroleum Act"), and the Petroleum (Taxation) Act, 1991 (both as amended principally by the Petroleum Laws Amendment Act, 1998) Namibia implemented EIA as part of oil and natural gas projects.

### **2.8.2.2 Namibia's Green Plan**

In 1991, the then Ministry of Wildlife, Conservation, and Tourism, initiated a process to develop a Green Plan for Namibia (Brown, 1992). The document outlines a cross-sectoral and multidisciplinary approach to ensure a safe and healthy environment for current and future generations, as well as a competitive economy. The Green Plan was established through a series of national workshops attended by a diverse group of people from the government, NGOs, academic institutions, and the commercial sector. These seminars identified essential themes, problems, and strategies that guided those charged with drafting each chapter of the Green Plan. According to Jones (2000), the resulting Green Plan document was presented by then Namibian President Sam Nujoma in 1992 at the United Nations Conference on Environment and Development (UNCED), in Rio de Janeiro, Brazil (United Nations, 1992). This document established a national vision for environmental concerns, goals, and future actions for Namibia. The Green Plan provided needed policy and law, as well as strategies and recommendations for critical areas such as wildlife management, tourism, and fisheries, as well as environmental education for

long-term development, and it connects the environment to socioeconomic development (Ruppel et al., 2016).

In terms of the environment, some substantive outputs of Namibia's Green Plan "have been the EMA, which provides the legal foundation for environmental protection in the country through environmental impact assessments (EIAs) and strategic environmental assessments (SEAs) as well as the establishment of the environmental investment fund (EIF) of Namibia" (Ruppel et al., 2016, p. 31).

### **2.8.2.3 National Plans**

Namibia also developed Vision 2030, launched by President Sam Nujoma, in June 2004 (National Planning Commission [NPC], 2004). Vision 2030 highlights how Namibia as a nation can emphasise good governance by realising the need to improve on matters about equity and access to productive resources as well as environmental degradation. Sequential five-year national development plans (NDPs) were planned to drive the country's long-term objectives with NDP 1 covering the period 1995/6 to 1999/2000. The second to fifth NDPs included a goal for environmental sustainability.

Namibia's second National Development Plan (NDP2) which spanned the period 2001/2002–2005/2006 sought sustainable and equitable improvement in the quality of life of all the country's inhabitants (National Planning Commission [NPC], 2001).

Namibia's third National Development Plan (NDP3) spanned the period 2007/2008–2011/2012 sought productive use of natural resources and environmental sustainability (National Planning Commission [NPC], 2008). The plan's environmental goals were to improve the condition of natural resources and biodiversity across Namibia's various vegetation and habitats by managing protected areas, habitats, and species,

incorporating awareness action into environment projects, and promoting formulation of policies and regulations.

Namibia's fourth National Development Plan (NDP4) spanned the period 2012/2012–2016/2017 and focused on sustainable economic development, job creation, and income equality (National Planning Commission [NPC], 2012). The NDP4 differed substantially from its predecessors by being more focused with fewer goals and targets (Du Plessis, 2013). However, the plan had minimal focus on the environment. The most desired outcomes from NDP4 in terms of environment related to sustainable tourism growth (Du Plessis, 2013).

Namibia's fifth National Development Plan (NDP5) was launched in 2017 and spanned the period 2017/2018–2021/2022 (National Planning Commission [NPC], 2017). Since environmental sustainability formed one of the four pillars of NDP5, environmental protection took a prominent role in this NDP. It therefore also aligned with relevant global and continental development frameworks including Agenda 2030, the Sustainable Development Goals, the Paris Agreement, the African Union Agenda 2063, and Southern African Development Community (SADC) Regional Indicative Strategic Development Plan (Du Plessis, 2013). Environmental impact assessment was also mentioned as a tool for good environmental governance.

In 2021, President Hage Geingob launched the Harambe Prosperity Plan for the period 2021–2025 as the government's action plan for economic recovery and inclusive growth (Republic of Namibia [NA], 2021). This plan was made up of five pillars of which the fifth pillar, which was aimed at international relations and cooperation, had a focus on the environment. This pillar was to implement activities that would enhance economic diplomacy for economic recovery by increasing Namibia's benefits from multilateral

cooperation in crucial areas of national interest such as the environment. The sixth National Development Plan (NDP6) will span the period 2025-2030 to attain Vision 2030.

#### **2.8.2.4 Environmental Assessment Policy**

A lengthy process for the development of EIA legislation began in 1992, with consultation among stakeholders and sectors. In August 1994, the Namibian cabinet approved the Environmental Assessment (EA) Policy for the country (Ministry of Environment and Tourism [MET], 1995). This policy was the first formal effort in the country to regulate the application of EIA. The EA Policy was developed and refined through a lengthy process of cross-sectoral and multidisciplinary consultation and negotiation and recognises that environmental assessments are a key tool for implementing integrated environmental management.

#### **2.8.2.5 Environmental Management Act 7 of 2007 and Environmental Impact Assessment Regulations 30 of 2012**

The work of drafting the Environmental Management Bill began in 1996 (MET, 1995). According to Tarr (2003, p 10), the process was locally driven, and different experts partake in a series of workshops, focus-group discussions, and external reviews during the consultations. The drafting process was however challenged in accommodating diverse sectoral interests, particularly in the areas of waste management, pollution control, and land use planning. By December 1998, negotiation of the 6th and final draft of the bill was discussed with the main stakeholders and ready for submission to parliament.

The planned submission failed in June 2003, due to a lack of consensus over whether the new Act should be administered by the Office of the Environmental Commissioner (EC) to be located within the MET and overseen by a proposed

appointment of the Sustainable Development Commission (SDC), or whether there should be a more neutral Environment Agency located outside of Government (Tarr, 2003).

A decision was later made to appoint the EC and the SDC and the Environmental Management Bill was finally promulgated as the Environmental Management Act 7 of 2007 (EMA, Act 7 of 2007). The EMA (7 of 2007) defines the term ‘environment’ as “the complex of natural and anthropogenic factors and elements that are mutually interrelated and affect the ecological equilibrium and the quality of life, including land, water, and air; all organic and inorganic material; all living organisms; as well as various components of the human environment encompassing the landscape and the natural, cultural, historical, aesthetic, economic and social heritage and values”. While the Act outlines the integration nature of an EIA, there are no distinctive assessments for health, social, ecological, and cultural components. The EMA includes modern and international principles, including the polluter pays, recycling and reuse, access and benefit sharing of resources, and public participation principles.

The EMA provides for the establishment of a sustainable development advisory council (SDAC) and the appointment of the EC and environmental officers. Furthermore, the EMA provides for a process of assessment and control of activities that may have significant effects on the environment. Table 2.4 below shows the milestones of Namibia-specific EIA legislation.

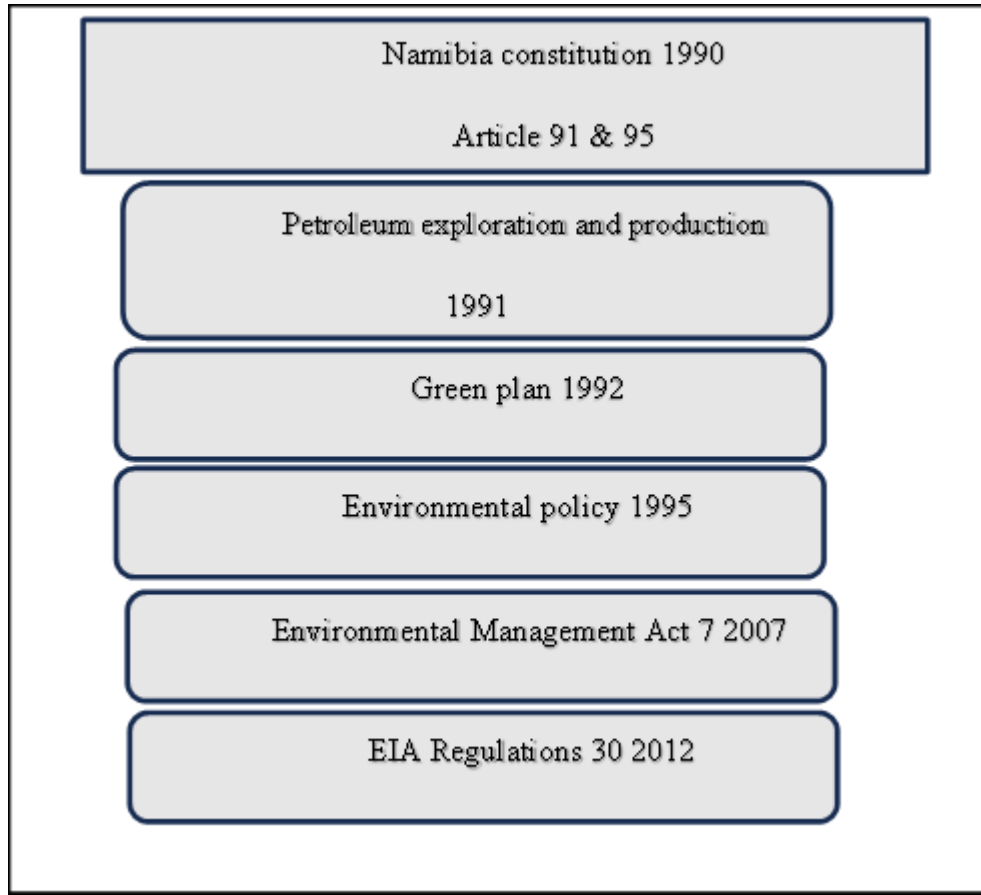


Figure 2. 4: Milestone of Namibia EIA legislation

EMA annex 1 lists all activities that cannot be undertaken without an Environmental Clearance Certificate (ECC). In 2012, the Environmental Impact Assessment Regulations 30 of 2012 were gazetted. The Regulations of 2012 consist of 30 regulations and three annexes which include the EIA forms, EIA fees, and the list of activities that may not be undertaken without an Environmental Clearance Certificate (ECC). Other important regulations include the duties of proponents (regulation 3); general requirements of the EAP (regulation 4); public participation methods (regulation 21-23), and the directives on the EIA process including penalties and offenses (regulation 30).

The listed activities included are:

- 1) Energy generation, transmission, and storage activities
- 2) Waste Management, Treatment, handling, and disposal activities.
- 3) Mining and quarrying activities
- 4) Forestry activities
- 5) Land use and development activities.
- 6) Tourism development activities
- 7) Agriculture and aquaculture activities
- 8) Water resources development
- 9) Hazardous substance treatment, handling, and storage
- 10) Infrastructure
- 11) Other activities (Construction of military demonstration and testing sites and construction of cemeteries, camping, leisure, and recreation sites).

#### **2.8.2.6 Institutional Arrangements for EIA**

The Ministry of Wildlife, Conservation, and Tourism, now known as the Ministry of Environment, Forestry and Tourism (MEFT) leads environmental management and facilitates multilateral environmental agreements for Namibia. The minister's responsibilities are outlined in section 4 of the EMA. Under the MEFT, the EIA section is hosted under the Department of Environmental Affairs (DEA) which is led by the Environmental Commissioner (EC). Section 18 of the EMA gives provision for the appointment of environmental officers with a role to support enforcement of the EMA. The roles and responsibilities of appointed officials under EMA are outlined in Table 2.8.

Table 2. 8: The Roles and Responsibilities of Appointed Officials under EMA (Source: EMA, 2007).

<b>Institutional framework</b>	<b>Descriptions of the function</b>	<b>Year inaugurated</b>
Sustainable development advisory council	Advise the minister on issues that promote cooperation and coordination between organs of state, non-governmental organisations, community-based organisations, the private sector, and funding agencies, on environmental issues relating to sustainable development.	January 2013
Environmental Commissioner	<p>Advising government bodies on the preparation of environmental plans.</p> <p>Receiving and recording all applications for environmental clearance certificates.</p> <p>Determining whether a particular listed activity requires an environmental assessment.</p> <p>Reviewing environmental assessment reports, issuing environmental clearance certificates, and conducting inspections to monitor compliance with the EMA.</p>	February 2012
Environmental Officers	Public services assist in enforcing the EMA as they are endowed with certain powers, including the powers to search, seize, and issue compliance orders in cases of violations of the EMA.	February 2012

## DEPARTMENT OF ENVIRONMENTAL AFFAIRS

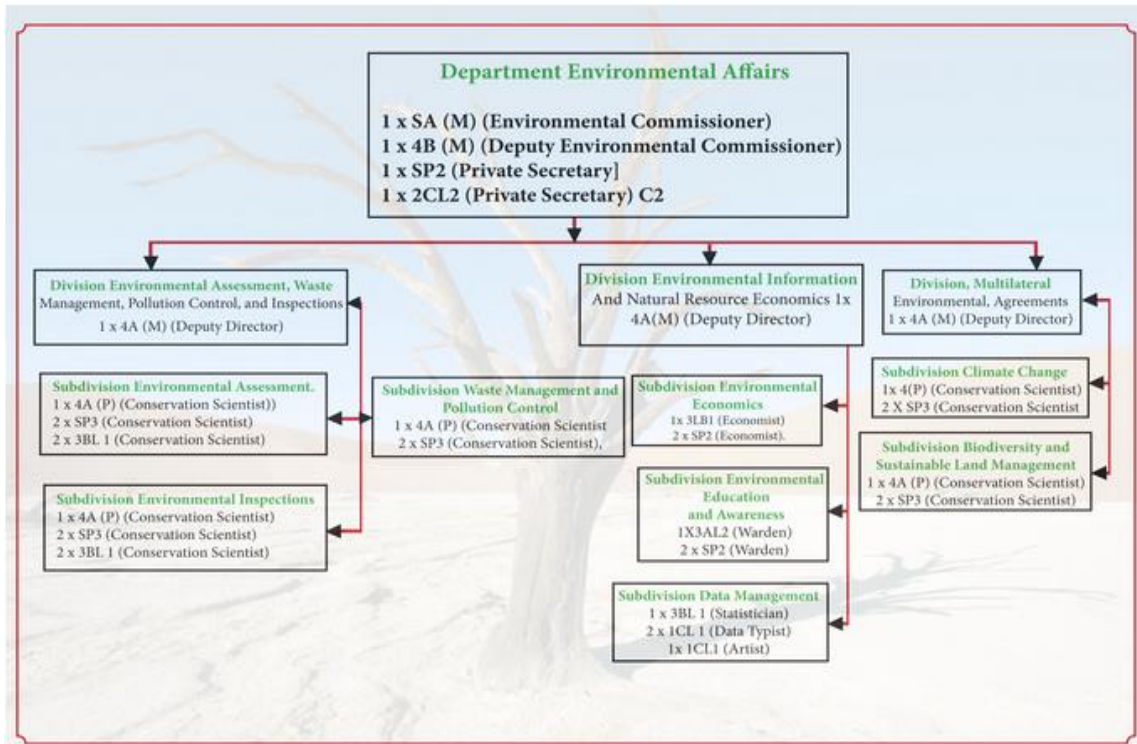


Figure 2. 5: The organizational structure of DEA (MET website, undated).

### **2.8.2.7 EIA Process in Namibia**

Environmental impact assessment is an important process in Namibia's environmental management framework. The EIA process is designed to evaluate the potential environmental, social, and economic impacts of proposed projects and activities before they are implemented. The process ensures that development activities are carried out sustainably and responsibly, minimising adverse effects on the environment and local communities.

Legally, the EMA of Namibia, particularly sections 27 to 33, provides the legal basis for the EIA process. The EMA outlines the requirements, procedures, and responsibilities related to EIA. In terms of applicability, the EIA process is typically required for listed projects and activities that are likely to have significant environmental impacts. The proponent (project developer) appoints an Environmental Assessment Practitioner who undertakes the EIA. A successful project obtains an environmental clearance certificate (ECC) that signifies that the project has been assessed and approved from an environmental perspective. The steps of the Namibia EIA process are summarised in Table 2.10 and Figure 2.6.

Table 2. 9: EIA Process Steps in Namibia as per the EMA (2007)

<b>Step</b>	<b>Function</b>
Screening	The proponent submits a project description to the MEFT. Based on this description, the MEFT determines whether the project requires a full EIA or if it can be subjected to a simplified assessment process.
Scoping	If a full EIA is required, a scoping process is conducted to identify the potential impacts and issues that should be addressed in the assessment. The proponent assesses the project's potential environmental, social, and economic impacts. This includes identifying both positive and negative impacts.
Preparation of EIA report	The proponent conducts a baseline study to gather data about the existing environmental conditions in the project area. This study provides a basis for assessing potential impacts.
EIA report review	The EIA report, including the assessment findings, proposed mitigation measures, and EMP, is submitted to the MEFT for review.
Decision making/authorisation	The MEFT decides whether to issue an ECC based on the EIA report and public input.
Monitoring and compliance	After obtaining the ECC, the proponent must adhere to the approved EMP and monitoring requirements to ensure that the project's impacts are managed effectively.
Public participation	Public consultation is an integral part of the EIA process, allowing local communities and stakeholders to provide input, raise concerns, and offer suggestions.

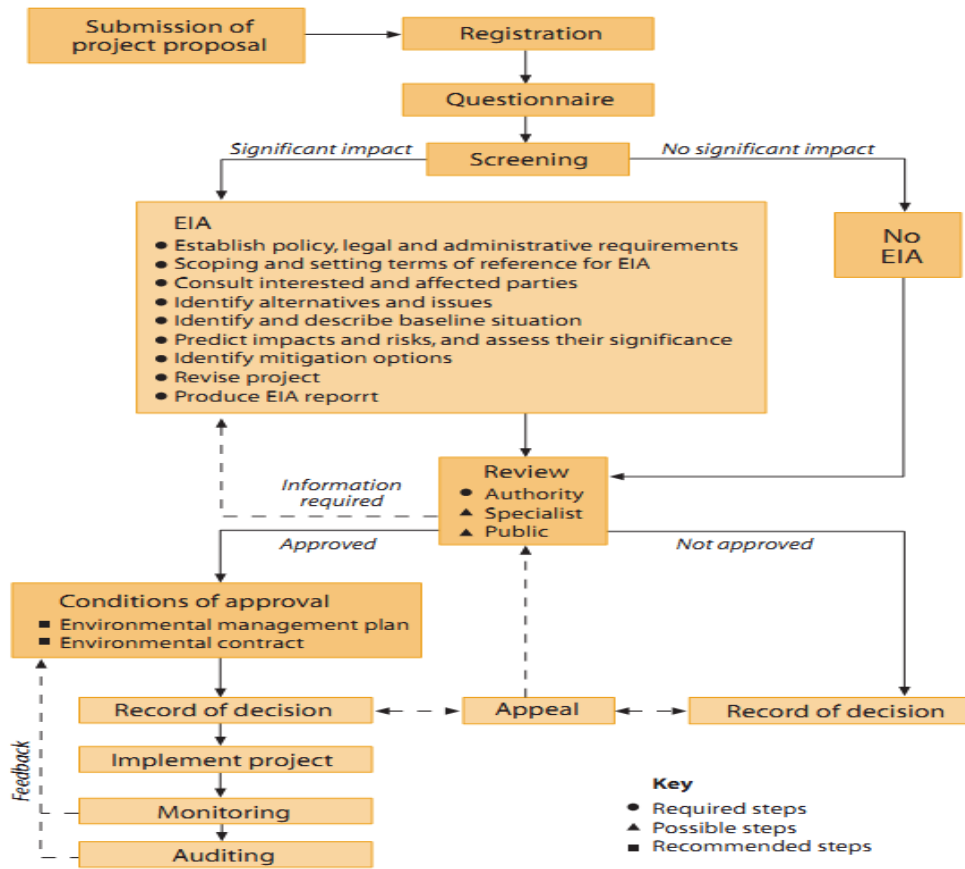


Figure 2. 6: Namibia EIA process (Source: Tarr, 2003)

## **2.9 Chapter Summary**

From the work of several researchers highlighted in this chapter, it is evident that gaps exist in the current regulatory framework of many countries around the world. Several evaluation frameworks have been established to study the performance, quality, and effectiveness of EIA globally. New criteria are emerging with the improvement of EIA. The important factor is to study EIA in a place of implementation, understanding the context, the laws, actors, and institutions, and the aims and objectives of the EIA system. The information on the evolution of EIA in Namibia sets a good background helpful for the reader to understand the status and development of the EIA system. The next chapter presents the research methodology employed for the study, explaining the suitability of the research design and instruments selected for this work.

## 2.10 References

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## **CHAPTER 3. RESEARCH METHODOLOGY**

### **3.1 Introduction**

This chapter discusses the research methodology in terms of the research approach and research design that was followed to conduct this study. In this study, the research methodology translated philosophical principles into guidelines supporting research (Sarantakos, 2015). This chapter outlines the procedures of inquiry and analysis, the specific philosophy of the study, and the methods of sampling, data collection, and analysis. Lastly, it explains how issues related to ethics were dealt with. The data requirements of this study include the following: Data and information about the current practices of the Namibia EIA system, and the extent to which it is adequate and conforming to international best practice. Data and information about the EIA process and the extent to which it satisfies the principles of good governance. Data and information about EIA efficiency and effectiveness in achieving its set objectives and desired outcomes (environmental protection and sustainable development); and Data and information about areas of governance and implementation deficit in the current EIA system as well as the success and effectiveness of the EIA process as deciphered from selected case studies.

### **3.2 Description of the Study Area**

Namibia is a country located on the southwest coast of Africa and borders Angola, Botswana, South Africa, and Zambia. Namibia has a surface area of 824,295 km<sup>2</sup> and ranks as Africa's fifteenth-largest country (Namibia Statistics Agency, 2012). The geography of Namibia includes the Namib Desert along the coast and the Kalahari Desert

in the east. Namibia's climate is dry, characterized by sparse and erratic rainfall. The average annual rainfall is 270 mm and 92 percent of the land is categorised as extremely arid (22 percent), arid (33 percent) or semi-arid (37 percent), while the remainder is sub-humid (FAO, 2005).

The country is divided into three topographical regions: (1) The coastal desert region, which includes the Namib Desert covering the entire length of the coastline. (2) The inland plateau region, which is a continuation of the South African Plateau, stretches from the southern to the northern border and covers more than half of the country, (3) The dune-and grass region, covering the Kalahari Desert to the east and south of the inland plateau region (FAO, 2005). Namibia's three main vegetation regions are the Savannah, covering about 64 percent of Namibia's land surface; the Desert vegetation, covering about 16 percent and the Dry woodlands, covering about 20 percent of the land. The cultivable area is estimated to be 25 million ha (FAO, 2005).

Namibia is one of the world's most sparsely populated countries with a population density of 2.4 inhabitants/km<sup>2</sup>. The population distribution in Namibia has experienced an increase from 2.132 million in 2011 to a current estimate of 3,022,401 in 2024 (NSA, 2024; NSA, 2017). As it currently stands, most of Namibia's population depends on agriculture, specifically subsistence farming, for their livelihood (Keja-Kaereho et al., 2019). The increase in population and a simultaneous push for rapid economic growth and industrialisation, have increased pressure on the environment with many components of the natural resource base already suffering from unsustainable use (Crawford & Terton, 2016). Namibia also faces challenges of inadequate governance and growing corruption which are impacting environmental management (Byers, 1997).

The economy of Namibia is highly dependent on natural resource-based industries including agriculture, mining, fisheries, and tourism (Crawford & Terton, 2016). Adverse impacts of climate change therefore pose a great threat to the economy and sustainable development, which in turn can affect the attainment of national development goals. Wealth distribution is highly inequitable, and there is a high incidence of extreme poverty. Of the total population, 67 percent live in the rural area. About 70% of the Namibian population depends on agricultural activities for livelihood, mostly in the subsistence sector (Cross-Border Road Transport Agency, (2018). The literacy rate in Namibia is about 83%, one of the highest in Africa (African Economic Outlook, 2018).

The country's government system is a multi-party democracy, and the president is both chief of state and head of government. Namibia has a mixed economic system, which includes a variety of private freedoms combined with centralized economic planning and government regulation (Cross-Border Road Transport Agency, (2018). Namibia's economy is based on agriculture, tourism, and mining, which includes diamonds, uranium, gold, silver, and base metals. Some of the environmental issues in Namibia include depletion and degradation of water and aquatic resources; desertification; land degradation; loss of biodiversity and biotic resources; and wildlife poaching (African Economic Outlook, 2018).

### **3.3 Research Design**

Literature on research methodology discusses three main designs including quantitative, qualitative, and mixed methods (Creswell, 2013; Bryman, 2012). According to Creswell (2013), quantitative studies seek to test existing theories, whilst qualitative studies tend to be exploratory, especially in cases where the literature and underpinning theory are limited. Essentially, quantitative research is mainly based on collecting and working with structural data that can be numerically or statistically analysed (Bryman, 2012). However, qualitative data is not in numeric form but in texts and narratives (Creswell, 2013). The third paradigm is the mixed method which is a combination of both the quantitative and qualitative data (Denscombe, 2008). The fundamental objective of this research is to evaluate the performance of the Namibian EIA system and its quality and effectiveness. This is a relatively new subject in Namibia, and so there is a dearth of available literature and theory.

Consequently, this study employed inductive contextual research and a convergent parallel design consisting of interviews, questionnaire surveys, and analysis of documentary sources (Bryman, 2012). The study generated quantitative and qualitative data and therefore fitted a mixed-method approach. With the convergent parallel design, areas of convergence or divergence between the qualitative and quantitative results are analysed and discussed, but most importantly, the quantitative numerical data informs the qualitative themes. The mixed method was appropriate for this assessment because the quantitative data (from the questionnaire survey) allowed the graphical representation of the actor's information and the qualitative data from interviews allowed a detailed

description and explanation of the relationships and the contextual differences in the research, as per Bryman (2012).

This study followed a grounded theory style design. Grounded theory is used to explore the process, action, or interaction between many individuals in which the process, or action, is the unit of analysis (Khan, 2014). It therefore granted the opportunity to explore the activities and interactions in the Namibia EIA system and processes. Other complementary designs that were used in this research include the historical research design, exploratory research design, case study research design, and descriptive research designs.

In this study information from the EIA policy and regulatory frameworks are used as secondary data and coupled with primary data from interviews. Because there is little information on Namibia's EIA system, the exploratory design is used to gain insights and familiarity on this subject (Creswell, 2013) and to answer all four research questions.

The four research questions in this study are concerned with what and how, and therefore a descriptive design is deemed suitable to answer these questions.

In this study, the case study is used to select EIA projects to assess the extent to which the EIA process is duly followed. Two projects on Marine Phosphate mining and ReconAfrica oil drilling were analysed as objective 4. The study was undertaken according to the research plan as depicted in Figure 3.1 below.

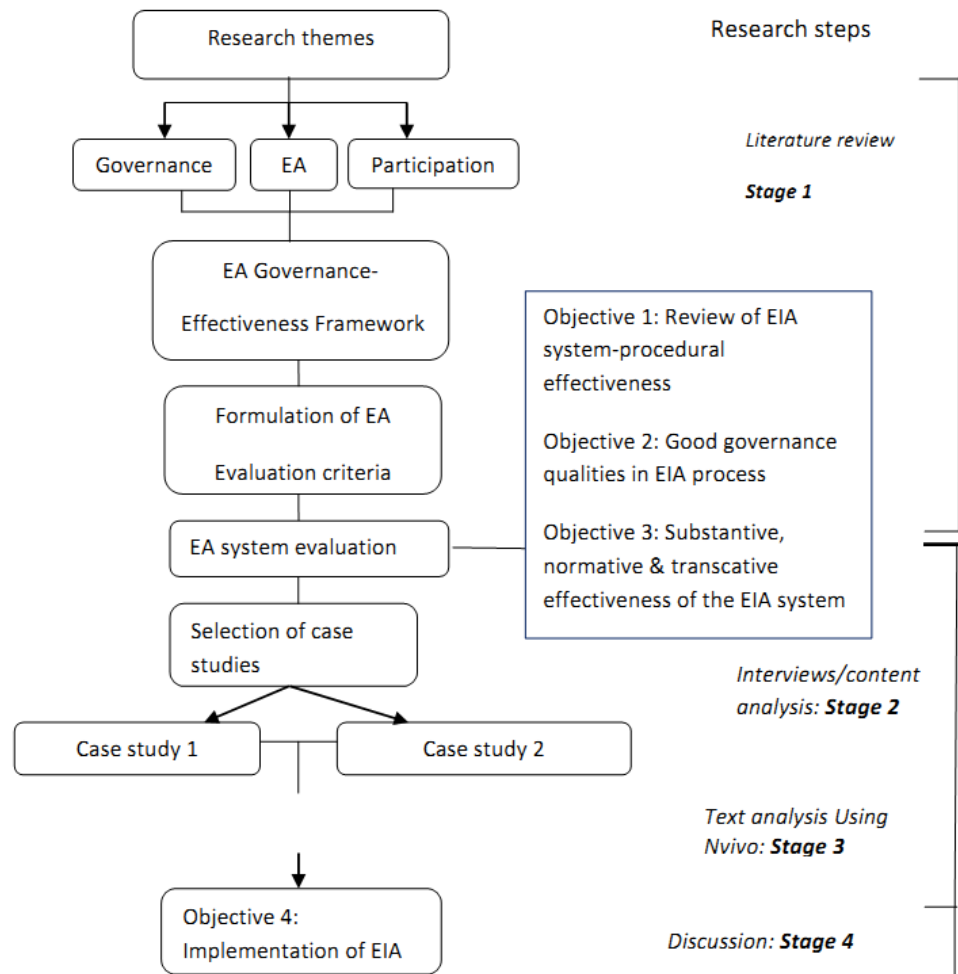


Figure 3. 1: Research Plan Depicting the Research Areas Covered in the Study

### 3.4 Population and Sample Size

The target population for this study included researchers, consultants, public institutions, private officials, and civil society involved in resource and environmental management, conservation, and climate change in Namibia. To obtain a sample, two databases: one from MEFT and the other from the Walvis Bay Environmental Management & Advisory Forum (WEMAF) were used. The database comprised representatives from at least six groups including the DEA (which is the EIA regulatory

authority), government departments that are competent authorities (CAs) and custodians responsible for reviewing EIA reports related to resources, NGOs with an interest in environmental management, EIA consultants, public and private sector representatives who are often the proponents, and academics from research institutions and universities. The names on the database have been captured from workshops, awareness campaigns, training, and meetings on environmental management in Namibia from 2011 to 2017. In this study, a purposive sampling strategy was applied to obtain data. It was selected because it allows the intentional selection of a participant based on the characteristics and qualities the individual possesses (Etikan et al., 2016). The strategy was deemed suitable to collect rich data from EIA actors and experts in this research.

The total of 300 actors, researchers, and consultants in the database were taken as an initial sample for the survey questionnaire. To increase the sample size, respondents were requested to forward the survey link to other experts who may not be on the database list.

### **3.5 Research Instruments / Data Collection**

This study combined a literature review, document analysis, questionnaire survey, semi-structured interviews, and case studies to obtain data. The review of the literature and policy documents was done to establish the background to develop the need for the study and the research questions, surveys, and interview questions and to select appropriate criteria for the evaluation framework. The questionnaire survey was used to collect overall facts and experiences on EIA development, implementation, quality, and effectiveness. The survey method was selected because it allowed obtaining a data set from a large sample. The survey generated quantitative data while the interviews generated qualitative

data, satisfying the mixed method approach set for this study and answering objectives 1-3. For objective 4, the researcher used two case studies to understand the EIA process and how it was followed in two projects.

### **3.6 Procedure**

The research process followed the study plan as indicated in Figure 3.1. The stages of the procedures are described below:

#### **3.6.1 Literature review**

In this research academic literature and EIA policy documents were used to develop criteria for reviewing the performance of the EIA system and also to set a criteria framework for examining its quality, effectiveness, and implementation lessons. The literature review also helped the researcher frame the research problem and questions at the early stage of the research. The knowledge gained from the literature review and document analysis was used to develop a questionnaire survey and interview guides.

#### **3.6.2 EIA Survey**

To capture actors' perceptions of the performance, quality, and effectiveness of the EIA system in Namibia, a structured questionnaire was developed from the literature and document analysis. The questionnaire survey was piloted in August 2018 with EIA actors during a Walvis Bay Environmental Management and Advisory Forum (WEMAF) workshop in Walvis Bay. WEMAF was regarded as a suitable platform for piloting because it is an independent body and represents different government ministries and NGOs that are mainly involved in the Namibia EIA process. The comments from the

actors were used to improve the questionnaire. The survey was developed using the QuestBack application and a survey link was generated. QuestBack was selected because it allowed only the submission of completed surveys.

*Actors* were defined as anyone involved in the technical procedures and fieldwork of EIA, or with knowledge of EIA. The purpose of this criteria was to include individuals who may have obtained knowledge of the Namibia EIA system through research and postgraduate studies but have not partaken in specific EIA stages and procedures. The questionnaire survey included nine components of closed questions and two open-ended questions. Closed questions were suitable to collect factual perceptions and relevant to yield quantitative data while the open-ended questions were used to allow unconstrained exploration of an expert's views and to stimulate EIA legislation and its implementation.

The survey was divided into two sections, whereby section A covers the actor's contextual information including institution, gender, age, years of experience, and stages of EIA involvement. Section B comprised nine sections of closed questions and considered the various elements of EIA performance, quality, and effectiveness as follows. Section 1 focused on the review of performance and procedural effectiveness covering EIA legislation, EIA administration and EIA procedure (objective 1); Section 2- Good governance quality in the EIA process (objective 2); Section 3-9 on substantive elements: decision making, knowledge and learning and emergence of leadership; normative elements: public participation, mechanism for sustainable development; and transactive measures: time, cost and roles of actors in EIA (objective 3). Respondents were recruited by convenience and snowball sampling.

A link to the online survey was sent to 300 experts with email addresses obtained

from the MET/WEMAF database. The survey was open from October 2018 to March 2019. To increase the response rate, participants were sent monthly reminders and requested to widely share the survey link with other actors involved in EIA but who may not be on the database list. A total of 110 responses were received (see Table 3.1). The questions were practical and EIA-specific and therefore the public was excluded from the survey. To increase the response rate, participants were sent monthly reminders and requested to widely share the survey link with other actors involved in EIA but who may not be on the database list.

### **3.6.3 Semi-structured Interviews**

In the survey, actors with both technical knowledge and field experience in EIA were requested to indicate their willingness to participate in an in-depth dialogue through face-to-face interviews. Interviews are used to collect in-depth information on the issues under study (Burrows & Savage, 2014). The purpose of the interviews in this study was to have a dialogue with experts and to seek clarification and validate issues on themes generated from the survey's open-ended questions and corresponding to the research questions. The interview guide was developed based on the sections/ themes in the survey questionnaire and corresponding to the research (Table 3.1).

Twenty-five experts indicated their willingness to be interviewed and included government representatives from the DEA (3), Government departments assigned as competent authorities (5), local authorities (2); environmental assessment practitioners or consultants (10), academics (1), state-owned enterprises (2); and non-governmental organisations (2). Limitations associated with the small sample of interviewees

representing the different organisations and the overall survey response rates are acknowledged. However, due to the novelty of the EIA system, the number of EIA experts in Namibia is limited and 25 experts are viewed as sufficient. In addition, all interviewees had at least 5 years of experience in EIA which enriched the data.

Interviews were audio recorded, transcribed, and organised according to the pre-set themes using NVivo 12 software. Transcripts were analysed using a deductive approach based on the research questions and occurring themes that fit the evaluation criteria (Vaismoradi et al., 2013). Responses from different interviewed experts are presented as quotes in the result section using pseudonyms to adhere to the ethical conditions of this research.

Tables 3.2 and 3.3 provide a profile summary of participants from the survey and interviews. For confidentiality and ethical considerations, the study presents interviewed participants' responses using pseudonyms. Table 3.1 shows the interview guide.

Table 3. 1: Interview guiding questions.

Assessment of Governance Processes	Guiding questions
1-1. Participation (The extent to which stakeholders and decision-makers engage in genuine deliberation)	<ul style="list-style-type: none"> <li>● Are there opportunities within the EIA DM processes for people involved to deliberate – not just to reach decisions but to really dialogue, and explore and analyse problems together? Where – in what avenues?</li> </ul>
1-2. Rule of law	<ul style="list-style-type: none"> <li>● Is the EIA process based on impartial legal provisions that protect the environment and its people?</li> </ul>
1-3 Linkages (The presence of appropriate linkages among organizations and institutions, especially across levels).	<ul style="list-style-type: none"> <li>● Is there communication or coordination between institutions involved in EIA? E.g. the CA and other organs of state? In what way?</li> <li>● Can you think of any examples of decisions taken by the DM body that affected what your institution was doing or how it conducted its work?</li> </ul>
1-4. Consensus oriented	<ul style="list-style-type: none"> <li>● Does EIA present opportunities to facilitate discussion and to reach consensus amongst different stakeholders? Any specific example of such a case?</li> </ul>
1-5. Equity (Whether or not institutional rules are fair and take account of unequal circumstances in society)	<ul style="list-style-type: none"> <li>● Are there any communities or stakeholder groups that are not represented in the EIA process? Which ones?               <ul style="list-style-type: none"> <li>- Can you give me some examples of how their concerns are voiced and heard in the DM processes of the EIA? (Or of how their concerns are NOT voiced).</li> <li>- Do they have the capacity to represent themselves competently? Can you give me some examples?</li> </ul> </li> </ul>
1-6. Responsiveness (Whether or not institutional patterns show response to society)	<ul style="list-style-type: none"> <li>● Can you think of any examples of concerns that the general public or some community or stakeholder group has about the EIA process, but which is not being done or attended to? Tell me about that.</li> <li>● If someone—some citizen or citizens, some community or stakeholder group—wants the EIA DM to look at some issue or concern, how can they do that?</li> </ul>

1-7. Transparency (Whether or not the assessment process is open and accessible)		<ul style="list-style-type: none"> <li>● Is the EIA process transparent and clear?</li> <li>● Does the public have rights to review the EIA decision making process?</li> </ul>
1-8. Legitimacy (Whether there is public support for the institutions of the EIA)		<ul style="list-style-type: none"> <li>● As far as you know, do the various communities and stakeholder groups and segments of society accept EIA as legitimate? Do they support it?</li> </ul>
1-9. Accountability (Whether or not institutional patterns provide accountability procedures)		<ul style="list-style-type: none"> <li>● Who is the main DM body accountable to? How are they accountable/what mechanisms are in place for it to be held to account?</li> <li>● Are the responsibilities of the DM body clear? Are the responsibilities of other bodies in the EIA process clearly assigned?</li> </ul>
1-10. Effectiveness & efficiency		<ul style="list-style-type: none"> <li>● Do the EIA process, its capacity &amp; outcomes ensure environmental protection?</li> <li>● Does it contribute to sustainable development at the least cost to society?</li> <li>● Provide examples</li> </ul>
Effective Decision making	1-8. Clear scope, goals, and objectives	<ul style="list-style-type: none"> <li>● Do the key DM bodies in the EIA process have clear goals and objectives?</li> <li>● Do the goals and objectives provide guidance on decision making?</li> </ul>
	1-9. Efficiency (of DM processes themselves.)	<ul style="list-style-type: none"> <li>● Does it typically take a long time for a decision to be made?</li> <li>● What kind of resources and efforts—in terms of new research, consulting stakeholders, and so on—go into making a decision?</li> </ul>
1-11. Learning capacity (The extent to which the EIA promotes learning)		<ul style="list-style-type: none"> <li>● Has the EIA process improved in any ways over time?</li> <li>● Has the level of trust among the various individuals who have been involved increased over time? Have the people involved changed the way they understand each other or understand issues?</li> <li>● Are there ways in which lessons that are learned and knowledge that is gained are passed on? Or institutionalized in any way?</li> </ul>

<p>1-12. Leadership (The extent to which the EIA makes room for the emergence of leadership of various kinds—visionary, entrepreneurial, and collaborative)</p>	<ul style="list-style-type: none"> <li>● There are various kinds and styles of leadership that might emerge among the communities and stakeholders involved: visionary leaders: inspire people and promote progressive change, entrepreneurial leaders: go out and make things happen, Collaborative leadership: people who are connectors and help to facilitate new kinds of partnerships. Can you think of any ways in which EIA has facilitated the emergence of leaders and leadership?</li> </ul>
<p>1-13. More informed decision making</p>	<ul style="list-style-type: none"> <li>● Does EIA contribute to more informed decisions?</li> <li>● Do Stakeholders see/ know the value of EIA in terms of informed decision making?</li> </ul>
<p>1-14. Resolving Tradeoffs (The extent to which EIA has resolved tradeoffs—including tradeoffs among social, economic, and environmental needs, and tradeoffs among different social groups—in a way that is equitable and fair, that is economically rational, and that protects the environment.)</p>	<ul style="list-style-type: none"> <li>● Has the EIA, in the decisions that it has produced making economic sense? In what way?</li> <li>● Has the EIA, in the decisions that it has produced, sufficiently protected the environment?</li> <li>● Are the decisions equitable and fair? Why or why not?</li> </ul>
<p>1-14. Contributing to just power relations (The extent to which EIA has placed limits on the use of coercive power, and to which it has enhanced power as capacity)</p>	<ul style="list-style-type: none"> <li>● When there is a lack of consensus, do some stakeholders have more ability than others to push their agendas forward? Can you give an example?</li> <li>● How does the EIA process allow individual agendas to be constrained or predominate in relation to collective goals?</li> </ul>
<p>1-15. Setting Direction (The extent to which governance has established a common vision or direction.)</p>	<ul style="list-style-type: none"> <li>● Is the vision or direction of EIA well-articulated?</li> <li>● Does it have wide support?</li> </ul>

<p>1-16. Building Community (The extent to which EIA is helping stakeholders to identify, or create, shared values and shared identities)</p>	<ul style="list-style-type: none"> <li>● Has EIA contributed to some kind of collective identity?</li> <li>● Has the sense of community among people of the various communities and stakeholders involved changed? What role did EIA play in those changes?</li> <li>● Has your involvement in various aspects of EIA helped you to articulate values in a different way?</li> </ul>
<p>1-17 Democratic and fair public participation (the extent to which EIA enhances fair and democratic participation of all groups.</p>	<ul style="list-style-type: none"> <li>● Has EIA contributed to democratic and fair participation?</li> <li>● Do I&amp;AP have an opportunity to contribute to implementation &amp; DM through public participation?</li> <li>● Are the views of public are taken up meaningfully in EIA</li> </ul>
<p><b>Assessment of EIA efficiency</b></p>	
<p>1-18 Funding (the extent to which EIA attracts government &amp; international funding</p>	<ul style="list-style-type: none"> <li>● Does EIA attract sufficient financial support from the government and international community?</li> </ul>
<p>cost (The extent to which EIA is done with the least cost)</p>	<ul style="list-style-type: none"> <li>● Does EIA contribute to efficiency of projects in terms of cost?</li> <li>● Is the EIA process affordable?</li> </ul>
<p>1-19 time (the Extent to which EIA is efficient &amp; not causing delays to projects.)</p>	<ul style="list-style-type: none"> <li>● Is the EIA process contributing to efficiency of project implementation?</li> </ul>
<p>1-20 Roles and responsibilities (The extent to which EIA administration is efficient)</p>	<ul style="list-style-type: none"> <li>● Is the EIA review and DM process efficient and done according to agreed timelines?</li> </ul>

Table 3. 2: The number of respondents in the survey and interviews

<b>Institution</b>	<b>Number of Respondents Survey</b>	<b>Number of Respondents Interviewed</b>
Government (Ministry/ SOE)	29	10
Local authority	4	2
Academia	24	1
Non-Governmental Organisation	17	2
Consultant	36	10
<b>Total</b>	<b>110</b>	<b>25</b>

Table 3. 3: Contextual information of survey respondents

<b>Variable</b>	<b>Category</b>	<b>Count (n)</b>	<b>Percentage (%)</b>
<i>Gender</i>	Female	42	38%
	Male	68	62%
<i>Highest Qualification</i>	Grade 12	0	0%
	Bachelor	28	25%
	Masters	64	57%
	PhD	20	18%
<i>Age category</i>	20-30	13	12%
	30-40	62	56%
	40-50	17	15%
	50+	19	17%
<i>Years of experience in EIA</i>	Less than 1 year	10	9%
	1-5 years	42	39%
	5-10	31	28%

Variable	Category	Count (n)	Percentage (%)
	years		
	10+ years	26	24%
<i>Number of EIAs involved in</i>	None	12	11%
	1-4	32	30%
	5-9	19	18%
	10+	43	41%

**Note:** n=110

### 3.6.4 Case Study Analysis

Further micro examination of the implementation and effectiveness of the EIA process at the project level is undertaken using case study analysis. Case studies are especially valuable to investigate ‘how’ research questions and for evaluation, and investigation of social complexity (Yin, 2009). Furthermore, the selection of case studies places necessary restrictions on what data will be collected and the context in which the data will be analysed to prevent too broad of an analysis and too unwieldy a research project (Yin, 2014). In this study, the selection of projects for analysis began by identifying all projects that underwent EIAs after 2012, coinciding with the enactment of the EIA Regulations. This process yielded a population of 1,317 projects that have undergone EIA between 2012 and 2019. To ensure a manageable and meaningful analysis, a purposeful sampling approach was employed to select two projects. Purposeful sampling was chosen as it allows for the intentional selection of cases that are likely to provide valuable insights into the research questions at hand (Campbell et al., 2020). In this case, the goal was to select projects that could offer a comprehensive understanding of EIA implementation and lessons learned for improvement. Five criteria were used

in selecting case study projects met the criteria as follows: (i) they were undertaken after 2012 when EIA Regulations were put in place; (ii) they had a full EIA report available with evidence of public participation; (iii) they had an environmental clearance certificate (ECC); (iv) they were projects of national and international importance and garnered media and public attention; and (v) should represent one of the key development sectors namely: mining, infrastructure, agriculture, hospitality and tourism as described by Humavindu and Stage (2013).

The Namibia marine Phosphate mining project (NMP) and the ReconAfrica oil drilling (REN) satisfied all five criteria and were selected for analysis. Other projects satisfied the criteria except the one of international interest and importance and therefore disqualified. The multiple case study design was selected over a single case to draw more powerful conclusions (Yin, 2009). Case study analysis was used in this research to gain a practical understanding of the EIA process and its implementation in the two chosen projects in Namibia. This objective (4) assessed the extent to which the EIA process is duly followed according to the established laws and to demonstrate the best practices.

### **3.6.5 Document analysis**

Document analysis is a form of qualitative research in which documents are analysed and interpreted to gain understanding and develop empirical knowledge around a topic under study (Henn et al., 2005). Document analysis refers to both a data collection method and a mode of analysis (Henn et al., 2005). In this study document analysis was used as a complementary method to semi-structured interviews and surveys to achieve objectives 1, 2, and 3. For objective 4 document analysis was used to analyse the case study EIA reports and related documentation's objective. Observation of the actual

implementation of the project was not included as part of this analysis, as the focus was only on the micro examination of the EIA process.

For objective 4, a comprehensive assessment framework was developed from the Namibia EIA policy, the EMA (2007), and the EIA regulations (2012). The framework was developed with eight main criteria to assess the extent to which the EIA process was duly followed from the proposal to the decision-making stage. Secondary data were sourced from various channels including EIA reports, peer-reviewed papers, documentaries, regulations, theses, and panel discussions.

Table 3. 4: Summary of methods for each objective used in the research.

<b>Objective</b>	<b>Tasks</b>	<b>Research methods</b>
Objective 1	<ol style="list-style-type: none"> <li>1. Review research on the EIA system and its effectiveness in the world</li> <li>2. Review the EIA policy and legislation of Namibia</li> <li>3. Adopt the framework to review the Namibia EIA system</li> </ol>	Literature review Document analysis Survey
Objective 2	<ol style="list-style-type: none"> <li>1. Review the concept of Governance and EIA effectiveness and quality</li> <li>2. Choose criteria and develop the evaluation framework for quality and performance assessment</li> </ol>	Literature review Survey Semi-structured interview
Objective 3	<ol style="list-style-type: none"> <li>1. Review the frameworks to evaluate substantive, normative, and transactive effectiveness</li> <li>2. Choose criteria and develop the effectiveness evaluation framework</li> </ol>	Literature review Survey Semi-structured interviews
Objective 4	<ol style="list-style-type: none"> <li>1. Review the EIA legislation to develop criteria for analysing the EIA process in the two case studies</li> <li>2. Review two EIA reports of Namibia Phosphate mining and ReconAfrica oil drilling, and other associated reports and debates</li> <li>3. Provide recommendations and lessons learned to increase EIA effectiveness in Namibia</li> </ol>	Document analysis Literature review

### **3.6 Data Analysis**

Upon completion of the data collection, quantitative data from the questionnaire survey was analysed. The data were analysed using Social Packaging for Social Sciences (SPSS) version 23.0 and Microsoft Excel (2019) and presented in bar charts, crosstabs tables, and pie charts highlighting the adequacy and effectiveness of the Namibia EIA system. Qualitative data from the interviews were audio recorded and transcribed. Information was organized in a Computer-Aided Data Analysis (CADA) software (NVivo 14.0) and analysed using content and thematic analysis (Vaismoradi et al., 2013). Content and thematic analysis approaches are suitable to analyse the views and concerns of people about phenomena or systems under study (Vaismoradi et al., 2013). Content analysis is specifically well-suited to analyse the multifaceted and important information related to policies and exploratory work in an area where not much is known (Vaismoradi et al., 2013). Thematic analysis provides a rich and detailed, yet complex, account of the data as it searches for and identifies common threads that extend across an entire set of interviews (Braun & Clarke, 2006). Transcripts were therefore analysed using a deductive approach based on the research questions and occurring themes fitting the assessment framework.

The results from the survey were calculated as percentages and presented in graphs using Microsoft Excel (2019) and the Statistical Package for the Social Sciences (SPSS 23.0) was used for the cross-tabulation of the independent and dependent variables.

The specific research procedures and data analysis for each objective are described under the stand-alone Chapters 4, 5, 6, and 7, respectively.

### **3.7 Research Ethics**

According to Neuman (2007) ‘ethics helps to define what is, or is not, legitimate to do or what moral research procedures involve’. Ethical consideration in this study started with the application to the ethical committee of the University of Namibia. The committee reviewed all interview guidelines and structures, to ensure that they met the highest ethical standard available. A formal ethical clearance was received from the University of Namibia on the 30<sup>th</sup> of September 2019.

Fontana and Frey (2005) highlight that the human right to privacy and confidentiality, the right to be informed, and the right to be protected from harm are key concerns in social science research. Given that surveys, questionnaires, and interviews were used in this study, informed consent had to be developed to inform participants of their right to privacy and confidentiality when deciding to participate. This research did not require participants to give true names, and therefore pseudo names were used to record personal information such as years of experience and qualification of participants. Questionnaires and interview records were transcribed and coded for the privacy of the participants. Dictaphones used to record voices in this study had a special feature of a password; the records were locked and only accessible to the principal researcher.

The transcribed data were coded and securely stored on encrypted CDs and drives. All the voice records and electronic data will be destroyed at least five years after the completion of the study as per the best media sanitation practice by pulverizing and cross-cut shredding (Halej, 2017). The researcher applied for and obtained ethical approval from UNAM before the commencement of the fieldwork (Appendix A).

### **3.8 Chapter Summary**

This chapter provided a brief overview of the research methodology to contextualise the data aspect of this study. The choice of different modes of data collection best suitable for this research was guided by the type of data required. The different methods of data collection explained in this chapter offered the opportunity to capture the participants' views and opinions and thus provide a more effective method of gaining access to information about the EIA and its performance and effectiveness. The next four chapters are presented as stand-alone articles with abstracts, introductions, methodology, results, discussions, conclusions, and recommendations.

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## **CHAPTER 4. EVALUATING THE PERFORMANCE AND PROCEDURAL EFFECTIVENESS OF NAMIBIA'S ENVIRONMENTAL IMPACT ASSESSMENT SYSTEM**

This chapter is published as:

### **EVALUATING THE PERFORMANCE AND PROCEDURAL EFFECTIVENESS OF NAMIBIA'S ENVIRONMENTAL IMPACT ASSESSMENT SYSTEM**

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#### **4.1 Abstract**

Environmental impact assessment (EIA) in Namibia was formally introduced in 2007 through the Environmental Management Act (EMA Act 7 of 2007). However, little EIA-related research has been undertaken, and the system has not been formally reviewed. This paper evaluates the procedural performance and effectiveness of the EIA system in Namibia. The criteria used for the evaluation were obtained from several sources in the literature and based on legal, administrative, and procedural frameworks. Data were collected through a literature review, document analysis, and semi-structured interviews. The study revealed that Namibia has a functional EIA system based on a good legal basis, regulated EIA process, and institutional structures. Analysis of the legislation and administrative frameworks highlighted several implementation weaknesses including lack of coherence in the legislation and poor implementation. Further weaknesses included a lack of enforcement, weak coordination, inadequate financial and human resources, and limited autonomy of the regulatory authority. Screening, scoping, public participation, and review process are perceived as inadequate. Based on our findings we suggest an urgent need to complete the ongoing legislation reform and provide some practical pointers to improve the performance of the EIA system. Essentially, EIA is beneficial and has a positive and preventive effect in Namibia. However, more effort is needed to enhance system monitoring and implementation, capacity building, and EIA awareness to ensure the effective performance of the EIA system.

**Keywords:** procedural, performance, effectiveness, EIA system, Namibia

#### **4.2 Introduction**

The environmental impact assessment (EIA) process originated in the late 1960s. It is now adopted extensively and legislated in over 100 countries worldwide (Drayson al., 2017; Morgan, 2012). According to Glasson et al. (2012), EIA aims to identify potential environmental impacts of activities and to assess different options before deciding whether to accept or reject a proposed development. The EIA system is framed by basic principles of environmental protection and sustainable development and reflects

common approaches to similar challenges (Marara et al., 2011). Although EIA in developing countries is based on the same set of principles as that of developed nations, its implementation often falls short of international practices (Rebelo & Guerreiro, 2017). Experience to date shows that the establishment of EIA in developing countries was often a result of a response to a disaster or funding requirements by international donor institutions. Marara et al., (2011) emphasised that many developing countries mimicked Western EIA systems without considering the local politics and context.

While other countries in the world have introduced the EIA system as early as the 1970s, EIA systems in sub-Saharan Africa are relatively new, being established largely in the 1990s. In Southern Africa, South Africa and Zimbabwe introduced EIA in 1997, with Mozambique and Angola following in 1998 (Aucamp, 2009). Literature shows that the status and quality of EIA, its implementation, and its performance differ based on the governance system and the context (Kolhoff et al., 2018; Marara et al., 2011; Suwanteep et al., 2016). It is thus necessary that the EIA system is reviewed periodically in response to the dynamics of governance and context in a country. Several EIA evaluation studies have been undertaken for countries in the Middle East and North Africa (Ahmad & Wood, 2002), East Africa (Marara et al., 2011), and South Africa (Wood, 2003). More recently Rebelo and Guerreiro (2017) evaluated and compared EIA performance in Angola, Kenya, Tanzania, South Africa, Mozambique, and the European Union. Some of the shortcomings found in developing countries include insufficient consideration of impacts and alternatives, and lack of public participation (Bilgin, 2015; Elvan, 2018; Wood, 2003).

In Namibia, EIA was introduced in 2007 through the promulgation of the Environmental Management Act 7 of 2007 (EMA, Act 7 of 2007) in 2007. This was followed by the Environmental Impact Assessment Regulations 30 of 2012 (EIA Regulations, Regulations 30 of 2012) in 2012. Despite it being in place for about a decade, there has been no formal monitoring of the system to date. The government of Namibia has recently begun the consultation process for reviewing and amending EIA legislation.

This study is therefore timely in bringing useful evidence on the functioning and implementation gaps in the EIA legislation, grounded in the perceptions of different key stakeholder groups. This evidence will now be used to develop appropriate guidelines once the new legislation is enacted. At an institutional level, system review and monitoring are critical steps to obtain feedback and a means to improve processes and mechanisms. In addition, there is limited research on the performance and effectiveness of EIA in Namibia. There is therefore a need to conduct a thorough review of the Namibian EIA system from both the institutional and research perspectives. The aim of this study is thus to review the status and performance of the EIA system according to the legal, administrative, and institutional frameworks currently in place.

### **4.3 Methodology**

Environmental impact assessment performance and effectiveness have been extensively discussed in the literature since the earlier work by Sadler (1996). This was followed by numerous investigations of EIA performance at policies and project levels in different contexts (Bond et al., 2020; Chanchitpricha & Bond, 2013; Elvan, 2018; Lyhne et al., 2017; Richardson & Cashmore, 2011). It is beyond the scope of this paper to review the various debates on effectiveness, the study will instead focus on the status and

performance of EIA in Namibia. Performance refers to the extent to which the EIA process complies with EIA legislation, institutional and professional standards, and procedures as measured through the legislative frameworks, administrative provisions, and EIA guidelines (Pope et al., 2018; Sadler, 1996).

An EIA performance is effectively undertaken using evaluation criteria. This paper reviews the Namibian EIA system's performance against criteria adapted from Fuller (1999) and Ahmad and Wood (2002), using data collected through a literature review, document analysis, and semi-structured interviews. Fuller's (1999) model groups the criteria into two categories: systemic and foundational measures, while Ahmad and Wood's (2002) comprise a model of criteria to measure the system performance. Systemic measures represent features of the EIA system designed to deliver quality assurance in practice and administration and foundation measures are actions to improve the effectiveness of the EIA system. Systemic measures include the legal, administrative, and procedural frameworks, and foundation measures include the existing EIA guidelines, training opportunities, and the certification of professionals. In this study, a criterion on time and cost of EIA was added to explore the fees and effort that go into a good EIA system. Cost and time are important components, yet it is rarely investigated in EIA studies (Loomis & Dziedzic, 2018).

Data collection commenced by reviewing the extant literature and analysing EIA policy and guidance documents. This information was used to explore the EIA process and guide the composition of interview questions. Semi-structured interviews were conducted with a sample of 25 experts comprising the following number of representatives: The Department of Environmental Affairs (3), government departments assigned as competent authorities (5), local authorities (2), environmental assessment

practitioners (8), academics (2), state-owned enterprises (2) and non-governmental organisations (2). Limitations associated with the small sample of interviewees representing the different organisations and the overall survey response rates are acknowledged. However, other studies in the literature assessing SEA effectiveness used a small sample of 2-6 interviews (Jha-Thakur et al.,2009; Van Doren et al., 2012). All interviewees had at least 5 years of experience in EIA which enriched the data. Questions were technical and EIA-specific; therefore, the public was not included in the interviews. Open-ended interview questions were used to allow unconstrained exploration of an expert's views on EIA legislation and its implementation. Additional probing questions stimulated further and detailed discussions (Saunders et al., 2009).

Interviewees were recruited by convenience and snowball sampling. The focus was to obtain a range of opinions from experts in EIA and representatives of the four main actor groups: academics, NGOs, parastatals, and government. The sampling process targeted a minimum of three representatives from each actor group. Only two academics were interviewed due to time and location constraints. About seven academics working in natural resources and environmental-related departments in institutions of higher learning indicated (via email) that they were unable to partake in the interviews due to limited technical knowledge of EIA. Practitioners of EIA, however, were eager to participate as they had many issues to discuss and welcomed the need for research evidence to improve Namibia's EIA system. Because of a limited number of EIA experts in Namibia, the sample of 25 was representative of all the key EIA actors nationally. Interviews were audio recorded and transcribed, followed by a coded thematic analysis using NVivo 12 software (Vaismoradi et al., 2013). Transcripts were analysed using a deductive approach based on the research questions and occurring themes that fit the evaluation criteria.

A detailed profile of the interviewees is not provided to adhere to the ethical conditions of this research. Instead, interviewees' views on the results are presented using pseudonyms. The evidence that was obtained from the document analysis and interviews was matched to the *systemic* criteria in **Table 4. 1** below or the *foundation* criteria in **Table 4. 2**. Substantive evidence was classified as *fully met*; some evidence was classified as *partially met*, and no evidence was classified as *not met*.

Table 4. 1 EIA System Evaluation Criteria: Systemic Measures<sup>1</sup>

<b>Systemic measures</b>	
<b>1</b>	<b>EIA legislation</b>
1.1	Legal provisions for EIA
1.2	Provisions for appeal by the developer or the public against decisions
1.3	Legal or procedural specification of time limits
1.4	Formal provisions for SEA
<b>2</b>	<b>EIA administration</b>
2.1	Competent authority for EIA and determination of environmental acceptability
2.2	Review body for EIA
2.3	Specification of sectoral authorities' responsibilities in the EIA process & coordination with other planning and pollution control bodies.
<b>3</b>	<b>EIA process</b>
3.1	Specified screening categories
3.2	Systematic screening approach
3.3	Systematic scoping approach
3.4	Requirement to consider alternatives
3.5	Specified EIA report content
3.6	Systematic EIA report review approach
3.7	Provisions for public participation in EIA process
3.8	Systematic decision-making approach
3.9	Requirement for Environmental Management Plans
3.10	Requirement for mitigation of impacts
3.11	Requirement for impact monitoring
3.12	Experience of SEA
3.13	Time and cost of EIA

Note. <sup>1</sup> Adapted from Ahmad & Wood (2002); Fuller (1999)

Table 4. 2: EIA system evaluation criteria: Foundation measures<sup>1</sup>

<b>Foundation measures</b>
4.1 Existence of general and/or specific guidelines including any sectoral authority procedures
4.2 EIA system implementation monitoring
4.3 Expertise in conducting EIA (national universities, institutes, and consultancies with EIA technical expertise)
4.4 Training and capacity building

*Note.* <sup>1</sup> Adapted from Ahmad & Wood (2002); Fuller (1999).

### **4.3 Results**

This section presents the results of the review of the Namibia EIA system (Table 4.3p. and Table 4.4). Results show that 66% (14 out of 21) of the evaluation criteria were partially met; 33% (7 out of 21) were not met, and none of the criteria was considered fully met. All four foundation measures are rated as not met.

#### **4.3.1 Systemic Measures**

##### **4.3.1.1 Legislative Framework for EIA**

Article 95 (1) of the Namibian Constitution requires the state to govern the environment for the well-being of the people, noting that: “The state shall actively promote and maintain the welfare of the people by adopting policies aimed at the maintenance of ecosystems, essential ecological processes and biological diversity of Namibia and utilization of living natural resources” (NA Const. art. 95 (1). The Ministry

of Environment and Tourism (MET) was established to promote Article 95 with provisions on environmental assessment and management as well as the implementation of multilateral environmental agreements. In 1991, the MET initiated an extensive intersectoral dialogue on environmental management, which led to the Namibia Green Plan.

Table 4. 3: Review of the Namibia EIA System: Systemic Measures

<b>Evaluation criteria</b>	<b>Rating</b>	<b>Results</b>
1 EIA legislation		
1.1 Legal provisions for EIA	Partially	EMA, Act 7 of 2007 & EIA Regulations, Regulations 30 of 2012 clearly define the EIA process but have shortcomings in timelines and omissions of activities.
1.2 Appeal by the developer or public	Partially	Section 50 of the EMA gives legal provisions for appeal, but 14 days to appeal is limited.
1.3 Legal specification of time limits	Partially	The overall timeline of the EIA process from screening to decision is not indicated.
1.4 SEA formal provision & experience	Not met	There is no SEA provision in the EMA & EIA Regulations.
2 EIA administration		
2.1 Competent authority	Partially	DEA is the authority in charge of EIA, but not as CA. CA roles are unclear.
2.2 Review body for EIA	Partially	Section 36 of the EMA assigns the EC office under the DEA as the review body; however, the quality checks are missing.

2.3	Specification of sectoral authorities	Partially	Minister to coordinate but no regulation or guideline is available for it.
<b>Evaluation criteria</b>		<b>Rating</b>	<b>Results</b>
3	EIA procedure		
3.1	Specified screening categories	Partially	Screening approaches are given in the legislation, but screening categories & thresholds are lacking.
3.2	Systematic scoping approach	Partially	Scoping is well-defined; however, no scoping guidelines exist in the legislation.
3.3	Requirement to consider alternatives	Partially	Regulation 8 (g) requires alternatives during the assessment, however, there is no guide or regulation on how alternatives can be considered.
3.4	Specified EIA report content	Partially	Regulation 15 specifies the content of the report, but no quality assurance checks exist.
3.5	Systematic review approach	Partially	Section 36 of the EMA assigns the EC to review, however no review checklist or guideline exists, and no EIA review committee is established.
3.6	Public participation	Partially	Regulations 21, 22, and 23 give provision for public consultation, but no guideline is available.

3.7 Systematic decision-making approach	Partially	Regulation 18 assigns the EC to decide within 7 days from the date of review, but the regulation is not followed, and the process lacks transparency.
3.8 Requirement for mitigation & EMP	Partially	Regulations 8 & 15 require a mitigation plan, but no guideline exists on the usage of the plan and how it can be implemented.
3.9 Requirement for impact monitoring	Not met	No monitoring provisions exist in the legislation.
3.10 Experience for SEA	No met	No formal requirement for SEA in Namibia, hence poor experience.

Table 4. 4: Review of the Namibia EIA System: Foundation Measures

<b>Evaluation criteria</b>	<b>Rating</b>	<b>Results</b>
4.1 EIA system implementation and monitoring	Not met	Provisions on EIA system monitoring are not in the legislation.
4.2 EIA guidelines including sectoral authority	Not met	No sectoral guidelines or regulations exist.
4.3 Expertise in conducting EIA	Not met	No requirement exists for EIA expertise registration or certification.
4.4 Training and capacity building.	Not met	No training or capacity-building provisions exist in the legislation.

The Green Plan was presented at the Rio Earth Summit in 1992, and Namibia ratified the three UN Conventions on Biodiversity, Climate Change, and Desertification / Land Degradation, which led to the adoption of Agenda 21. The MET was recently renamed to the Ministry of Environment, Forestry and Tourism (MEFT), and is referred to as such in this chapter. Consequently, EIA was accepted as an environmental governance tool and the first environmental policy was enacted in 1994. This was followed by the promulgation of the Environmental Management Act 7 (EMA Act 7 of 2007), and the enabling Environmental Impact Assessment Regulations 30 of 2012 (EIA Regulations, Regulations 30 of 2012), in 2012. The objective of the EMA is “to prevent and mitigate, based on the principles set out in section 3, the significant effects of activities on the environment” (EIA Regulations, 2012). The EIA legislation applies to new projects as well as to the renovation or expansion of existing development.

The EIA Regulations require the developer to submit an EIA report to the environmental commissioner (EC) before commencing a development activity. The developer is responsible for the appointment of the EAP and for ensuring compliance with the statutory requirements of the EIA process. The EMA specifies the list of activities subject to EIA, the steps of the EIA process, and associated time limits and institutional responsibilities. Section 27 of the EMA consists of a prescribed list of 65 activities that are likely to cause adverse environmental and social impacts. The list includes activities related to construction, water abstraction, mining, and agricultural activities. High-impact activities including fisheries and sand mining are omitted from the discretionary list.

One of the legislative strengths of the Namibian EIA system is the inclusion of section 50 of the EMA, which gives any person aggrieved by the decision on EIA

applications, the right to appeal to the minister or high court (EMA Act 7 of 2007). However, a gap exists in the regulation because there is no clear provision for interested and affected parties (IAPs) or the public to be informed of the decision made on proposed projects. According to regulation 18 of the EMA, the EC is only required to inform the developer of the decision. A local authority expert stated that the appeal process needs to be open and transparent, adding that there is a need for an online database to share information on EIA applications and decisions with the public. Interviewees in this study indicated that the public currently relies on media reports or leaked information from the DEA to learn about EIA decisions.

Another important provision in the EIA legislation is timelines. The regulations indicate that upon receipt of the application, the EC should acknowledge the EIA application and notify the proponent within three days. Within seven days the EC should review the EIA report, while the proponent and public can appeal 14 days from the date of decision. No definite timeline is indicated for decision making though, and the EMA stipulates that decision making should be undertaken “within a reasonable time” (EMA, Act 7 of 2007).

There is no formal provision for strategic environmental assessment (SEA) in the legislation. Section 25 of the EMA requires all organs of state to submit environmental plans of planned activities, policies, and programmes to the EC. While that requirement can be interpreted as SEA, the regulation is silent on the procedure for environmental plans.

All interviewed experts agreed that the EIA system in Namibia is based on clear legal provisions. However, there were reservations on the implementation of the

legislation, with experts indicating a need to strengthen some areas and identifying the need to create enablers for effective implementation:

EIA is a legal tool and a legal obligation that one must adhere to. It has brought change, but I still feel like it needs change, and it needs to be improved because there are a lot of legal loopholes (Exp\_GovSS1).

A senior government scientist highlighted that the current loopholes in the EIA list result from a lack of consultation, consensus, and inter-ministerial conflicts that occurred during the initial drafting of the EIA legislation. An NGO expert added that several critical elements including categories of activities and provision of SEA, the role of the Sustainable Development Advisory Committee in the review, and decision-making process were in the draft Environmental Management Bill in 2003 but were omitted in the final EMA Gazette in 2007.

Some of the key challenges discussed by the interviewees included lack of monitoring provisions, lack of coherence between the Act and the Regulations, lack of enforcement of fines and penalties, lack of personnel including inspectors and environmental officers, and lack of guidelines on activities and the EIA process. Specific reference was made to the lack of appropriate definitions of key terms in the Regulations whereby, for example, *public participation* and *public consultation* are used interchangeably in the legislation. An expert from the DEA agreed to a lack of appropriate definitions of terms indicating that “it becomes difficult to enforce the legislation and to deal with offenders as the court may ask, which one is the requirement for EIA: if it is public participation or public consultation?” (Exp\_GovRS1).

The issue of political and business power influence was also stated as a challenge in the Namibian EIA process. A government scientist suggested that communities’

decisions are often intimidated by “political champions” who influence them to agree to projects they know little about (Exp\_GovSS1).

Interviewees also criticised the practice where the EAP is paid by the proponent, noting that too much control and power is given to proponents as they determine who is going to do the EIA, and the point at which they pay them. A senior scientist added that EIA reports are based on transaction conditions rather than on true reflections of impacts. It was suggested that an independent intermediary body should be established where proponents pay EIA costs to avoid relationships between EAP and proponents. A senior government official supported the notion stating: “I think practitioners will be more honest and more thorough if they were getting paid through some other funding systems and the quality will improve” (Exp\_GovSS1).

Regarding penalties, the EMA states that a person who commits an offense in terms of the EIA Regulation is liable for a N\$100,000 fine, imprisonment for a period not exceeding 10 years, or both. Interviewees noted that in practice, fines only appear on paper and are rarely imposed, but when they are enforced, developers tend to appeal in court due to several loopholes in the legislation. The legislative provision is therefore partially met (Table 4.3).

#### **4.3.1.2 EIA Administration**

Under the MEFT, the EMA designates the DEA as the sole regulatory authority in charge of supervising and authorising EIA applications in Namibia. The MEFT-DEA was established in 1990 and is headquartered in Windhoek. The DEA is responsible for screening projects, reviewing EIA reports, and deciding on the acceptability of the projects. The DEA also has broad responsibilities, such as overseeing Namibia’s

compliance with various United Nations conventions and the implementation of programmes related to pollution and waste management control.

The EC is the head of the DEA and was first appointed in 2012. The EC acts as the secretariat that receives and records EIA applications, reviews the EIA reports, and authorises the environmental clearance certificate (ECC). Government ministries including the Ministry of Fisheries and Marine Resources, Ministry of Mines and Energy, Ministry of Agriculture, Water and Land Reform, and Ministry of Urban and Rural Development are designated as competent authorities. Section 1 of the EMA defines a competent authority as “an organ of state which is responsible, under any law, for granting or refusing an authorisation”. Section 32 of the EMA requires the applicants to apply to the relevant CA for an ECC in respect of a listed activity being undertaken (EMA, Act 7 of 2007). Yet, regulation 10 of the EMA states that a “competent authority (CA) may not issue an authorisation unless the proponent has obtained an ECC in terms of the EMA” (EMA, Act 7 of 2007). Section 32 and Regulation 10 seem contradictory in terms of the roles of the CA. In practice, consultants indicated that they hardly consult the CA during screening or scoping because CAs have no power or capacity to deal with EIA applications. Government experts agreed that the role of the CA is unclear, and the current practice leaves the EIA administration in the hands of the DEA only.

The EC is responsible for all environmental decisions in the country. Interviewed experts criticised the fact that the EIA decision lies on a single individual. It was indicated that there is a perceived lack of trust and transparency. Experts indicated that, by June 2003, the Environmental Management Bill had set out the role of the Sustainable Development Advisory Committee (SDAC) to assist the EC with EIA decisions.

However, the role of the SDAC in the EMA was downgraded and only limited to advising the EC on policy issues without any direct role in the EIA decision.

The DEA only has an office in Windhoek and no regional offices exist. Lack of decentralisation was pointed out as a challenge in EIA administration. According to local authority experts, the DEA office lacks communication and coordination with offices in the regions throughout the country. A senior government expert expressed concerns that the current institutional arrangements allow DEA to monopolise the EIA process. Experts, however, applauded a new directive for local authorities to authorise some activities, noting that Windhoek and Walvis Bay municipalities were granted the power to authorise rezoning applications in 2018. Weak coordination and communication also seem to exist between the EC office and the EAPs. Practitioners lamented that the DEA is non-responsive and therefore EAPs often undertake EIA at their discretion.

Another challenge in EIA administration is the limited capacity, skills, and expertise to manage EIAs. DEA officials indicated that the EIA administration is demanding, and as a result, there is a high staff turnover. There are limited staff in reviewing and monitoring of impacts. The EMA makes provisions for the appointment of environmental officers in different regions. However, to date, concerned officials indicated that no appointment of environmental officers or inspectors has taken place. Interviewees added that institutional capacity, human resources, and financial capacity is a national challenge that requires attention.

Interviewed officials revealed that the position of DEA under a government ministry is a constraint to effective EIA management. Experts indicated issues of lack of independence and autonomy of DEA and conflict of interest and self-regulation when EIA applications are from the mother ministry (MEFT), as critical challenges. Interviewees

also indicated that some of the DEA staff own consulting firms, and some are shareholders or friends of the developers, creating a possibility for favour and unethical behaviour during the review. Administrative provisions are therefore considered partially met (Table 4.3).

#### 4.3.1.3 EIA Process and Practice

**Figure 4. 1** below summarises the main stages of the EIA process in Namibia, namely screening, scoping, public participation, EIA report, review, decision making, mitigation, and monitoring.

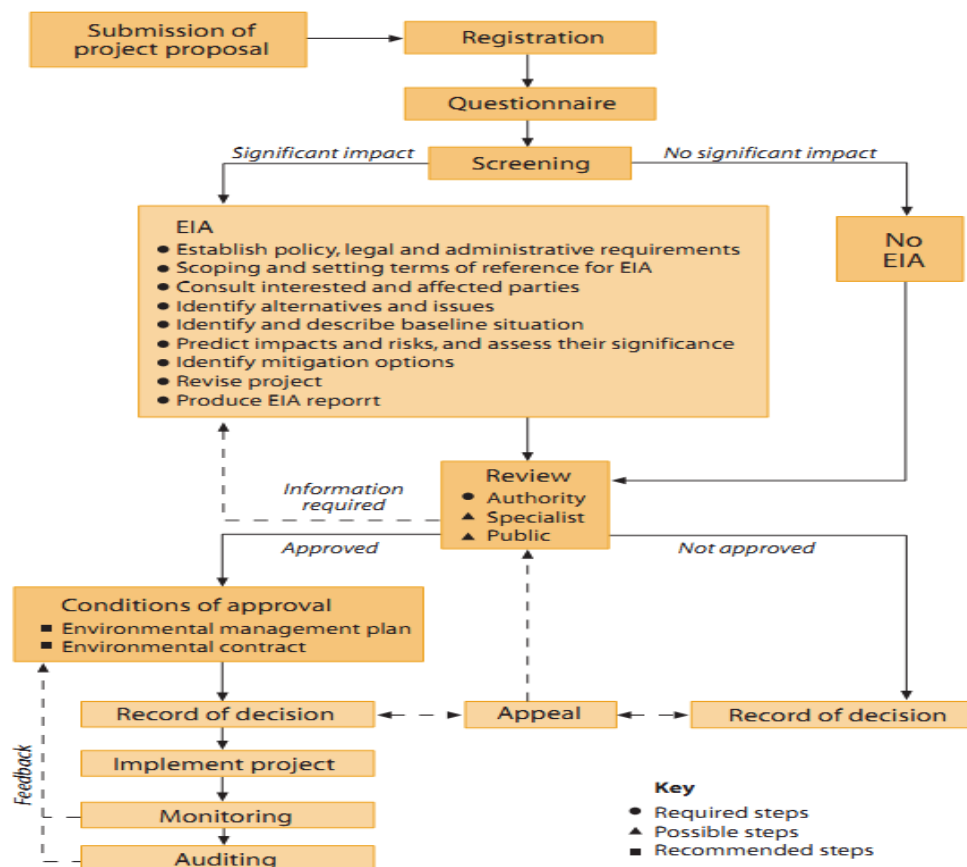


Figure 4. 1: The EIA Process of Namibia (Source: Tarr & Tarr, 2003)

Survey participants indicated that screening, scoping, EMP and mitigations, and the writing of the EIA report are well performed (**Table 4. 2** below). However, stages including participation, review, and decision making are not well performed. Monitoring and auditing are poorly performed. The EIA stages are discussed below, with some comments from the interviews.

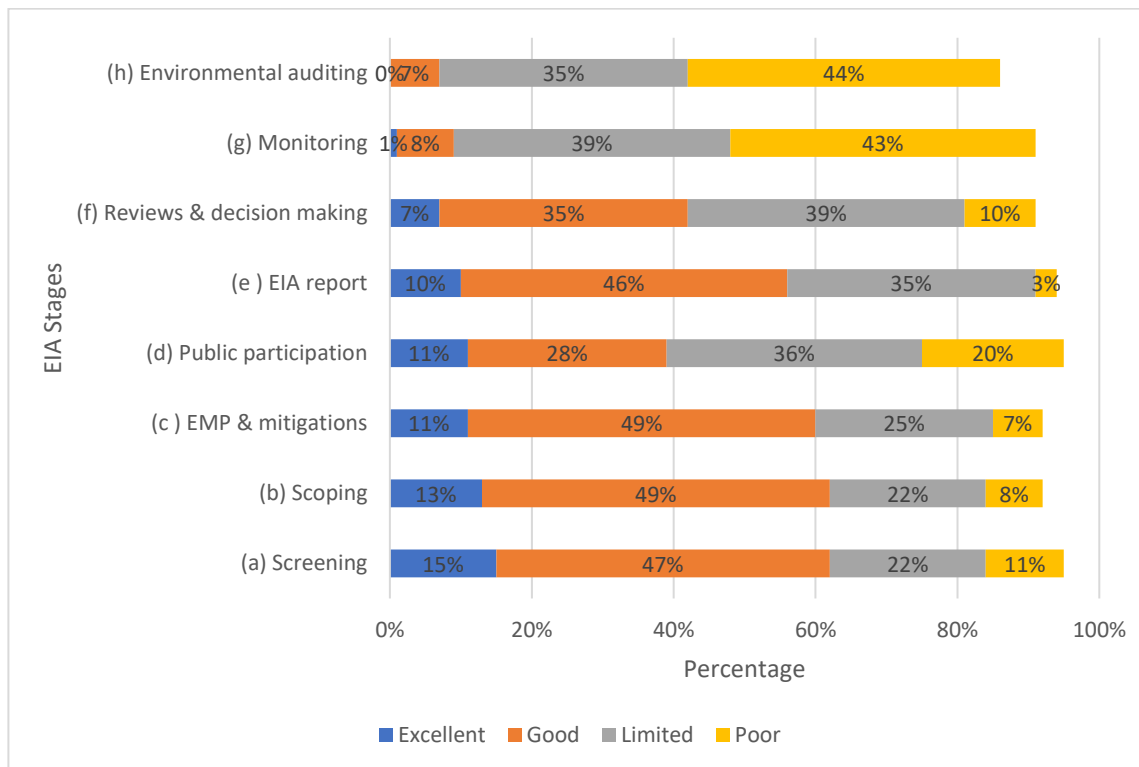


Figure 4. 2: Respondents' Perceptions on the Performance of Key Stages of the EIA Process

#### **4.3.1.3.1 Screening**

The screening process ensures that only projects with significant impacts are assessed, and that the EIA is applied appropriately. The responsibility for screening projects lies with the DEA. A hybrid approach is used with a combination of discretionary lists, case-by-case examinations, and thresholds (EIA Regulations, 2012). No screening categories are provided in the legislation. However, for every listed activity, the proponent should submit a screening questionnaire to the DEA. The DEA has a new screening questionnaire in place comprising 25 questions requesting information on the project description and the environment. Some government experts applauded the questionnaire stating that it is comprehensive. Most EIA consultants nevertheless criticised the screening tool, indicating that questions are highly technical for community members in rural areas, including conservancies.

The listed activities lack thresholds and only three activities (bulk transportation storage and transportation of dangerous goods; storage and handling of a dangerous good; and abstraction of underground water) have provisions for a threshold. Major activities such as roads, power lines, and communication networks lack defined thresholds. A representative of the regulatory body described the current list of activities as “one size fits all” (EXP\_GovRS1).

A senior government representative retaliated that the listing of aquaculture facilities as an activity requiring EIA without specifying the size limit has confused small-scale fish farmers:

Now if we take inland/freshwater aquaculture in the north (specifically in the Oshanas), the people are buying fingerlings from the Ministry of Fisheries as small-scale farmers and now the question is, do they have to do an EIA? Must each farmer do an EIA?

People on their plots in Okahandja, there were applications that they wanted to do hydroponics (fish farming and vegetables); must they do an EIA, because under the EMA, aquaculture is a listed activity? (Exp\_GOVSR3)

The screening process is described as long, bureaucratic, and non-selective, a practice that defeats the purpose of the EIA process. A senior consultant added that with the current screening process, a 3 km road and a 1,000 km dual carriageway would both require an EIA, and a bed and breakfast development in a rural area is subjected to identical EIA requirements as a five-star hotel in the central business district:

One of the key challenges is that our current regulations do not have thresholds. If somebody wants to build a two-bedroom Bed and Breakfast in Ongha, the Act says that person needs an EIA and, in this case, the EIA might cost more than the infrastructure itself. Doing a small campsite somewhere in Epupa also requires an EIA, because we do not have thresholds (Exp\_PC2).

Experts suggested a need to produce an exclusive and inclusive list of projects requiring EIA to introduce screening schedules and to establish standard environmental management plans for common activities such as fuel stations.

#### **4.3.1.3.2 Systemic Scoping Approach**

Scoping is an important stage in the EIA process to ensure that potential significant impacts are addressed. Scoping is the responsibility of the EAP who assesses the proposed activity on behalf of the developer. Where the proposed activity does not require an assessment, the EC may grant the application and, on payment of the prescribed fee, issue an ECC to the proponent (EIA Regulations, 2012). When the proposed activity requires an assessment, the EC determines its scope, the procedures and methods, and a reasonable

period for the assessment report to be submitted (EIA Regulations, 2012). Development of terms of reference is the responsibility of the developer. Interviewed experts noted that the scoping stage affords excessive power to the developer, a practice perceived as affecting the quality of the assessment process.

Public consultation is a requirement during scoping. According to regulation 21 of the EIA Regulations (2012), the developer must open and maintain a register of interested and affected parties (IAPs) and solicit comments from the public. Regulation 13 permits the EC to issue an ECC based on the scoping report. It is not clear under which condition that can happen, but interviewed experts indicated that the issuing of ECC at the scoping report stage lacks transparency and consistency.

No scoping guidelines exist in the legislation; however, the outline of the scoping report is specified in Regulation 8 of the EIA Regulations (2012). Some of the challenges in scoping include a lack of baseline data, reliance on desktop studies, and a lack of site visits.

#### **4.3.1.3.3 The Requirement to Consider Alternatives**

In Namibia, it is mandatory to consider alternatives for development projects. Regulations 8 and 15 both require an indication of alternatives in the scoping- and assessment reports, respectively (EIA Regulations, 2012). According to the EIA Regulations, an alternative to a proposed activity implies the following. There are various ways to fulfil the overall goals and needs of the project. This includes exploring different options for where the project takes place, the type of project, how it's designed or organized, the technology used, and how it's carried out (EIA Regulations, 2012). Apart

from *defining* alternatives, the legislation does not clearly *describe* these alternatives and does not provide any guidelines on the *types* of alternatives that should be considered.

Interviewed experts noted that the implementation of site alternatives is a challenge in Namibia. This is because proponents often acquire land through municipalities and traditional authorities before project inception, therefore making it difficult to consider a change of site. Interviewees, however, indicated that through EIA, alternative sites had been considered for several capital projects including a hazardous chemicals storage facility and an oil container terminal in Walvis Bay.

#### **4.3.1.3.4 Specified EIA Report Content**

The developer and the EAP prepare an assessment report within 14 days of the receipt of notification from the EC (EIA Regulations, 2012). Regulation 15 of the EIA Regulations specifies the outline of the EIA report and requires the EAP to provide all information needed for decision making (2012). In 2018, MEFT through the commissioner's office developed a new EIA report guideline note which sets strict requirements of a maximum of 60 pages for an EIA report. Yet, the legislation provides no specified quality control measures to prevent the release of inadequate reports. Interviewed experts indicated that many EIA reports are written according to the specified content. However, they perceived the quality of reports to be deteriorating due to "copying and pasting." A senior NGO expert noted that EAPs are not certified, and many EIA reports are written by unqualified people. An expert from the regulatory authority indicated that low-quality reports are a result of a "one-man show" stating that "EIA is supposed to be done by a team of specialists but now EIAs are a one-man show being done by one person only, which is already affecting the whole EIA process"

(Exp\_GovRS1). Interviewed experts revealed that the EIA reports are often too large and lack clarity on important issues of biodiversity and socioeconomics. Many experts indicated that EIA in Namibia is undertaken as a “tick box” and “window-dressing” procedure for developers with little concern for the environment.

#### **4.3.1.3.5 Systemic EIA Report Review Approach**

The review stage of the EIA process is an important quality control measure to ensure that information and data collected about project impacts are adequately reported for use in decision making (Fuller, 1999). In Namibia, EIA reports are publicly reviewed before the final report is submitted to the EC for a decision. The regulation is not clear on the review approach and instrument used by the DEA; nor on the time needed for reviewing, with section 36 of the EMA indicating the EC must review the application “within a reasonable time after the closing date” (EMA, Act 7 of 2007).

According to section 45 of the EMA, the EC can consult or appoint any person, institution, or authority and hold a public hearing on the EIA application under review (EMA, Act 7 of 2007). In addition, the EC has the prerogative to appoint an external reviewer in cases when technical knowledge is lacking or a high level of objectivity is required (EMA, Act 7 of 2007).

There are no review committees in place. The DEA undertakes a review of EIA applications and when necessary, the CA is engaged to provide recommendations. Interviewed experts from CAs indicated that government officials provide recommendations on EIA reports, however, no formal appointment was made, and no guidance or training was offered to undertake the review. As a result, the review process is not prioritised and is undertaken as an *ad hoc* activity. Experts also suggested there is a

need to establish an independent EIA review committee made up of academics, local authorities, and NGO members to assist the EC.

Interviewees noted that the DEA lacks human resource capacity in terms of numbers and expertise to undertake the review of EIA applications. Experts revealed that the most experienced personnel left the DEA and worked in consulting firms and NGOs. A senior consultant advised that the DEA internal reviewers' lack of skill can be improved by collaborative agreement where new staff can attend field training with reputable EIA consulting firms.

#### **4.3.1.3.6 Public Participation in the EIA Process**

Public participation is mandatory and conducted at different EIA stages (EIA Regulations, 2012). During screening, the public is notified about the registration and the intention to undertake an EIA and invited to register as an IAP. During scoping, the public is invited to comment on the scoping report. Finally, during the EIA report review, IAPs are invited to comment on submitted reports (regulation 7(1) (a), 8(f), 23(1) of the EIA Regulations, 2012). Regulation 21 requires the proponent to notify the IAP of their intention to undertake an EIA for a listed activity (EIA Regulations, 2012). A notice must be placed once a week for two consecutive weeks in at least two newspapers circulated widely in Namibia. Information in the notice should include project background information, the due date when the public can give comments, and the date and venue of the public consultation meeting (EIA Regulations, 2012). Stakeholders are given 21 days to comment on the draft scoping or EIA report. Regulations 21 and 22 require the proponent to submit copies of minutes from the meetings and the responses to public objections and comments (EIA Regulations, 2012).

However, the EIA legislation lacks specific guidelines on public participation. Interviewees noted that this lack of guidelines is a challenge because proponents tend to decide on the methodology and the venue of the consultation process without considering the public.

Regulation 21 dictates that draft EIA reports must be placed in common places such as libraries and municipal offices for public comments (EIA Regulations, 2012). Interviewees are of the view that while such an approach is commendable, it only works in urban areas because many rural areas lack such infrastructure. In addition, people in rural areas may find it difficult to give comments or to attend public meetings due to long travel distances between villages and towns. Interviewees also noted that there is a lack of public interest in attending EIA meetings. Interviewed consultants added that newspaper advertisements are expensive yet the public lacks environmental awareness and ownership of the environment and gives no value to public meetings. A senior expert confirmed the reluctance to public meetings saying there is a practice of “Not In My Backyard syndrome”:

For example, during the sand mining project in the Swakop River, people didn't mind at all about it and did not attend meetings by the municipality, but when it shifted into a different area close to their houses, they started complaining about the dust, which goes exactly with the “Not In My Backyard Syndrome.” It also seems that people only want to partake in EIA when it is a scary project such as chemicals and hazardous substances (Exp\_GovSS2).

Other interviewees, however, perceived low turnout at public meetings because of communication and language barriers because invitations are sent to English daily newspapers, while many communities are not conversant in English. An NGO expert

noted challenges about access to newspapers in rural areas stating that: “They say they put the public participation in the newspapers but who gets a copy of the Namibian in the middle of Sori Sori Conservancy?” (Exp\_NGOMS2).

In addition, it was found that there is a trend for proponents to request the public to register as IAPs and to provide comments via email. Interviewees perceived such practices as inappropriate, indicating that many Namibians cannot read and write in English and few people have access to the internet. Another issue raised on participation is the impact of culture and traditions. A senior consultant indicated that EAPs need to be aware of cultural differences when calling for public meetings, stating issues of hierarchy to correctly address the leaders as well as women’s and men’s associations. The expert indicated that in some areas women may not participate when men are around and, in some cases, female EAPs are expected to dress in culturally accepted attire (*shitenge*) when addressing public meetings.

An NGO expert revealed that information presented in public meetings is highly technical stating: “I did not understand much from the meeting and can only imagine the community members.” The expert further added that proponents often only raise issues related to job creation and other benefits during public meetings without discussing the environmental and social impacts of the project: “When you have the proponent with his/her people talking about jobs and everybody wants a job, they kind of influence the community without talking about any of possible negative consequences” (Exp\_NGOMS2). The legislation lacks a guide or checklist directing proponents on issues that public meetings ought to cover.

A government expert (Exp-GovSS4) applauded the increasing role of media in EIA. Interviewees revealed that recently newspapers published articles on EIA in general

and on projects undergoing EIA. Some of the highly publicised projects mentioned during the interviews included the Zambezi Tobacco Project, Namport Container Terminal, Marine Phosphate Mining, Desert Rose, Platz am Meer shopping mall, and Sand mining activities. A local authority expert applauded the media saying: “If it was not for the newspaper, the public would not know that Marine Phosphate Mining was approved” (Exp\_LA1).

Experts suggested the following actions to improve participation: the DEA should increase awareness in communities, especially in rural areas; advertise public meetings on the radio and in local languages; and urgently need to develop public participation guidelines.

#### **4.3.1.3.7 Systematic Decision-Making Approach**

Decision-making, during which the proposed development is approved or disapproved, is an important stage of the EIA process. The EC is responsible for deciding and approving the ECC for proposed activities. Regulation 18 requires the EC to decide and notify the proponent and CA within seven days from the date of review. There is no provision for the public to be informed of the decisions made on projects.

Interviewees criticised the decision-making process commenting that it lacks transparency and is prone to corruption and bribery. Experts further indicated that the concentration of power in the position of the EC renders it vulnerable to abuse of power and influence from powerful individuals. Experts from the government particularly bemoaned a lack of involvement of other departments in decision-making. A senior scientist commented that:

At the end of the day everything goes to MEFT and some of us can only advise, and I tend to feel it's not necessarily a good way of laying things to have all the power in one person, in this instance the commissioner (Exp\_GovSS1).

Interviewees also identified issues around conflict of interest, stating that some DEA staff own consulting firms while they are responsible for recommendations toward decision making. It is unclear as to whether the findings of the assessment are the central determinant in decision making. Interviewees perceived economic impacts such as job creation, investment opportunities, and service provision, to be more highly considered in the approval of projects than environmental impacts. According to concerned officials, environmental clearance approval letters often include specific conditions that the proponent should fulfil during and after project implementation. Non-compliance with the ECC conditions can be fined an amount not exceeding N\$500,000 or imprisonment for a period not exceeding 25 years or both (EIA Regulations, 2012).

#### **4.3.1.3.8 Requirement for Environmental Management Plan (EMP), Mitigation, and Monitoring of Impacts**

Both a mitigation plan and EMP are legal requirements. However, no clear specifications or guidelines exist on the use of the mitigation plan and EMP upon project approval. Environmental auditing is not a requirement. Interviewed experts indicated that the implementation of mitigation measures and EMP is poor.

Follow up and monitoring of impacts are not a requirement in the Namibia EIA system. Both the EMA and the EIA Regulations lack provisions on impact monitoring. An expert from DEA (Exp\_GOVRS1) indicated that monitoring and follow up are a challenge because it is not properly legislated. The expert also revealed that because of

financial constraints, the department is unable to undertake inspections of projects in different regions. Interviewed consultants indicated that developers are required to provide a monitoring report during the renewal of the ECC (which happens every three years) (EIA Regulations, 2012).

Some of the challenges that the DEA faces to effectively carry out monitoring and inspection include limited institutional capacity resulting from insufficient suitably qualified and skilled staff, lack of transport, and limited finances. Experts also mentioned limited use of EMP during project implementation, lack of requirements on rehabilitation plans, and challenges.

#### **4.3.1.3.9 Experience of SEA**

Namibia's EIA regulations apply to both public and private projects. No specific clause makes provisions for SEA and therefore there is limited experience of SEA. In Namibia, SEAs are rare. Between 1980 and 1998, only a handful were undertaken (Tarr & Figueira, 1999). Between 2008 and 2013, only ten voluntary SEAs were undertaken (Hipondoka et al., 2016). In 2015, a SEA was carried out for the NDP4 (Dalal-Clayton & Tarr, 2015). Interviewees indicated the need to have SEA regulations, emphasising that the application of SEA can be a relief measure to the currently congested EIA process.

#### **4.3.1.3.10 Time and Cost of EIA**

Section 35 of the EMA (2007) stipulates that the cost of the EIA process is the responsibility of the proponent. The annex of fees indicates that the ECC application and the ECC amendment cost N\$300, while the application for transfer of an ECC and the appeal application both cost N\$1,000. The EAP determines the cost of the assessment

services. Interviewees had divergent views on the benefits of the EIA process. Some government experts and consultants indicated that the EIA process is lengthy and costly and therefore not beneficial because it delays critical projects for investment, food security, and job creation. However, most of the experts indicated that the EIA process is beneficial to the environment because it scrutinises the impacts of new development. Interviewees mentioned projects such as Epupa hydropower station, Otjivalunda salt mine, Sandpiper marine phosphate mining, Rio Tinto desalination plant, Desert Rose development, and Swakop River sand mining, all of which were stopped through EIAs.

Concerned officials noted that EIAs are generally not cheap, costing between N\$50,000 (for small projects) and more than N\$1,000,000 (for big projects). Such projects have a timeline of between 3 and 12 months. Interviewed consultants, however, indicated that the prices of EIA in the market vary. According to a senior environmental consultant, novice EAPs charge less to make a “quick buck” while experienced EAPs charge high professional fees. A senior government officer was of the view that EIA services are valuable and should not be viewed as expensive because they cost the same as other essential services like medical and accounting services. Tarr & Figueira (1999) indicated that a proper EIA requires between 1 and 27 months with costs ranging between 0.22% and 2.52% of the total project cost.

#### **4.3.1.4 Foundation Measures**

##### **4.3.1.4 .1 EIA System Implementation and Monitoring**

No legal requirement is in place for system implementation and monitoring. The criterion is therefore considered to be not met. Since 2007, the EIA system has not been amended or reviewed. In 2018, the government undertook a series of stakeholder consultations on the amendment of the EMA and EIA Regulations. All interviewees expressed satisfaction with the consultation process, however, they urged for immediate action from MEFT to promulgate the improved legislation. An NGO expert applauded the MEFT for the EIA consultation and revision process. The NGO expert further highlighted that Environmental Assessment Professionals of Namibia (EAPAN) had in the past facilitated dialogues on amendments required in the EIA systems and all inputs from previous meetings were given to DEA. An expert from DEA (Exp\_GovSRS1) indicated that revised legislation is with the legislators for finalisation before it can be approved.

##### **4.3.1.4 .2 Existence of EIA Guidelines**

All interviewees agreed that a lack of guidelines is a weakness in the Namibia EIA system. Apart from the EIA report guideline note of 2018 and the guide to the EMA of 2008 (Ministry of Environment and Tourism, 2008), no general, sectoral, or systematic guidelines exist in Namibia. Recent initiatives found on the MEFT website, included a new webpage displaying guiding information on the EIA process and applications. The webpage includes links to the EIA Policy, the EMA, the EIA Regulations, and the ECC online application system, EIA draft reports where the public can provide comments, a non-compliance form for the public to report misconduct, a screening questionnaire, and

a sand mining questionnaire (Ministry of Environment, Forestry and Tourism [MEFT], 2024b).

#### **4.3.1.4 .3 EIA Expertise, Training, and Capacity Building**

The legislation is silent on expertise, training, and capacity building. There is limited expertise in Namibia and only a meagre number of experts are found in universities, NGOs, and consulting firms. Interviewees believed that training and capacity building is needed to increase the number of EIA experts. Interviewees also noted that a professional body should be put in place to register EIA experts. An NGO expert indicated that EAPAN has tried to register EAPs and so far, has 35 registered experts. A senior practitioner pointed out that lack of EAP certification is a quality assurance matter that needs consideration stating:

I strongly feel that EIAs in Namibia are slightly taken for granted given that we (EAPs) do not have a regulated body that can protect our industry. It is for this reason that every person around the block is doing EIAs qualified or not (EXP\_PC5). The two criteria are therefore considered to be not met (Table 4.3).

#### **4.4 Discussion**

Namibia is a developing country in sub-Saharan Africa in which EIA was introduced nearly a decade ago. This research is the first formal evaluation of the practices and procedural performance of EIA in Namibia. The evaluation was undertaken using a triangulation of literature review, document analysis, and semi-structured interviews. The combination of methods and analyses enabled a robust review that strengthened the

validity of the findings. Findings emerging from this study show that the EIA system in Namibia is still in its infancy stage and faces several deficiencies, which are not unique to the country but rather common in other contexts as well. Table 4.3 summarises the main findings of this paper about the status and performance of the EIA system in Namibia. Criteria that are *fully met* suggest that there is substantive evidence to consider the criteria as being met; *partially* means there is some evidence, but gaps still exist; and *not met* indicates that there is not enough evidence supporting the criteria.

Results show that Namibia has a functional EIA system based on a good legal basis, a specified EIA process, and well-established institutional arrangements. The EIA is strong, and it is mandatory for both public and private development projects. In Namibia, EIAs are carried out according to the legislation and procedural requirements in place, however, multiple loopholes and challenges are affecting its effective implementation. The analysis shows that the Namibian EIA system partially meets the criteria of an internationally ideal EIA system. Out of the 23 criteria in the assessment framework, three systemic measures including provision of SEA, experience of SEA, and impacts monitoring were not met. Foundation measures including review and monitoring of the EIA system, training, EIA certification, and EIA guidelines were also not met. According to Fuller (1999), foundation measures are the actions undertaken to improve the effectiveness of the EIA system and help ensure the successful application of the systemic process. According to Marara et al., (2011), foundation measures are also critical for the continuous improvement of the EIA system, hence their absence can result in a stagnant process which yields unsatisfactory results for both the development and the environment. Based on this result, it can be concluded that Namibia's EIA system partially conforms to the best EIA international practice but in the current state is not fit to fully

deliver the purpose of environmental protection and sustainable development. Wood (2003) noted that an EIA system that fails to meet a significant proportion of evaluation criteria, not only falls short of recognised international good practice but cannot deliver its intended benefits.

Before independence, EIAs in Namibia were voluntarily and mainly undertaken only for mining and infrastructure sectors. According to Tarr (2003), only a meagre three EIAs were undertaken between 1980 and 1990. Between 1991 and 2001, fewer than 20 EIAs were undertaken from onshore and offshore diamond mining, oil and gas exploration, roads, and power plants. In the absence of EIA legislation, many of the mining and exploration EIAs were carried out following the environmental obligations of the mother organisation of respective companies.

In 1998, the government of Namibia introduced fast-track EIA to increase the flexibility of the system and to assist previously disadvantaged Black Namibians to gain access to mainly diamond mining and prospecting which has been dominated by white Namibians and multinationals Tarr (2003). While the intentions were good, the government relinquished the requirement for a full EIA for mining, requiring only the completion of a comprehensive environmental questionnaire. Recent data from the NPC (National Planning Commission [NPC], 2015) shows that the number of EIA applications has increased from 120 in 2012 to 322 EIAs in 2015. In 2025, the MEFT reported that approximately 150 EIA applications are received per month (Albertz, 2025). Lately, the EIA has also been promoted as an environmental tool to guide policy and economic development in the NDP. For the first time in 2016, NDP4 was subjected to a SEA. These are positive phenomena and in comparison, with three EIA undertaken in 1990, it appears

that the inclusion of EIA objectives and its use in national plans contributed to the acceptability of EIA in Namibia.

The provision for the public and proponents to appeal the EIA decision is another strength in the Namibia EIA process. Although interviewees criticised the 14 days given for appeal, several appeal applications were recently registered including the Rossing desalination plant in 2015 and Sandpiper marine phosphate mining in 2018. In the case of the desalination plant, an appeal was lodged by the proponent and the application was later approved with conditions (Immanuel, 2016), while in the phosphate mining case, a community activist appealed resulting in the withdrawal of the ECC (*Namibian Marine Phosphate (Proprietary) Limited v Minister of Environment and Tourism*, 2018). The above scenarios show the effectiveness of the appeal system and the effective performance of the EIA system. An appeal by a community activist is also a positive attribute of the Namibia EIA process and a good portrayal of environmental freedom and justice.

The Namibia EIA system appears to have a preventive effect, evident in several projects that stopped due to the EIA decision. Some of the projects included the Epupa hydropower plant, for which the EIA was undertaken in 1998 (Tarr, 2003). The EIA was rejected due to community outcry on the proposed site which holds cultural and heritage importance for the indigenous Ovahimba people. Similarly, the Otjivalunda salt project undertaken in 2012 was rejected due to community concerns as the salt pan holds a rich Aawambo cultural heritage. The Rossing desalination plant proposed in the sensitive area of the Namib desert and along the Atlantic Ocean was also rejected in 2015 due to political reasons (Rio Tinto Rössing Uranium, 2015). A daily newspaper indicated that the government refused Rio Tinto permission to build a desalination plant to protect the interest of Namwater, a state-owned enterprise that provides water in the country

(Immanuel, 2016). In the case of Sandpiper marine phosphate mining, the ECC was withdrawn because of public outcry, and a moratorium was placed on the project to date (Namib Times, 2016). The cases above place the Namibia EIA system on a good status and this can be recognised as adequate performance.

The MEFT as the administrative body has adopted several initiatives to improve the EIA system. The newly established website now includes an EIA online application system for new submissions, a non-compliance form for the public to report offenses, a screening questionnaire for new projects, and a special screening questionnaire for sand mining, which includes the approval of the traditional authority and the regional councillor. The practice of involving grassroots authorities is a positive milestone toward motivating the participation of indigenous communities and possibly leads to more use and acceptance of EIA in rural areas. Boiral et al., (2020) highlighted that building trusting relationships with indigenous communities before developing an environmental initiative is essential for best management practices. These positive initiatives not only improve access to information but also can contribute to transparency and the overall performance and effectiveness of EIA in Namibia.

The use of media in EIA is also one of the strengths in Namibia. Media plays a role in informing the public on proposed developments under assessment and about EIA decisions. Additionally, proponents use daily newspapers to advertise EIA public meetings. Projects including the Sandpiper marine phosphate mining, the tobacco project, and sand mining activities in northern Namibia received massive newspaper coverage. According to Kakonge (2006a), the use of media to publicise EIA in developing countries is important and should be encouraged.

The Namibia EIA system faces some challenges. One of the main challenges is the lack of research. Before 2007, scientists from MEFT-DEA published several discussion papers on EIA and how best it can be applied in Namibia, for example Tarr (2003) and Tarr and Figueira (1999). However, after the EMA and EIA Regulations came into effect, the hype around EIA diminished. Only a meagre of thesis and EIA publications in peer-reviewed journals were found. Several scientists who published on EIA before 2007 seem to have moved to NGOs and consulting firms, before the change in leadership and restructuring at the MEFT, and the subsequent appointment of the EC in 2012. In addition, there appeared to be a loss of interest after the EMA failed to include critical provisions. Some of these include the role of the SDAC and EC in the EIA application, SEA provisions, and listing of fishing activities which were highlighted as key assets of the to-be EIA systems in early publications. Results indicated that there were disagreements, inter-ministerial rivalries, and conflicts during the EMA consultation, which may have led to divisions, loss of research interest, and antagonism toward EIA laws. Wood (2003) reported that inter-ministerial and sectoral conflict is a prevalent problem in developing countries which has caused inefficiencies in EIA.

Another challenge facing EIA in Namibia is that over the years, the government invested mainly in infrastructural projects dedicated to economic growth and delivery of essential services including water and sanitation to its poverty-stricken population (NPC, 2011) making environmental protection the least priority. Rathi (2017) highlighted that the real reason for undertaking an EIA namely, to determine the environmental impact, may seem less relevant in a context where people are poverty-stricken. In a country with high unemployment, the circumstances dictate that such communities are more concerned about economic development and less about environmental goals. Some of the proposed

projects including the Marine Phosphate Mining, and the ReconAfrica Oil Drilling project can bring significant business and investment opportunities in Namibia and can contribute to economic growth and industrialisation. However, it remains the responsibility of the government and developers to seek a balance between potential economic benefits and possible adverse environmental impacts that can emanate from such projects.

From the interviews, a prevailing notion is that EIA implementation in Namibia is treated as a mere regulatory requirement and a tick-box procedure. This notion is common in many developing nations. Marara et al., (2011) highlighted the prevalence of this perception in East Africa, noting that EIA is effectively a mere lip service to satisfy national commitments to international obligations. Similarly, Morrison-Saunders and Retief (2012) noted that in South Africa, EIA is taken as a superficial check rather than a control measure and Rathi (2017) indicated that EIA in India is used as a project justification and a speed breaker in the business plan. Rathi (2017) noted that with that perception, proponents rarely take full ownership of the EIA reports prepared by EAP, which can deteriorate the performance of the EIA system.

In Namibia, EIA is also perceived as leaning more toward impacts on the natural environment with little consideration of social impacts. Rathi (2017) confirmed that EIA in many developed nations still emphasises more on the physical environment which is also limited to listing fauna and flora.

Another challenge identified in this study is that there is a lack of coherence between the Act and the Regulations. The EMA covers a wide range of relevant obligations; however, the enabling regulations lack directives to facilitate EIA implementation. Some of the critical EIA components such as SEA, impact monitoring, and follow up are absent in the Regulations. Such mishaps not only hinder the effective

implementation of the EIA system but also may affect the persecution of offenders, hence leaving the system toothless and prone to abuse. SEA is known to address environmental-related issues and challenges more strategically. Moreover, SEA also provides various alternatives, and timely opportunities to mitigate environmental impacts and provide an effective management for cumulative impacts than EIA (Bina et al., 2011). Namibia can achieve better environmental performance by enacting SEA regulations for policy, programmes, and plans to support project-level EIA.

The lack of enforcement of available legislation is another challenge. The EIA system lacks effective penalties and fines are rarely enforced. While Namibia indicates a low fine of N\$100,000 (an equivalency of about US\$6,053.51 on the current exchange rate) or 10 years imprisonment for an EIA offence, countries like Lebanon stipulate a penalty of (US\$132,000) or a year in prison for establishing a project without an EIA authorisation (Elvan, 2018). Turkey's law imposes a fee of 2% of the project cost for those who start construction before the completion of the EIA process (Elvan, 2018).

Lack of decentralisation is also perceived as a weakness in the Namibian EIA system. The EIA system is highly centralised with offices only found in Windhoek. For a country consisting of 14 regions, the decentralisation of EIA services to regions needs to be considered to ensure better service delivery and to reduce bureaucracy. Decentralisation may also motivate the government to recruit environmental officers and inspectors throughout the country. Paliwal and Srivastava (2012) noted that decentralisation without sufficient qualified staff cannot improve EIA performance and efficiency. This means appropriate institutional arrangements should be accompanied by the development of human resource capacity.

Coordination and communication between MEFT-DEA and CAs are perceived as weak. Contrary to the views of Wood (2003) that environment ministries in developing countries are often “bypassed” by other, more powerful ministries, the MEFT is powerful and has seemingly monopolised the EIA system. More coordination and sharing of EIA responsibilities with custodian ministries need consideration to improve the decision on the use of resources and the overall performance of the EIA system.

Namibia's EIA system is also faced with a shortage of experienced and qualified EIA professionals at DEA and in consulting firms. A recent report by NPC (2015) confirms a lack of human resource capacity particularly in EIA inspection and monitoring, indicating that the EIA compliance level stands at 57%. The issue of understaffing is also a problem. The lack of capacity for skilled staff and experts has been reported in many developing countries including Egypt, Turkey, and Tunisia; South Africa, Mauritius, Ghana; Kenya, Rwanda, and Tanzania; and India and Sri Lanka (Ahmad & Wood, 2002; Champion & Essel, 2013; Khosravi et al., 2019; Marara et al., 2011; Zubair, 2001). Moreover, EIA experts in Namibia are not registered or certified to undertake EIA. Interviewees claimed that the quality of EIA reports is deteriorating, as EIA services have become a money-making scheme. The DEA is also constrained because of its position in the government. In the current setting under MEFT, the DEA lacks independence, is not autonomous, and lacks financial resources. Wood (2003) highlighted that it is important to put in place not only the legal requirements for EIA but also adequate institutional and personnel capacity and finances to implement them effectively. To improve the Namibia EIA system, the DEA needs to prioritise staff capacity, skill, and autonomy.

The EIA process is clearly articulated in the EIA Regulations, however, there are notable weaknesses in the different stages of EIA. For example, screening is based on a

hybrid approach of a prescribed list and case-by-case- examination, however, the process is perceived as inadequate due to lack of screening categories and thresholds.

Consideration of alternatives is included and defined in the EIA Regulations (2012). However, no other detail or guideline is provided on the types of alternatives or how they should be considered. Van Gils (2015) indicated that in Namibia, alternatives are poorly considered because the EIA process is undertaken too late in the project cycle. Sharing the same notion, Khosravi et al., (2019) indicated that Iran's regulations require the inclusion of technical and spatial alternatives in the EIA report, however, alternatives are rarely considered because EIA is conducted when most details of the project have been finalised leaving no opportunity to consider alternatives. Consideration of alternatives to projects is also a weakness in ASEAN (Association of Southeast Asian Nations) countries (Swangjang, 2018). Aucamp (2009) noted that consideration of alternatives in projects is an essential component of the EIA system, but it is inadequately undertaken or legislated in many countries. According to Arts et al., (2012), there are discrepancies in the consideration of alternatives even in developed nations. The UK has no formal requirement to assess alternatives, while the Netherlands considers alternatives as an essential factor for EIA effectiveness (Arts et al., 2012).

Another challenge in Namibia is that perceived excessive power is given to developers and EAP. One of the weaknesses is that the development of TOR is left to the developer. In other EIA contexts including Egypt, Tunisia, and Turkey, the competent authority is charged with the development of TOR for different types of activities and their impacts (Ahmad & Wood, 2002; Badr, 2009), hence empowered to oversee the EIA process. Secondly, EAP is paid by developers, a practice that put developers in charge of EAP and can influence the quality of the assessment. Rathi (2017) suggests that EAP may

produce low quality and compromised reports because they are hired by the project proponent.

In general, Namibia has good regulations on EIA public participation. Public participation is mandatory in the EIA process and is required in three stages. Despite this provision, the practice thereof, particularly during the scoping, report review, and decision-making stages, is poor. The participation process is weak because of implementation constraints related to communication barriers such as languages and the use of unsuitable methods. In practice, the proponents advertise public participation meetings in the daily newspapers. and invite public comments via email. According to the most recent census, only 8.9% of the Namibia population has access to daily newspapers and only 5.4% of the population has daily access to the internet (Namibia Statistics Agency [NSA], 2017). These low percentages make communication through newspapers and email a failed attempt that weakens community involvement and the effectiveness of EIA. Several studies raised concerns over the inadequate levels of public participation during the EIA process. Rathi (2017) noted that in India, no public consultation is undertaken during scoping, while Khosravi et al., (2019) reported that in Iran, public consultation is practically non-existent. Marara et al., (2011) added that in Kenya, the public is still ineffectively aware of their role and is insufficiently involved in the EIA process. In the Namibian context, radio was suggested as a fitting medium for EIA communications and information sharing. According to the NPC (2015), 69% of Namibians have access to radio and the national broadcaster covers 10 languages on their radio stations. The literature has affirmed the full involvement of Indigenous people to improve project acceptance and to enhance good environmental management practices (Boiral et al., 2020; O’Faircheallaigh, 2015; Sinclair et al., 2017).

The review and decision-making process was heavily criticised, particularly the lack of review committees and assertion of power to the environmental commissioner (EC). Many countries have established a review mechanism consisting of expert appraisal committees at different administrative levels to review EIA reports. In India, the proponent gets 15–20 minutes to present to the committee to review the project under equally tight time constraints (Rathi, 2017). In Egypt, EIA reports are assigned to independent consultants, often university professors who use their professional expertise and judgement (Ahmad & Wood, 2002). Badr (2009) indicated that the involvement of different experts in the review can improve the credibility of the process and hence reduce corruption and bribery. Interviewees perceived possible unethical conduct and corruption in the review and decision-making process in Namibia. Forms of corruption have been reported in EIA literature. Williams and Dupuy (2017) reported on various forms of corruption in the EIA process and Enríquez-de-Salamanca (2018) reflected on the degree of stakeholder manipulation in EIA. The assertion in the EIA regulation that decisions should be made “within a reasonable time,” may be a possibility because the process is perceived as unfair and not transparent.

Another weakness identified in the Namibia EIA system is the lack of monitoring and follow up. The EIA legislation is silent on monitoring and follow up. Literature shows that follow up is an important component for achieving effective EIA, however, it is a serious deficiency in both developing and developed countries (Jalava et al., 2013; Arts et al., 2012). Khosravi et al., (2019) and Rathi (2017) reported that follow up is perceived as weak in both Iran and India. Arts et al., (2012) highlighted limited follow-up practices in the UK and the Netherlands. Interestingly, Swangjang (2018) noted that, despite them

being developing countries, many ASEAN countries give importance to EIA follow up and provide environmental compliance certificates.

The time and cost criteria are partially met. The overall message in Namibia is that EIA is beneficial and has a positive effect on development. Similarly, in South Africa, EIA is accepted as valuable because it adds value and saves time and money for projects. The regulatory compliance cost to the government is about R796 billion per annum (Morrison-Saunders & Retief, 2012). The compliance cost in Namibia is unknown.

The EIA Regulations only requires the EC to inform the proponent and the CA about the decision on projects under review (EIA Regulations, 2012). This resulted in the public being left out of EIA information. In its policy brief, the NPC (2015) reported that Namibia lacks policies on access to information, hence there is no backup law for the public to demand the right to information. Mandatory requirements should be introduced for open and free access to EIA reports and information.

Cultural practices and traditions are also a concern in Namibia. Interviewed consultants highlighted the consideration of cultural norms as critical to successful public consultation. An EAP indicated that leadership hierarchies and gender issues including the freedom of expression for women and dressing decency are important components to note when attending public meetings in different cultural settings in Namibia. A report by Friedrich-Ebert-Stiftung (2015) confirms that freedom of expression in Namibia is restricted and is often exercised based on traditional and cultural practices.

The Namibian EIA legislation is currently under review. Most of the experts commented on the DEA for undertaking consultations on legislation amendments and expect many of the existing challenges to improve upon the implementation of the revised laws. El-Fadl and El-Fadel (2004) noted that countries should reform their legislation and

procedural practices to suit their institutional arrangements, resources, and technical and financial constraints. Although revision of EIA regulations is a positive act, it has been observed that many amendments deal with “perennial problems of EIA” such as making regulation less complex and improving processes to enhance the quality of reports without dealing with effectiveness issues (Arts et al., 2012). A study by Morrison-Saunders and Retief (2012) showed that the South African EIA system needed to focus on changing the behaviours of EIA professionals rather than undertaking another legislation revision. Namibia needs to complete the current amendment process to close gaps, but there is a need to invest more in system monitoring and implementation and developing guidelines analysis to ensure good and effective performance of the EIA system. Practical guidance for conducting EIA can help to promote better procedural compliance and effective process implementation.

#### **4.5 Conclusion and Recommendations**

Many of the shortcomings found in this study are also common to maturing EIA systems in the world. The Namibian EIA system is based on good legislation and institutional arrangements and a sound EIA process. The system therefore partially meets the criteria of an ideal EIA system. As in many developing countries, the main challenge in the Namibian EIA system arises from loopholes in legislation, the lack of coherence between the Act and the enabling Regulations, and poor implementation. Although the use of EIA before the legislation in 2007 was voluntary, EIA objectives and guidance are now included in the national development plans. Good legal provision does not necessarily result in the effective performance of an EIA system. This is also evident in countries including the UK, the Netherlands, Pakistan, and South Africa. These countries

may have sound EIA legislation, yet their systems experience deficiency ranging from inadequate human and financial resources of EIA regulatory authorities, deficiency in screening and scoping, poor quality of EIA reports, lack of public consultation, weak monitoring, and follow up (Arts et al., 2012; Morrison-Saunders & Retief, 2012; Nadeem & Fischer, 2011). For Namibia, more effort is required to enhance the EIA process in the areas of public participation, screening, scoping, review, and decision making to ensure effective implementation. Foundational matters of monitoring of the EIA system, SEA provision, expert certification, capacity building, and guidelines also need attention to ensure the maturity and effectiveness of the system. It is now critical to ensure that ongoing revision of EIA legislation is completed and implemented to give effect to institutional arrangements and administrative structures. There is also a need to invest more in system monitoring, capacity building, EIA advocacy, and awareness raising to ensure good and effective performance of the EIA system. Further research should focus on the substantive effectiveness of EIA to determine the extent to which EIA meets desired objectives in the Namibian context.

The following are a list of targeted pointers and recommendations to improve the performance and effectiveness of the Namibia EIA system based on the findings from this research and best practices in the literature:

- The DEA should complete the 2018 legislation amendments. An implementation plan should be designed to clarify the action plan and the roles and responsibilities of the regulatory authority and other government departments in the EIA system.
- The DEA should publish EIA reports and develop an open database for all submitted EIA reports. The database would enhance communication and

information sharing and encourage public scrutiny and research into the performance of the EIA system.

- The DEA should be promoted to an impartial state-owned enterprise to improve its autonomy and independence. In the new institution, establish a department to manage the registration and certification of EIA practitioners, EIA payments between the developer and the consultants, and payments from EIA fines.
- The government should seek funds to invest in EIA services and to attract experts into the institutions, to provide training and capacity building to EIA practitioners, to increase human resource capacity, and particularly to strengthen monitoring and enforcement capacity. Additional staff can be posted at MEFT regional offices to decentralise EIA services.
- The government should develop guidelines for critical EIA stages indicating the methods and approaches to ensure consistency and quality of the assessment process.

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**CHAPTER 5. GOOD GOVERNANCE QUALITY IN NAMIBIA'S ENVIRONMENTAL IMPACT ASSESSMENT PROCESS**

This chapter is published as:

**GOOD GOVERNANCE QUALITY IN NAMIBIA'S ENVIRONMENTAL IMPACT ASSESSMENT PROCESS**

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## 5.1 Abstract

Environmental impact assessment is a well-known environmental governance tool. However, its quality is influenced by the governance setting and context in the country of implementation. In Namibia, EIA started voluntarily in the 1980s, with only a minimal number of post-facto EIAs in the mining sector. After independence, the Environmental Management Act 7 of 2007 and Environmental Impact Assessment Regulations 30 of 2012 were developed. Since the development and implementation of EIA in Namibia, no study has assessed the quality of Namibia's EIAs and the governance context under which EIA is conducted. This study assesses the quality and adequacy of the EIA mechanism in Namibia and the extent to which the EIA process satisfies good governance principles. The evaluation criteria used were obtained from several sources in the literature and based on the United Nations governance principles. Data were collected through a questionnaire survey and subsequent semi-structured interviews with experts. From the twelve criteria used to examine adequacy, only four were scored as adequate, including legal basis, EIA scope, compliance, and procedures. Important EIA requirements on cumulative impacts, alternatives, follow up, and administration were rated as inadequate. Namibia's EIA process partially satisfies eight out of ten qualities of good governance, with accountability and transparency rated as poor. These inadequacies may have implications for the quality of assessment undertaken and the decisions that are made. An EIA process that fails to meet good governance qualities can be deemed unfit to achieve the intended purpose. According to interviewed experts, Namibia can improve EIA quality by supporting legislation with clear guidelines, procedures, and financial commitment, and decentralising EIA services to local administrative tiers including traditional authorities.

**Keywords:** EIA process, accountability, decision making, context, Namibia.

## **5.2 Introduction**

Political and socioeconomic context plays an important role in determining the quality and efficacy with which legislative and institutional regimes for environmental management are developed and implemented (Marara et al., 2011). In developing countries, the impact of different backgrounds and contexts is manifested in the interest and attention given to environmental protection and environmental governance tools such as the environmental impact assessment (EIA). The assessment has become a popular decision-support tool because it is intended to enhance good governance and sustainable development. These systems are put in place to increase accountability in environmental decision making by using a reliable and verifiable basis (Bond et al., 2020).

Environmental impact assessment is used as a planning tool with many purposes, but generally, it aims to identify in advance the possible environmental consequences of planned projects and to seek means to prevent negative impacts from development. As a governance tool, EIA has the objective to restore and maintain environmental quality, supporting sustainable development that is more in harmony with the conservation of ecosystems and protection of human health and social wellbeing (Jalava et al., 2013; Keken et al., 2022; Morgan, 2012). A quality EIA process also plays an important role in delivering the evidence necessary to support critical environmental imperatives including climate change mitigation, promotion of environmental justice, and sustainable investments (Bice & Fischer, 2020). The gradual development and improvement of EIA in achieving accurate predictions of impacts can also be a crucial factor in preventing, reducing, or compensating for environmental risks associated with different development activities (Bice & Fischer, 2020; Keken et al., 2022). While EIA is a trusted tool, there is growing critique around its functioning and quality.

Numerous research studies have focused on evaluating and understanding the regulatory and technical aspects of EIA (Ahmad & Wood, 2002; Chanchitpricha & Bond, 2013; Elvan, 2018). Extensive research evaluated the quality of the EIA by reviewing EIA reports (Mounir, 2015; Sandham et al., 2013). The weaknesses typically identified in those studies relate to the capacity of authorities involved, public participation, scoping and impact prediction, EIA follow-up, monitoring, consideration of alternatives, and cumulative impacts (Mounir, 2015; Sandham et al., 2013). While EIA quality studies have shown that the overall quality of EIAs has often improved with time (Barker & Jones, 2013; Bond et al., 2018; Jalava et al., 2013; Sandham et al., 2013), quality reviews should not merely be a matter of checking that required contents are produced in the reports and that relevant information is presented. A useful review should consider the quality and success of the whole EIA process in its specific governance context.

The quality of the EIA process in different countries is influenced by the dynamic governance contexts, characterised by varied demographics and urbanisation (Retief et al., 2016), intensive project delivery (Bice & Fischer, 2020), developing technologies (Sinclair et al., 2017), increasingly interconnected geographies and political uncertainties (Chi et al., 2016). This means EIA operates within incredibly complex contexts, rife with vagueness and uncertainty (Bice & Fischer, 2020). This is an indication that governance context and EIA instruments cannot be dissociated.

In a review of the EIA system in Australia, eight governance principles were identified as appropriate to evaluate the quality and efficiency of the EIA process, namely participation; transparency; certainty; accountability; integrity; cost-effectiveness; flexibility; and practicality (Morrison-Saunders & Bailey, 2000). In another study, Chi et al. (2016) evaluated EIA in China, the United States, and Finland from a governance

perspective using a framework with process integration, professional governance, and public engagement as quality enablers or inhibitors of EIA. According to Meuleman (2015), governance frameworks have an impact on EIA as they offer both constraints and opportunities for EIA systems and procedures. Monteiro and Partidário (2017) investigated why governance are important in EIA by reflecting on its role in promoting engagement, collaborations, learning processes, and sustainability. Building on this body of work, we argue that, if EIA is known and accepted globally as a governance tool, then the system and the processes should uphold and conform to good governance principles. In this study, good governance principles are used as measures to analyse the quality and governance context in which the EIA system is implemented in Namibia.

In project management, quality refers to the degree to which all project elements including processes and end products are combined to fulfill requirements and standards and satisfy stakeholder needs (Project Management Institute [PMI], 2017). In this study, the elements and processes therefore refer to the process and the different stages of Namibia's EIA system: the standards are the United Nations good governance principles, while stakeholder needs are the views of interviewed experts. The analysis of the quality of EIA and the governance context is an important endeavour in Namibia because environmental assessment is still relatively new in the country, with the Environmental Assessment (EA) Policy of 1995, followed by the Environmental Management Act (EMA) promulgated in 2007, and subsequently the EIA Regulations in 2012.

Namibia inherited a colonial legacy of institutional segregation and economic inequality which generally contributed to environmental degradation and habitat destruction in certain areas (Ministry of Environment and Tourism [MET], 1995). The economy of Namibia is dependent on natural resources, mainly based on mining, fishing,

tourism, and agriculture, which are vulnerable to environmental degradation and depletion. The EA Policy of 1995 emphasised an urgent and fundamental need for an instrument to facilitate economic development, foreign investment, and the alleviation of poverty in a newly independent Namibia (MET, 1995). The policy specifically acknowledged that Namibia is an arid country and that water scarcity and the land's carrying capacity need to be considered before policy formulation and during all stages of planning. The EMA emphasised EIA as a key tool, amongst others, to further the implementation of a sound environmental policy that strives to achieve integrated environmental management and sustainable development.

Thus far, only a few studies have assessed the Namibian EIA system and no research to date has examined the quality and governance context of EIA in Namibia. The objective of this research is therefore to analyse the quality of the Namibian EIA system by examining the governance mechanism currently in place for conducting EIA and the extent to which the process satisfies good governance principles.

### **5.3 Methodology**

The approach for evaluating the good governance quality of the EIA system in Namibia was based on evaluative and quality control criteria derived from the literature and supported by the perceptions of EIA actors. The ten criteria used were based on the good governance qualities as agreed upon by international bodies like the World Bank (World Bank Group, 1992) and United Nations Development Programme (United Nations Development Programme [UNDP], 2009). The extent to which an EIA process meets the good governance qualities can be used to distinguish between weak and good governance of the EIA system and subsequently its state. Weak governance is associated with negative

outcomes and closely linked to social mishaps such as corruption, social exclusion, and a lack of trust in authorities; whereas good governance has the potential to regulate and enforce sound policies and produce positive outcomes (Asefa & Huang, 2015).

Data was gathered through a questionnaire survey and semi-structured interviews. The questionnaire was sent to around 300 experts from a database of environmental experts and actors obtained from the Ministry of Environment, Forestry, and Tourism [MEFT]. A total of 110 experts familiar with the EIA process responded during the period between October 2018 and March 2019. To obtain more explicit information and for triangulation, survey respondents were requested to indicate their willingness to participate in face-to-face interviews. As a result, 25 respondents were interviewed representing the Department of Environmental Affairs (3), government ministries assigned as competent authorities (5), local authorities (2), environmental assessment practitioners (8), academics (2), state-owned enterprises (2) and non-governmental organisations (2).

We acknowledge the limitations associated with the small sample of interviewees representing the different organizations and the overall survey response rates. There are few EIA experts in Namibia, and thus far only 48 are registered under EAPAN. Other studies in the literature assessing SEA effectiveness also used a small sample of 2-6 interviews (see Jha-Thakur et al., 2009; Van Doren et al., 2012), yet their findings made relevant contributions. Questions in the survey and interviews were technical and EIA-specific, therefore the public and people without knowledge of EIA were excluded. Table 5.1 provides a detailed profile of participants in the survey and interviews. For confidentiality and ethical considerations, responses by interviewed participants are presented using pseudonyms.

The United Nations principles of good governance were used as quality measures by assessing the extent to which the Namibia EIA system satisfied them. The UN's good governance qualities include: i) rule of law, ii) participation, iii) coordination, iv) transparency, v) responsiveness, vi) consensus orientation, vii) equity, viii) legitimacy, ix) effectiveness and efficiency, and x) accountability (United Nations Development Programme [UNDP], 2009; World Bank Group, 1992). A 4-point Likert scale was used to rate the criteria according to actors' perceptions where 1 = *excellent*, 2 = *good*, 3 = *limited*, and 4 = *poor*. In this study, excellent and good represented an adequate system, and limited and poor represented an inadequate system. For the governance standards, respondents rated governance in Namibia EIA as follows. 1 = *fully met*, 2 = *partially*, 3 = *marginally*, and 4 = *poor*. Additional information was obtained through semi-structured interviews.

The survey responses were analysed using the Statistical Package for the Social Sciences (SPSS 25) and Microsoft Excel (2021) and presented as descriptive statistics. Expert interviews were audio recorded, transcribed, and organised using NVivo 12 software. Transcripts were analysed by means of a thematic analysis using a deductive approach (Vaismoradi et al., 2013).

Table 5. 1: Background Information of the Survey Respondents

Demographic characteristic	Survey		Interviews	
	1 (n = 9)	2 (n = 6)	1 (n = 9)	2 (n = 6)
Gender				
Female	42	38	7	28
Male	68	62	18	72
Highest education				
Grade 12	0	0		
Bachelor	1	5		
Masters	1	1		
PhD	7	0		
Age category				
20-30	0	0	0	0
30-40	28	25	0	0
40-50	64	57	15	60
50+	20	18	10	40
Years of experience in EIA projects				
Less than 1 year	13	12	0	0
1-5 years	62	56	8	32

5-10 years	17	15	10	40
10+ years	19	17	7	28
Number of EIA projects involved in				
None	12	11	0	0
1-4	32	30	0	0
5-9	19	18	10	40
10+	43	41	15	60

Note. GCSE = Total count (n)=110.

## 5.4 Results

### 5.4.1 Adequacy of EIA Mechanisms in Place for the Conduct of EIA

The mechanisms in place for EIA range between good and limited. Using a 50% threshold mark for "adequate governance mechanisms vs inadequate governance mechanisms" of Namibia's EIA system, only four elements out of twelve were rated as *adequate* and included (i) provisions and requirements on the legal basis, (ii) EIA scope, (iii) requirements for compliance, and (iv) EIA procedures. More than 60% of the respondents rated the remaining eight EIA mechanisms, including the requirements for cumulative impacts, and consistent and impartial administration as *inadequate* (Figure 5.1).

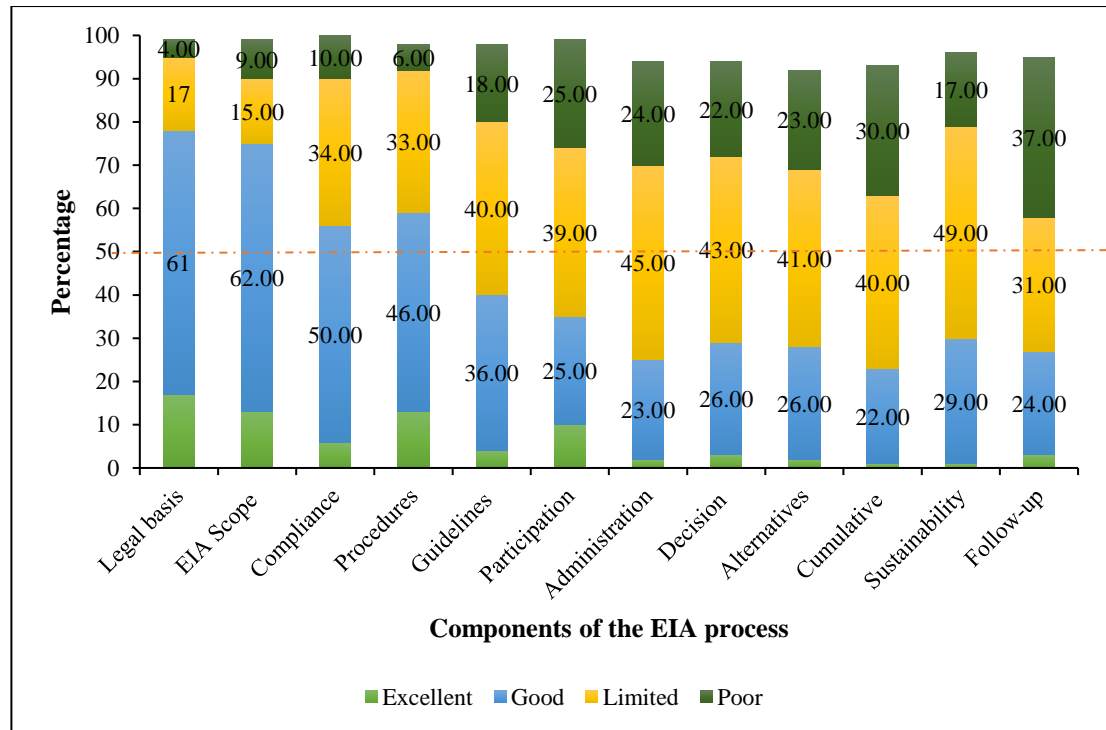


Figure 5. 1: Stakeholders' Views: Adequacy of Governance Mechanisms in Place Conducting EIA (n=110)

A substantial proportion of 68% of respondents scored the requirement for follow-up and monitoring as *inadequate* (Figure 5.1). Another important element of technical guidelines for EIA was also rated *inadequate*, being perceived as limited by 40% and poor by 18% of the respondents, respectively.

#### 5.4.2 Good Governance Qualities in the Namibia EIA Process

To understand the specificity of the governance context under which EIA is implemented, survey respondents were asked to rate the extent to which the Namibian EIA process satisfies the qualities of good governance. Out of the ten good governance qualities, the Namibian EIA process *partially satisfied* eight of the principles: i) rule of law, ii) coordination, iii) participation, iv) responsiveness, v) consensus oriented, vi)

equity, vii) effectiveness, and viii) legitimacy. The principle of accountability was *marginally met*, and transparency was considered *poorly met* (Table 5.2). The results of each governance quality are discussed in the following section.

#### **5.3.1.1 Rule of Law**

The rule of law indicator is defined as the extent to which the EIA process is based on a good and impartial legal system that protects the environment and its people. The results show that 45.9% of participants rated the principle of the rule of law in the Namibian EIA system as *partially met*. A government scientist asserted that: “I feel that the Namibia EIA process is not satisfying good governance qualities therefore it's a no, the rule of law is in place, but with various gaps, and no effort is made to evaluate the legislation” [GovS1]. Another government senior scientist also indicated that while environmental laws exist, they are not respected. The senior scientist pointed out developments that have not followed environmental impact assessment (EIA) recommendations saying:

Look at coastal developments, there are multimillion-dollar developments that should never have happened, for example, the Container terminal project and the Platz A-meer raft extension were not part of the initial EIA. In those instances, the environmental rules were not followed [GovSS1].

Table 5. 2: Frequency to which the EIA Process Conforms to Good Governance Qualities

<b>Good governance qualities</b>	<b>Score</b>	<b>Frequency</b>	<b>Valid percent</b>	<b>Cumulative percent</b>
Rule of law (N=110)	Fully met	28	25.7	25.7
	Partially met	50	<b>45.9</b>	71.6
	Marginally met	19	17.4	89.0
	Poorly met	11	10.1	99.1
	No opinion	1	0.9	100.0
Linkages & coordination (N=110)	Fully met	14	12.7	12.7
	Partially met	45	<b>40.9</b>	53.6
	Marginally met	30	27.3	80.9
	Poorly met	17	15.5	96.4
	No opinion	4	3.6	100.0
Public participation (N=110)	Fully met	30	27.3	27.3
	Partially met	48	<b>43.6</b>	70.9
	Marginally met	18	16.4	87.3
	Poorly met	14	12.7	100.0
	No opinion	0	0	
Responsiveness (N=110)	Fully met	12	10.9	10.9
	Partially met	43	<b>39.1</b>	50.0
	Marginally met	33	30.0	80.0
	Poorly met	18	16.4	96.4
	No opinion	4	3.6	100.0
Consensus oriented (N=106)	Fully met	11	10.0	10.0
	Partially met	53	<b>48.2</b>	58.2
	Marginally met	28	25.5	83.6
	Poorly met	14	12.7	96.4
	No opinion	4	3.6	100.0

<b>Good governance qualities</b>	<b>Score</b>	<b>Frequency</b>	<b>Valid percent</b>	<b>Cumulative percent</b>
Equity (N=107)	Fully met	16	14.5	14.5
	Partially met	43	<b>39.1</b>	53.6
	Marginally met	29	26.4	80.0
	Poorly met	20	18.2	98.2
	No opinion	2	1.8	100.0
Accountability (N=110)	Fully met	13	11.8	11.8
	Partially met	33	30.0	41.8
	Marginally met	33	<b>30.0</b>	71.8
	Poorly met	28	25.5	97.3
	No opinion	3	2.7	100.0
Transparency (N=107)	Fully met	17	15.6	15.6
	Partially met	31	28.4	44.0
	Marginally met	25	22.9	67.0
	Poorly met	32	<b>29.4</b>	96.3
	No opinion	4	3.7	100.0
Legitimacy (N=107)	Fully met	16	14.8	14.8
	Partially met	39	<b>36.1</b>	50.9
	Marginally met	31	28.7	79.6
	Poorly met	21	19.4	99.1
	No opinion	1	0.9	100.0
Effectiveness & efficiency (N=107)	Fully met	7	6.4	26.2
	Partially met	40	<b>36.4</b>	56.1
	Marginally met	32	29.1	93.5
	Poorly met	28	25.5	100.0
	No opinion	3	2.7	

### 5.3.1.2 Coordination and Linkages

Coordination means the EIA process enhances appropriate coordination and communication among organisations and institutions. This element was rated as *partially met* by 40.9% (Table 5.2). An interviewee from the local authorities noted that coordination is weakened due to a lack of decentralisation of EIA services, stating that: “There is no coordination, and the systems are not speaking to each other” [LA1]. The local authority expert suggested that the EIA process should be coordinated and decentralised using structures that are within the community. A senior manager from the local authority noted that:

The EIA tool is useful, but when it comes to communication and coordination, there is hardly communication between the DEA and other organs of state and there are no clear guidelines on who the competent authorities are for different resources or development and what they ought to do [LAM2].

However, the expert indicated that coordination and communication could be improved if the DEA collaborated with local authorities and municipalities who are the custodians of developments and service delivery in their area of jurisdiction. Other experts added that municipalities were experiencing difficulties with the implementation and coordination of EIA because local authorities lacked appropriate administrative structures and expertise in the field of environmental management. Mention was also made about the exclusion of traditional and religious structures to improve coordination in the EIA process. A senior government official stated: “In most cases, people choose to go with the political structures but then the traditional and religious structures are the ones that are closer to the people” [GovSS2].

### **5.3.1.3 Participation**

Participation means that the EIA process promotes consultation of all interested and affected parties (IAPs) and that decisions consider their interest, needs, and values. The Namibian EIA process *partially met* this principle (Table 5.2). Participation was one of the most frequently mentioned governance qualities in the interviews. Respondents highlighted that the low rating resulted from various shortcomings concerning the participation methods and approach used in the EIA process. A manager of an NGO cited that:

In the current legislation the issue of public and stakeholder consultation and communication is not stated well, especially how it should be done, what is the maximum number of people to be consulted, and at what level. The consultants therefore choose what they see fit [NGOM1].

An academic asserted that public participation was a challenge in the EIA process, noting that “There is a lack of deliberation in the EIA process, and the consultants only come to inform the public about their projects, so the EIA process is not transparent and not legitimate” [ACA1].

### **5.3.1.4 Responsiveness**

Responsiveness means that the EIA process responds to concerns raised by stakeholders and the public, within a reasonable time frame. The rating of the respondents shows that the EIA process *partially met* the principle of responsiveness (39.1%), (Table 5.2). A government scientist indicated that there was no assurance that public comments would be responded to or considered in the final assessments. The scientist criticised the

EIA system saying: “Sometimes we give comments, but they are not included in the final submission which one is only lucky to see, and one cannot do much about it” [GovS3].

#### **5.3.1.5 Consensus-Oriented**

Consensus-oriented means the EIA process mediates between many different needs, perspectives, and expectations of stakeholders. Almost half of the respondents (48.2%) across the five groups involved in the survey indicated that the EIA process *partially satisfies* the principle of consensus-oriented (Table 5.2). Most interviewees were pessimistic about this criterion, citing that only a few people partake in the EIA process. A senior scientist noted that:

It’s difficult to agree on this criterion. In Namibia, only a few educated or urban people are often involved in EIA, and only those perspectives are considered. We can only measure good governance if people know and are aware, which is not the case [GovSS3].

#### **5.3.1.6 Equity**

Equity means the EIA process is fair and enhances the representation of communities and stakeholders. The Namibian EIA process partially satisfies the equity criterion (Table 5.2). Interviewed experts indicated that equity is a challenge in several structures in Namibia, including EIA. A local authority expert noted that: “That’s the purpose of EIA to enhance equity, but not in Namibia” [LA2]. It was suggested that more education, awareness, and political will toward the EIA process can enhance fairness and equity.

### **5.3.1.7 Accountability**

Accountability means decision-makers and the proponents are responsible to all parties, including the public, for both the decision and their actions in the EIA process. The respondents' views were split with 30% rating accountability in the EIA process as *marginally* met (Table 5.2). Interviewed experts highlighted accountability as a challenge in the decision making, monitoring, and implementation of the EIA process. A senior government official noted that accountability is a subset of responsibility commenting: There is no accountability in the EIA system because even the regulatory body that issued the ECC indicates on the conditions that they are not liable for damages, which places blame or responsibility on no one [GovSS5].

A junior consultant also echoed the same view saying:

People are taking advantage of the lack of accountability knowing they will not be held responsible because on the ECC, MET is saying that they will not be held liable and accountable for whatever is going to happen; and MET hardly inspects approved projects [EAP4].

Interviewees highlighted the need to add stringent measures and conditions to the ECC to show government seriousness in enforcement and punishment in case of misconduct.

### **5.3.1.8 Transparency**

Transparency means the EIA process and decision-making process are open and accessible. Survey respondents had divergent views on transparency. Table 5.2 shows that the EIA process in Namibia poorly satisfies the principle of transparency (29.4%). Interviewees stressed the lack of transparency in the EIA process. Senior officials from

the NGO and consultancy sectors cited the lack of access to information as contributing to the lack of transparency. An interviewee from the government stated: “About transparency, the whole EIA process needs revisiting because a lot of information is not accessible to the public and therefore, we cannot say the process is transparent” [GovS4]. Another consultant shared a similar sentiment, indicating that: “I love working for the good of the environment but the transparency around EIA is almost zero” [EAP3]. A senior consultant highlighted that transparency is also affected by conflict of interest, stating that: “Namibia’s population is small, and the environmental sector has few experts who know each other and are often conflicted, which brings a lack of transparency in some areas” [EAP7].

Representatives from the decision-making authority, however, indicated that the review and decision-making stages of the EIA process were open and transparent. A scientist from the DEA noted that: “The review and decision-making process is very transparent, and assessment is done by different officers and not the environmental commissioner alone” [GovS6]. Most of the interviewees highlighted corruption and political influence in the EIA process as impediments to transparency. A senior government expert asserted that:

In some projects, there is too much politics involved, sometimes it is perceived and sometimes it is actual, but the overall perception is that if there is too much politics involved then the process is likely to be less transparent [GovS5].

The expert, however, indicated optimism toward an improved EIA system saying: “But I believe in the next few years the system will be in a much better position than it is now” [GovS5].

### **5.3.1.9 Legitimacy**

Legitimacy considers the extent to which the EIA process is acceptable. Results show that the EIA process *partially* satisfies the principle of legitimacy (Table 5.2). Interviewed experts indicated that the low score on legitimacy was connected to public participation and how actors were regulated. Experts added that legitimacy was low in the EIA process because the government undertook projects with little consideration of EIA laws. Interviewees alleged that several projects including waste disposal in protected areas, water abstractions, and road construction, were implemented without an ECC. A senior consultant criticised the government saying:

Government themselves as the regulators are not abiding by many of its laws. The problem is bigger than EIA and when you go further you find that small projects are said to need an EIA while bigger projects go without it [EAP8].

### **5.3.1.10 Effectiveness and Efficiency**

Efficiency and effectiveness mean that the EIA process and its outcomes ensure environmental protection and sustainability at the least cost. The EIA process in Namibia *partially* satisfies the principle of efficiency and effectiveness (Table 5.2) Interviewees linked the effectiveness and efficiency of the EIA process to national governance and political will, with the majority mentioning that EIA as a tool was not getting support from the government. A government scientist asserted that: “effectiveness in EIA has so much to do with political will and government support but that component is limited in Namibia” [GovS3]. An expert from the private sector suggested that information sharing and knowledge management could also contribute to efficiency. Interviewees suggested that a digital mapping system and a database were needed to depict different developments

and to annually report on the number of approved and rejected projects. An engineer from the local authority indicated that digital and online systems could improve inspection, monitoring, and assessments of cumulative impacts.

A senior government official added that EIA's effectiveness was affected by the level of secrecy and dishonesty in the process, commenting:

There is a lot of secrecy in this whole thing of EIA. You go and ask the sample design from those that undertake sampling and ask the protocols but sometimes they will not provide you with these things because they would not want you to see how they have manipulated the data. Honesty is not in EIA [GovSS4].

Interviewees agreed that EIA efficiency and effectiveness could be improved through awareness campaigns and training programmes on the environment and EIA across the country.

## **5.5 Discussion**

Good governance principles should be embedded into the legislation, provisions, and requirements to ensure a quality EIA system. Studies examining the quality of EIA systems often focus on the EIA report, and only a few researchers have examined the mechanisms in place and the governance context. This study evaluated the adequacy of EIA governance mechanisms in place for the conduct of EIA in Namibia. On a 50% pass threshold, only the legal basis, EIA scope, compliance, and procedures were considered adequate, and eight criteria did not pass the threshold, so hence are viewed as inadequate. The mechanisms perceived as adequate are mainly those that are embodied in legislation. Criteria below the 50% threshold included critical requirements on cumulative impacts, alternatives, follow up, and impartial administration. These inadequacies may have

serious implications for the EIA system and can affect the quality of the assessment and subsequently, the decisions made. A good and innovative EIA system should encompass various mechanisms to provide environmental information needed for developing alternatives, the guidelines of the EAP to prepare an EIA report and to undertake formal public participation, and the requirement for follow up (Arts et al., 2012).

The requirement for assessment of cumulative impacts, follow up and monitoring are cited as challenging mechanisms in both developing and developed EIA systems. Arts et al., (2012) indicated that the UK and the Netherlands have been criticised about the lack of consideration of cumulative impacts and alternatives in their EIA systems.

Kolhoff et al., (2013) highlights that EIA requirements in developing countries are often overly ambitious and cannot achieve the objectives in the light of constraining governance and political realities, including financial limitations. For sub-Saharan African countries, the SADC has been advocating for the harmonisation of environmental policies and legal frameworks (Hartzenberg & Kalenga, 2015; Nshimbi & Fioramonti, 2014). With an inadequate EIA mechanism and requirements, Namibia can benefit from collaborative legislation and implementation guidelines from SADC. Such regional EIA programmes can also strengthen transboundary EIA legislation and practices, with the possibility of experts exchanging and sharing resources to ensure successful and quality EIAs.

Results show that out of the ten good governance qualities, the Namibia EIA process *partially* satisfies eight good governance principles, namely: rule of law, coordination, participation, responsiveness, consensus-oriented, equity, legitimacy, and effectiveness and efficiency. The principles of accountability and transparency are marginally and poorly met, respectively. Ideally, a well-conceived EIA should reflect many of the elements of good governance qualities to produce positive governance

outcomes and to ensure formal and informal networks among stakeholders, deliberation, transparency, and accountability in decision-making (Chi et al., 2016; Kakonge, 2006). An EIA process that meets good governance qualities can also mitigate the hazards of political interests and conflicts (Monteiro et al., 2018). Namibia's EIA process in this case may have minimal effect in producing quality results to effect good environmental decisions or to impact governance issues at the national level.

The question of good governance in the Namibian system is not new. According to Kandetu et al., (2001), the existing governance dilemma is no longer about the existence of institutions and representative structures, but mainly about access, responsiveness, and effectiveness of political and socioeconomic systems. In terms of environmental governance, the Namibian Constitution accords high priority to environmental protection, as enshrined in Article 95. The EMA (2007) and accompanying EIA Regulations (2012) in Namibia also expressly outline the essence of the EIA process in terms of the rule of law and its significant use for sustainable development. The partial ranking, however, acknowledges that the EIA rules are lacking. These findings are consistent with Husselmann's (2016) results, which revealed that Namibia's EIA process is not adequate, as it complies to some level with the rule of law, with some notable gaps. The main challenge found in this study is that the law is not followed, particularly with big investments, and the government is the main culprit in non-compliance. Some of the questionable developments mentioned by interviewed experts include the recently built Platz shopping mall in Swakopmund and the Walvis Bay container terminal, both on the Namibian coast.

According to Jordan & Lenschow (2010) and Yang (2019), EIA processes that conform to the notion of rule of law strongly promote other good governance qualities including transparency and accountability. When fulfilled, the fundamental principle of the rule of law also promotes access to justice (Roe, 2020). As a result of the study's findings, the Namibian environmental rule of law requires additional measures aimed at more effective implementation of EIA processes and stringent requirements on follow up and monitoring, alternatives when developing and consideration of cumulative impacts to ensure good governance. The agencies entrusted with enforcing environmental laws, such as the DEA, should be strengthened to ensure consistent and impartial administrative structures which are accountable, responsive, and transparent.

The principle of coordination and participation is rated as *partially met*. It was suggested that there is a need to increase coordination and participation within the EIA process amongst Namibia's governing leadership institutions, including political, traditional, and religious entities to improve the EIA process's adherence to good governance standards. These findings are supported by Mustafa (2001) who also noted that institutional coordination across EIA implementation arrangements is a key factor in determining the efficacy and quality of EIAs. In the context of Namibia, traditional authorities and local councils are the closest to the communities. However, their role is restricted to advisory, supportive, and assistance functions regarding land and environmental matters (Kaapama et al., 2007). Strengthening the role of traditional authorities in the EIA process can be a helpful step toward getting communities' involvement and raising their awareness. Traditional authorities in Namibia are well noted in the success of custodianship of wildlife to locals through community-based natural

resource management (CBNRM) in Namibia, hence their involvement in the EIA process could usefully enhance participation and coordination among communities.

According to Chi et al., (2016), good coordination and participation can create networks connecting stakeholders, increase interaction, create bonding, and thus foster a shared perception that may lead to collaborative decisions in EIA. Most Central Asian countries' EIA laws emphasise the necessity for improved coordination in the EIA process amongst institutions in very broad terms and without procedural constraints, especially amongst sectors (Barannik et al., 2002).

Interviewees suggested that to adequately govern the EIA process, decentralisation of EIA services to regional government departments should be strengthened and tailored to Namibia's sociocultural and political environment. In 1997, the government of Namibia adopted decentralisation as a means of promoting equal economic, cultural, and socioeconomic development, and improved participatory democracy, with the transfer of powers to regional and local government authorities. The Decentralisation Enabling Act 33 of 2000, hereafter referred to as Act 33 of 2000, provides for stakeholder consultation and communication. The EIA services should top the decentralisation agenda for uptake into local and regional government to ensure cross-sectoral coordination and cooperation between the public and private sectors. At the local authority level, participation and coordination of the EIA process can also be coordinated through existing bodies such as the constituency development committees (CDCs). These committees are statutory bodies that operate at regional and local levels involving elected members, traditional authorities, representatives of NGOs and community-based organisations, youth, women, and people with disabilities, making it a good avenue for handling EIA participation and reviews (Act 33 of 2000).

In Chile, municipalities at the local level play a role in EIA procedures by channeling citizen complaints about environmental offenses to appropriate enforcement authorities (Organisation for Economic Co-operation and Development (OECD), 2016).

If supported and strengthened, municipalities in Namibia can also become proactive institutions to decentralise EIA services and advance the national agenda on sustainable development and environmental protection through project assessments. The bulk of Namibia's environmental challenges are cross-sectoral, including pollution, land degradation, and scarce water resources (Nangombe, 2021), which necessitates a coordinated approach to environmental governance.

The principle of responsiveness and equity is also *partially met* in the Namibian EIA process. As a foundation for good governance, the World Summit on Sustainable Development (WSSD) in 2002 revitalised the EIA agenda to ensure that development is responsive to people's needs and that the rule of law is maintained for environmental justice (Sadler et al., 2002). The results of this study demonstrate the need for appropriate and timely opportunities for the Namibian public to be informed and heard fairly and equitably. The EMA (2007) considers intergenerational equity in the use of all-natural resources, and the EIA process (Ruppel & Ruppel-Schlichting, 2011). However, no action plan is in place to ensure this principle. The USA adopted an Equity Action Plan, a tool used to break through barriers and advance justice across underserved communities and their members to access and benefit from environmental opportunities through the federal government (Environmental Protection Agency [EPA], 2015).

In a context where 70% of the population lives in rural areas and depends on natural resources, Namibia needs an action plan and guidelines on how EIA can be a governance tool to improve equity and responsiveness to environmental rights. Namibia's administrative system's three tiers—central, regional, and local, including traditional authorities—can be an appropriate avenue for fostering equity through the EIA process. As suggested in the interviews, more education and awareness campaigns can enhance fairness, equity, community representation, and overall environmental governance.

Results show the principle of legitimacy and consensus is also *partially met* in the Namibian EIA process. Bond et al., (2016) highlight legitimacy as an important principle in the EIA process. According to Lai and Hamilton (2020), if stakeholders believe the process to be illegitimate, the implementation of EIA in conservation and development projects may be compromised. Interviewees view EIA in Namibia as not legitimate, as often only educated, and urban communities, partake in it. Only 43% of the population lives in urban areas (National Planning Commission [NPC], 2015). This means a large proportion of citizens living in rural areas have limited opportunity to partake in EIA, a notion that contributes to an illegitimate process. In addition, interviewees noted that government projects do not comply with EIAs and some of the projects bypass the EIA procedures. If the government responsible for ensuring the integrity of the EIA process is failing to comply, then it cannot control other developers and impose EIA as required. Other factors related to illegitimacy mentioned in the results include bribery and corruption, all of which are part of the contextual settings and contribute to poor governance.

The efficiency of EIA is influenced by the governance environment in which it takes place (Meuleman, 2015). Interviewed experts in this study noted that the efficiency and effectiveness of EIA in Namibia are affected by political influence in the EIA process, lack of political will, and dishonesty in the process. A lack of political will and weak environmental institutions indicates poor governance (Ibeh & Walmsley, 2021). In their study of EIA in African countries, Marara et al., (2011) identified Rwanda as having high political will and Kenya and Tanzania as exhibiting low political will in governing EIA implementation. In Namibia, lack of political will and constrained financial support are both challenges that stifle good environmental governance. For Namibia, limited political will is a challenge and the EIA process is not supported enough financially to adequately promote good environmental governance.

Transparency and accountability are the two lowest-ranked principles of good governance rated as *poor* and *marginal*, respectively. According to Bond et al., (2020), EIA is aimed at bringing accountability and transparency to the decision-making process by providing objective and scientific evidence. Lack of transparency can directly affect several of the other principles and can contribute to weak governance. Such a ranking can therefore be detrimental to the quality of the EIA process and environmental governance in Namibia. Morrison-Saunders and Bailey (2000) state that the Canadian Environmental Assessment Agency (CEAA) highlights transparency as a principle that provides certainty and accountability in the EIA process. Nuesiri (2016) also noted that accountability serves to mitigate negative social and environmental impacts and protects against abuse of power, guiding the actions of powerholders towards more socially and environmentally sustainable results.

According to the experts interviewed, lack of transparency and accountability in Namibia results from limited access to information, conflict of interest among EIA professionals, and lack of monitoring and compliance by the MEFT and political influence in the EIA process. Sosovele (2011) noted that a lack of accountability in enforcing environmental procedures is a governance failure that renders the EIA process ineffective.

A transparent and accountable EIA process can also be an enabling tool to build trusting relationships with Indigenous communities and to reconcile biodiversity conservation and human development (Barker & Jones, 2013; Boiral et al., 2020), a factor that is important to a novice EIA system such as that for Namibia. Also, transparency in EIA can enhance administrative justice, a core factor in shaping the development of EIA (Alberts et al., 2022).

The poor ranking for transparency and accountability in the Namibia EIA process is a governance deficiency that requires urgent attention if the EIA is to be effective and purposeful. The Namibia government needs to strengthen institutions to ensure that the EIA process is undertaken cleanly and is not influenced by corrupt forces. According to Williams and Dupuy (2017), corrupt behaviours thrive under conditions of secrecy, power imbalances and weak institutions, a condition which is familiar to Namibia. Ibeh and Walmsley (2021) noted that countries in sub-Saharan Africa, including Namibia, have weak environmental governance structures characterised by some degree of corruption, incoherent sustainability policies, weak environmental laws and non-existent monitoring and enforcement. These challenges not only impact environmental sustainability but can play an important role in national development, even limiting the achievement of global goals such as the SDGs. Some of the best EIA practices such as ensuring strict adherence to regulations through data and decentralised information provision, enhancing conflict

resolution, innovation, and use of technologies for better involvement, awareness, and training, can improve the adequacy, quality, and context under which EIA is implemented.

## **5.6 Conclusion and Recommendations**

Environmental impact assessment can be considered a good environmental governance instrument, as it introduces rules and assigns specific roles and responsibilities to actors. Namibia's commitment to good environmental governance is noticeable in efforts to set up legislation and mechanisms for the conduct of the EIA process. Inadequacy, however, lies in the provisions and requirements on participation, alternatives, cumulative impacts, and monitoring of project impacts. These limitations culminate in the overall EIA process to partially satisfy good governance principles. The rating of transparency and accountability as *poor* is a setback for the quality of the Namibia EIA process. While legislation reforms and technocratic modification are needed to improve the quality of the EIA process, political approaches are needed to address the governance and contextual challenges associated with EIA in Namibia. Full involvement of the public and private sectors and urban and rural communities is needed. Contextual issues ranging from low political will and support, implementation of unauthorised projects and political influence in the EIA process, lack of decentralisation of EIA services, and lack of resources have received low levels of attention from the government.

A befitting solution lies in strengthening, supporting, and utilising local administrative tiers at regional, local, and traditional structures for including the public and private sectors, and grassroots communities living in urban and rural areas of Namibia. Such efforts could help to ensure improved participation, coordination, legitimacy, accountability, and transparency in the EIA process and to ensure

responsibility of project monitoring towards all actors. With the necessary improvements, EIA can become an essential tool not only to stir principled development but also to manage conflicts, contradictions, and inconsistencies which are ingredients of poor governance. Consequently, based on our analysis, we recommend that:

- there should be a commitment of political leadership and will from the government to create an enabling environment for sustainable development using EIA. This requires the integration of environmental concerns in all major economic and social policies, plans and decision making and that EIA procedures are strengthened to demand appropriate transparency, accountability, and compliance around the assessment efforts.
- environmental authorities (such as the DEA) require strengthening in monitoring and enforcement to ensure EIA compliance.
- government projects should undergo EIA, and the government should be exemplary in undertaking quality assessments; and
- government should include all tiers of governance into the EIA process by making use of existing bodies and committees in the local and regional councils and the traditional authorities.

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**CHAPTER 6. SUBSTANTIVE, NORMATIVE, AND TRANSACTIVE  
EFFECTIVENESS OF EIA: PERCEPTION OF KEY ACTORS IN NAMIBIA**

This chapter is published as:

**SUBSTANTIVE, NORMATIVE AND TRANSACTIVE EFFECTIVENESS OF  
EIA: PERCEPTION OF KEY ACTORS IN NAMIBIA**

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## **6.1 Abstract**

Environmental impact assessment (EIA) is supported by enforceable legal backing, making it an important environmental management tool. However, its effectiveness in especially developing countries, where systems often mimic the Western world, has been a matter of debate. In Namibia, EIA has been voluntary taking place before independence in 1990, however the enactment of the Environmental Management Act (EMA), Act 7, and the Environmental Impact Assessment (EIA) Regulations, Regulations 30 only came into force in 2007 and 2012, respectively. This paper investigates the substantive, normative, and transactive effectiveness of EIAs in Namibia, as it is perceived by key actors. Data were collected through survey questionnaires and triangulated with data captured from semi-structured interviews. A total of 110 actors responded to the survey and 25 experts were interviewed. Interviewees perceive EIA in Namibia as moderately and marginally effective in supporting substantive, normative, and transactive effectiveness. They further perceive that various contextual and administrative challenges affect EIA's effectiveness in Namibia. Such challenges include poor administration frameworks, restrained consideration of assessment findings in decisions, constrained learning and environmental awareness opportunities, inadequate public participation, limited funding, and poor monitoring and reporting. Interviewees also highlighted the importance of political will from government to improve funding and appropriate institutional arrangement of the EIA authority. Poverty causes actors to perceive that projects meant to improve the livelihood of impoverished communities can be accepted while foregoing environmental ideals and objectives. With timely and targeted improvements, EIA can be an effective tool for facilitating good environmental decisions, learning, resource mobilisation, and sustainability in Namibia.

*Keywords:* Namibia, effectiveness, actors, perception, EIA

## **6.2 Introduction**

Environmental impact assessment (EIA) can be an efficient and effective tool that incorporates environmental concerns into development planning and provides a systematic means for regulators to monitor compliance with measures made at project inception (Nicolaisen & Fischer, 2016). Discussion on EIA effectiveness is a recurring topic in environmental assessment research (Arts et al., 2012; Loomis & Dziedzic, 2018). High expectations are placed on EIA's capacity to aid in environmental protection and sustainable development through improved decision making, learning, and environmental awareness (Arts et al., 2012). However, these potential benefits of environmental assessments vary among different countries depending on contextual factors such as cultural, legal, and administrative frameworks (Tokarczyk-Dorociak et al., 2019). Several researchers, for example Arts et al., (2012), Clarke and Vu (2021), Duarte et al., (2017), and Jha-Thakur and Fischer (2016) evaluated EIA effectiveness in different countries using the perception of stakeholders who are involved in the implementation.

Using three dimensions of effectiveness, namely substantive, normative, and transactive effectiveness, this study investigates EIA's effectiveness in Namibia using the perception of actors involved in the implementation. A range of EIA actors with knowledge and field expertise of EIA in Namibia were interviewed and their perceptions used to identify potential topics for reform; and highlight areas of effectiveness, adequacy, agreement, controversy, and critical areas of research interests. The 10-year-old Namibian EIA system is under pressure to undergo a legislative reform for which a series of nationwide stakeholder consultations were undertaken in 2018. Four years have now passed with the amended EMA and EIA Regulations yet to receive Cabinet approval for implementation. This paper brings out the perception of stakeholders' perceptions on

substantive gaps in the EIA legislation that affects its effectiveness in Namibia and reiterate the need to review the current legislation.

In this paper, we briefly introduce the Namibian EIA system, then present the survey and interview methods, and finally discuss the main results.

### **6.2.1 EIA in Namibia**

Environmental impact assessment was formally introduced in Namibia a decade ago through the enactment of the Environmental Management Act (EMA, Act 7 of 2007) in 2007, and the Environmental Impact Assessment Regulations (EIA Regulations, Regulations 30 of 2012) in 2012. The EIA policy formulation was locally driven and followed multiple stakeholder consultations that started after the Environmental Assessment (EA) Policy was approved in 1994 (Tarr, 2003). The legislation process was, however, characterised by persistent delays. By 1996 the drafting of the Environmental Management Bill had started, but by 2003 the Bill had not been submitted to Parliament for approval (Tarr, 2003). The EMA was finally approved in 2007 while the EIA Regulations was promulgated in February 2012. After independence in 1990, Namibia adopted in its Constitution, Article 91(c), and Article 95(1), to promote sustainable development for which the Ministry of Environment and Tourism (MET) was established as a custodian. Assessments are now administered under the MET's Department of Environmental Affairs (DEA) and headed by the environmental commissioner (EC).

Since its implementation, minimal research has been undertaken to evaluate EIA practices and implementation. Husselmann (2016) evaluated the performance of the EIA system in Namibia, focusing on procedural effectiveness, but omitted important factors on the quality and substantive and normative effectiveness of EIA. Joseph (2018) similarly

investigated the decision-making process in specific EIA study projects in Namibia from a procedural perspective. However, there is a need for more research to understand the overall effectiveness of EIA in Namibia. This paper evaluated the substantive, normative, and transactive effectiveness of EIAs in Namibia, as perceived by key actors.

### **6.2.2 Conceptualising EIA Effectiveness**

Sadler (1996) introduced three effectiveness dimensions: procedural, substantive, and transactive to measure the effectiveness of the EIA system. An additional element called normative effectiveness was added to the first set by Baker and McLelland (2003). In this paper, we measure EIA's effectiveness in terms of three dimensions: substantive, normative, and transactive. The substantive dimension used the following themes as criteria: (i) effective decision making (ii) learning and (iii) leadership. The normative dimension used the following themes as criteria: (i) resolving trade-offs (ii) limiting coercive power and enhancing power capacity (iii) establishing a common vision (iv) helping stakeholders to identify and create shared values and identities and (v) promoting fair and democratic participation. Finally, the transactive dimension used the following criteria: (i) attracting funding, (ii) conducting EIA process without delay, (iii) conducting EIA process at reasonable cost and (iv) ensuring EIA authority is well-organised with clearly defined roles and responsibilities. The detailed themes and criteria questions used for each effectiveness dimension are presented in the method section.

The effectiveness and efficiency of EIAs should regularly be evaluated to guarantee that the instrument is continually improved and can adapt to the changing environmental needs (Loomis & Dziedzic, 2018). As the concept of efficiency and effectiveness are interrelated, they are assessed together and used to examine the aspect

of the EIA processes and practices (Loomis & Dziedzic, 2018). Outcomes of evaluation studies vary in terms of the influence that EIA has on decision making in a specific context (Chanchitpricha & Bond, 2013; Rega et al., 2018). To strengthen the analysis of EIA effectiveness, Loomis & Dziedzic (2018) identified a need for more empirical studies that combine more than one effectiveness dimension. This calls for a systemic investigation of the EIA system at a country level. This study, therefore, investigates the effectiveness of EIA in the context of Namibia using actors' perceptions.

### 6.3 Methodology

The analysis of EIA's effectiveness in Namibia followed a participatory approach based on two methods: (a) inquiry by survey questionnaire and (b) dialogue through semi-structured interviews with experts. The same themes and research questions presented in Table 6. 1 were used for the survey and as the interview guide.

Table 6. 1: Effectiveness Themes and Associated Research Questions Used in Survey and Interviews

<b>Effectiveness Dimension</b>	<b>Effectiveness Theme</b>	<b>Thematic Question</b>	<b>Research question</b>
Substantive effectiveness  (Chanchitpricha & Bond (2013); Glucker et al., (2013); Sinclair et al., (2008); Jha-Thakur et al., 2011; Țăpurică & Ispășoiu, 2013)	Decision making	S1. To what extent is the EIA process effective in achieving the following areas of decision making?	a) Ensuring that the findings of an assessment are considered before any decision is made in respect of listed activities.  b) Ensuring explicit consideration of the environmental factors in decision-making.

Effectiveness Dimension	Effectiveness Theme	Thematic Question	Research question
			<p>c) Ensuring explicit considerations of social factors in decision-making.</p> <p>d) Ensuring appropriate arrangements for verifying implementation &amp; monitoring.</p>
	Learning	S2. To what extent is the EIA process effective in achieving the following areas of learning?	<p>a) Increase the environmental awareness of developers.</p> <p>b) Increase environmental awareness of CA.</p> <p>c) Promote environmental awareness and values of environmental/social concerns among</p> <p>d) the public.</p> <p>e) Enhance opportunity for stakeholders to learn &amp; gain knowledge.</p> <p>f) Enhance provisions of institutional memories.</p>
	Leadership	S3. To what extent is the EIA process effective in achieving the following levels of leadership?	<p>g) Visionary leaders: who inspire people and promote progressive change.</p> <p>h) Entrepreneurial leaders: who out &amp; make things happen.</p> <p>i) Collaborative leaders: who are connectors and help to facilitate new kinds of partnerships.</p>

Effectiveness Dimension	Effectiveness Theme	Thematic Question	Research question
		Visionary leadership Entrepreneurial leadership Collaborative leadership	
Normative effectiveness O’Fairchellaigh (2010); Gucker et al., (2013); Robinson et al., et al., (2012); Chantchipricha and Bond (2013)	Sustainable development	N1. To what extent is the EIA process effective in achieving the following mechanism of sustainable development?	j) Resolving trade-offs: the decision is fair & socially acceptable; economically viable and protects the environment. k) Placing limits on the use of coercive power and enhancing power capacity. l) Establishing a common vision among communities. m) Helping stakeholders to identify & create shared values and shared identities. n) Promoting fair and democratic participation.
	Public participation	N2. To what extent is EIA effective in enhancing the following rationale of public participation?	o) Influencing decisions. p) Enhancing the democratic capacity of those involved. q) Enhancing social learning. r) Empowering & emancipating marginalised individuals & groups. s) Harnessing local information & knowledge.

Effectiveness Dimension	Effectiveness Theme	Thematic Question	Research question
			t) Generating legitimacy. u) Resolving conflicts.
Transactive effectiveness (Sadler, 1996), Wood, 2003; Loomis & Dzedzic, 2018)	Efficiency	T1. To what extent is the EIA process efficient in the following areas of transactive effectiveness?	v) Attracting government and international funding. w) Ensuring an EIA process that is prompt & conducted within a reasonable time (with no delay). x) Ensuring an EIA process that is inexpensive, conducted at a reasonable cost, and justifying the benefits thereof. y) Ensuring that EIA authority is well organised, and their roles & responsibilities are clearly defined & allocated.

### 6.3.1 EIA Survey

To capture EIA actors' perceptions of the effectiveness of EIA in Namibia, we developed a structured questionnaire with closed and open-ended questions. *Actors* were defined as anyone involved in the technical procedures and fieldwork of EIA, or with knowledge of EIA. The purpose of this criteria was to include individuals who may have obtained knowledge of the Namibia EIA system through research and postgraduate studies but have not partaken in specific EIA projects. The survey questions were divided according to the effectiveness dimensions, themes, and criteria questions as presented in

Table 6.2 A link to the online survey was distributed between October 2018 and March 2019. The study used a purposive sampling process, and therefore, to commence, the survey link was distributed to 300 actors found on a database of stakeholders that was obtained from the Ministry of Environment, Forestry, and Tourism (MEFT), as the EIA regulatory authority. The database comprised names of individuals involved in EIA and environmental management in Namibia. The database comprised representatives from at least six groups including the DEA (which is the EIA regulatory authority), government departments that are competent authorities (CAs) and custodians responsible for reviewing EIA reports related to resources, NGOs with an interest in environmental management, EIA consultants, public and private sector representatives who are often the proponents, and academics from research institutions and universities.

The names on the database have been captured from workshops, awareness campaigns, training, and meetings on environmental management in Namibia. In the survey introductory notes, an instruction cautioned that only respondents with knowledge and/or who have been involved in any stages of the EIA process were eligible to respond. To increase the responses, participants were sent monthly reminders and requested to widely share the survey link with other actors involved in EIA but who were not on the mailing list.

The survey comprised three parts. Section A enquired about the background professional knowledge and experience in EIA, using multiple choice questions. Section B was divided into three subsections as per the effectiveness dimension, to seek the perception of actors on the EIA system in Namibia based on set themes and criteria questions, which were each evaluated using a 5-point Likert scale, as outlined in Table 6.2 below. Likert scales have successfully been used before in EIA evaluation studies to

quantify the effectiveness of the EIA system in different countries. For example, Wood (1995), and El-Fadl and El-Fadel (2004) used a 3-point scale; Theophilou et al., (2010) used a 4-point scale; Marara et al., (2011) used a 5-point scale; while Bina et al., (2011) and Sadler (1996) used a 6-point scale. The five-point scale used in this study provided the required detail for the evaluation while reducing potential over-complication caused by a high number of alternatives (e.g., a 9-point scale). Dawes (2008) also noted that reliability and validity are improved by using a 5- to 7-point scale. The survey responses to the research questions were rated as listed in Table 6.2 below.

Table 6. 2: A 5-Point Likert Scale for Evaluating each Effectiveness Dimension

<b>Scale</b>	<b>Key actor</b>	<b>Description</b>
1	Very effective	Criteria effective and adequately functional
2	Moderately effective	Criteria partially effective and adequate/ functional with minor gaps
3	Marginally effective	Criteria meagrely met somewhat inadequate with some gaps
4	Not effective	Criteria poorly met, inadequate with significant gaps
5	No opinion	Insufficient basis to judge

Substantive effectiveness was evaluated as a capacity component, measuring the extent to which EIA can achieve its objective of environmental protection using three themes as criteria, namely: (i) effective decision making (ii) learning, and (iii) leadership (Arts et al., 2012; Chanchitpricha & Bond, 2013; Robinson et al., 2012; Sadler, 1996). In

this study, learning is considered as a subset of environmental awareness and therefore is treated as a substantive element following Arts et al., (2012). Leadership has also become a significant element in environmental governance and therefore added as a substantive criterion (Țăpurică & Ispășoiu, 2013).

Normative effectiveness was assessed as an outcome element using the following functions of sustainable development (Chanchitpricha & Bond, 2013; Robinson et al., 2012): (i) resolving trade-offs, in other words, the decision is fair and socially acceptable, economically viable and protects the environment; (ii) placing limits on the use of coercive power and enhancing power capacity; (iii) establishing a common vision among communities; (iv) helping stakeholders to identify & create shared values and shared identities; and (v) promoting fair and democratic participation. The element of public participation was reported in the literature as a critical challenge in EIA effectiveness (e.g., O'Faircheallaigh, 2010), hence it received more attention. Public participation was assessed according to seven rationales, and the survey question considered the extent to which EIA is effective in enhancing public participation to (i) influence decisions, (ii) enhance the democratic capacity of those involved, (iii) enhance social learning, (iv) empower & emancipate marginalised individuals & groups, (v) harness local information & knowledge, (vi) generate legitimacy and (vii) resolving conflicts (O'Faircheallaigh, 2010).

The transactive dimension evaluated the extent to which EIA is efficient in achieving four elements of efficiency: (i) attracting government and international funding, (ii) ensuring an EIA process that is prompt & conducted within a reasonable time (with no delay), (iii) ensuring an EIA process that is inexpensive and conducted at a reasonable cost that justifies the benefits thereof, (iv) ensuring that EIA authority is well organised

and their roles & responsibilities clearly defined & allocated (Chanchitpricha & Bond, 2013; Sadler, 1996).

From the total of 110 actors who responded to the survey, 25 experts were interviewed. Table 6. 3 shows the number of respondents for the survey and interviews and Table 6.4 shows their background information.

Table 6. 3: The Number of Respondents in the Survey and Interviews

<b>Institution</b>	<b>Number of respondents Survey</b>	<b>Number of respondents interviewed</b>
Government ministry / SOE	29	10
Local authority	4	3
Academia	24	2
NGO	17	2
Consultant	36	8
<b>Total</b>	<b>110</b>	<b>25</b>

Table 6. 4: Profile Summary of Survey Respondents

<b>Demographic characteristic</b>	<b>Survey</b>		<b>Interviews</b>	
	( <i>n</i> = 110)	(%)	( <i>n</i> = 25)	(%)
<b>Gender</b>				
Female	42	38	7	28
Male	68	62	18	72
<b>Highest Education</b>				
Grade 12	0	0	0	0
Bachelor	28	25	0	0
Masters	64	57	15	60
PhD	20	18	10	40
<b>Age Category</b>				
20-30	13	12	0	0
30-40	62	56	8	32
40-50	17	15	10	40
50+	19	17	7	28
<b>Years of experience in EIA projects</b>				
Less than 1 year	10	9	0	0
1-5 years	42	39	7	28
5-10 years	31	28	11	44
10+ years	26	24	7	28

Demographic characteristic	Survey		Interviews	
	(n = 110)	(%)	(n = 25)	(%)
<b>Number of EIA projects involved in</b>				
None	12	11	0	0
1-4	32	30	0	0
5-9	19	18	10	40
10+	43	41	15	60

*Note.* Total count surveys (n) = 110; Total count interviews (n) = 25.

### 6.3.2 Semi-structured Interviews

During the survey, actors with at least three years of technical and field experience in EIA were requested to indicate their willingness to participate in an in-depth dialogue through face-to-face interviews. The purpose of the interviews was to have a dialogue with experts and to seek clarification and validate issues that were raised during the survey. The interview guide questions were based on the themes in the survey questionnaire and related to the effectiveness dimensions presented (Table 6.1). Twenty-five experts indicated their willingness to be interviewed, and the group included government representatives from the DEA (3), government departments assigned as competent authorities (5), local authorities (2); environmental assessment practitioners or consultants (8), academics (2), state-owned enterprises (2); and non-governmental organisations (2). Because of the limited number of EIA experts in Namibia and the novelty of the EIA system, the total number of 25 experts were viewed as sufficient. Table

6.4. provides a profile summary of participants in the survey and interviews. For confidentiality and ethical considerations, the study presents interviewed participants' responses using pseudonyms.

The results from the survey were calculated as percentages and presented in graphs using Microsoft Excel (2019). Interviews were audio recorded, transcribed, and organised according to the pre-set themes using NVivo 12 software. Transcripts were analysed using a deductive approach based on the keywords related to the pre-set themes. Responses from different interviewed experts are presented as quotes in the result section. Survey results were analysed using Microsoft Excel (2019) to obtain percentages and the Statistical Package for the Social Sciences (SPSS 25) for the cross-tabulation of research questions vs types of institutions.

#### **6.4 Results**

This section explores the perceptions of key actors on the substantive, normative, and transactive effectiveness of EIA in Namibia. As far as years of experience with EIA is concerned, 24% of the survey respondents had more than 10 years of experience, while 9% had less than 1 year of experience in EIA projects and 11% lacked field experience in specific EIA stages (Table 6.4). Majority of the survey respondents were from consultancies (33%) followed by government (26%), and academics 22% (Figure 6. 1).

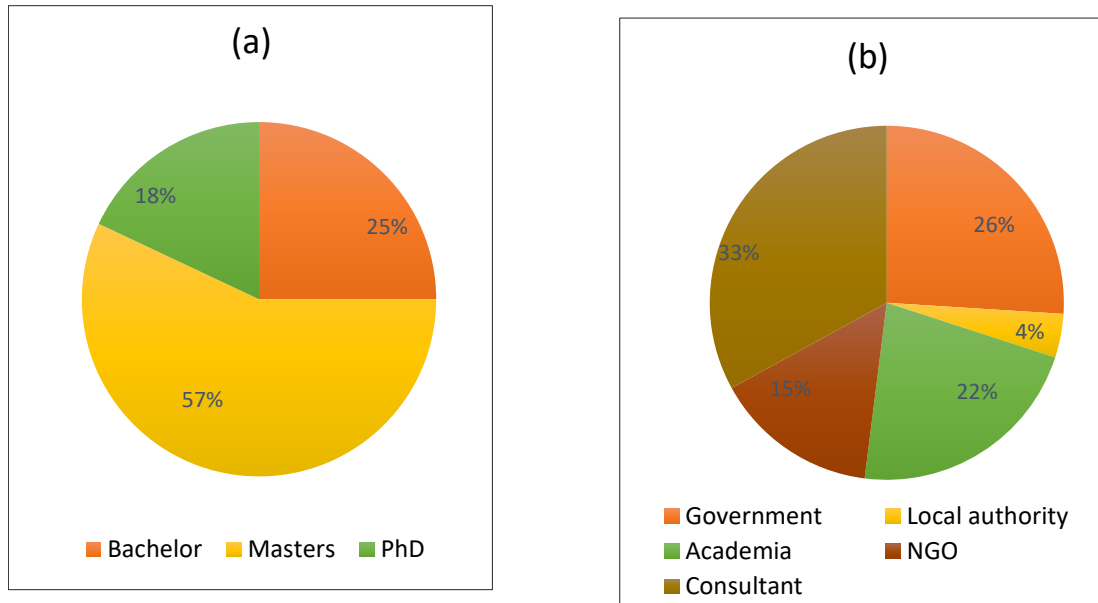


Figure 6. 1(a) Qualifications of Survey Respondents (b) Institutions of Actors Represented in the Survey

The following three sections discuss the results of the survey and interviews, in terms of the three effectiveness dimensions: substantive effectiveness, normative effectiveness, and transactive effectiveness.

### 6.4.1 Substantive Effectiveness

#### 6.4.1.1 EIA's Effectiveness on Decision-Making

Figure 6. 2 summarises the perceptions of the survey respondents on the extent to which the EIA process is effective in contributing to four areas of decision-making, namely (i) ensuring that the assessment findings are considered before any decision is made, (ii) explicitly considering environmental factors in decision making, (ii) explicitly considering the social impacts of decision making and (iv) ensuring appropriate

arrangements for verifying implementation and monitoring. Overall results show that EIA is *moderately effective* in elements of decision-making. On a 50% threshold mark for “EIA’s effectiveness on decision making vs EIA’s ineffectiveness on decision making” the highest ranking is between *moderately* and *marginally effective*. Figure 6.3 and Figure 6.6 shows the proportion of respondents who felt that the EIA process was either *very effective*, *moderately effective*, *marginally effective*, *not effective*, or who had *no opinion* in contributing to the four areas of decision-making described above. A proportion of 44% of respondents perceived that EIA is *moderately effective* in ensuring that findings of the assessment are considered before any decision is made, while 23% rated it as *marginally effective* (Figure 6.3).

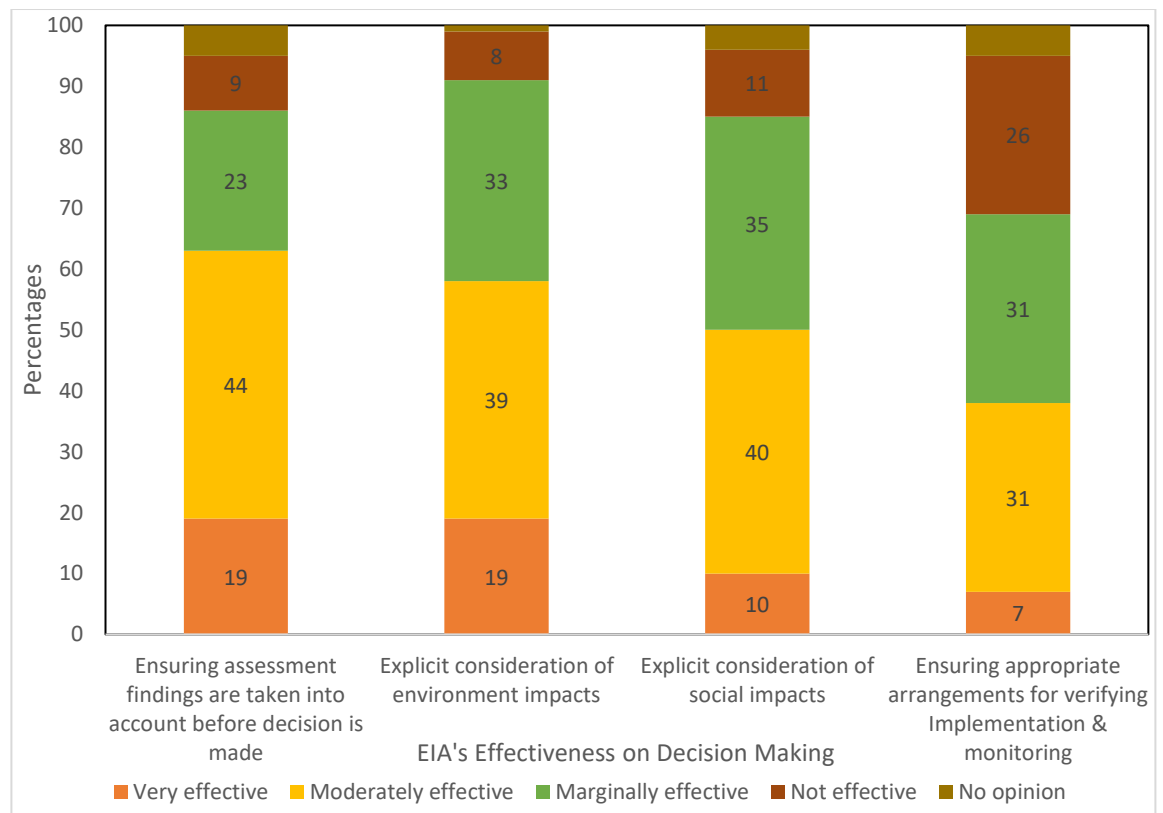


Figure 6. 2: Actors’ Perceptions: EIA’s Effectiveness in Achieving Elements of Decision Making (n=110).

More than a quarter of respondents indicated that EIA had led to explicit consideration of the environmental factors in decision-making (Figure 6.4), compared to consideration of social factors (Figure 6.5). A high proportion of respondents also rated that EIA is marginally effective (31%) and not effective (26%) in ensuring appropriate arrangements for implementation and monitoring (Figure 6.6).

An interviewed scientist from the DEA (EIA regulatory authority) indicated that EIA in Namibia contributes to good environmental decisions noting that:

“EIA is helpful, and it is better than nothing. Some developments were stopped, e.g., phosphate mining, not that I support the decision taken to stop it, but a decision must be made, and indeed the EIA reports were used to reach that decision” [*Gov\_SI*].

A government scientist added that EIA is helpful, and Namibia should optimise the legal obligations of the EIA system:

“I think some of [the] international project initiators got to the point when they realised that EIA is not just about a levy but should consider both social and environmental factors; the world should know Namibia is serious with EIA and is saying no to unsustainable projects” [*Gov\_S2*].

Another senior government scientist was optimistic about EIA's contribution to decision making saying, “There have been quite a lot of improvements in project decision making, but countrywide we need more monitoring and implementation of strategic assessment and planning” [*Gov\_SSI*].

The majority of the interviewed experts lamented that while EIA is a helpful tool, the process in Namibia is more of a “one-man show” because the ultimate decision lies with the EC. Experts suggested that the current sustainable advisory committee should be

strengthened to help the commissioner in making decisions on national projects and ensure consideration of environmental, social, and economic issues in planned projects. It was also suggested that the DEA should publish annual reports with all EIA applications listed and showing accepted and rejected projects, strengthen monitoring, and distribute monitoring reports of implemented activities to improve EIA visibility and effectiveness.

In general, consultants and respondents from the government were more optimistic about the effect of EIA on ensuring the consideration of assessment findings and the consideration of environmental factors in decision-making (Figure 6.3). However, academics and consultants indicated that EIA’s effect on ensuring consideration of social factors is only *marginally effective*, with only government actors scoring it between *very effective* to *moderately effective*. Academics and consultants were also critical of the effect of EIA on ensuring appropriate arrangements for monitoring, rating it as only *marginally effective* (Figure 6.6).

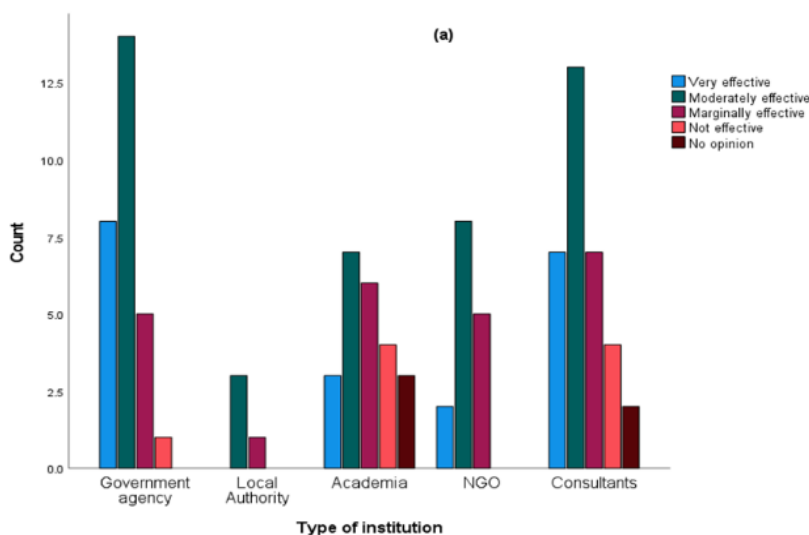


Figure 6. 3: Actors’ Perception: EIA’s Effect on Extent to which Assessment Findings Considered in the Decision.

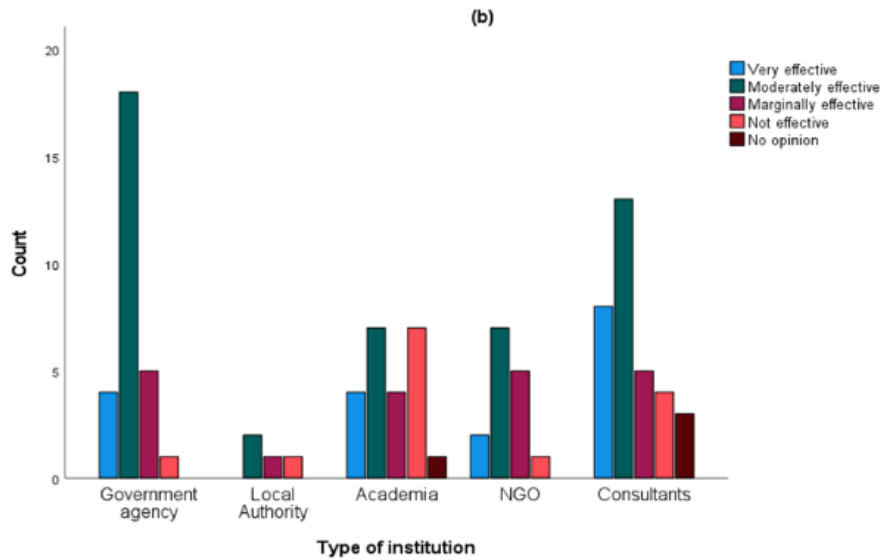


Figure 6. 4: Actors' Perception of EIA's Effect on Explicitly Considering Environmental Factors in the Decision.

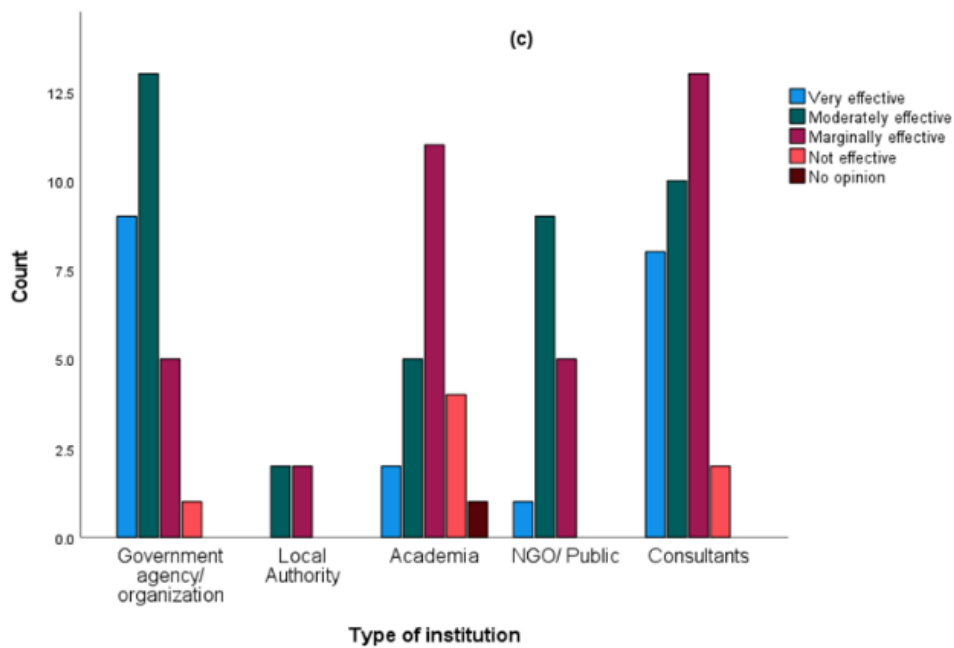


Figure 6. 5: Actors' Perception of EIA's Effect on Explicitly Considering Social impacts in the Decision.

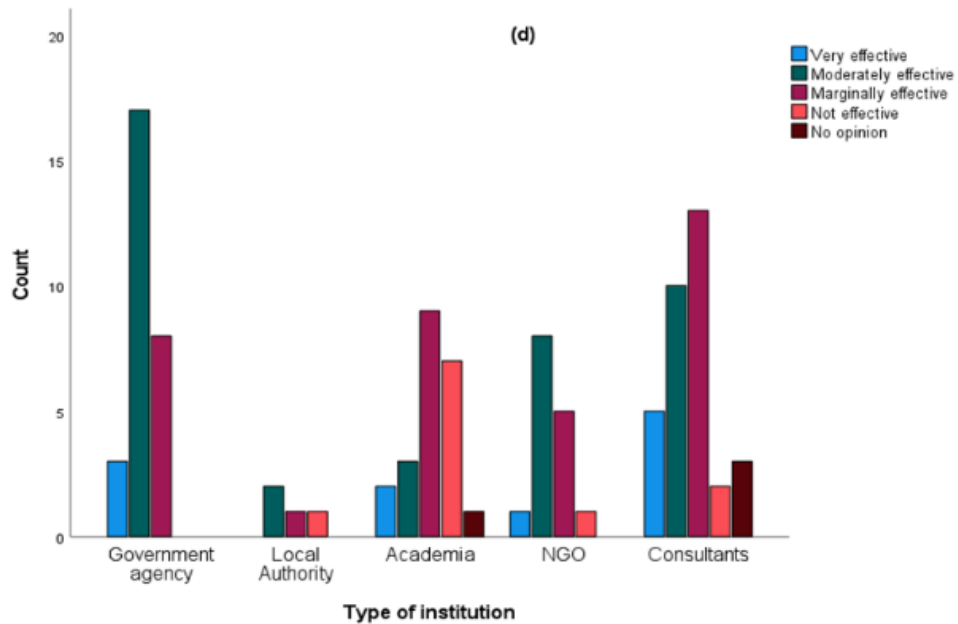


Figure 6. 6: Actors' Perception of EIA's Effect on Ensuring Appropriate Arrangements for Monitoring Depending on the Institution

#### 6.4.1.2 EIA Contribution to Learning

Survey respondents were asked to rate the extent to which EIA is effective in achieving five elements of learning, in terms of five criteria: increasing environmental awareness of developers, increasing environmental awareness of competent authority, promoting environmental awareness and values among the public, enhancing the opportunity for stakeholders to learn, and gaining knowledge and enhancing provisions of institutional memories. Overall results show that EIA is *moderately effective* in elements of learning. On a 50% threshold mark for an “effective EIA contribution to learning vs ineffective EIA contribution to learning”, EIA is *somewhat effective* in achieving learning. Most of the survey respondents indicated that EIA is *moderately effective* in achieving all five elements of learning (Figure 6.7). A good proportion of respondents also rated EIA

as *very effective* in creating environmental awareness amongst different groups, with developers (29%), and competent authorities (28%) benefiting more than the public (24%) (Figure 6.7). Academics were more optimistic about the effect of EIA on learning for developers, perceiving it as *very effective*. A high proportion (49%) of respondents also rated EIA as *moderately effective* in facilitating opportunities for stakeholders to learn and gain knowledge.

An interviewed senior scientist from the DEA indicated that involvement in the EIA process creates an opportunity for learning and awareness stating that: “Even as a reviewer, one learns a lot, and sometimes you need to read further on a certain project to get enough information on deciding on the project, public and other actors can definitely learn more” [Gov\_SS2]. Most interviewed experts agreed that the EIA process is a good learning platform. However, they stated that most members of the public are biased and only attend meetings on controversial projects, implying minimal learning and awareness in the public domain. A government review scientist confirmed the notion of lack of learning stating that:

It is time Namibians realise that they have a voice in EIA. The public can only learn if they are involved but now projects in rural areas for example hardly get communities' opinion because people do not partake in EIA [Gov\_SS3]

Survey respondents rated EIA as *moderately effective* in enhancing institutional memory (36%), and 25% rated it as *marginally effective* (Figure 6.7 below).

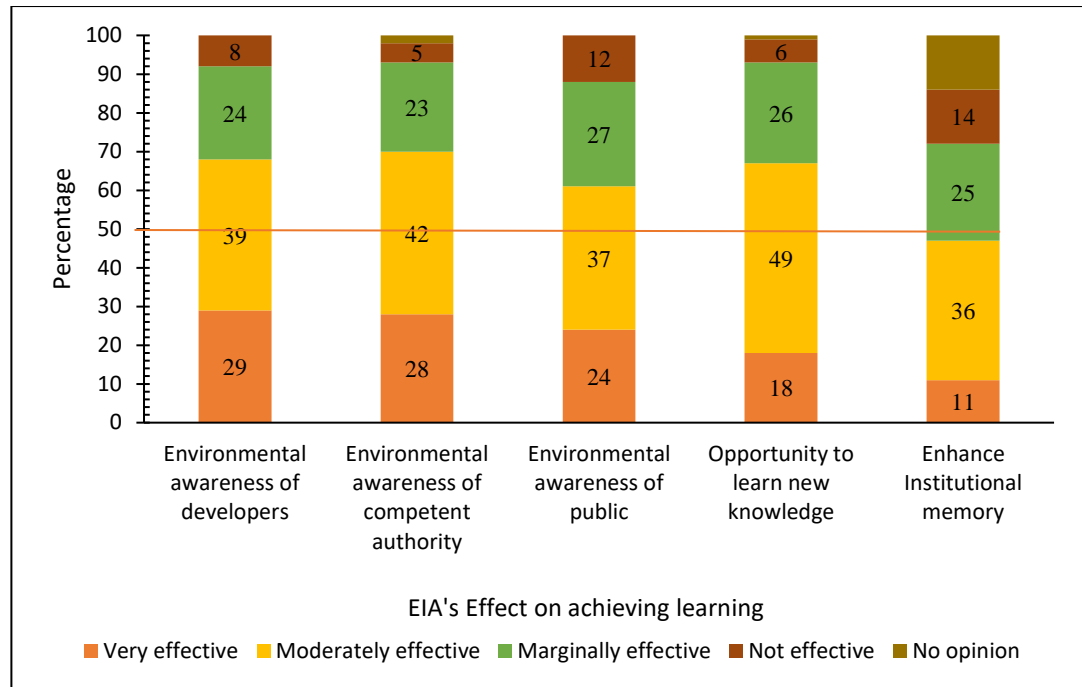


Figure 6. 7: Actors' Perceptions of EIA's Effectiveness in Achieving Elements of Learning (n = 110).

Most interviewed experts were also pessimistic about the capacity of the EIA to enhance institutional memory, indicating that in government ministries, EIA projects are designated to only a few selected individuals, and there is no proper handover when individuals resign from the position. Experts recommended the need for institutions to improve the archiving and records of EIA projects with both electronic and hard copies and to train more people on the EIA process.

#### 6.4.1.3 EIA effectiveness in achieving different leadership styles

The study reveals that EIA is *moderately effective* in achieving and enhancing the emergency of leadership styles (Figure 6.8). Very few survey respondents (less than 15%) indicated that EIA is *very effective* in contributing to visionary, entrepreneurial, and collaborative leadership.

During the interviews, a government senior scientist perceived that: “only a small fraction of the population that is involved in EIA will learn and then the emergence of leadership could occur” [Gov\_SS1]. However, an academic expert added that the emergency of leadership is still far-fetched for the Namibia EIA system stating that: “we are still in that old-fashioned approach where EIA practitioners meet the community, by way of informing and then off they go, without public participation” [Ac\_1].

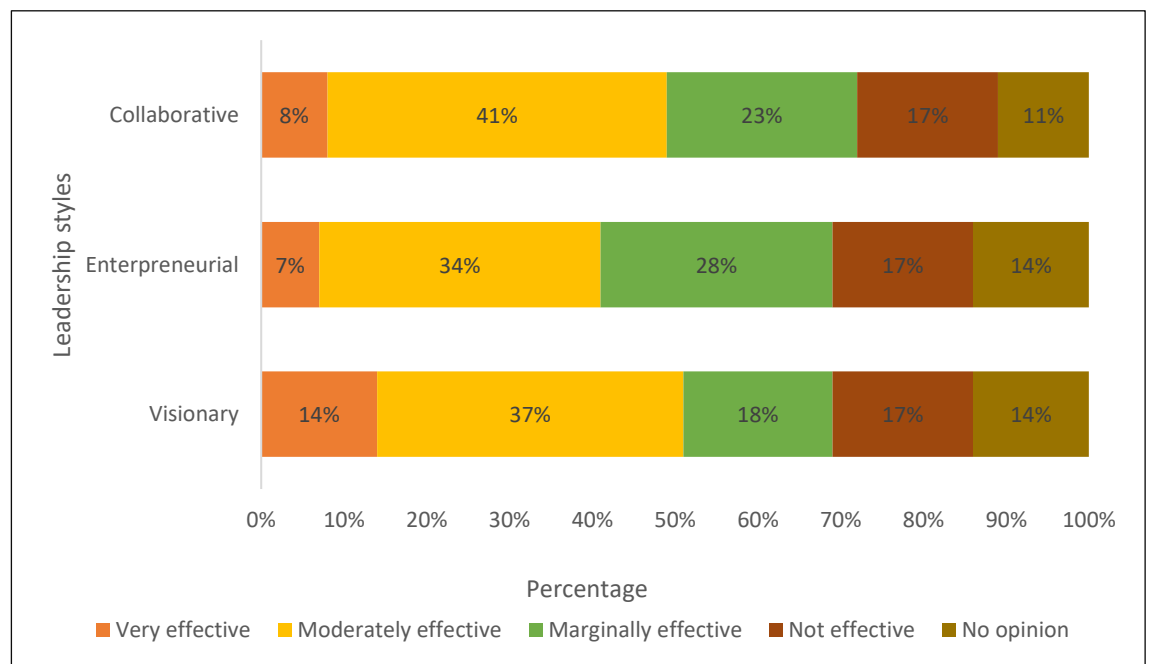


Figure 6. 8 Actors’ Perceptions of EIA’s Effectiveness in Achieving Elements of Learning (n = 110).

Another academic expert, however, added that the emergence of leadership is more likely in urban settings as compared to rural areas, saying: “With developments that happen in towns, people team up and can agree to have a leader who can stand up for them, but we do not have much happening in our rural communities” [Ac\_2].

Several interviewed experts perceived that one of the problems limiting the development of leadership in EIA is that government officials open public meetings. This practice can negatively influence the decisions of communities to take the lead in discussions. It was suggested that while political will and support are needed in EIA, high-ranked officials' meetings such as constituency councillors and governors should be separate from community meetings to enhance the independence and emergence of EIA champions and leaders in local communities.

Actors from different groups and institutions show mixed views on the effect of EIA on the emergence of leadership styles with ratings between moderately effective to not effective (Appendix E to Appendix G).

#### **6.4.1.2 Normative Effectiveness**

##### **6.4.1.2.1 EIA Effectiveness in Achieving and Contributing to Elements of Sustainability**

Overall results show that EIA is *moderately effective* in elements of sustainability. Figure 6.9 shows that most survey respondents indicated that EIA is marginally effective in (i) limiting the use of coercive power and (ii) establishing a common vision among communities. However, EIA is perceived as moderately effective in achieving the following criteria: (i) resolving trade-offs and ensuring that decisions made are socially acceptable, economically viable, and environmentally friendly; (ii) creating shared values and identities amongst stakeholders and (iii) promoting fair and democratic participation.

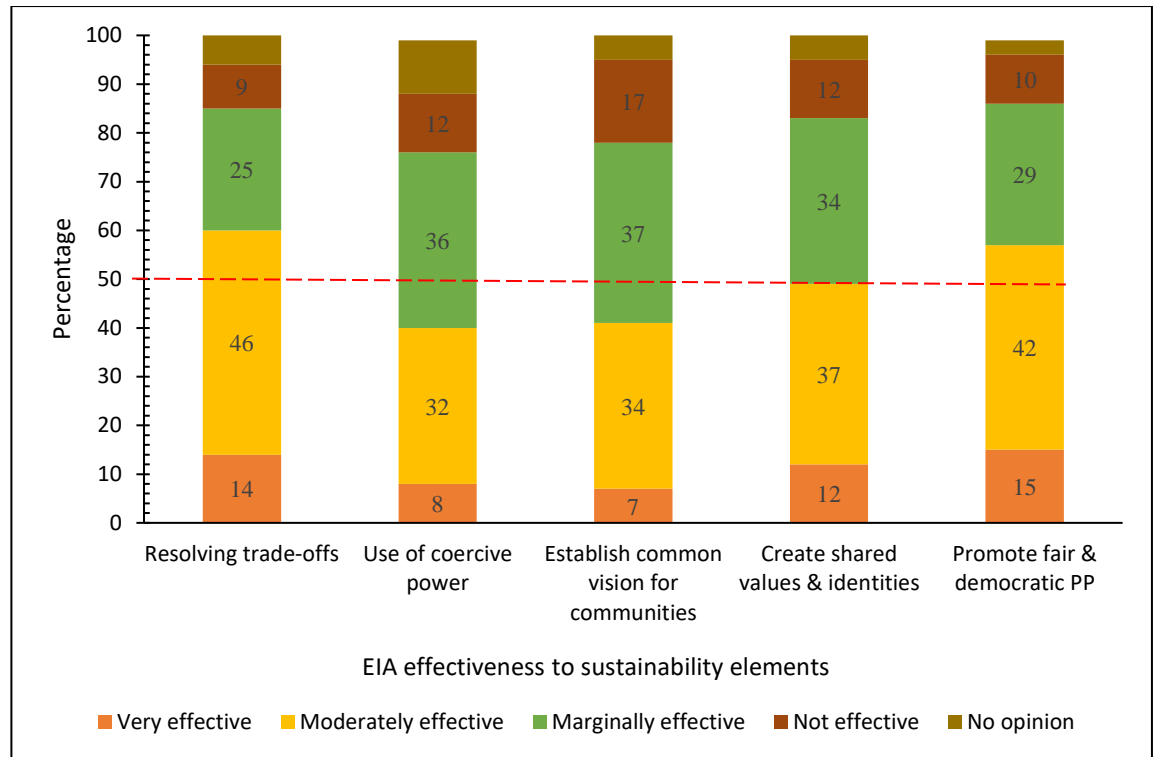


Figure 6. 9: Actors’ Perception of EIA’s Effectiveness in Achieving Elements of Sustainability (n=110).

At a threshold of 50% for “sufficient EIA’s contribution to elements of sustainability vs. insufficient EIA’s contributing to elements of sustainability”, respondents were divided with nearly 50% rating EIA as *effective* and the other half rating it as *not effective* toward sustainability.

Actors from all the institutions perceived the EIA effect to resolve trade-offs as *moderately effective*, except for academics who viewed it as *marginally effective* (Appendix H). Except for consultants who perceived it as *moderately effective*, actors from all institutions perceived EIA’s effectiveness to limit the use of coercive power as *marginally effective* Appendix I. Actors from NGOs perceived that EIA is *moderately effective* in ensuring the establishment of a common vision among communities, compared

to the rest of the institutions which viewed it as *marginally effective*. Except for local authorities who rated it as *marginally effective*, actors from all institutions perceived EIA's effectiveness to promote fair and democratic participation as *moderately effective* (Appendix A).

Most interviewed experts indicated that the economic situation and poverty in Namibia can hinder appropriate trade-offs in EIA decisions. A government scientist specifically pointed out that poverty in rural and marginalised communities can cause decision-makers can cause decision makers to support a project that may offer the delivery of essential services, even if such a project held negative impacts on the environment: "Sometimes trade-offs are made at the expense of the environment because there are people that need to be lifted out of poverty and hunger" [Gov\_S5]. Another government scientist indicated that while EIA should restore balance, conservationists and environmental experts in Namibia often held extreme views driving the agenda of environmental preservation without considering the possible economic gain from the resources.

Interviewed experts also perceive that the divided rating on elements of sustainability could be a result of different experiences with community projects, stating that many projects that required communities to relocate left "a bad taste of EIA." Experts noted that projects such as town expansion and sand mining were perceived as unsustainable and against community visions and values because the new projects resulted in community members losing valuable assets such as land and livestock. A government scientist lamented that "in most cases, developers compensate communities to relocate or give up portions of their land, with little consideration of social sustainability, cultural and livelihood attachment" [Gov\_S2]. An academic expert added that often rural communities

suffered when relocated because no EIA was undertaken for the new site and the area, which may not support their traditional livelihood.

#### 6.4.1.2.2 EIA Effectiveness in Enhancing Rationales of Public Participation

Noting that effective public participation is a key element of sustainability, respondents were asked to rate the extent to which EIA is effective in enhancing seven rationales of public participation. The results show that overall, EIA effectively enhances the rationales of public participation. Figure 6.10 below shows a strong contest between the *moderate* and *marginal* ratings on all elements of public participation.

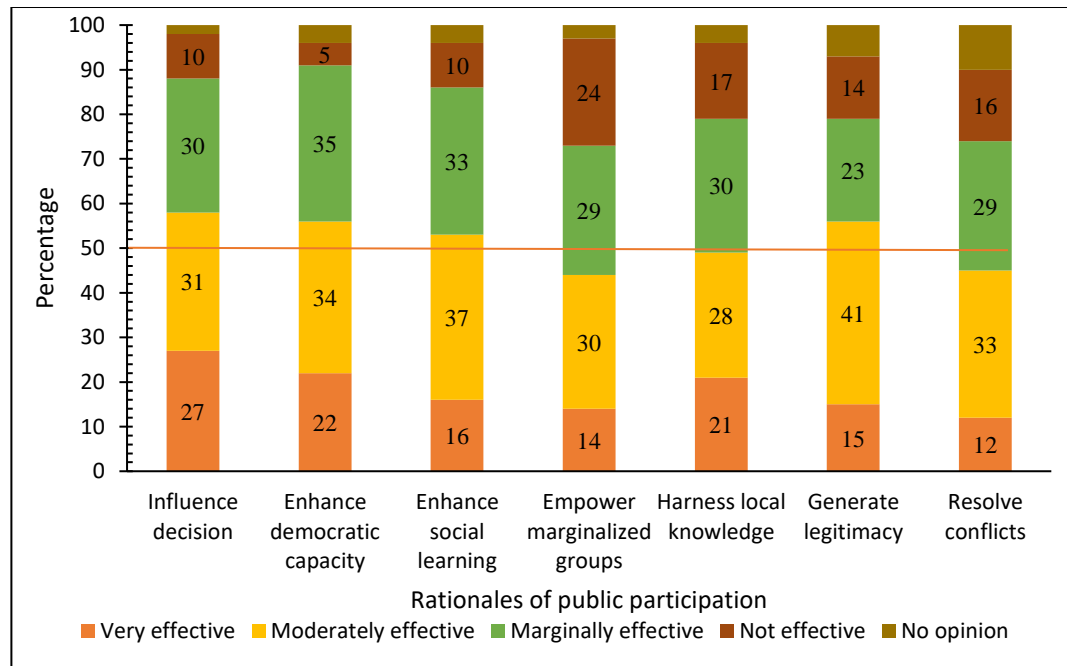


Figure 6. 10: Actors' Perceptions of EIA's Effectiveness in Enhancing Rationales of Public Participation (n=110).

A third of the participants rated EIA's effectiveness to participation as *moderately effective* in the following: enhancing social learning (37%), resolving conflicts (33%), and influencing decisions (31%); while the other two-thirds ranked the same criteria as *marginally effective*.

Figure 6.10 further shows that respondents were divided on ranking the effectiveness of EIA to enhance democratic capacity, with 35% rating it as *marginally effective* and 34% indicating it as *moderately effective*, respectively. Although a proportion of 30% indicated that EIA is *moderately effective* in empowering marginalised communities, 24% rated it as *not effective*. The contribution of EIA to harnessing local knowledge is also rated as *not effective*. The criteria on EIA effectiveness to generate legitimacy showed a stronger indication of *moderate effectiveness* (41%) in comparison to (23%) who rated it as *marginally effective*.

Interviewed officials indicated that EIA public meetings were often not participatory and instead, consultants used such meetings to manipulate poor communities by promising them job opportunities without explaining the project impacts. An academic expert pointed out that it had become a norm for EIA practitioners to use public meetings to convince communities rather than hearing their views, adding that: "participation should be a way of understanding people's views and ideas but not persuading them about the benefits" [Ac\_1]. A government scientist noted that illiterate and rural poor communities benefit less saying:

"In poor and little communities, the issue of jobs and money counts more than the destruction of the environment; they need the development because they are poor, so they turn a blind eye for the sake of the short-term advantage" [Gov\_S4].

Interviewees highlighted that the effort should be made to improve public participation in EIA to enhance environmental justice and the rights of communities.

#### **6.4.1.3 Transactive Effectiveness**

This dimension measures EIA's effectiveness in terms of financial and human resources, cost, and time. Actors were asked to rate the extent to which EIA is efficient in enhancing four elements of transactive effectiveness (Figure 6.11). Most survey respondents indicated that EIA as a tool is *moderately efficient* at luring government and international funds (31%), ensuring rapid and timely EIA decisions (34%), and warranting that the EIA authority is organised, and personnel roles are clearly defined and allocated (31%). The results, however, show that 31% of the respondents perceived EIA as *marginally efficient* in ensuring that EIA is inexpensive and is conducted at a reasonable cost. In comparison, 26% indicated that EIA is *inefficient* in controlling the cost. On a 50% threshold line, results indicate divergent views on EIA efficacy. Therefore, there is a slight difference between the overall proportion of respondents rating EIA as efficient and those scoring it as inefficient.

Interviewed experts remarked that EIA can be an efficient planning tool, however, the process requires improvements. A private consultant stated that the EIA in Namibia was inefficient because it delayed development: "I think the EIA process is causing unnecessary delays in the whole implementation process. In the past, projects would take 5 weeks to get an ECC but now it's almost 2 months, yet DEA provides no update" [EAP-3].

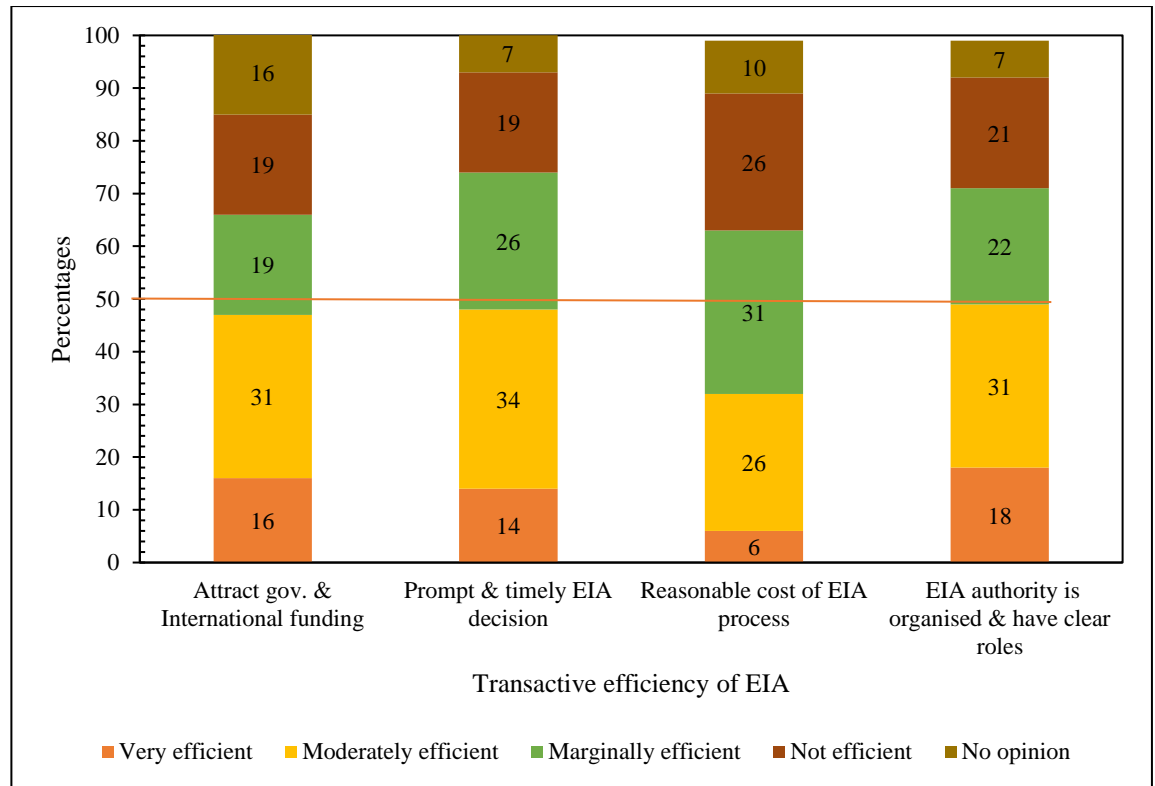


Figure 6. 11: Actors’ Perceptions of EIA’s Effectiveness in Enhancing Areas of Transactive Effectiveness (n=110)

Regarding cost efficacy, a senior government scientist highlighted that “Cost efficiency in EIA should not be mistaken with cheap, stating that investors should pay for environmental services including EIA, like other professional services” [Gov\_SS3]. Another government official, however, mentioned that “the cost of EIA needs regulations, as consultants set prices on their own” [Gov\_S4]. Most experts highlighted that the ineffectiveness of the EIA process resulted from limited administrative power of the DEA because it is placed under a government ministry and therefore lacks funding, human resources, and autonomy to regulate the process.

## 6.5 Discussion

This study assessed the substantive, normative, and transactive effectiveness of EIA as perceived by key actors in Namibia. In a review of EIA policy effectiveness evaluations, Loomis & Dziedzic (2018) recommended a full national review of effectiveness dimensions to remedy EIA system improvement at a national level. This study responds to this view and aims to highlight areas of effectiveness and inadequacy in the Namibian EIA system.

Most respondents in the survey and interviews represented government departments consultants, academics, and representatives from local authorities. From the survey, actors from the government were more optimistic about the effectiveness of the EIA process as compared to academics and local authorities. While several settlements and towns are declared as local authorities, only a few of them have established environmental departments. Hence, only four respondents were from local authorities. While also acknowledging that 9% of the survey respondents lack practical field experience of EIA, their perspective from research or education is deemed valuable for this study. Overall results show that EIA is perceived to be between *moderately effective* to *marginally effective* in various elements of substantive, normative, and transactive effectiveness.

In Namibia, EIA effectiveness is affected by various contextual and administrative challenges such as poor administrative frameworks, inefficient mechanisms in the decision-making processes including consideration of assessment findings in the decision, lack of public learning and environmental awareness, inadequate public participation and monitoring, limited resources and funding, and a lack of consideration of community cohesion. Many of Namibia's EIA challenges, as identified in this paper, are not dissimilar

to those in other systems. Sosovele (2011) indicated that countries like Tanzania were grappling with EIA ineffectiveness in guiding development decisions and environmental management arising from various projects. Similarly, other African countries including Egypt, Ghana, and Mauritius have been unsuccessful in integrating EIA into planning and decision-making processes (Campion & Essel, 2013). Clarke and Vu (2021) noted limited public participation as a challenge in Vietnam, while Jha-Thakur & Fischer (2016) indicated moderate consideration of EIA findings in decision making in the UK, and Morgan (2012) highlighted weak follow up and monitoring as a common challenge in global EIA practices.

In a Namibian country report on the environment, Tarr (2003) highlighted that sound sustainable development and implementation are not possible without appropriate and effective verification and monitoring efforts. Considering the weak effectiveness of EIA systems in guiding development decisions, several authors considered economic and social variables including poverty and corruption as critical impediments to EIA effectiveness, for example, Hapuarachchi et al., (2016), Khosravi et al., (2019), and Madlome (2016). Poverty, which can influence public participation and trade-offs, is perceived as a critical factor in the Namibian EIA process. Interviewed experts indicated that environmental protection is often foregone in favour of economic gains to lift communities out of poverty.

The ineffectiveness of the EIA worldwide has also been linked to the capacity of the implementing authority, and lack of political will (Khan et al., 2020). Interviewed experts perceive that the capacity of the EIA authority in Namibia is most affected by a lack of autonomy because the current authority office is placed under a government ministry. Experts suggested that there is a need to establish an independent body to

manage and oversee EIA implementation. The problem of autonomy of EIA authority has been reported in other African countries including Kenya, Rwanda, and Tanzania (Marara et al., 2011). The issue of EIA authority in Namibia has been debated since the initial policy negotiations in 1998. According to Tarr (2003), a final draft of the Environmental Management Bill was delayed from 1998 until 2007 when the current EMA (2007) was enacted. This was caused by a lack of consensus over whether the EIA authority should be located within the MEFT and overseen by the Sustainable Development Commission or whether it should be neutrally placed as Namibia's environmental agency outside of government. The decision to place the EIA authority under a government ministry seemingly remains a challenge deterring the quality, efficiency, and effectiveness of EIA implementation to date.

Regarding political will, interviewed experts highlighted that public attendance at EIA meetings in Namibia is rather low and politicians only attend public meetings for projects of interest. It seems that their attendance at EIA meetings cannot be interpreted as political will or support. Instead, political will should be visible in the effort in government's efforts to increase funding and the capacity of staff involved in EIA which are perceived as low and inefficient. In their study on the effectiveness of strategic environmental assessment (SEA) in Portugal, Partidario & Monteiro (2019) indicated that most projects requiring environmental assessments are highly political and therefore driven by politicians, which probably explains the political attendance observed in Namibia. Ali et al., (2016) also expressed that political will is low in Pakistan noting that the environment is not on the priority agenda, and therefore political effort in terms of financial support is limited.

For Namibia, the economy and people's livelihood are dependent on natural resources, and therefore full involvement and political support are required to ensure safe, inclusive, and sustainable development of the natural capital while simultaneously improving the living standards of impoverished and marginalised communities. For Namibia, more collaboration is also needed between the public and private sectors because resources including water, land, mining, fisheries, tourism, and agriculture where most EIA are undertaken, are managed under different institutions and government ministries. Through EIA, intersectoral partnerships may contribute to improved participation, learning, and leadership, which in turn can reduce conflicts, and enhance the inclusion of marginalised communities.

EIA's contribution to learning, awareness, and the emergence of leadership is perceived as *moderately effective*. Cruz et al., (2018) noted that EIA is an important learning platform where diverse knowledge and skills can be acquired by participants in the EIA process and can also spill over to other people or groups not involved in specific EIA projects. Learned stakeholders and communities can contribute to the development of new political strategies and influence government planning and decision-making (Diduck et al., 2013). Through consultation and engagement, the acquired knowledge and experience can change people's perspectives, beliefs, values, and attitudes (Cruz et al., 2018), hence facilitating opportunities to alter individual, social, and organisational norms and values in favour of environmental protection and sustainable development. Interviewed experts indicated that EIA authorities in Namibia lack regulating power to ensure proper public engagement and perpetuate learning. In general, environmental leadership is also related to the provision of safe working environments, reduction of pollution costs, achievement of organisational social goals, and innovative solutions to

environmental and socioeconomic challenges (Țăpurică & Ispășoiu, 2013). The Namibian EIA process needs improvement so that it can facilitate awareness, learning, and the emergence of environmental champions in communities.

Respondents in this study suggested that an effective EIA process ought to improve environmental justice amongst different groups. Strauss (2022) noted that the Namibian EIA system only allows the public to get involved at the very end of the development process, restricting their ability to influence decisions, and impacting environmental rights and justice. Ideally, an effective EIA process should satisfy environmental justice ensuring fair treatment and the significant involvement of poor, marginalised, and indigenous communities in environmental policy and natural resource development decisions (Simpson & Basta, 2018; Suiseeya, 2020).

While the Namibian Constitution is concerned with environmental justice, evidence shows that the underprivileged and the environment continue to be ignored in policymaking (Kiaka, 2018; Schnegg & Kiaka, 2018), including the EIA process. Interviewed experts recommended that the development of participation guidelines can improve the success and usefulness of EIA. Simpson and Basta (2018) confirmed that the complementary application of EIA public involvement guidelines and frameworks can allow EIA to contribute to effective community participation. Namibian policymakers should develop public participation guidelines incorporating three elements of environmental justice with full consideration of the fairness of the process of decision making, moral preferences over the distribution of social and economic gains and burdens among a group of individuals, and legitimacy to expand the scope and benefits of EIA.

Stakeholders engaged in this study are divided in their confidence in the effectiveness of the EIA process to contribute to sustainability elements. Survey respondents perceive that EIA is *moderately effective* in resolving trade-offs and fostering shared values and identities among stakeholders and promoting fair and democratic participation. However, it is *marginally effective* in placing limits on the use of coercive power and establishing a common vision among communities. In an interview, an expert from the NGO perceived that effective EIA could help in establishing common visions among communities. Their views may be observational as most NGOs in Namibia assist communities through the CBNRM, a programme that enhances cooperation and mutual goals for communities to manage and protect natural resources in conservancies (Jones, 2000). With a mixed rating on sustainability, it remains debatable whether EIA in Namibia has much influence on development. In the developed world, EIA has become a crucial instrument for sustainable development, ensuring that environmental projects, strategies, or plans do not have a disproportionate detrimental influence on the environment (Arts et al., 2012; Morgan, 2012).

The Namibian case, however, shows that the EIA process is *not very effective* in fostering a balance between social, economic, and environmental aspects of development to curb conflicting situations. At a national level, Namibia is aggressively pursuing sustainable development through its Vision 2030 and National Development Plans, however, the moderate rating on EIA's contribution to sustainability elements could indicate failure in reaching its intended purpose and a negative impact on the realisation of national and sustainable development goals. To maximise the potential of the EIA as a tool for achieving sustainable development, more effort is required to improve the

capacity of the EIA system as a tool to protect the environment and enhance sustainable development in Namibia.

In the context of Namibia's EIA projects, interviewed experts specifically mentioned activities such as township expansion and sand mining as projects that left a "bad taste of EIA" because communities are not satisfied with compensation and relocation strategies. Weber and Mendelsohn (2017) confirm that Namibia is undergoing a rapid and major transition from a rural-based society to one based largely in urban areas and therefore faced challenges with unplanned urban growth and increases in informal settlements. Interviewees indicated that with town expansion and sand mining, communities are often compensated to move from the area of origin to a new area where no EIA has been undertaken, making relocation difficult.

According to the principles of good EIA practice, the scope of compensation measures should include the creation of new habitat to replace the site used because of a development (Kwiatkowska-Malina, 2016). It seems mitigation measures in EIA should consider social issues including families and livelihood pathways in the relocation and compensation plan to ensure that communities are not worse off in the new environment. Environmental compensation in EIA regulations should follow the mitigation hierarchy whereby environmental impacts should first be avoided, then minimised, and restored where possible, making compensation a last resort as proposed by Evans et al., (2021).

EIA is perceived to be *moderately efficient* in luring government and international funds (31%), ensuring rapid and timely EIA decisions (34%), and warranting an organised authority with clearly defined personnel roles (31%). According to Tarr (2003), the establishment of the EIA policy in Namibia is locally driven from the time of the Environmental Management Bill in 1998 to date. Unlike other countries which received

international and donor funding to establish or improve the EIA systems, the Namibian government initiated the EIA legislation. Tarr (2003) also highlighted that while the EIA authority is well set, it is affected by the “brain drain” as many of the better-qualified managers and technical experts from the government are absorbed into the private sector, parastatals, and NGOs due to better remuneration packages and career growth opportunities. The high staff turnover may affect the efficiency of the EIA process, consequently impacting staff roles and timely decision making.

Husselmann (2016) investigated the impact of transactive efficacy on Namibia’s EIA system in terms of time and concluded that timeframes in the policies are not adhered to, therefore affecting timely decisions. Interviewed experts also perceived that EIA is not cost-efficient because the prices of EIA services are not regulated. The efficiency of the EIA process in terms of money and time has been recognised as a significant factor in attaining transactive effectiveness (Veronez & Montaña, 2015). Theophilou et al., (2010) conducted interviews with SEA practitioners involved in two case studies in the UK and found that transactive effectiveness tends to be weak due to poor substantive effect on the part of the proponent.

The efficiency of EIA in ensuring that the roles and responsibilities of the regulatory authority are organised and defined is perceived as *moderate*. Arts et al., (2012) highlighted those assigning roles and responsibilities in EIA is important to steer the behaviour of public and private actors towards greater environmental awareness and the incorporation of environmental values into proposed activities and plans.

This study has opened a wide range of opportunities requiring attention in the implementation of the EIA process, including publication of the state of environmental reports, strengthening, and enforcing monitoring, improved environmental awareness and

public participation, and better institutional arrangements. The insights from this paper may also propel the government to endorse and implement the awaited EIA legislation amendments undertaken in 2018. While EIA effectiveness cannot conclusively be based on actors' perceptions, this analysis provides perceptions on areas that are performing well and those that are inadequate in the context of Namibia. We also note that the *moderate* rating on substantive, normative, and transactive effectiveness from this analysis does not imply total failure of EIA in Namibia because certainly, the situation could have been worse in the absence of EIA legislation and practices.

### **6.6 Conclusion and Recommendations**

The EIA process is an essential socio-ecological governance tool that can contribute to environmental protection and sustainable development. While it is deemed with such purpose and objectivity, the level and extent of its effectiveness and efficiency remain questionable. This study concludes that key actors perceive the Namibia EIA process to be *moderate to marginally efficient* in its contribution to substantive effectiveness, sustainability elements, and transactive effectiveness. The government of Namibia has made considerable efforts in setting up the EIA system by establishing a basic legal and administrative setup. However, the EIA system is not fully adequate or fully effective, hence far from fulfilling best practices requirements and achieving its intended purpose. The perceived substantive and normative ineffectiveness of EIA reflects a national challenge and raises the question of whether EIA is truly influencing development decisions in Namibia in the way it should. The study reveals that public participation, decision-making processes, and EIA monitoring are some of the components that require attention and improvement.

Factors including community awareness, participation, funding and resources, and institutional arrangement of EIA authority can affect the substantive, normative, and transactive effectiveness of the EIA process. EIA can be a useful tool to facilitate good environmental decisions, learning, and leadership and enhance shared norms and values in communities. However, political support and will are required to improve human and financial resources, and execution of the EIA process stages such as public participation, mitigation, and decision making to ensure effectiveness and appropriate and timely policy reforms. With improvements, EIA as an environmental tool can contribute to environmental justice and sustainability goals in terms of the distribution of environmental quality among different communities, and access of citizens to decision-making processes that affect their environments. The following are recommendations to improve the effectiveness and efficiency of EIA in Namibia based on the findings from this study:

- Government should demonstrate political will and support by mobilising national and international funding. This will ensure that appropriate institutional and administrative arrangements are in place for the EIA authority to independently manage and supervise the EIA process.
- Policy reforms including the development of guidelines should be accelerated to improve adequate public participation and to enforce monitoring and environmental reporting. This will ensure enhanced learning and awareness, the emergence of EIA champions in communities, and contribution to sustainability goals.
- Legal provision is needed in the EIA regulations setting requirements for appropriate compensation and relocation plans in the environmental management

plans. This will ensure that communities and families are not worse off in cases when they are required to relocate due to project development.

- Further research is needed to further interrogate critical issues of effectiveness using real case studies in Namibia.

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## **CHAPTER 7. THE ASSESSMENT OF THE NAMIBIA EIA PROCESS: THE CASE OF MARINE PHOSPHATE MINING AND RECONAFRICA OIL DRILLING**

### **7.1 ABSTRACT**

Namibia's environmental impact assessment (EIA) process was established in 2012 and oversees an average of 300 projects annually. This paper investigates the implementation of the EIA process in Namibia through two case studies, namely, the Namibia Marine Phosphate (NMP) project and the Reconnaissance Energy (REN) Namibia (Pty) Ltd oil drilling project. The case studies were purposefully selected to meet five set criteria: the project was undertaken after 2012 when EIA regulations were put in place, it has a full EIA report and an environmental clearance certificate (ECC) issued, and evidence of public participation, the project should be of national importance and should have received media coverage. Data was collected using documentary analysis and obtained from EIA reports and grey literature related to the cases. An evaluation framework was developed to assess the adherence of the case studies to the Namibian EIA legislation. Results show that both the NMP and REN EIA reports provide a comprehensive overview of the scoping and assessment process. However, more effort is put into the environmental impacts as compared to the socio-economic issues. For both projects, the process faced criticism, leading to demands for the revocation of the ECC and the licenses. The study found notable gaps in the details of the project's scope, consideration of relevant laws and requirements, deficiencies in addressing cumulative impacts, and justification of alternatives. Such limitations show that the EIA process is not duly followed and suggest potential shortcomings in environmental stewardship and governance of the Namibia EIA process.

**Keywords:** EIA process, Marine phosphate, ReconAfrica, Namibia

## **7.2 Introduction**

Namibia's environmental impact assessment (EIA) process has now been in place for over a decade. Since 2012, an average of 300 EIA applications are reviewed every year (Namibia Statistics Agency, 2017). The use of EIA was minimal before independence, with only five EIA conducted between 1980-1990 and a total of 57 between 1990-1998 (Tarr & Figueira, 1999). Most projects have been in the mining, gas, and oil exploration sectors. Notably, Namibia boasts significant resources both renewable and non-renewable. Some of the newly explored resources include oil and gas as well as marine phosphate mining. While the exploration of such resources offers potential economic growth opportunities, they also entail environmental risks and social challenges. This paper explores the development of the Namibia Marine Phosphate (NMP) project and the Reconnaissance Energy (REN) Namibia (Pty) Ltd Oil Drilling project as two case study projects in Namibia, with an intention to assess the extent to which the EIA process is implemented and duly followed.

The two case study projects are of national importance and received significant attention from the public and international stakeholders hence selected to investigate the dynamics of EIA application in Namibia.

Wilkins (2003) noted that a meaningful assessment should include questions on whether an evaluation is required and the desired level, the scope of the review, and specific alternatives to the project. Other critical elements of the assessment process include public and stakeholder engagement. Glasson and Therivel (2013) noted that the principles for the implementation of EIA need to follow national legislation and examination of existing legislation and the environmental assessment reports can give information on EIA implementation and practices of a specific context. Studies that

evaluated the implementation of EIA in different case study projects highlighted the critical importance of high-quality impact statements, effective policing, and robust monitoring in ensuring the successful implementation of EIA processes (Abebe et al., 2007; Leepile et al., 2023; Yusoff & Hashim, 1996). The assessment of the EIA process in Namibia in the two case studies of NMP and REN oil drilling can identify critical factors influencing the effectiveness and offer valuable lessons learned and recommendations for future projects and policy enhancements.

### **7.3 Methodology**

#### **7.3.1 Introduction**

The implementation of the EIA process in the NMP and REN projects followed a qualitative design and was undertaken using a document analysis of the project documents including the EIA reports and other related literature and the Namibia EIA policy documents. The use of case studies has been successfully used in EA evaluation (see Chanchitpricha & Bond, 2013; Fischer, 2003; Sadler, 1996). The next section provides information on the two case studies and how they were selected and analysed.

#### **7.3.2 Selected projects**

##### **7.3.2.1 Namibia Marine Phosphate Mining**

The NMP project is a joint venture between Mawarid Mining LLC and Havana Investments (PTY) Ltd, aimed at exploiting marine phosphate deposits in Namibia's continental shelf. The NMP obtained a mining licence from the Ministry of Mines and Energy (MME) in 2011, followed by an ECC in 2012. The licensed area, Mining Licence (ML) 170, spans approximately 2,233 km<sup>2</sup> on Namibia's continental shelf, located around

60 km offshore and 120 km southwest of Walvis Bay (Benkenstein, 2014). The NMP project, with its extensive licensed area and significant extraction activities, presents challenges related to the marine ecosystem impacts and sustainable resource management.

### **7.3.2.2 ReconAfrica oil drilling**

The REN project, a subsidiary of Reconnaissance Energy Africa Ltd, leads the oil drilling project in northern Namibia's Kavango Basin. REN holds a 90% interest in petroleum exploration rights under Petroleum Exploration Licence (PEL) No. 73, encompassing six square blocks (1719, 1720, 1721, 1819, 1820, and 1821), while the remaining 10% is held by the National Petroleum Corporation of Namibia (NAMCOR), a state-owned entity (Risk-Based Solutions [RBS], 2021). The REN project involves exploratory drilling activities within specific blocks, highlighting issues associated with subsurface resource extraction and land use impacts.

### **7.3.3 Case Study Selection and Analysis**

Case studies are valuable to investigate the 'what' and 'how' research questions and for the evaluation, and investigation of social phenomenon (Yin, 2009), and therefore suitable for an in-depth assessment. In this study, the selection of projects started by identifying all projects that underwent EIAs from 2012 onwards, coinciding with the enactment of the national EIA Regulations. This process yielded a population of 1,317 projects that have undergone EIA between 2012 and 2019. To ensure a manageable and meaningful analysis, a purposeful sampling approach was employed to select two projects. Purposeful sampling was selected as it allows for the intentional selection of cases that are likely to provide valuable insights into the research questions at hand (Campbell et al.,

2020). In this case, the aim was to select projects that could offer a comprehensive understanding of the implementation of the Namibia EIA process and to pick out lessons and deficiency areas for improvement. The project selected for analysis should meet the following criteria: (i) they should have been undertaken between 2012 and 2019 when EIA Regulations were put in place; (ii) they should have a full EIA report available with evidence of public participation; (iii) the project should have received an environmental clearance certificate (ECC); (iv) the project should be of national and international importance and have received media and public attention; and (v) the project should represent one of the key development sectors namely: mining, infrastructure, agriculture, hospitality and tourism as described by Humavindu and Stage (2013).

Upon analysis, two projects the NMP and the REN satisfied all five criteria and were therefore selected for analysis. Two case studies were selected over a single case to allow an opportunity to draw stronger conclusions (Yin, 2009). According to George et al., (2020), the inclusion of projects from different sectors in EIA enables a comprehensive assessment of environmental impacts and facilitates the development of tailored mitigation strategies to address the diverse challenges facing the environment.

Actual site observation of the implementation of the project was not included in this analysis, as the focus was only on the micro examination of the EIA process from proposal to decision making.

#### **7.3.4 Document analysis**

A comprehensive document analysis was employed to gather data for the case studies. Secondary data were sourced from various channels including reports, peer-reviewed papers, documentaries, regulations, theses, panel discussions, and public dialogues. Online platforms such as Google Scholar and Scopus were the most searched platforms by using specific keywords such as “*phosphate, mining, AND Namibia*) OR (*“oil drilling” AND ReconAfrica AND Namibia*” to ensure relevance.

Online databases and repositories maintained by government agencies, environmental organisations, and research institutions were consulted, alongside direct contact with regulatory authorities, to ensure comprehensive data collection. 37 documents were analysed for the NMP case while 25 were analysed for ReconAfrica.

This holistic approach facilitated the gathering of diverse documents, enabling thorough analysis of the projects' adherence to environmental regulations, effectiveness of mitigation measures, and overall environmental impact.

#### **7.3.5 The Assessment Framework**

The researcher developed a systematic framework to comprehensively assess the EIA process and how it is implemented in the two case studies. This framework aimed to assess the extent to which the EIA process was duly followed as stipulated in the EIA Regulations (2012) and the EMA (2007). The criteria in the assessment framework were based on four pivotal stages of the EIA process: scoping and assessment, EMP and mitigations, public participation, and review and decision making. The four stages were chosen as key stages of EIA as described by Glasson and Therivel (2013) and as annotated

in the Namibia EIA legislation. The description of the stages is provided below as per the provision made in the Namibian EIA law.

#### *Scoping and assessment*

Namibia EIA Regulation 8 provides the requirements for scoping and assessment and what should be included in the scoping report. Regulation 15 notes that the proponent must instruct the Environmental Assessment Practitioner (EAP) to prepare a comprehensive assessment report within 21 days, covering all necessary information for the Environmental Commissioner's (EC) decision-making process, including the description of the proposed activity, its environmental impact, alternatives, mitigation measures, and submission to the Environmental Commissioner upon completion.

#### *EMP and mitigations*

The regulation on mitigation requires the inclusion of a draft management plan in environmental assessments, detailing proposed measures to manage, mitigate, protect, or remedy identified environmental effects, along with objectives for environmental rehabilitation and closure. Applicants are required to outline proposed management measures, including objectives for environmental rehabilitation and closure, to address identified environmental effects.

#### *Public participation*

Public participation is mandatory according to the EMA (2007). Regulations 21, 22, and 23 provide details of the public consultation process including steps taken to notify potentially interested and affected parties, proof of noticeboard displays, advertisements,

and notices, a list of registered parties, and a summary of issues raised by interested and affected parties along with the date of receipt and the response of the EAP to those issues.

### *Review and decision-making*

Review and decision-making bring the EIA process to an end before the actual project execution. Regulation 15 stipulates that within seven days of the review, the EC must communicate in writing to both the proponent and competent authority regarding the decision on the application. Additionally, upon payment of the prescribed fee, the EC is obligated to issue the Environmental Clearance Certificate (ECC), subject to any specified conditions. Throughout the review process, the EC holds the authority to consult with various stakeholders, conduct investigations, and even organize public hearings. Post-review, the EC may either issue the ECC or reject the application, providing reasons for refusal. The ECC may include specific conditions, and its validity extends for three years. EMA allows for public appeal in case of dissatisfaction with the EC decision, and judicial review is an option for those displeased with a Minister's decision.

To strengthen the assessment framework, two more criteria were added focusing on EIA capacities and sustainability. The criteria on capacity were based on the requirement in the Namibian law (Regulation 3) that dictates that the Assessment Practitioner (EAP) should be knowledgeable and have experience in the Namibia EIA law and the Curriculum Vitae (CV) of the EIA team should be included in the EIA report. In this assessment, the capacity was evaluated from the expertise of the EIA team as per the attached CVs. The criteria for sustainability were based on the objective of EMA and EIA regulations to promote the sustainable management of the environment and the use of natural resources by establishing principles for decision making on matters affecting the

environment and to provide for a process of assessment and control of activities that may have significant effects on the environment. The assessment framework showing criteria and indicators is presented in Table 7.1.

Table 7. 1: The Assessment Checklist for the Implementation of EIA Projects

Criteria	Indicator	Explanation
EIA process	P1: Scoping & assessment  P2: EMP & mitigations	The scoping process is done according to the TOR, the project is justified, relevant laws are identified, impacts including cumulative are clear and appropriate alternatives are provided. EMP clearly outlines mitigations, remedy & rehabilitation plans as per the EIA Regulations.
	P3: Public participation	Public participation is transparent & done according to the regulations & evidence and minutes are attached. Public concerns are responded to.
	P4: Approval & decision making	The decision is taken within a reasonable time, and due processes are followed as per the legislation.
EIA capacities	C1: EIA expertise	Experts on the team have appropriate knowledge & qualifications as per the law & their CVs are attached.
Sustainability	S1: Balanced Environmental socioeconomic & cultural consideration S2: community health, livelihood & wellbeing S3: Ecosystem integrity & trade-offs	The project represents a balanced consideration for all impacts including biodiversity, community health, livelihood & wellbeing, and promotes appropriate trade-offs.

### 7.3.5.1 Assessment criteria of conformity

The researcher formulated the assessment criteria for appraising the EIA process stages using the framework in Table 7.1. A 4-point Likert scale is selected to show conformity based on four distinct scores, *fully met*, *reasonably met*, *limited*, and *poorly met*, as outlined in Table 7.2. A four Likert scale was chosen as opposed to a wider scale of 5 or 6 to strike a balance between detail and simplicity, and to avoid unnecessary complexity (Allen & Seaman, 2007).

Table 7. 2: Scale Value Against the Criteria Conformity

<b>Likert scale value</b>	<b>The measure of criteria conformity</b>
Fully met	Data gathered from all research methods/sources agree that the evaluation criterion is met beyond a reasonable doubt.
Reasonably met	Data gathered from more than half of the sources/methods agree that the evaluation criterion is met, but the other half disagree that it is met.
Limited	Data gathered from half of the sources/methods agree that the evaluation criterion is met.
Partially met	Data gathered from less than half of the sources/methods agree that the the evaluation criterion is met.
Poorly met	Data gathered from all research methods/sources agree that the evaluation criterion is not met beyond a reasonable doubt.

### 7.2.6 Data Analysis

Thematic analysis related to key stages including scoping and assessment, public participation, approval, and decision-making, EIA expertise, and environmental socioeconomic, and cultural considerations were used (Vaismoradi et al., 2013). Using

the information from the EIA reports and associated documentation, data relevant to the different pre-structured themes were scrutinized searching out common patterns, success factors, challenges, and shortcomings across the evaluated projects. Key insights regarding the effectiveness of EIA implementation were summarised, and areas for improvement were identified.

### **7.3 Results**

#### **7.3.1 Results from Case Study 1: Namibia Marine Phosphate (NMP) Project**

##### **7.3.1.1 EIA Process Under NMP**

This section presents the results according to the criteria in the assessment framework on how well the EIA process was implemented and followed in Case Study 1: Namibia Marine Phosphate (NMP) Project.

##### **7.3.1.1.1 Scoping and Assessment**

Results show that these criteria range between fully met and partially met and are presented as follows:

*Scoping process:* The criterion is reasonably met. The scoping process in the EIA report prepared in 2012 aligns with the TOR requirements. The NMP EIA report provides a thorough overview of the scoping process, detailing key issues and impact categories such as biogeochemical, benthic, and socioeconomic impacts. The key environmental issues and impacts are identified. However, the assessment lacks detailed socioeconomic impacts of the project.

**Project Justification:** This criterion is reasonably met. The EIA report clearly shows the justification and desirability of the project by emphasising its role in addressing global staple food shortages, the challenge of limited agricultural land, and its contribution to the global phosphate industry (Midgley et al., 2012). While the report outlines the relevance, the assessment falls short in providing specific details on the economic or social benefits of the project.

**Relevant Laws and Regulations:** This criterion is fully met. The NMP EIA report identifies relevant national laws including Article 95 of the Namibian Constitution, the Environmental Management Act 7 of 2007, and the Minerals (Prospecting and Mining) Act 33 of 1992 (Midgley et al., 2012). The report demonstrates a commendable understanding and acknowledgment of relevant national and international laws and conventions governing environmental and mining activities.

Table 7. 3: Assessment Results of the Conformity of Each Aspect of the Scoping and Assessment for NMP

<b>Criteria</b>	<b>Evaluation</b>	<b>Criteria Conformity</b>
Scoping process	Methodical scoping in harmony with TOR	Reasonably met
Project justification	Comprehensive project justification with room for improvement.	Reasonably met
Relevant laws and regulations	Relevant national laws are identified in the report.	Fully met
Impacts, including cumulative, are clear	Comprehensive assessment of impacts with room for improvement in cumulative impact consideration	Partially met
Appropriate alternatives provided	The range of alternatives considered	Reasonably met

### **7.3.1.2 EMP and Quality of Mitigations**

The results show that this criterion is limited (Table 7.4). There is a notable gap in accountability and oversight in the EMP prepared in 2014. While the EIA report and the EMP incorporate mitigation measures for identified significant impacts and stresses the importance of monitoring surveys, there are critical oversights (Council for Scientific and Industrial Research [CSIR], 2014; Midgley et al., 2012). For example, the report mentions a growing amount of shipping activities in the Namibian Exclusive Economic Zone (EEZ) without providing detailed information on how the NMP project considered the cumulative impacts of phosphate mining in conjunction with other marine activities. The report also lacks specific details on the effectiveness and comprehensiveness of the provided measures, particularly in addressing potential impacts on marine life and ecosystems. While a pre-dredging verification survey is important for key species and was undertaken, the imperative of daily record-keeping is underscored in the report. However, a verification survey for specialist studies was conducted without approval (ECC).

The report emphasises the need for a monitoring programme to assess recovery post dredging. However, the NMP seems to deflect responsibility for both the implementation and funding of this critical monitoring programme to external entities, mentioning the Ministry of Fisheries and Marine Resources (MFMR) and the Benguela Current Commission (BCC) as institutions to lead it (CSIR, 2014). The information provided in the EMP also reflects a broader issue of limited accountability and oversight within the environmental management framework and has the potential to jeopardise the efficacy of monitoring programmes and the overall environmental impact mitigation strategies outlined in the report (CSIR, 2014).

Table 7. 4: Evaluation Outcomes for Alignment of Every Aspect within EMP and Quality Mitigations for NMP

<b>Criteria</b>	<b>Evaluation</b>	<b>Criteria Conformity</b>
EMP clearly outlines mitigations, remedies & rehabilitation plans	Limited accountability and oversight in environmental management	Limited

### 7.3.1.1.3 Public Participation

The results show that these criteria are limited as discussed below and shown in table 7.5.

***Public Participation is Transparent and according to Regulations:*** This criterion is *limited*. The EIA report shows that a local consulting firm was assigned to facilitate the public participation process (Midgley et al., 2012). The public and IAPs were informed about the availability of the EIA report and requested comments through newspaper notices. The EIA report was made available on a local consulting firm’s website (<http://www.envirod.com>) and placed at public libraries in Windhoek and Walvis Bay and the offices of the key ministries including MET, MME, and MFMR, as indicated on page 6 of the EIA report (Midgley et al., 2012).

***Evidence and Minutes Attached:*** The final report includes a 100-page appendix prepared by Midgley et al., (2012) on comments that were received during the review period of 17 January to 8 February 2012. The public also commented through letters, petitions, and demonstrations. Following the submission of the EIA report in April 2012, the public and other stakeholders opposed the project through different platforms

including written letters in newspapers, petitions, and peaceful demonstrations (Amukwa, 2022; Swakopmund Matters, 2015). The report shows comments from a diverse range of 22 sources, including private individuals, government representatives, stakeholders, and industry professionals (Midgley et al., 2012). The external reviewer reported attending all six stakeholder consultation meetings, including three in Windhoek, one in Swakopmund, and two in Walvis Bay where stakeholders provided insight and raised their concerns (Midgley et al., 2012). However, local NGOs like Swakopmund Matters and the Australian-based Deep-Sea Mining Campaign contested the project, highlighting objections regarding the perceived insufficient levels of these three public consultations during the EIA process (Costella, 2013). The criterion is therefore *limited*.

***Public Concerns are Responded to:*** This criterion is limited. The concerns raised by scientists, the fishing industry, and the public highlighted potential shortcomings in the EIA report, prompting responses from NMP and indicating areas in the assessment process that require further attention and scrutiny (Currie, 2014; Namibia Economist, 2012). Independent scientists expressed concerns about direct destruction to benthic habitats, the release of hydrogen sulfide concentrations, the release of heavy metals, and bioaccumulation in the food chain, impacting fisheries (Currie, 2014). In response, NMP indicated that the project would include an environmental monitoring programme, while also complying with Namibian environmental regulations and best practices (Namibia Economist, 2012).

The Namibian Hake Fishing Industry Association and the Confederation of Namibian Fishing Associations also strongly opposed the project, arguing that dredging would cover a significant portion of historical monk trawling grounds (Komnenic, 2013). In response, NMP exhibited a reasonable level of consideration and responsiveness stating

that only 19.75% of the monk trawl catch would be affected. The NMP response encompasses a commitment to the environmental monitoring programme, assuring compliance with regulations, and engaging with the fishing industry and other stakeholders.

Table 7. 5: Assessment Results of the Conformity of each Aspect regarding Public Participation for NMP

<b>Criteria</b>	<b>Evaluation</b>	<b>Criteria conformity</b>
Public participation is transparent and in accordance with regulations	Transparent public participation in EIA assessment	Limited
Evidence and minutes attached	Strong public involvement in the EIA procedure	Limited
Public concerns are responded to	Addressing public concerns with responsive measures	Limited

#### **7.3.1.1.4 Review and Decision Making**

Results show that these criteria are partially and poorly met (Table 7.6) and are discussed below.

***Decision taken within a reasonable time:*** The criterion of “decision taken within a reasonable time” is rated *poorly met* for several reasons. While the Namibian EIA Regulations acknowledge the possibility of specified conditions that could cause delays in ECC issuance, they also emphasise the importance of timely communication and decision-making within seven days of the review. However, the timeline analysis in the case study revealed a significant deviation from these regulatory timelines, with the

process extending over several years from the submission of the EIA report in 2012 to the issuance of the ECC in 2016.

Despite the potential presence of specified conditions outlined in the regulations, the prolonged duration of the decision-making process raises questions about efficiency, effectiveness, and adherence to regulatory requirements. In addition, the subsequent legal proceedings and eventual nullification of the ECC in 2021 further underscore the challenges and delays encountered in the decision-making process. Therefore, the rating of *poorly met* reflects the failure to align with the regulatory timelines and the prolonged duration of the decision-making process, despite potential considerations for specified conditions.

***Due Processes are Followed as per the Legislation:*** This criterion is *partially met* based on the study findings. The decision-making process regarding the issuance of the ECC for the NMP project was marred by controversy and opposition, resulting in a complex lawsuit. This process encountered delays and became the subject of public debates, raising concerns about procedural efficiency and adherence to established procedures (The Namibian, 2016). The subsequent appeal process led to the nullification of the ECC, highlighting concerns about procedural fairness. Although the high court ruling affirmed the validity of NMP's Mining Licence ML170, it also exposed breaches in commencing mining activities without a valid ECC.

Despite the court's insistence on the necessity of an ECC, the decision did not fully satisfy stakeholders, as it revealed deficiencies in compliance with stipulated conditions. Workers in the fishing industry staged mass protests, citing worries about environmental and economic impacts, and advocated for independent oversight in conducting feasibility studies and EIAs (Hartman, 2013).

In a newspaper article, the fisheries minister raised concerns about extensive lobbying for government approval of the phosphate project, suggesting the possibility of undue influence exerted to push through the controversial project without adequate consideration of legal and environmental implications (The Namibian, 2015). The Minister of Fisheries expressed the belief that the MFMR should have been more involved in the decision-making process before the ECC was granted by the EC.

The significant public opposition prompted the MFMR to propose an 18-month moratorium, which was approved by the Cabinet on September 17, 2013, to conduct environmental studies using an independent institution. However, concerns were raised by the Chamber of Mines of Namibia (2015) regarding the lack of progress in the strategic environmental assessment (SEA) study intended to address environmental concerns. This concern arose from the Government of the Republic of Namibia (GRN) maintaining silence on the Cabinet Moratorium on marine phosphate mining, which was declared on 17 September 2013 and lapsed in March 2015 (Kimani, 2015).

Table 7. 6: Assessment Results Showing Conformity of each aspect of the Approval & Decision Making for NMP

<b>Criteria</b>	<b>Evaluation</b>	<b>Criteria Conformity</b>
Decisions are taken within a reasonable time	Extended timeline and persistent controversy in ECC issuance	Poorly met
Due processes are followed as per the legislation	Complexities and concerns in ECC decision making	Partially met

### 7.3.1.2 EIA Capacities: EIA Expertise & Qualifications

Results indicate the criterion is *partially met* (Table 7.7). There is a notable deficiency in the information regarding the expertise and qualifications of the assessment team, therefore this criterion is ranked as limited. The EIA team comprises 15 experts under the leadership of a non-Namibian lead consultant with expertise in evolutionary ecology. However, the report lacks essential details on the qualifications and areas of expertise of the other 14 experts. The specialist studies in the report covered a range of critical areas, including fisheries, mammals, seabirds, water column dynamics, benthos, and jellyfish, showcasing a diverse and multidisciplinary approach. However, detailed CVs are not attached to the report as required. Although the EIA report by Midgley & Associates et al., (2012) mentions an independent reviewer, there is also no provision of comprehensive information on the qualifications and expertise of this reviewer.

Table 7. 7: Assessment Results: How Certain Aspects of EIA Align with Expertise and Qualifications Required for NMP

<b>Criteria</b>	<b>Evaluation</b>	<b>Criteria Conformity</b>
Experts on the team have appropriate knowledge & qualifications	Expertise and qualifications provided	Partially met

### **7.3.1.3 Sustainability**

#### **7.3.1.3.1 Balanced Environmental and Socioeconomic Consideration**

The results in Table 7.8 show that the criteria on conformity in biodiversity conservation are *poorly met*, community health and livelihood are *partially met* and balanced consideration of all impacts and trade-offs is *partially met* as described below.

***Biodiversity and Ecosystem Integrity:*** This criterion is rated as *poorly met*. The NMP's EIA report acknowledges the impact on fisheries, coupled with specialist studies on key marine species. However, there is a notable deficiency in the report's commitment to biodiversity protection and ecosystem integrity. Despite the recognition of the importance of fisheries, the NMP EIA report falls short in providing specific actions geared towards safeguarding overall biodiversity. Within the report, there is a discernible lack of emphasis on rehabilitation measures and biodiversity monitoring, indicating a gap in ensuring the long-term health and resilience of the ecosystem. Furthermore, the consultant places greater emphasis on marine traffic concerns over biodiversity conservation during dredging operations, as indicated by the emphasis on restricted areas where human activities, such as fishing, dredging, or development, are prohibited.

#### **7.3.1.3.2 Community Health and Livelihood**

The criterion is rated as *partially met*. The EIA report acknowledges the vital role of commercial fishing in Namibia's Erongo Region and the awareness of the overlapping areas between fishing and mining (Midgley & Associates et al., 2012). However, the report falls short of offering clear insights into how the co-existence of mining and fishing impacts the livelihoods and overall well-being of the local communities. Moreover, the commitment to Corporate Social Responsibility (CSR) for the Walvis Bay community, as

expressed on the NMP website, introduces an element of community support. However, this pledge is not extensively detailed within the EIA report, leaving stakeholders and readers without a comprehensive understanding of the tangible initiatives and benefits that will be extended to the local community.

#### **7.3.1.3.3 Ecosystem integrity and trade-offs:**

This criterion is rated as *partially met*. There is a notable deficiency of focus on fisheries impacts at the expense of specific actions for a balanced consideration of overall biodiversity protection and trade-offs (CSIR, 2014). While acknowledging the significance of trade-offs between mining and fishing, the report lacks a clear and detailed outline of these trade-offs, leaving a notable information gap. Although the economic impact assessment hints at potential benefits, the report falls short of providing a well-rounded and balanced consideration of biodiversity, ecosystem health, and community well-being (Midgley & Associates et al., 2012). The absence of a comprehensive representation of these aspects raises concerns about the completeness of the assessment, potentially overlooking critical factors that could influence the project's long-term sustainability.

Moreover, the reference to CSR support on the NMP website is insufficiently integrated into the report, creating a disconnect between the acknowledged commitment and the detailed implementation plan.

Table 7. 8: Assessment Results: Conformity of each Aspect of Balanced Environmental and Socioeconomic Consideration for NMP

<b>Criteria</b>	<b>Evaluation</b>	<b>Criteria conformity</b>
Biodiversity & ecosystem integrity	Inadequate emphasis on biodiversity conservation in the EIA Report	Poorly met
Community health & livelihood	Incomplete assessment of co-existence: Mining, fishing, and community wellbeing	Partially met
Balanced consideration & trade-offs	Deficient consideration and incomplete integration	Partially met

### **7.3.2 Results from Case Study 2: Reconnaissance Energy (REN) Namibia Oil**

#### **Drilling**

##### **7.3.2.1 EIA Process under REN**

###### **7.3.2.1.1 Scoping and Assessment**

Results show a range of scores for the criteria on scoping and assessment as shown in Table 7.9. A detailed description of each criterion is provided in the following section.

Table 7. 9: Assessment Results: Conformity of each Aspect of Scoping and Assessment for REN

<b>Criteria</b>	<b>Evaluation</b>	<b>Criteria conformity</b>
Scoping process	Methodical scoping in harmony with TOR	Reasonably met
Project justification	Comprehensive project justification with room for improvement	Partially met

<b>Criteria</b>	<b>Evaluation</b>	<b>Criteria conformity</b>
Relevant laws and regulations	Not all relevant national laws are mentioned in the report.	Reasonably met
Impacts, including cumulative, are clear	Comprehensive assessment of impacts with room for improvement in cumulative impact mitigation	Partially met
Appropriate alternatives provided	Absence of clear alternatives and criticisms	Partially met

**Scoping Process:** The EIA report is clear on the primary objective of the initial activities including the well-drilling programme and stratigraphy and following the TOR as reported in the EIA report (Risk-Based Solutions [RBS], 2019; Risk-Based Solutions [RBS], 2023). There is notable criticism from stakeholders, including the Free Namibia NGO, citing fatal flaws and unclear protocols in the TOR and a lack of consideration for ecosystem protection in the drilling areas (De Waal & Shihepo, 2023). This criterion is therefore rated as *reasonably met*.

**Project Justification:** The project's justification, as outlined in the EIA report, is centred around the potential of the Kavango Basin to serve as a significant oil and gas reservoir. The EIA Report shows that the REN oil drilling project offers several potential benefits for Namibia, including increased state earnings through rights rentals and taxes, improved national skills in geosciences through on-the-job training, creation of short-term and long-term employment opportunities, and support for local infrastructure development, enhancing regional development (RBS, 2019). However, the report lacks detail on how these benefits directly contribute to the overall importance of the project for

Namibia and its people, the economy, and livelihoods. Missing elements include a clear explanation of how the project aligns with national development goals, how it addresses specific socio-economic challenges facing the country, and how it ensures equitable distribution of benefits among local communities. In addition, the report does not elaborate on how the project will enhance livelihoods or support sustainable economic growth in the long term. Various media houses held discussions about the alleged misinformation provided in the report and on the REN website. This criterion is therefore *partially met*.

***Relevant Laws Identified:*** The REN oil drilling initiative emphasises its dedication to adhering to established regulations, highlighting key legislative frameworks such as the Petroleum (Exploration and Production) Act of 1991, the Petroleum Laws Amendment Act of 1998, and the Environmental Management Act of 2007 (RBS, 2021). The scoping report notably failed to include pertinent legislation related to forestry and communal land. Therefore, this criterion is rated as *reasonably met*.

***Impacts, Including Cumulative, are Clear:*** The scoping report acknowledges a broad range of impacts related to oil drilling across environmental dimensions but falls short of providing sufficient clarity and comprehensiveness. While a sensitivity rating system is used as indicated in the EIA report, the absence of specific details and quantitative data limits the depth of understanding regarding the severity of impacts (RBS, 2023). The EIA report briefly mentions cumulative impacts but lacks detailed elaboration on assessment, measurement, or mitigation methods, and it also fails to adequately address the clarity regarding impacts, including cumulative effects specifically related to climate change. The report provides an incomplete picture of environmental impacts, mentioning factors like noise and vibration without specifying their magnitude, identifying affected

reptile species, or projecting changes in water quality. The complexity of cumulative effects is discussed minimally in the report. This criterion is *partially met*.

***Appropriate Alternatives Provided:*** The EIA report outlines various alternatives considered in the environmental assessment for the REN oil drilling project, covering aspects like site locations, drilling equipment, fluids, and the “no-action” option (RBS, 2023). While each alternative is assessed for its environmental impacts, there is a lack of detailed comparison regarding their advantages, disadvantages, and mitigation strategies. This criterion is therefore rated as *partially met*.

#### **7.3.2.2.2 EMP and Quality Mitigation**

Table 7.10 below shows that the assessment of the EMP and mitigation is partially met. The REN’s EMP incorporated a 91-page EMP document aimed at managing and protecting surface and groundwater resources during the exploratory phase. The company asserts adhering to the EMP in its operations, particularly during the 2D seismic operation. The EMP includes specific mitigation measures on significant impacts, a statement on rehabilitation commitment, and environmental monitoring (RBS, 2021).

Table 7. 10: Assessment Results: Conformity of each Aspect of EMP & Quality of Mitigations for NMP

<b>Criteria</b>	<b>Evaluation</b>	<b>Criteria conformity</b>
EMP clearly outlines mitigations, remedy & rehabilitation plans	The EMP successfully identifies and outlines various mitigation measures for surface and groundwater resources.	Partially met

Criteria	Evaluation	Criteria conformity
	The suggestion for a groundwater monitoring system is included, emphasising information sharing with impacted communities.	

While the report is clear, community protests suggest deviations and accusations about entering protected areas without proper licence and not following survey lines as indicated in the EMP, with allegations of unauthorised entries into virgin forests (Schneider, 2022). These allegations indicate potential shortcomings in adhering to the EMP despite REN's assertion of compliance.

Therefore, while the EMP exists and is clear, there are concerns regarding its implementation, leading to *partial* fulfillment of the criterion.

#### **7.3.2.2.3 Public Participation**

***Public Participation is Transparent and in accordance with Regulations:*** The report shows that the EAP engaged with various stakeholders and institutions, explicitly identifying seven crucial groups for involvement. Evidence of transparent communication methods including local newspaper advertisements and emails is included in the EIA report. Six public notices were published, and photos of fourteen meetings organised in Kavango and Khomas regions are shown in the report (RBS, 2021). There are various claims of inadequate consultations notably from the Kavango East Communal Land Board and some community members (Shihepo & Sole, 2022). Analysis of Annexure 3 of the

EIA report shows that the Kavango East Communal Land Board did not attend any of the meetings. The criterion is therefore *partially met* as shown in Table 7.11.

***Evidence and Minutes Attached:*** Annexure 3 of the EIA report includes a section for public and stakeholder consultation, encompassing 56 pages including public notices, stakeholder notifications, presentations, posters, meeting minutes, attendance registers, advertisements, stakeholder registers, and issue-response records (RBS, 2021). Most of the participants raised concerns about production processes like fracking. The report shows that REN maintained that they would only clarify activities and processes under the exploration stage which they are permitted to undertake and not on processes regarding full production. The Namibian Chamber of Environment (NCE) raised concerns about the limited access to meetings and consultations due to Covid restrictions (Namibian Chamber of Environment [NCE], 2021). The criterion is therefore *partially met*.

Table 7. 11: Assessment Results: Conformity of each Aspect regarding Public Participation for REN

<b>Criteria</b>	<b>Evaluation</b>	<b>Criteria conformity</b>
Public participation is transparent & according to regulations	Inclusive public participation in the EIA process	Partially met
Evidence and minutes attached	Public, stakeholders, and community consultations materials attached with limited access.	Partially met
Public Concerns are responded to	Non-effective and non-inclusive communication during public consultation processes	Partially met

***Public Concerns are Responded to:*** The EIA report in Annexure 3 includes a comprehensive list of issues and responses from public meetings. However, community members and stakeholders continue to express disappointment with the responses provided by REN during public consultations particularly in Nkurenkuru and Rundu. Concerned members indicated that the public consultations were rushed, and sufficient opportunities were not given for all affected parties to ask questions and engage meaningfully (Shikongo, 2021). In addition, the NCE raised concerns about deficiencies in the accessibility of public consultation meetings reports and responses related to the seismic survey (NCE, 2021). The NCE claims that some institutions were denied opportunities to attend such meetings (NCE, 2021). These concerns warrant the criterion to be *partially met*.

#### **7.3.2.3.4 Review and Decision Making**

The results show that the review and decision-making process criteria range between *fully met* and *reasonably met* (Table 7.12).

***A decision was taken within a reasonable time:*** The evaluated documents show that the process, from the initiation of the ECC application, which was initiated by REN with the MEFT on 11 June 2019 to the issuance of the ECC on 26 August 2019 by the EC, took approximately two-and-a-half months. The ECC granted permission for a defined period, allowing REN to conduct exploratory drilling operations in PEL 73, Kavango Basin until the certificate expired on 26 August 2022. The issuance of the ECC within a two-and-a-half-month period demonstrates that it was granted promptly. This duration aligns with the standard timeframe of three months typically required by the EC to issue an ECC as per the legislation. Therefore, the criteria for the decision-making process to occur within a reasonable time is deemed to be *reasonably met*.

***Due Processes are followed as per the Legislation:*** This criterion is *partially met*.

While the process to award the ECC was done in the required time, several stakeholders criticised the process. Stakeholders raised concerns about the lack of transparency surrounding the undisclosed details of the ECC approval procedures and the openness and comprehensiveness of the decision-making process. Also, the public continues to contest the project criticising the public hearings held in the stages of the exploration phase. In an online article, Tan (2021) underscored growing concerns among local communities citing limited participation in a consultation that was held in Rundu on 22 January 2021. Tan (2021) indicated that only 50 people could attend the public meeting due to COVID-19 restrictions adding that the consultation lasted two hours, with only 30 minutes allocated for questions. National Geographic highlighted concerns about the transparency of the REN project indicating that locals seem unaware of REN's activities as significant concerns were raised only after a press release in September 2020 (Barbee and Neme, 2020).

Also, international attention and criticism from the likes of Leonardo DiCaprio and US politicians emphasised concerns about the project's potential impact on the Okavango Delta's wildlife and ecosystem in Botswana and indicating that due scrutiny and procedures were not followed (Barbee & Neme, 2020; Collins, 2021).

Table 7. 12: Assessment Results: Conformity of each Aspect of Approval and Decision Making for REN

<b>Criteria</b>	<b>Evaluation</b>	<b>Criteria conformity</b>
Decisions are taken within a reasonable time	Within a reasonable time, but with allegations that the decision was rushed.	Reasonably met
Due processes are followed as per the legislation.	Criticised for limited participation and allocation of time for questions. While under Covid restrictions, more separate meetings were not considered	Partially met

### 7.3.2.3 EIA Capacities: EIA Expertise and Qualifications

This criterion is *reasonably met*. The CVs of all experts were attached as Annex 3 of the EIA report. The report shows that the lead consultant is a qualified engineer majoring in geology, geotechnics, and environmental engineering.

The team consisted of 17 experts covering various specialisations, including geological, environmental, socioeconomic, GIS, stakeholders, community consultations, and engineering.

Table 7. 13: Assessment Results: Conformity of each Aspect of EIA Expertise and Qualification for REN

<b>Criteria</b>	<b>Evaluation</b>	<b>Criteria conformity</b>
Experts on the team have appropriate knowledge & qualifications	Expertise documentation	Reasonably met

### 7.3.2.2 Sustainability

The results show *partially met* conformity for all the criteria (Table 7.14). The criteria are discussed below.

#### 7.3.2.2.1 Balanced Environmental and Socioeconomic Consideration

***Biodiversity and Ecosystem Integrity:*** The EIA report lacks appropriate information on protected areas and biodiversity conservation, indicating a lack of attention to critical ecological zones. The report has information on the fauna and flora of the Kavango Basin, however, the information is not applied to analyse how exploration activity can affect biodiversity. Barbee (2021) highlighted that REN has been accused of operating without the necessary permits for water use and wastewater disposal. The World Heritage Centre's analysis further underscores inadequacies in considering potential threats to environmentally sensitive areas like the Okavango Delta (Barbee & Neme, 2020; Bega, 2021).

In response, RBS (2021) clarified that they will not be exploring or be active in environmentally sensitive areas such as the Tsodilo Hills World Heritage Site, the Okavango Delta World Heritage Site, or any National Parks. Therefore, this criterion is rated as *partially met* (Table 7.14).

### 7.3.2.2.2 Community Health and Livelihood

The EIA report contains information on the socioeconomic settings of the area of interest including population data, unemployment, and essential infrastructure and services. While the report mentions that the project's CSR is aligned with community expectations, only the provision of potable water is mentioned in the report. The report stated that the water initiative involves the drilling and installation of community water wells, with the current count reaching 24 wells as of 4 September 2022, 21 of which are equipped with water tanks and solar technology (Louw, 2022). Barbee and Neme (2020) accused REN of contravening the Namibian Constitution regarding the safety of drinking water because of potential groundwater contamination through exploration activities. This criterion is rated as *partially met* (Table 7.14).

Table 7. 14: Assessment Results: Conformity of each Aspect of Balanced Environmental and Socio-economic Consideration for REN

Criteria	Evaluation	Criteria conformity
Balanced environmental & socio-economic considerations	Lacking balance in consideration of protected areas and biodiversity conservation and human benefit and losses due to the project.	Partially met
Community health & livelihood	Poor consideration for community health and livelihoods	Partially met
Ecosystem integrity & trade-offs	Deficiencies in the deliberate efforts toward ecosystem integrity and clear trade-offs	Partially met

### 7.3.2.2.3 Ecosystem integrity and trade-offs

The report shows that environmental issues seem more highly considered compared to the socioeconomics in the REN report. Apart from the secondary data on population and employment, the report lacks data on several households to be affected by the project. The assessment does not adequately address trade-offs in terms of the community benefits and losses because of the project. The EIA report fails to thoroughly discuss mitigation measures, for example, in the prevention of groundwater contamination. The criterion is therefore *poorly met* (Table 7.14).

## **7.4 Discussion**

### **7.4.1 EIA Process: Scoping and Assessment**

The NMP and REN EIA reports provide an overview of the scoping process, detailing key issues and impact categories. Both reports, however, concentrated more on the environmental impacts as compared to the socio-economic issues. For both projects, the scoping process faced criticism, leading to demands for the revocation of the ECC and the licenses. While the projects are justified in terms of investments, careful examination of potential environmental, social, and economic impacts is critical (Enríquez-de-Salamanca, 2021). Compared to REN, the NMP project presented a more comprehensive rationale, citing global food shortage, limited agricultural land, and growing market demand, aligning with broader global concerns and emphasising potential benefits. While the REN is an exploratory project aimed at establishing a new oil and gas field in Namibia, a thorough assessment of the impacts on community health, livelihood, and ecosystem would be necessary through a separate social impact assessment (SIA). The reports presented minimal information on socio-economic impacts and only highlighted job opportunities. Vanclay (2020) notes that a detailed analysis of social benefits is important and should include information on job creation, skill transfer, and contributions to

government revenue. The results show a high level of mistrust from the public and concerned stakeholders, due to inadequate information provided in the report and the public consultation meetings. Hasan et al., (2018) underscore the importance of transparent project justifications in building public and community trust.

The NMP and REN reports showcase a relevant legal landscape in Namibia, referencing the Namibian Constitution, the EMA, and legislation related to Minerals and Prospecting, and Petroleum exploration and production. The weakness in the REN report lies in the failure to mention legislation related to forestry and communal land. This omission is significant, considering the potential impacts of oil and gas exploration on land use, biodiversity, and local communities of the Kavango Basin and the high biodiversity of the Kavango Basin. Moreover, the EIA report also fails to adequately address the cumulative effects of the project. The NMP report also lacks sufficient information on the cumulative impacts of marine mining in conjunction with other existing activities. According to Jones (2016), cumulative impact assessment is critical in emphasising the need to understand combined effects both at spatial and time scales. The literature on EIA also emphasises the importance of a holistic approach, considering all relevant laws and potential impacts (Glasson & Therivel, 2013; Romianingsih et al., 2023). NMP undertook a verification study as an additional measure in their assessment. However, the study was undertaken without an ECC, showing high levels of non-compliance. The fact that projects with such deficiencies were accepted shows an implementation challenge in the review and the decision-making process of Namibia's EIA process.

#### **7.4.2 EMP and Quality Mitigation**

Both the NMP and REN's EMPs were comprehensive. While the EMP aligns with EIA Regulations by proposing mitigation measures, the absence of accountability for the monitoring and rehabilitation programme was an evident challenge. Monitoring and rehabilitation are a problem in several EIA processes globally as seen in (Khan et al., 2020; Elvan 2018; & Rathi, 2017). For complex projects such as NMP and REN, the responsibility and funding commitments ought to be clear before the project commences, and a lack of such information in the EIA reports is a concern in Namibia's EIA governance. (Wilson et al., 2017) highlight that it is an established norm for project proponents to oversee and fund monitoring and rehabilitation initiatives. The Namibia government needs to consider adopting such a requirement in the EIA legislation to improve accountability.

The REN EMP includes mitigation measures of exploratory activities specifically in managing surface and groundwater resources. However, concerns regarding the failure to apply for abstraction permissions for water boreholes, non-compliance with regulatory procedures, and potential contamination of water resources are weaknesses challenging the effectiveness of REN's adherence to the EMP. In addition, protests and accusations about the project entering virgin forests without required licenses (Schneider, 2022) underscore potential gaps in the EMP's effectiveness. While the EMP is acknowledged as a guiding document, the lack of clarity on specific mitigations and rehabilitation plans, along with protests and complaints, raises questions about whether the EIA process was duly followed and if it is effective in this context.

### **7.4.3 Public Participation and Approval**

The EMA (2007) acknowledges the requirement of public participation in the EIA process. For both NMP and REN concerns were raised about the inadequacy of the consultation processes. Key stakeholders such as the Kavango East Communal Land Board were reported left out of the consultation process in the REN project. Although the EIA reports document efforts that were made for public participation through various channels like noticeboard displays, advertisements, and notices; gaps persist. Some of the problems seemed to have resulted from inappropriate advertisement methods such as newspapers and online platforms. The Kavango Region where REN is taking place is one of the poverty-stricken regions with limited internet and poor access to newspapers (NPC, 2015). The notices were also written in English which is inappropriate for a community of marginalized people found in the REN area of interest. Canada's environmental assessment legislation mandates meaningful consultation with Indigenous communities (Wright, 2020), which Namibia can learn from considering its marginalized San population in the Kavango Region. In the case of NMP, stakeholders including the fishing industry raised concerns about the unsuitability of data presented in the public meetings. According to Yao et al., (2020), limited participation compromises the EIA process's quality and credibility as well as the legitimacy of the decision-making.

Another critical issue raised regarding public participation in the REN project was the COVID restrictions. To address these issues, establishing clear guidelines, and providing conditions and frequency of meetings as well as the use of appropriate communication methods is essential. The Office of Natural Resources and Environmental Policy and Planning in Kenya published *Guidelines for Public Participation*, presenting

24 choices for involving the public through various methods including newspapers and radio outreach (Birgen et al., n.d.).

#### **7.4.4 Review and decision making**

The ECC approval for the NMP project led to legal battles and eventually to the cancellation of the environmental certificate, indicating deficiencies in the decision-making process. Similarly, various stakeholders continue to ask for the cancellation of the REN ECC (NCE, 2023).

In contrast, the approval process for the REN project was comparatively swift, taking about two and half months, earlier than the three months stated in the EMA (2007). While the rapid decision may be beneficial in terms of time, it could be the contributing factor to various complaints raised by stakeholders and communities. In South Africa, the National Environmental Management Act (NEMA), Act 107 of 1998 (1998) mandates that the competent authority must decide on environmental authorisation within 45 days of receiving the full EIA report, and for activities undergoing a basic assessment process, the decision must be made within 30 days. Namibia could learn from this approach by tailoring the EIA process timeframe for EC decision making to suit the specific characteristics and potential impacts of the projects.

Both the NMP and REN face opposition to the approval process. The opposition and legal challenges post-approval suggest unaddressed community concerns during the public engagement phase and a lack of resolution of grievances. The Canadian Environmental Assessment Act (CEAA) of (2012) law has in place a review panel that conducts public hearings with communities as part of the review and decision-making process (CEAA, 2012). This process ensures that all relevant information is gathered, and

community concerns are addressed before a final decision is made. Namibia can adopt the approach of an independent review panel to enhance the EIA process. The review panel, if adopted in Namibia, can also ensure that a thorough examination of project impacts is done, facilitate meaningful engagement, and ensure that community grievances are adequately addressed before project approvals are granted.

#### **7.4.5 EIA Capacities**

Capacity and expertise are a challenge in many developing countries and Namibia is no exception. The EMA (2007) requires that the CVs of the EIA team should be provided. However, the NMP only listed the EAP names and their areas of specialization instead of including their CVs, a notable procedural mishap in the report. In contrast, REN's report has complied with the legal requirement by attaching the CV of the EAPs, showing a multidisciplinary team. It is worth mentioning that several EAPs who worked on the two projects are not Namibians, a potential indication of a lack of experts. Lack of capacity and expertise is one of the areas that need interventions as pointed out by Kolhoff et al., (2018) and Marara et al., (2011). The implication of having non-Namibian EAPs leading projects could mean potential challenges in understanding local contexts, regulations, and community dynamics.

Several countries have regulations to accredit EIA practitioners, however, Namibia has no such requirement. Countries with a regulatory body that ensures EAP competence include the United States (National Association of Environmental Professionals (NAEP)) and South Africa (Environmental Assessment Practitioners Association of South Africa (EAPASA)) (Kalembo & Odeku, 2023; National Association

of Environmental Professionals [NAEP], 2024). Namibia has in place a body called EAPAN, but it is not recognized by law and only has 50 registered EAPs.

#### **7.4.6 Sustainability**

The limited outcomes of the NMP and RENs EIA report about biodiversity and ecosystem integrity have noteworthy implications for Namibia, particularly in the context of environmental conservation and sustainable resource management. The NMP project area is in the rich upwelling cell of the Benguela Current Large Marine Ecosystem. According to Kainge et al., (2020), the Benguela Current Large Marine Ecosystem is vital for both ecological balance and the socioeconomic well-being of local communities dependent on fisheries. The limited commitment by NMP to specific actions for safeguarding biodiversity raises concerns about the potential degradation of marine habitats and the subsequent impact on fish stocks. Given fisheries' significance to Namibia's economy (contributing around 3% of GDP since 2007 and 20% of export earnings), the Namibian government has largely succeeded in sustainable fisheries management through monitoring and research (International Trade Administration [ITA], 2024; Sowman & Cardoso, 2010). A lack of commitment toward monitoring and rehabilitation plans in the NMP report is therefore a case of concern. Without robust long-term and medium-term strategies for monitoring and restoring impacted areas, the long-term health and resilience of the Namibian marine ecosystem may be at risk, compromising the economic benefits derived from the ocean ecosystem (Borja et al., 2010). This gap in the report also raises questions about the project's dedication to responsibly implement the EMP.

The REN's EIA report also showed minimal consideration of sustainability goals including inadequate consideration of protected areas and biodiversity hotspots and impacts on human health. The second test-drilling site near the village of Mbambi is located inside Kapinga Kamwalye Conservancy, an important area for the marginalized community of the Kavango Region (Barbee & Neme, 2020). The omission of effort to protect sensitive biodiversity areas is also in contravention of Section 2 of the EMA, which emphasises the need to prevent serious or irreversible damage to the environment and the reduction, limitation, or control of activities causing such damage.

The allegations about REN operating without the necessary water permits raise concerns about the use of water, a very scarce resource in Namibia. Without appropriate wastewater disposal measures, the development poses a direct threat to water resources which can affect local communities, wildlife, health of the ecosystem, and consequently reduce tourism activities in the Okavango Basin and potentially to the Okavango Delta. The Okavango basin includes the rivers of Angola, Namibia, and Botswana, and is a vital resource for the local population while the Okavango Delta is a renowned wetland in Botswana that's home to a rich ecosystem and a variety of threatened and endangered species, listed as both a Ramsar and World Heritage Site (Francis et al., 2021). While the EIA was restricted to Namibia, the impacts to nearby areas cannot be ignored, and therefore more careful planning is needed to avoid detrimental effects on the environment and livelihood of communities as well as potential transboundary conflicts.

## **7.5 Conclusion, Lessons Learned, and Recommendations**

In summary, the evaluation of the NMP and REN projects underscores the nuanced nature of the Environmental Impact Assessment (EIA) process in Namibia. While both

NMP and REN have undertaken the EIA process and received an ECC, plausible limitations and challenges are showing that the EIA process is not duly followed. There are also notable gaps showing deficiencies and loopholes in the legislation. Areas that need consideration in terms of legislation reform include regulations on the scoping and assessment process, especially requirements on cumulative impacts, alternatives, EMP implementation, monitoring, and rehabilitation plans. While the reports exhibit a conscientious approach to addressing potential environmental impacts, the concerns regarding non-compliance by the NMP on the verification study, shifting of monitoring responsibility to the government, and possible deviations from the EMPs by REN are unprecedented. These weaknesses suggest potential shortcomings in environmental stewardship and governance in the Namibia EIA process.

The reported concern raised about public consultation in the two case studies are signs of a compromised EIA process. With concerns stemming from inadequate inclusivity, rushed consultations and mistrust between actors, the quality and credibility of the Namibia EIA process remains questionable, and probably needs urgent resolutions. The imbalance presentation between environmental and socio-economic impacts also is a challenge that necessitates the need for a robust SIA requirement for complex projects such as the NMP and REN. Moreover, the deficiencies in EAP's capacities need attention, and accreditation, certification, and training of local experts is a good start for improvement.

From the assessment of the implementation of EIAs in the two selected projects, the following lessons learned, and recommendations were derived.

- **Holistic Approach to EIA:** The analysis highlights the need for a more comprehensive, holistic, and balanced approach to environmental impact assessments focusing on both the natural and human environment.
- **Swift Regulatory Response:** Regulatory bodies should respond swiftly and decisively to instances of non-compliance, using their authority to safeguard environmental integrity.
- **Continuous Monitoring and Evaluation:** Regulatory bodies should establish robust monitoring and evaluation mechanisms to track the ongoing environmental impact of projects, ensuring adherence to regulations and immediate corrective action when needed.
- **Enhance EIA Rigour:** Regulatory bodies need to improve the rigour and comprehensiveness of EIAs, ensuring a thorough examination of potential environmental impacts, especially in ecologically sensitive areas.
- **Establishing an independent review panel:** Namibia should adopt a structure of a review panel. Establishing a committee is not only for reviewing and decision making but also to ensure adequate public engagement through public hearings.
- **Comprehensive regulations on monitoring and rehabilitation.** A strict and clear directive is needed on the requirement for proponents' role to commit funds for monitoring and rehabilitation of sites after project decommissioning.
- **Deficiency in Locally Trained EAPs:** The shortage of locally trained EAPs in Namibia, as evidenced by the predominance of non-Namibian EAPs involved in projects, is primarily attributed to the limited availability of specialised EIA courses. This discrepancy between market demand and the skills of EIA students underscores the necessity for dedicated EIA programmes within Namibia's

institutions for higher education. Collaborative efforts between the Government and tertiary institutions to establish courses and accreditation standards are needed to address this issue.

- The inclusion of transboundary issues in the EIA system is needed particularly for Namibia, given various shared resources with other countries such as the Okavango Basin and the BCLME.

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## **CHAPTER 8: SYNTHESIS & CONCLUSION**

### **8.1 Introduction**

This chapter concludes the study by summarising the key research findings concerning the research aims and questions and discussing the value and contribution thereof. It also reviews the limitations of the study and proposes opportunities for future research.

### **8.2 Synthesis**

At a global level, the important trigger in environmental governance was the frustration with decisions that were made from a centralistic governance approach, but which appeared to be ineffective. From the 1970s, EIA amongst other, became a tool of note, being accepted at international and national level as an environmental governance instrument. This was mostly because most countries established binding EIA legislation and EIA became a platform to involve actors in environmental decision-making processes.

The relevance of actors in EIA is important and determined by their formal position (for instance, a government authority), their control of relevant resources (for instance expertise), their power to hinder or block implementation (lobby groups, civil society) or by the stakes in the issue (for instance, proponents). This study satisfied this notion by obtaining the views of the relevant actors in both the survey and interviews.

Since its establishment, several researchers questioned the effectiveness of EIA in achieving the set goals of environmental protection and sustainable development. Numerous studies have assessed the performance and effectiveness of EIA in the developed world, but only a few have been undertaken in developing countries, of which only a handful are in sub-Saharan Africa, Drayson et al. (2017).

In addition, most of the studies focused on procedural requirements, evaluating the practice of EIA against current legislation and processes. There is an increased need to evaluate the multi-dimensional purpose and normative goals of EIA in different contexts (Loomis & Dziedzic, 2018). This study is answering the call to undertake holistic EIA evaluation studies in developing countries and therefore reviewed the status and functioning of the EIA system as performance, and assessed the quality, and effectiveness of the Namibian EIA system, emphasizing the strength and weaknesses, implementation gaps, opportunities, and recommendations for improvement. The study adopted a comprehensive and multidimensional approach to evaluate the horizontal and vertical EIA mechanisms and functions and analysed the EIA system at three different levels: the meta, macro, and micro dimensions. The evaluation was undertaken using a triangulation of literature review, document analysis, and semi-structured interviews. The combination of methods and analyses enabled a robust review that strengthens the validity of the findings.

Objectives 1 and 2 targeted the meta-level analysis by evaluating the performance and quality of Namibia's EIA system. Performance and quality assess the extent to which the EIA system aligns and conforms to ideal systems and best practices. The ideal EIA system by Wood (1995) and Wood and Ahmad (2003) was used to assess the performance of the Namibia EIA system, while good governance principles (World Bank, 1999, UNDP, 2009) were used to assess the quality of the system. The overall results show that Namibia's EIA system partially meets the criteria of the ideal systems as well as the good governance qualities. Essentially, Namibia has a functional EIA system based on robust legislation, a well-established institutional arrangement, and a specified EIA process for new and existing development.

The EIA process is successful and has a preventive effect, as evident from numerous projects halted due to an EIA decision. However, due diligence is needed to develop functional measures and qualities which are key to improving performance. Namibia's EIA process seems inadequate as it only partially satisfies good governance qualities. EIA cannot be a good governance tool for environmental sustainability, without it fully satisfying these qualities.

Objective 3 addressed the macro level, by examining the substantive, normative, and transactive effectiveness of Namibia's EIA. The results show a moderate rating on the influence of EIA on good environmental decisions, learning, emergence of leadership and fair and democratic public participation. While this is a shortcoming, this rating does not imply failure because certainly the situation could have been worse in the absence of EIA.

Objective 4 delved into the micro level, scrutinizing the implementation of the EIA process in two selected case studies in Namibia and assessing a specific step within the EIA process and correlating them with the actual steps taken in individual project case studies. Some of the critical gaps found in the NMP and REN assessment include inadequate consideration of cumulative impacts, alternatives, EMP implementation, monitoring, rehabilitation plans and public participation. The raised concerns in the two case studies are signs of a compromised EIA process.

Stakeholder perceptions obtained from the survey and interviews highlighted significant deficiencies in the enforcement of fines, weak communication between the DEA and competent authorities as well as poor transparency and accountability in the EIA system. Based on this result, it can be concluded that Namibia's EIA system with the current legislation and institutional arrangement only partially conforms to the best EIA international practice but is not fit to deliver the intended benefits of environmental

protection and sustainable development. The EIA system requires legislation reform to ensure quality and effectiveness.

Some of the strengths of the EIA system in Namibia include the increase of EIA applications from a mere 8 in 1998 to above 300 in 2015. This shows an acceptance of EIA as a planning tool. Another strength of the Namibia EIA system is the provision to appeal the decision of the EC. The appeal provision led to the recalling of the NMP clearance certificate which is currently on moratorium.

Important contextual factors that came out of this study include the lack of political will, which is evident in the lack of funding toward EIA and the lack of decentralization of EIA services. Interviewees in this study suggested the need to decentralize EIA offices to other governance arms including the regional, local, and traditional authorities to improve accessibility, awareness, and legitimacy. The results showed that there is potential bribery and corruption in the EIA system due to the one-point centre of power that lies within the environmental commissioner as the sole decision maker.

Recommendations were given to establish a review and decision-making panel to assist the EC, particularly with complex projects. Another notable contextual factor is the effect of inter-ministerial power struggles, change in leadership, and restructuring of institutions on the development of EIA legislation. The study found that the restructuring of MEFT as the regulatory authority and subsequently the appointment of the EC in 2012 affected the timely enactment of the EIA regulations and impacted the content of the regulations with some notable omissions of the role of SDAC in review, the appointment of inspector and environmental officers including honorary appointments and provision for SEA which was previously highlighted in the environmental management bill.

The study also shows that good governance in the EIA process is compromised. Namibia is a developing country and projects such as the NMP and REN have the potential to bring the much-desired business and investment opportunities contributing to economic growth, industrialization, and employment opportunities yet they can cause adverse environmental impacts if not implemented accordingly. With high economic disparity and inequality, and a huge responsibility to develop infrastructures needed for essential services, Namibia may be faced with the problem of balancing simultaneous development while maintaining ecosystem integrity and human welfare.

## **8.2 Contribution of the study and its Significance to the Field**

This research contributes to and holds significant importance in the broader context of environmental governance and sustainable development, particularly in the context of Namibia. The country's pristine environments and stable wildlife populations make it a crucial case study for understanding the challenges and opportunities associated with EIA processes in developing countries, specifically in sub-Saharan Africa.

One of the key contributions of this research lies in its multidimensional and holistic approach to evaluating the effectiveness of Namibia's EIA system. Many studies only focused on the procedural dimension, but this study evaluated the substantive, normative, and transactive effectiveness. The inclusion of the good governance principle as a measure of quality in this study opens an opportunity to debate further on the conceptualization of quality in EIA, which now is very minimal. The consideration of the good governance principle also sheds some light on the grey relationship between EIA effectiveness and governance contexts. At a closer look, the dimensions of quality overlap with procedural effectiveness, transactive effectiveness, and some aspects of normative

and substantive effectiveness. This is an essential insight supporting separating quality and effectiveness dimensions in impact assessments. This understanding is particularly relevant in the context of developing countries, where governance mechanisms play a crucial role in determining the success of environmental management initiatives.

The research's emphasis on the ongoing review of the EIA policy by the Namibian government adds practical relevance to its findings. By contributing to the national process of amending laws and improving the quality of the EIA process, the study has direct implications for the regulatory framework in Namibia. This is crucial for addressing the identified challenges in legislative and administrative frameworks, which are essential for the successful implementation of sustainable development initiatives.

Furthermore, the evaluation framework developed in this research is a valuable contribution to EIA research and literature. The framework can be a useful tool to evaluate EIA effectiveness not only in Namibia but also in other countries and regions worldwide. The second framework used in the assessment of the case study in objective 4 can be adopted as a checklist to review EIA reports by the DEA and other competent authorities in Namibia and other countries with similar EIA requirements. The choice of criteria used in developing the frameworks is also a pragmatic contribution to EIA theories and particularly adds value to the link between EIA effectiveness and good governance. Most importantly was the selection of criteria for the substantive, normative, and transactive dimensions.

In addition to the three commonly used substantive criteria (good environmental decision, learning and leadership), we added a criterion on leadership, which is a new area in environmental management and EIA. For a context like Namibia, with a small population of 3.3 million, a low literacy level, and a relatively new EIA system,

environmental leadership and champions are a critical feature that should be included in EIA effectiveness studies.

The framework also includes good governance qualities as a stand-alone criterion of effectiveness. Concerning good governance, only a few studies including (Arts et al., 2012) formulated criteria or indicators to assess the importance of governance in EIA. Meuleman (2015), compared the relationship between EIA and governance to a bee and hive, highlighting the influence of governance on effectiveness. In this study, governance is considered as an input element into EIA performance, quality, and effectiveness.

The literature holds contradicting views on whether to treat legitimacy as a separate element of quality or as an element of substantive or normative effectiveness in impact assessment. Researchers such as Pope et al., (2018) and Bond et al., (2018) recognized legitimacy as an important element in EIA effectiveness but left it hanging as a stand-alone criterion. We also recognize legitimacy as a standalone element, but it is less valuable to analyse on its own. In this study, it was therefore adopted into the list of good governance quality, where it fits best and following the description by the OECD (1997). This contribution brings a prospect of a new debate in EIA theory and effectiveness.

The framework is also an addition to the body of knowledge and can be used in evaluation studies. Scholars can interrogate the usage and relevance of this framework in EIAs from different contexts. The theoretical implications of this research challenge a one-size-fits-all approach to EIA success, emphasizing the importance of tailoring systems to individual country contexts. It also contributes to theoretical discussions on the maturing process of environmental governance systems, highlighting the challenges faced by developing countries.

The specific case studies on the NMP and REN projects enhance the practical applicability of the research findings. By highlighting deficiencies, compliance issues, and gaps in addressing deviations in EMPs, the study sheds light on critical aspects of implementation, especially those that demand immediate attention for the improvement of environmental stewardship and governance.

The findings also emphasize the importance of addressing capacity issues among EAPs and EIA reviewers, indicating a need for local training and capacity-building programs, accreditation, and certification regulations. Practitioners and governments can also use these findings to improve EIA practices including the quality of assessment and decision making that is based on assessment results.

The practical implications extend to policy recommendations, enhancing EIA effectiveness, and offering lessons for specific projects. The empirical evidence from this study can be used by policy makers to complete the much-awaited legislation reform that was commenced in 2018.

The study findings acknowledge the importance of legislation reforms and technocratic modification in procedures to strengthen critical requirements on public participation, SEA, EMP, and monitoring and rehabilitation plans. Moreover, it advocates for political support and will to support and finance EIA programmes, decentralise EIA services to regional and traditional administrative tiers. Such a process, we believe, can serve as an essential mechanism to improve the effectiveness and efficacy of the EIA system in Namibia.

Lastly, the value of this research to the field of impact assessment and appraisal is evident from the publications of Objectives 1 in 2021, 2 in 2023, and 3 in 2024 in high-impact journals, attracting on average 7 citations annually thus far, and bringing the

Namibian case to the global EIA effectiveness debate. Objective 4, which is the analysis of two key case study projects on ReconAfrica oil drilling and Marine Phosphate mining, has been submitted for review in December 2024.

### **8.3 Recommendations for improved EIA systems**

Many of the shortcomings found in this study are common to other maturing EIA systems in the world. The Namibia EIA system is based on good legislation and institutional arrangements and a sound EIA process. The system therefore partially meets the criteria of an ideal EIA system.

#### **1) Administrative framework**

In terms of the administrative framework, the study provides the following recommendations.

##### **a) Legislation amendments and implementation plan by the DEA**

- Urgently complete amendments for EIA legislation.
- Develop a detailed implementation plan with specific action steps, roles, and responsibilities for the regulatory authority and other government departments within the EIA system.

##### **b) DEA transformation**

- Elevate the Department of Environmental Affairs (DEA) to an impartial state-owned enterprise for increased autonomy and increase the capacity of environmental officers and inspectors.
- Establish divisions within the new institution to manage EIA practitioner registration and certification, facilitate EIA payments, and oversee resource mobilization from fines and environmental charges.

**c) Funding for EIA decentralization**

- Government should secure funding to support the decentralization of EIA services to other government tiers including regional, local and traditional authorities and engaging with a diverse range of stakeholders, both domestically and internationally,

**d) Holistic environmental management**

- MEFT should ensure the integration of environmental considerations into sectoral policies to promote a comprehensive and cohesive approach to environmental sustainability.
- Improve coordination among government ministries to enhance collaboration on environmental initiatives and streamline efforts across various sectors.

Implement strategies to optimize the use of resources, ensuring efficiency and effectiveness in environmental management initiatives.

**e) Empower municipalities**

- Government should actively empower municipalities to contribute to national goals in local environmental governance, climate change mitigation, and sustainable mobility.

Establish certification programs to recognize and validate municipalities' efforts in these areas.

**f) Professional code of conduct for consultants**

- MEFT should enforce a stringent professional code of conduct for EIA consultants to mitigate bias towards project proponents.

Implement measures to discourage consultants from favoring project proponents and prioritize objective assessments of environmental impacts.

## **2) Regulatory framework**

In terms of the regulatory framework, the study provides the following recommendations to MEFT towards improving environmental governance by addressing specific aspects of EIA, SIA, SEA, compliance enforcement, rehabilitation requirements, and legislative assessments.

### **a) Enhance EIA procedures**

- Improve EIA procedures to include meaningful consideration of project alternatives, and cumulative impacts, ensure early-stage public participation and appropriate advertisement such as Radio, and maintain a balanced assessment of potential environmental impacts, with a particular focus on biodiversity, ecosystem integrity, and the psycho-social well-being of communities.

### **b) Optimize SIA and SEA applications**

- Strengthen the practical application of SIA and SEA to development plans and ensure effective consideration of social and cultural impacts as well as the effective implementation of relevant mitigation measures.

### **c) Harmonize compliance strategies**

- Harmonize environmental compliance and enforcement strategies across various national competent authorities.
- Appoint environmental officers and honorary inspectors to ensure compliance with sector-specific environmental permits.
- Consider introducing stringent criminal penalties for severe environmental offences to enhance deterrence.

**d) Enforce rehabilitation requirements**

- Introduce strict rehabilitation requirements for environmental damage, covering water bodies, land, species, and ecosystems.
- Develop and implement environmental remediation standards and plans, especially for soil contamination with heavy metals.
- Empower the DEA to enforce liability provisions through administrative actions.

**e) Strengthen legislative assessment**

- Strengthen the environmental aspects of ex-ante and ex-post assessments of laws and regulations.
- Ensure better integration of environmental considerations into land-use planning processes.

**3) Compliance assurance**

In terms of the compliance the study provides the following recommendations for MEFT.

**a) Enhance inspection frequency**

Increase the number of targeted inspections to ensure a more comprehensive monitoring of environmental compliance.

**b) Utilize administrative fines**

Expand the use of administrative fines as a measure for addressing environmental violations promptly and effectively.

**c) Improve fine collection**

- Implement measures to improve the collection of imposed fines, ensuring a more efficient and timely resolution of environmental offences.

**d) Robust EMP enforcement and monitoring**

- Strengthen the enforcement of mandatory Environmental Management Plans (EMPs) by establishing clear penalties for non-compliance.
- Transfer the responsibility of monitoring from developers to an independent regulatory body to ensure impartial and effective oversight.

**e) Third-party audits**

- Introduce a system of third-party audits for selected EIAs to provide an additional layer of scrutiny as it can also enhance objectivity and ensure that assessments accurately reflect environmental impacts.

**4) Environmental democracy**

In terms of environmental democracy, the study provides the following recommendations to MEFT.

**a) Enhance Environmental Education and Awareness**

- Expand environmental awareness programs and adult education initiatives to educate the public on environmental issues.
- Actively engage the public in environmental decision-making processes at both national and local levels.

**b) Consolidate environmental information**

- Consolidate public sources of environmental information to create a comprehensive and accessible platform.
- Implement regular reporting mechanisms on the state of the environment and status of EIA applications to keep the public informed.

**c) Address access to justice**

- Remove cost barriers in access to justice by requiring the government to cover its share of litigation costs, irrespective of the court decision outcome.
- Provide access to legal aid for Non-Governmental Organizations (NGOs) and marginalized communities to ensure equitable participation in legal processes related to environmental issues.

**8.4 Recommendations for Future Research**

This comprehensive evaluation of Namibia's EIA system opens avenues for future research. While the study sheds light on Namibia's EIA system's strengths and weaknesses and offers valuable recommendations, it also acknowledges that certain aspects warrant further attention for a comprehensive understanding.

First, there is a need to deep dive into concrete evidence of Namibia's EIA system's impact on environmental preservation and sustainability. Understanding these aspects is necessary for Namibia given that the country is celebrating 34 years of independence in 2024, with an increase in population from about 2.5 million in 2011 to the current 3 million people showing a growth rate of 3 percent between 2011 and 2023. The forthcoming era of socio-economic growth and industrialisation requires good environmental governance to ensure development is sustainable, equitable, and participatory.

This study therefore recognises that Namibia needs further research on EIA systems that are based on good governance principles including appropriate institutions, legislations, administrative agendas, and human and financial capital as planning tools for the development age. While it provides insights into the legislative and institutional aspects of the EIA system, a thorough investigation is needed to examine the tangible

effects of an approved project and its effect on the environment to gauge the true efficacy of EIA-based on-site observation and monitoring plans as set in the EMPs. Moreover, a comprehensive evaluation of factors influencing the effectiveness of the EIA process is crucial. Beyond legislative and administrative frameworks, understanding how various contextual, social, and economic factors impact the implementation of EIA procedures is vital. Factors such as community dynamics, resource availability, and technological advancements can significantly influence the success of environmental assessments and must be thoroughly analysed.

Second, assessing the feasibility and potential impacts of the recommendations proposed in the study is essential. While the recommendations offer practical solutions for enhancing Namibia's EIA system, their feasibility and potential consequences require careful consideration. It is crucial to evaluate the practicality of implementing legislative amendments, establishing an open database, and securing funds for EIA services, among other recommendations, to ensure their effectiveness in real-world applications.

Third, a comprehensive analysis of stakeholder perceptions is necessary to strengthen the study's contribution. Understanding how different stakeholders, including government agencies, environmental NGOs, local communities, and businesses perceive the EIA process can provide valuable insights into its effectiveness and areas for improvement. By incorporating diverse perspectives, the study can offer a more holistic understanding of the threats and opportunities associated with Namibia's EIA system.

Fourth, the practical implementation and impact of specific policy recommendations, understanding factors influencing public participation and decision-making processes, and conducting comparative studies with other countries facing similar challenges need further exploration.

Finally, future research can engage the usefulness of the evaluation framework developed in this study considering the context-specific nature of EIA effectiveness in different cases, hence contributing to more tailored and effective evaluation studies. A study analysing the quality of the EIA reports can also bring essential insights relevant to EIA effectiveness. It would be interesting for future research to investigate the discourse of quality in EIA effectiveness studies particularly whether dimensions of quality exist in the IA theories.

## **8.5 Conclusion**

Namibia's environmental management is based on article 95 (l) of the constitution (1990), the Green Plan (1992), the Environmental Policy of 1995, the EMA Act 7 of 2007, and the EIA regulations (2012). These regulatory instruments guide the implementation of EIA in Namibia placed under the custodianship of the Environmental Commissioner in the Ministry of Environment, Forestry, and Tourism.

Since 2012 when the EIA regulation was put in place, no study has been undertaken to formally evaluate the status and functioning of Namibia's EIS system and its processes. This dissertation aimed to review the status of EIA in Namibia and evaluate the quality, procedural, substantive, transactive, and normative effectiveness of the EIA system.

In Objective 1, the review of the Namibia EIA system was done against an ideal EIA system of international best practices using document analysis and surveys. The Wood and Ahmad (2003) framework was selected as it is commonly used in the literature and to enable comparison of this review to similar studies in Sub-Saharan Africa and elsewhere.

The results from the review show that Namibia has a functional EIA system based on fairly good legislation, a well-established institutional arrangement, and a specified EIA process. The EIA system is mandatory for both new and existing public and private development projects.

Namibia is committed to good environmental governance as noticed in her efforts to set up legislation and mechanisms for the conduct of EIA. The Namibia constitution is one of the few that includes the protection of the environment in consideration of the welfare of the people and highlights the role of the office of the ombudsman to deal with cases of over-utilization of natural resources. While the actual legislation of EIA was established slowly and over a long time, the process involved inter-sectoral meetings and consultations which yielded the development of the Environmental Policy in 1995 and eventually the EMA (2007) and the EIA regulations (2012).

Further findings show that EIA is accepted as a tool for environmental sustainability in Namibia as highlighted in the national documents such as the National Development Plan 5. The usage and acceptance of EIA are also evident in the increased number of EIA applications from a mere 20 in 1998 to over 300 in 2015, and about 150 per month in 2025 (Tarr, 2003; NPC, 2015; Albertz, 2025). The DEA has made several efforts to make EIA services accessible and include online platforms enabling stakeholders (a) to submit new EIA applications, (b) for the public to comment on projects under review, and (c) to report non-compliance. The study also shows that the EIA process has a preventive effect, as evident from numerous projects halted due to an EIA decision.

In objective 2, the quality of Namibia's EIA process was assessed against ten good governance principles. The results show that the Namibia EIA process is inadequate and partially satisfies good governance qualities.

The other eight governance qualities are partially satisfied; however, transparency and accountability are poorly met. Wood (2003) and Kakonge (2006b) noted that a well-conceived EIA system should entail governance characteristics and principles. These results are not surprising, given that results in objective 1 show that the system partially conforms to EIA best practices and lacks critical foundation measures of effectiveness.

In objective 3, the effectiveness evaluation considered three dimensions, namely, substantive, normative, and transactive of Namibia's EIA system. The findings reveal that the Namibia EIA system is *moderately effective in contributing to elements of* substantive, normative, and transactive effectiveness. While EIA effectiveness cannot conclusively be based on actors' perceptions, this analysis provides empirical evidence on areas that are performing well and those that are inadequate in the context of Namibia.

Some of the suggestions given from the survey and interviews to improve the effectiveness of EIA include the need to publish EIA activities in the yearly state of environmental reports, efforts to strengthen and enforce monitoring and follow-ups, improved environmental awareness and public participation through the decentralisation of EIA services to regional, local and traditional authorities and establishment of an independent, autonomous and capacitated (with financial and human resources) body to regulate and coordinate EIA. While the expectation is for EIA to be fully effective, the moderate rating does not imply failure because certainly, the situation could have been worse in the absence of EIA legislation and practices. For an EIA system that has not been reviewed, these results are somewhat positive, and with improvements, the system can become effective and efficient.

In objective 4, the study delved into the micro level, scrutinizing the implementation of the EIA process in two selected case studies in Namibia. The micro

analysis of the Namibian Marine Phosphate (NMP) and REN projects provided valuable insights into the implementation of the actual EIA process based on information provided in the EIA reports and other relevant documents, as per the existing law. Some of the concerns that came out of the case study analysis included challenges related to capacity and the lack of EIA experts in Namibia.

The EIA team for both projects showed a high proportion of foreign experts. Namibia legislation lacks requirements on EAP certification, training, and accreditation, and the regulation only vaguely states that an EAP should have appropriate experience and knowledge of Namibian law and environment. Other shortcomings noticed in the microanalysis include a lack of commitment toward monitoring and rehabilitation plans in project planning, inadequate and poor public consultations, mistrust between actors, and seemingly compromised decisions. These limitations compromise the quality and credibility of the EIA process and bring questions about the stewardship of environmental governance in Namibia.

Overall, the study findings reveal that the Namibian EIA process is not fully adequate or effective in facilitating good environmental decisions, learning, emergence of leadership, and sustainability elements. These results prompt further questions about the influence of EIA on developmental goals and decisions. Namibia's EIA legislation review is long overdue with consultations already completed in 2018. To date, there is no official statement or notification to the public on the progress towards the finalization of the legislation. However, from the result of this study, reform is needed, and evidence of this study is timely to address critical gaps and deficiencies in both the legislation, administration, and implementation plan to ensure a performing EIA system and quality and effective procedures.

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## Appendix A: Ethical Clearance Certificate



### ETHICAL CLEARANCE CERTIFICATE

**Ethical Clearance Reference Number:** EEREC/0003

**Date:** 30<sup>th</sup> September 2019

This Ethical Clearance Certificate is issued by the University of Namibia Research Ethics Committee (UREC) in accordance with the University of Namibia's Research Ethics Policy and Guidelines. Ethical approval is given in respect of undertakings contained in the Research Project outlined below. This Certificate is issued on the recommendations of the ethical evaluation done by the Environment and Engineering Research Ethics Committee (EEREC).

**Title of Project:** *The evaluation of performance, quality and effectiveness of Namibia EIA system*

**Nature/Level of Project:** *PhD*

**Researcher:** *Nekwaya Dietlinde Ndakumwa*

**Student Number:** *200235443*

**Faculty:** *Agriculture and Natural Resources*

**Supervisors:** *Prof Martin Hipondoka, (Main) UNAM  
Dr Simon Angombe (Co-) UNAM  
Prof. Andrew Dougill & Prof. Lindsay Stringer (University of Leeds)*

Take note of the following:

- i. Any significant changes in the conditions or undertakings outlined in the approved Proposal must be communicated to the EEREC. An application to make amendments may be necessary.
- j. Any breaches of ethical undertakings or practices that have an impact on ethical conduct of the research must be reported to the EEREC.
- k. The Principal Researcher must report issues of ethical compliance to the EEREC (through the Chairperson of the Faculty/Centre/Campus Research & Publications Committee) at the end of the Project or as may be requested by EEREC.
- l. The EEREC retains the right to:
  - i. Withdraw or amend this Ethical Clearance if any unethical practices (as outlined in the Research Ethics Policy) have been detected or suspected,
  - ii. Request for an ethical compliance report at any point during the course of the research.

REC wishes you the best in your research.

**Prof. O. T. Johnson:** EEREC Chairperson

A handwritten signature in black ink, appearing to read "Johnson", written over a horizontal dashed line.

Signature

## Appendix B: Research Permit

### CENTRE FOR RESEARCH SERVICES

Office of the Pro-Vice Chancellor: Research, Innovation & Development

University of Namibia, Private Bag 13301, Windhoek, Namibia  
340 Mandume Ndemufayo Avenue, Pioneers Park, Office F223 - Falock, Second Floor  
☎ +264 61 206 4673; E-mail: [malikmbulu@unam.na](mailto:malikmbulu@unam.na); URL: <http://www.unam.edu.na>



### RESEARCH PERMISSION LETTER

Date: 01/02/2024

**Student Name:** NAKWAYA DIETLINDE NDAKUMWA

**Student Number:** 200235443

**Programme:** DOCTOR OF PHILOSOPHY IN AGRICULTURE

**Approved Research Title:** The evaluation of performance, quality and effectiveness of Namibia EIA system

#### TO WHOM IT MAY CONCERN:

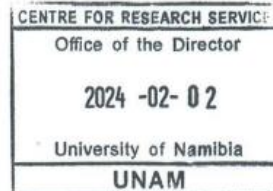
I hereby confirm that the above-mentioned student is registered at the University of Namibia for the programme indicated. The proposed study met all the requirements as stipulated in the University guidelines and has been approved by the relevant committees.

The proposal adheres to ethical principles as per attached Ethical Clearance Certificate. Permission is hereby granted to carry out the research as described in the approved proposal.

Best Regards

A handwritten signature in black ink, appearing to read 'AEE', is written over a horizontal line.

**Dr. AEE Shikongo**  
**Head: Postgraduate Research Support Services**  
**Tel: +264 61 206 3129**  
**E-mail: [aeshikongo@unam.na](mailto:aeshikongo@unam.na)**



## Appendix C: Print Version of Survey

10/16/2018 Print version

### Questionnaire

**1 Welcome**

---

**Dear participant,**  
This questionnaire is designed to collect data for a research project titled: *the Evaluation of the performance, quality and effectiveness of Environmental Impact Assessment: A case study of Namibia*, as part of my PhD studies at the University of Namibia in association with the University of Leeds, UK. The data collected will be used for academic purposes only and all information gathered will be kept confidential and the identity of participants will not be revealed. I will appreciate your honest, clear and objective responses to all questions. You may choose not to answer a question, should you feel uncomfortable. By taking part in this survey, it is understood that you are giving consent to partake. The survey consist of section A: personal data & section B: 10 structured multiple choice questions. The survey will take about 20 minutes to complete.

---

**2 Standard page**

**1. Type of institution**

Ministry/ SOE

Local Authority

Academia

NGO/Public

Consultant

**2. Highest qualification**

Grade 12       Bachelor       Masters       PhD

**3. Gender**

Female       Male

**4. Age**

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10/16/2018

Print version

20-30       30-40       40-50       50+

**5. Years of experience in EIA**

Less than 5years       5-10 years       more than 10 years

**6. How many EIAs have you been involved with in the last 3 years?**

1-3       4-6       7-10       10+

**7. Which stage(s) of EIA are you mostly involved in (mark more than one)**

- Screening
- Scoping
- Public participation/stakeholder consultation
- Impact analysis & Mitigation
- Report preparation (including specialist study)
- Report review
- Decision making
- Monitoring and follow up

**8. Which sector are you mostly involved in (mark more than one)**

- Energy generation, transmission & storage
- Infrastructure development (oil, water, gas, roads airports & harbors etc.)
- Land use and development (rezoning)
- 

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Water resources developments

- Tourism development
- Waste & Hazardous substance management
- Mining & Quarrying
- Forestry, aquaculture & Agriculture
- Fisheries

### 3 Standard page

#### 1. To what extent are the following institutional frameworks in place, adequate for the conduct of EIA in Namibia?

Very adequate: comprehensive & adequate  
 Moderately adequate: minor gaps & inadequate  
 Inadequate : some gaps & inadequate  
 Poor: significant gaps & inadequate  
 No opinion: insufficient basis/ experience to judge

	Very adequate	Moderately adequate	Inadequate	Poor	No opinion
a) Legal/policy basis	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) Scope of EIA application to listed activities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) Requirements for compliance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d) Procedures established for conduct of EIA	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e) Technical guidelines (e.g., for	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

10/16/2018

Print version

determining significance of impacts)

f) Public scrutiny & participation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g) Consistent impartial EIA administration	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h) Clear links to decision making	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
i) Requirements for alternatives	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
j) Requirements to assess cumulative impacts	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
k) Requirements to address sustainability issues	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
l) Requirements to undertake monitoring & follow up	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**2. How well are the following stages of the EIA process usually performed in Namibia?**

Excellent: comprehensive & adequate  
Good: minor gaps & inadequate  
Limited: some gaps & inadequate  
Poor: significant gaps & inadequate  
No opinion: insufficient basis/ experience to judge

	Excellent	Good	Limited	Poor	No opinion
a) Screening:Baseline study	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) Scoping: Impact analysis	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) Draft management plan & Mitigation measures	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d) Public participation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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e) EIA report preparation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f) Review & decision making	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g) Monitoring	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h) Environmental auditing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**3. To what extent does the EIA process satisfy/ meet the following qualities of good governance?**

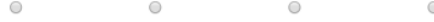
	<b>Fully met</b>	<b>Partially met</b>	<b>Marginally met</b>	<b>Poorly met</b>
a) Participation: EIA process provides appropriate opportunities to deliberate for all groups to be informed, involved & their views incorporated into decision making.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) Rule of law: EIA process is based on impartial legal system that protects the environment & its people.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) Linkages: EIA process enhances appropriate coordination & communication among organizations/ institutions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d) Consensus oriented: EIA process mediates between the many different needs, perspectives and expectations of stakeholders.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e) Equity: EIA process is fair and	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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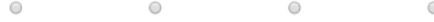
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enhances representation of communities and stakeholders.

f) Responsiveness: EIA process responds to concerns raised by stakeholders & general public within reasonable time.



g) Transparency: EIA process & the decision making process is open & accessible.



h) Legitimacy: EIA process is accepted & supported by various communities, general public & government (political will).



i) Accountability: Decision makers & proponents are responsible to all parties for their action & decision under the EIA process.



j) Effectiveness & efficiency: EIA process & its outcomes ensure environmental protection, sustainable use of resources at the least cost to the society.



**4. To what extent is the EIA process effective in achieving the following areas of decision making?**

Very effective      Moderately effective      Marginally effective      Not effective      No opinion

- a) Facilitate more informed decision making.
- b) Ensuring explicit consideration of the environmental factors in decision making.
- c) Ensuring explicit considerations of social factors in decision making
- d) Ensuring appropriate arrangements for verifying implementation & monitoring
- e) Ensuring appropriate arrangements for managing unanticipated impacts

**5. To what extent is the EIA process effective in achieving the following areas of learning?**

- |  | Very effective        | Moderately effective  | Marginally effective  | Not effective         | No opinion            |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| a) Increase environmental awareness of developers.   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| b) Increase environmental awareness of competent authorities.                                | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| c) Promote environmental awareness and values of environmental/social concerns among public. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| d) Enhance opportunity for   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

stakeholders to learn & gain knowledge.

e) Enhance provisions of institutional memories.

**6. To what extent is the EIA process effective in achieving the following levels of leadership?**

	Very effective	Moderately effective	Marginally effective	Not effective	No opinion
a) Visionary leaders: who inspire people and promote progressive change	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) Entrepreneurial leaders: who go out & make things happen.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) Collaborative leaders: who are connectors and help to facilitate new kinds of partnerships.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**7. To what extent is the EIA process effective in achieving the following mechanism of sustainable development?**

	Very effective	Moderately effective	Marginally effective	Not effective	No opinion
a) Resolving trade-offs : decision is fair& socially acceptable; economically viable and that protects the environment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) Placing limits on the use of coercive power and enhancing power as capacity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) Establishing common vision amongst communities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d) Helping stakeholders to identify &	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

create shared values and shared identities

e) Promoting fair and democratic public participation



**8. To what extent is EIA process efficient in the following areas?**

Very efficient      Moderately efficient      Marginally efficient      Not efficient      No opinion

a) Attracting government and international funding.



b) Ensuring an EIA process that is prompt & conducted within a reasonable time (with no delay)



c) Ensuring an EIA process that is inexpensive, conducted at a reasonable cost and justifying the benefits thereof.



d) Ensuring that EIA authority (DEA) is well organised, their roles & responsibilities are clearly defined & allocated.



**9. To what extent is public participation effective in achieving the following rationale?**

Very effective      Moderately effective      Marginally effective      Not effective

a) Influence decisions



b) Enhancing democratic capacity of those involved



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- c) Enhancing social learning
- d) Empowering & emancipating marginalized individuals & groups
- e) Harness local information & knowledge
- f) Generating legitimacy
- h) Resolving conflicts

**10. What are your views on the following?**

What are the contextual factors hindering the effectiveness of EIA in Namibia?

How can the effectiveness of EIA be improved?

This research is composed of this survey and additional interviews. If you would like to partake in in-depth discussion through an interview, kindly indicate your contacts:

---

**4 Final page**

**Thank you for partaking in this survey !**

**Appendix D: Interview Guide**

<b>University of Namibia</b>	
<b>Title of study</b>	
Evaluation of the performance, quality, and effectiveness of EIA system: A case study of Namibia	
Investigator:	Dietlinde N Nakwaya
<b>Interview guide</b>	

<b>Component</b>	<b>Questions</b>	<b>Key points to focus</b>
Legal policy	What is your take on the performance of the; EIA legislation EIA process?	EMA and the regulations, screening, scoping, participation, monitoring,
Quality of EIA reports	What is your take on the quality of EIA reports in Namibia? Do you think the quality of EIA reports have improved over the years? What contributes to low quality reports?	EIA process, quality, EIA consultants, experience, and knowledge of consultants
Governance	EIA is a governance tool. Do you think our EIA system is based on good governance principles, and how?	Rule of law, legitimacy, accountability, transparency, equity, responsiveness, coordination and communication, cost effectiveness, credibility
Effectiveness and decision making	Do you think the EIA system has the capacity to contribute and enhance effective DM?	Decision making, conditions of the ECC, informed DM
Learning capacity	Do you think the communities and public learn from partaking in the EIA process? Does EIA contribute to environmental awareness?	Learning, new information and ideas, environmental literacy and consciousness trust among individuals, institutional memory, lesson learnt
Leadership	Does EIA contribute to emergence of leadership among the community and the public?	Community, working together, prepared
Sustainable development	How does EIA contribute to SD?	Trade-offs (social, economic, and environmental needs), fair and democratic PP, common vision,
Power and politics	Is politics and power playing a role in the implementation of EIA and how?	EIAs for government projects, influence of politicians on EIA process, corruption, bribery,

	Do people in government and high offices have an advantage in the EIA process?	
Public participation	How is PP done in EIA? Is Public participation effective?	Types of methods used to call for PP, benefits of PP, Effectiveness in DM, effectiveness in harnessing traditional knowledge, inclusion of public view in the reports and DM
Financial and human resource capacity	Is there enough capacity at DEA? Is EIA affordable? In terms of time, is EIA efficient? Is the ministry or DEA well-funded to handle the EIA process?	Skills and experience of people at DEA, roles, and responsibilities, Estimate cost of an EIA, No delays for project implementation, no delay in EIA DM Vehicles and funds for inspection, hiring people,
Context	What are the contextual factors influencing effectiveness of EIA?	Corruption, lack of EIA understanding and expertise, EIA quality assurance, follow up and EMP, awareness creation, DM, requirements for EIA practitioners, lack of knowledge and transparency of DEA, PP, political support vs interference
Improvement	How can EIA be improved?	Impartial DM body, compliance team, penalties enforcement, registration of EIA practitioners, public awareness, monitoring, increase capacity at DEA, conflict of interest (MET with consulting companies), stakeholder participation, implementation of mitigation measures, amendment of legislation

**Appendix E: EIA effect on increased learning & environmental awareness of developer vs type of institution**

Scale	Type of Institution					Total
	Government	Local Authority	Academia	NGO	Consultants	
Very effective	39.3%		34.8%	12.5%	23.5%	27.6%
Moderately effective	42.9%	75.0%	21.7%	62.5%	38.2%	41.0%
Marginally effective	17.9%		30.4%	12.5%	32.4%	23.8%
Not effective		25.0%	13.0%	12.5%	5.9%	7.6%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

**Appendix F: EIA effect on increased learning & environmental awareness of Competent authority vs Type of institution**

Scale	Type of Institution					Total
	Government	Local Authority	Academia	NGO	Consultants	
Very effective	37.0%		26.1%	6.3%	29.4%	26.0%
Moderately effective	51.9%	50.0%	34.8%	75.0%	29.4%	44.2%
Marginally effective	11.1%	50.0%	26.1%	12.5%	32.4%	23.1%
Not effective			13.0%	6.3%	2.9%	4.8%
Total					5.9%	1.9%

**Appendix G: EIA effect on increased learning & environmental awareness of public vs Type of institution**

Scale	Type of Institution					Total
	Government	Local Authority	Academia	NGO	Consultants	
Very effective	18.5%		36.4%	12.5%	29.4%	24.3%
Moderately effective	66.7%	50.0%	13.6%	43.8%	23.5%	36.9%
Marginally effective	14.8%	25.0%	27.3%	31.3%	35.3%	27.2%
Not effective		25.0%	22.7%	12.5%	11.8%	11.7%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

**Appendix H: EIA effect on increased learning & and gaining knowledge vs Type of institution.**

Scale	Type of Institution					Total
	Government	Local Authority	Academia	NGO	Consultants	
Very effective	14.8%		17.4%	6.3%	26.5%	17.3%
Moderately effective	70.4%	50.0%	43.5%	50.0%	38.2%	50.0%
Marginally effective	14.8%	50.0%	21.7%	37.5%	29.4%	26.0%
Not effective			17.4%	6.3%	2.9%	5.8%
No opinion					2.9%	1.0%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

**Appendix I: EIA effect on enhancing institutional memory vs Type of institution.**

Scale	Type of Institution					Total
	Government	Local Authority	Academia	NGO	Consultants	
Very effective	14.8%		13.0%		14.7%	11.5%
Moderately effective	51.9%	50.0%	17.4%	43.8%	26.5%	34.6%
Marginally effective	29.6%	25.0%	21.7%	18.8%	26.5%	25.0%
Not effective		25.0%	26.1%	18.8%	14.7%	14.4%
No opinion	3.7%		21.7%	18.8%	17.6%	14.4%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

**Appendix J: Government Local Authority Academia NGO Consultants**

Scale	Type of Institution					Total
	Government	Local Authority	Academia	NGO	Consultants	
Very effective	22.2%		4.3%	12.5%	17.6%	14.4%
Moderately effective	48.1%	50.0%	34.8%	25.0%	29.4%	35.6%
Marginally effective	22.2%	50.0%	8.7%	25.0%	17.6%	19.2%
Not effective	3.7%		30.4%	25.0%	11.8%	15.4%
No opinion	3.7%		21.7%	12.5%	23.5%	15.4%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

**Appendix K: EIA effect on the emergence of Entrepreneurial leadership \* Type of institution Crosstabulation**

Scale	Type of Institution					Total
	Government	Local Authority	Academia	NGO	Consultants	
Very effective	22.2%		4.3%	12.5%	17.6%	14.4%
Moderately effective	48.1%	50.0%	34.8%	25.0%	29.4%	35.6%
Marginally effective	22.2%	50.0%	8.7%	25.0%	17.6%	19.2%
Not effective	3.7%		30.4%	25.0%	11.8%	15.4%
No opinion	3.7%		21.7%	12.5%	23.5%	15.4%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

**Appendix L: EIA effect on the emergence of Collaborative leadership \* Type of institution Crosstabulation**

Scale	Type of Institution					Total
	Government	Local Authority	Academia	NGO	Consultants	
Very effective	14.8%		4.3%	6.3%	8.8%	8.7%
Moderately effective	55.6%	25.0%	30.4%	43.8%	35.3%	40.4%
Marginally effective	25.9%	75.0%	13.0%	31.3%	20.6%	24.0%
Not effective			34.8%	18.8%	14.7%	15.4%
No opinion	3.7%		17.4%		20.6%	11.5%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

**Appendix M: EIA effect on the sustainability element on resolving trade-offs type of institution Crosstabulation.**

Scale	Type of Institution					Total
	Government	Local Authority	Academia	NGO	Consultants	
Very effective	26.9%		8.7%		17.6%	14.7%
Moderately effective	46.2%	50.0%	30.4%	53.3%	50.0%	45.1%
Marginally effective	23.1%	25.0%	34.8%	40.0%	17.6%	26.5%
Not effective		25.0%	21.7%	6.7%	2.9%	7.8%
No opinion	3.8%		4.3%		11.8%	5.9%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

**Appendix N: EIA effect on sustainability element on the limit on the use of coercive power \* Type of institution  
Crosstabulation**

Scale	Type of Institution					Total
	Government	Local Authority	Academia	NGO	Consultants	
Very effective	11.5%		8.7%	6.7%	8.8%	8.8%
Moderately effective	30.8%	25.0%	21.7%	33.3%	35.3%	30.4%
Marginally effective	34.6%	50.0%	47.8%	46.7%	29.4%	38.2%
Not effective	7.7%	25.0%	21.7%	6.7%	5.9%	10.8%
No opinion	15.4%			6.7%	20.6%	11.8%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

**Appendix O: EIA effect on sustainability element on establishing common vision in community \* Type of institution Crosstabulation.**

Scale	Type of Institution					Total
	Government	Local Authority	Academia	NGO	Consultants	
Very effective	11.5%		8.7%		5.9%	6.9%
Moderately effective	38.5%	25.0%	26.1%	60.0%	26.5%	34.3%
Marginally effective	42.3%	50.0%	34.8%	26.7%	38.2%	37.3%
Not effective	3.8%	25.0%	30.4%	13.3%	17.6%	16.7%
No opinion	3.8%				11.8%	4.9%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

**Appendix P: EIA effect on sustainability element on Identifying and creating shared values in community \* Type of institution Crosstabulation.**

Scale	Type of Institution					Total
	Government	Local Authority	Academia	NGO	Consultants	
Very effective	3.8%		17.4%	13.3%	14.7%	11.8%
Moderately effective	57.7%	25.0%	21.7%	40.0%	35.3%	38.2%
Marginally effective	38.5%	75.0%	34.8%	33.3%	26.5%	34.3%
Not effective			21.7%	13.3%	11.8%	10.8%
No opinion			4.3%		11.8%	4.9%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

**Appendix Q: EIA effect on sustainability element on promoting fair & democratic participation vs Type of institution Crosstabulation.**

Scale	Type of Institution					Total
	Government	Local Authority	Academia	NGO	Consultants	
Very effective	8.0%		17.4%	13.3%	23.5%	15.8%
Moderately effective	48.0%	25.0%	39.1%	46.7%	41.2%	42.6%
Marginally effective	32.0%	50.0%	26.1%	33.3%	20.6%	27.7%
Not effective	12.0%	25.0%	17.4%	6.7%	5.9%	10.9%
No opinion	0	0	0	0	8.8%	3.0%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

**Appendix R: EIA effectiveness in luring international and national funding vs Type of institution Crosstabulation**

Scale	Type of Institution					Total
	Government	Local Authority	Academia	NGO	Consultants	
Very effective	22.2%		21.7%		17.6%	16.5%
Moderately effective	44.4%	75.0%	13.0%	46.7%	17.6%	30.1%
Marginally effective	7.4%	25.0%	26.1%	26.7%	17.6%	18.4%
Not effective	14.8%		30.4%	13.3%	17.6%	18.4%
No opinion	11.1%		8.7%	13.3%	29.4%	16.5%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

**Appendix S: EIA efficiency in ensuring prompt, timely process vs Type of institution Crosstabulation.**

Scale	Type of Institution					Total
	Government	Local Authority	Academia	NGO	Consultants	
Very effective	18.5%		8.7%	13.3%	15.2%	13.7%
Moderately effective	44.4%	50.0%	26.1%	26.7%	33.3%	34.3%
Marginally effective	25.9%	25.0%	34.8%	33.3%	15.2%	25.5%
Not effective	7.4%	25.0%	21.7%	20.0%	24.2%	18.6%
No opinion	3.7%		8.7%	6.7%	12.1%	7.8%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

**Appendix T: EIA efficiency in ensuring reasonable cost vs Type of institution Crosstabulation.**

Scale	Type of Institution					Total
	Government	Local Authority	Academia	NGO	Consultants	
Very effective	11.1%		8.7%		5.9%	6.8%
Moderately effective	33.3%	50.0%	21.7%	33.3%	17.6%	26.2%
Marginally effective	29.6%		26.1%	26.7%	38.2%	30.1%
Not effective	18.5%	25.0%	30.4%	33.3%	26.5%	26.2%
No opinion	7.4%	25.0%	13.0%	6.7%	11.8%	10.7%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

**Appendix U: EIA efficiency in ensuring roles of authority is clear & defined vs Type of institution Crosstabulation.**

Scale	Type of Institution					Total
	Government	Local Authority	Academia	NGO	Consultants	
Very effective	37.0%		13.0%	6.7%	14.7%	18.4%
Moderately effective	33.3%	25.0%	34.8%	33.3%	29.4%	32.0%
Marginally effective	14.8%	50.0%	13.0%	26.7%	26.5%	21.4%
Not effective	14.8%		26.1%	26.7%	20.6%	20.4%
No opinion		25.0%	13.0%	6.7%	8.8%	7.8%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Appendix V: **Certificate by Language Editor**

This is to certify that **Minétté Teessen** has performed a

- Copy-edit
- Page layout & document format
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**EVALUATION OF THE PERFORMANCE, QUALITY AND EFFECTIVENESS OF ENVIRONMENTAL IMPACT ASSESSMENT IN SUB-SAHARAN AFRICA: A CASE OF NAMIBIA**

compiled by

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Date: 30 April 2024

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