**Abstract**

Environmental Impact Assessment (EIA) in Namibia was formally introduced in 2007. However, little EIA related research has been undertaken and the system has not been formally reviewed. This paper evaluates the 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 literature review, document analysis, and semi-structured interviews. The study revealed that Namibia has a functional EIA system based on fairly good legislation, institutional arrangements and a well outlined EIA process. Analysis of the legislation and administrative frameworks nevertheless highlighted several weaknesses including a lack of coherence in the legislation and poor implementation. Further weaknesses included a lack of monitoring and enforcement capacity, weak communication and information sharing, inadequate financial and human resources, and inappropriate public consultation approaches. It was found that EIA is slowly being accepted in Namibia and it has a preventative effect on proposed developments. The study recommends an urgent need to complete the ongoing legislative reform to close existing gaps and to improve the performance of the EIA system.

*Keywords*: performance; effectiveness; EIA system; Namibia.

1. **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 et al., 2017; Morgan, 2012). According to Glasson et al., (2012), EIA aims to identify potential environmental impacts of activities and assess different options prior to a decision 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 also based on the same set of principles, 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) emphasized that many developing countries mimicked western EIA systems without consideration of local politics and context.

While other countries in the world introduced the EIA system as far back 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 saw the introduction of EIA in 1997, followed closely by Mozambique and Angola in 1998 (Aucamp, 2009). Literature shows that the quality of EIA, its implementation, and performance differ based on the governance system and the context (Kolhoff et al., 2018; Suwanteep et al., 2016). It is, therefore, necessary that an 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 (Rebelo & Guerreiro, 2017). Some of the shortcomings found in developing countries include insufficient consideration of impacts and alternatives, and lack of public participation (Elvan, 2018; Wood, 2003).

EIA in Namibia was introduced in 2007 through the promulgation of the Environmental Management Act (EMA, No. 7, 2007) (GRN, 2007). It was later followed by the EIA Regulations in Notice No 30, 2012 (GRN, 2012). Although the system has been in place for about a decade, no formal system review and monitoring have been undertaken to date. The Government of Namibia recently completed a consultation process for reviewing and amending EIA legislation. This study is therefore timely in bringing useful evidence grounded in the perceptions of different key stakeholder groups, on the functioning and implementation gaps in the EIA legislation, which can now be used to develop appropriate guidelines, once the legislation is promulgated. At an institutional level, system review and monitoring is a critical step in obtaining feedback and a means of improving processes and mechanisms and there is also limited research in that area. The aim of this study is therefore to review the procedural performance and effectiveness of the Namibia EIA system. It answers two questions: (a) what is the current practice of EIA in Namibia and to what extent does the EIA system conform to international best practices and incorporate emerging environmental issues? And (b) what are the strengths and weaknesses in the implementation of the EIA system in Namibia?

1. **Evaluation criteria**

The evaluation criteria for the analysis of the EIA system of Namibia used in this study (Figure 1) were designed according to Ahmad and Wood (2002), Wood (2003) and Fuller (1999). Ahmad and Wood's (2002) and Wood’s (2003) model comprise criteria to measure the conformance and performance of the EIA system, while Fuller’s (1999) model adds structure by grouping the criteria into systemic and foundational measures. Systemic measures consist of features of EIA designed to deliver quality assurance in practice and administration including the legal, administrative, and procedural frameworks, while foundational measures consider actions to improve the effectiveness of the EIA system including the existence of EIA guidelines, training opportunities, and the certification of professionals. These evaluation criteria focus on the requirements and operation of the EIA system at a national level.

**Figure 1**: EIA evaluation criteria (adapted from Ahmad & Wood, 2002; Wood, 2003; Fuller, 1999)

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| **Systemic measures**(1*) EIA legislation* |
| 1.1 Legal provisions for EIA1.2 Provisions for appeal by the developer or the public against decisions1.3 Legal specification of time limits1.4 Formal provisions for SEA |
| (2) *EIA administration* |
| 2.1 Competent authority for EIA and determination of environmental acceptability2.2 Review body for EIA2.3 Specification of sectoral authorities’ responsibilities & coordination with other planning control bodies. |
| (3) *EIA process* |
| 3.1 Specified screening categories3.2 Systematic screening approach3.3 Systematic scoping approach3.4 Requirement to consider alternatives3.5 Specified EIA report content3.6 Systematic EIA report review approach3.7 Provisions for public participation 3.8 Systematic decision-making approach3.9 Requirement for environmental management plans3.10 Requirement for mitigation of impacts3.11 Requirement for impact monitoring3.12 Experience of SEA3.13 Time and cost of EIA |
| **Foundational measures** |
| (1) Existence of general and/or specific guidelines(2) EIA system implementation monitoring(3) Expertise in conducting EIA (4) Training and Capacity building |

Literature review, document analysis, and semi-structured interviews were used in this study. Data collection began with an initial review of the literature and analysis of EIA policy and guidance documentation. The 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. Interviewees were recruited by convenience and snowball sampling with a focus on obtaining a range of opinions from experts with the most experience in EIA and representatives of the five main actor groups: Academia, Non-governmental Organization (NGO), Consultants, Local Authorities, Government and Private organization. A minimum of two representatives was targeted per group. Due to a limited number of experts in Namibia, the sample of 25 was considered to be adequately representative of all the key EIA actors nationally. A detailed profile of interviewees is not provided here as per the agreements made with participants in the ethical conditions for this research, but the final sample comprised the following: Government (with three representatives from the Department of Environmental Affairs and five from the competent authorities); two from the private institutions; two local authorities; eight environmental consultants; two academics; and two NGO representatives. All interviewees had at least 5 years of experience in EIA. A pilot interview was first undertaken with five experts, and changes were made to the questions as suggested. Questions were technical and EIA specific, therefore the general public was not included in the interviews. Additional probing questions were posed to stimulate further and detailed discussions (Saunders et al., 2009). Interview transcripts were analyzed using a deductive approach based on the research questions and occurring themes fitting the evaluation criteria. Interviewees’ views are presented in the results (Table 1) and in text using code names to preserve anonymity.

1. **Results**

In this section, the performance of the Namibia EIA system is reviewed. Following evidence obtained from document analysis and interviews, criteria in Table 1 were classified as fully met when substantive evidence was found; partially met when only some evidence was found and not met when no evidence was found. Overall, results show that 68% (n=15) of the evaluation criteria are partially met; 31% (n=5) are not met and none of the criteria is considered fully met (Table 1).

**Legislative framework for EIA**

The constitution of Namibia article 95(l) requires the state to govern the environment for the wellbeing 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”* (GRN, 1990). 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, MET initiated an extensive inter-sectoral dialogue on environmental management, which led to the Namibia Green Plan which was at the Rio Earth Summit in 1992. In 2020, MET was recently renamed the Ministry of Environment, Forestry and Tourism (MEFT), and it is referred to as such henceforth in this paper. 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 (EMA, No. 7 of 2007) and the enabling EIA Regulations (No. 30 of 2012). The EIA legislation applies to new projects as well as to the renovation or expansion of existing development.

EIA regulations require the developer to appoint an independent environmental consultant and to ensure compliance with all the statutory requirements of the EIA process before commencing a development activity. The EMA (2007) specifies the steps of the EIA process, and associated time limits and institutional responsibilities.

Section 27 of the EMA (2007) consists of a prescribed list of 65 activities that are subject to EIA and likely to cause adverse environmental and social impacts on the environment. Some of the activities on the list include infrastructure development and construction, water extraction, mining and agricultural activities. According to interviewees, the list of activities needs amendment, as some potential high impact activities including fisheries and sand mining are currently omitted.

A senior government scientist highlighted that current loopholes in the EIA list result from a lack of consultation, stakeholder engagement and consensus stemming back to the initial drafting of the EIA legislation in early 2000. Interviewees pointed out that disagreements resulted from inter-ministerial conflict and different groups jostling for power. An NGO expert specifically pointed out that critical elements including activity categories and thresholds, provision of SEA requirements in the regulations, and the clearly defined role of the Sustainable Development Advisory Committee in review and decision-making process were outlined in the draft Environmental Management Bill in 2003, but were omitted in the final EMA promulgated in 2007. The current legislation now has several grey areas leading to a lack of coherence between the Act and the regulations.

One of the legislative strengths in the Namibia EIA system is the provision to appeal. According to section 50 of the EMA, any person aggrieved by the decision on EIA applications has the right to appeal to the minister or high court 14 days after a decision is made (GRN, 2007). While it is a strength, interviewees indicated that a 14-day period is too little, as the appeal process requires the gathering of evidence and communication with stakeholders or support groups, all of which take time. Another challenge is that the appeal application can only be submitted to the office of the commissioner, which is only stationed in the capital city of Windhoek.

Another important provision in the EIA legislation relates to timelines. The regulations clearly indicate that upon receipt of the application, the environmental commissioner should acknowledge the EIA application and notify the proponent within three days. Within seven days the environmental commissioner should review the EIA report. No definite timeline is indicated for decision making; the EMA only stipulates that decision making should be undertaken “*within a reasonable time*” (GRN, 2007).

All interviewed experts agreed that the EIA system in Namibia is based on clear legal provisions. However, there were reservations about the implementation of the legislation, with experts indicating a need to strengthen some areas and identifying the need to create enablers for effective implementation.

One of the weaknesses in the regulation is the inconsistent use of terms and concepts in the EMA and the regulations. Specific reference was also made to a lack of appropriate definitions of key terms in the regulations. Terms such as public participation and public consultation are used interchangeably and not clearly defined. An expert from DEA confirmed these problems and noted that they contribute to non-compliance, stating *“it becomes difficult to enforce the legislation and to deal with offenders as the court ask about the requirement for EIA. For example, the court can ask if the requirement is public participation or public consultation?”* (Exp\_GovRS1).

Other legislative weaknesses stated during interviews included a lack of requirements for impact monitoring and strategy on enforcement, lack of personnel including environmental inspectors and environmental officers and lack of requirements for strategic assessment. Interviewees pointed out that EIA fines and penalties are diminutive and cannot deter contravention of the EIA law. According to the EMA (2007), a person who commits an offence in terms of the EIA regulation is liable to a fine of N$ 100,000 (USD 6715.72 on 15/08/2021) or imprisonment of a period not exceeding 10 years, or both. Interviewees also noted that fines are only on paper and rarely imposed, but when enforced, developers tend to win court cases on an appeal basis due to several loopholes in the legislation.

Another notable weakness in the system is a lack of sector guidelines on activities requiring EIA. No sector guidelines exist and therefore assessments of similar projects are undertaken differently. A senior expert from an NGO suggested that common developments such as fuel stations, shopping malls should have specific guidelines and be obliged to adopt the same environmental management plans.

Another gap in the EIA regulations is that there are no clear provisions for Interested and Affected Parties (IAP) or the public to be informed of the decision made on a proposed project. According to Regulation 18, the environmental commissioner is only required to inform the developer of the decision. A local authority expert stated there is a need for an open online database where the DEA share with the public information on EIA applications and decisions taken on the projects, adding that such can contribute to the transparency of the appeal process. Other interviewees also indicated that the public relies on media reports or leaked information from the DEA to learn of EIA decisions. Given the different weaknesses and strengths found in the legislative frameworks, this criterion is rated as partially met (Table 1).

**EIA Administration**

The Environmental Management Act (2007) designated the DEA under the MEFT as the sole regulatory authority in charge of supervising and authorizing EIA applications in Namibia. The DEA was established in 1990 and is headquartered in Windhoek. No DEA regional offices exist. Interviewees pointed out the lack of decentralization as a weakness in EIA administration.

The DEA is responsible for EIA review and authorization. The environmental commissioner is the head of the DEA and was first appointed in 2012. The environmental commissioner is responsible for all environmental decisions and their authorization in Namibia. Interviewed experts criticized the practice, indicating that EIA decisions are the foundation of national development and therefore should not be left to an individual. Experts from the government further indicated that the concentration of power in the position of the environmental commissioner renders it vulnerable to power abuse and influence from other individuals. Interviewees further condemned the decision-making process stating that it lacks transparency and is prone to corruption and bribery.

Government ministries in charge of natural resources are designated as competent authorities. According to local authority experts, there is limited communication and information sharing between the DEA office, local authority offices and the competent authorities. Interviewees from the competent authorities expressed concerns indicating that the current practice leaves EIA administration in the hands of the DEA alone. A senior scientist also lamented that: *“at the end of the day everything goes to MEFT and some of us can only advise. 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, while excluding scientists and field experts”* (Exp\_GovSS1).

Other weaknesses in the administration of EIA in Namibia are the limited capacity and inadequate skills and expertise to manage EIAs. DEA officials indicated that the EIA administration is demanding, and as a result, there is high staff turnover. Other shortcomings in the EIA administration include lack of financial resources and lack of vehicles to undertake project inspections.

Interviewed officials revealed that the position of DEA under a government ministry is a constraint to effective EIA management. Experts perceived that the current institutional arrangements lack the independence and autonomy to authorize EIA applications without government interference and political pressures. The DEA may also be faced with issues of conflict of interest and self-regulation when EIA applications are tabled from the mother ministry (MEFT).

Interviewed environmental consultants bemoaned that the EIA administration is unfair, citing that some of the DEA staff own environmental consulting firms, and therefore compete with the practitioners during tender applications. The environmental consultants also claimed that some DEA staff members are often shareholders or friends to the developers, therefore increasing the possibility of a conflict of interest, favouritism and unethical behaviour during the reviewing process.

The EIA law allows the developer to appoint and pay the environmental consultant. Interviewed experts criticized that, noting that this arrangement gives the developer excessive control over the EIA process, leaving the authorizing agency with minimal power. A senior scientist perceived that the quality of EIA reports is likely based on transaction conditions rather than on a true reflection of identified impacts. Interviewees suggested that an independent intermediary body should be established to handle payments of EIA services, to avoid questionable relationships between the environmental consultants and the developer.

Contrary to the divergent views of the government experts on the weakness of institutional arrangements, local authority representatives applauded the environmental commissioner for authorizing the local and regional authorities to grant environmental certificates for rezoning. The expert noted that since 2018, the municipality of the city of Windhoek and Walvis Bay has been granted the power to authorize land rezoning for several local developments.

Given the evidence of weaknesses and strengths in administrative frameworks, this criterion is rated as partially met (Table 1).

* 1. **EIA process**

The EIA process in Namibia involves four main steps: (a) screening, (b) scoping and preparation of the EIA report, (c) review and decision making and (d) monitoring and auditing. These are shown in Figure 2.



**Figure 2:** The EIA process of Namibia (redrawn from MEFT, 2018)

* + 1. **Screening**

The screening process ensures that only projects with potentially significant impacts are assessed. The responsibility of screening projects lies with the DEA. A hybrid approach is used with a combination of a discretionary list, case-by-case examination and thresholds (GRN, 2012). No screening categories are provided in the legislation. However, for every listed activity, the proponent should submit a screening questionnaire to the DEA. Since 2018, the DEA has in place a screening questionnaire with approximately 25 questions enquiring about information on the project description and the environment. Some Government experts commended the questionnaire stating that it is comprehensive and allows the developer to provide important information for decision making. The majority of EIA consultants nevertheless criticized the screening tool, indicating that questions are too technical for community members in rural areas, as they are often not able to write and read in English.

The screening process is described as long, bureaucratic, and non-selective, a practice that defeats the purpose of the EIA process. A senior consultant noted that with the current screening process, a 3 km road and a 1000 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 (Exp\_PC2). *“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 a person needs an EIA”* (Exp\_PC2).

A further weakness in the EIA process is that listed activities lack thresholds. Only three activities (bulk transportation storage and transportation of dangerous goods, storage, and handling of dangerous goods and abstraction of underground water) have threshold requirements. A representative of the regulatory body described the current list of activities as “*one size fits all*” (EXP\_GovRS1).

A senior government expert noted that listing aquaculture facilities as an activity requiring an EIA without specifying the size limit has confused small-scale fish farmers. The expert further condemned the system, stating that in the case of aquaculture, EIA is becoming a hurdle to development, improvement of livelihood and food security. The expert said: *Now, if we take inland/freshwater aquaculture in the north (specifically in the Oshanas), the communities 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?* (ExP\_GovSR3).

The interviewed experts suggested a need to develop to: develop an exclusive and inclusive list of projects requiring EIA, introduce screening categories and establish standard Environmental Management Plans for common development activities to reduce the time spent on screening.

* + 1. **Scoping**

Scoping is an important stage in the EIA process to ensure that potential significant impacts are addressed. Scoping is the responsibility of the environmental consultant who assesses the proposed activity on behalf of the developer. Where the proposed activity does not require an assessment, the environmental commissioner may grant the application and, on payment of the prescribed fee, issue an Environmental Clearance Certificate to the proponent (GRN, 2012). When the proposed activity requires an assessment, the environmental commissioner determines its scope, the procedures and methods, and a reasonable period for the assessment report to be submitted (GRN, 2012). The development of the 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.

A strength in the Namibia EIA process is that public consultation is a requirement during scoping. In accordance with regulation 21, the developer must open and maintain a register of IAP and solicit comments from the public.

No scoping guidelines exist in the legislation. The outline of the scoping report is clearly outlined in regulation 8. According to interviewees, the scoping process heavily relies on desktop studies, and site visits are rare. An official from the Government lamented that as a result, scoping reports are not reflective of the actual environmental conditions, hence the low quality of EIA reports. The majority of interviewees also revealed that EIA reports are written following the specified outline, however, the quality of the EIA reports is poor, because of copying and pasting.

Consideration of alternatives is mandatory during scoping (GRN, 2012). Interviewed experts noted that the implementation of site alternatives is a problem because the land acquisition is obtained through municipalities and traditional authorities before project inception, therefore making it difficult to consider a change of site.

* + 1. **Review and decision making**

In Namibia, EIA reports are publicly reviewed before the final report is submitted for a decision. The regulation is not clear on the review approach and instrument used by the DEA; nor on the time needed for review. Section 36 of the EMA vaguely indicates that the environmental commissioner must review the application “*within a reasonable time after the closing date*” (GRN, 2007). Section 45 of the EMA requires the environmental commissioner to consult or appoint any person, institution and to hold a public hearing on the EIA application under review (GRN, 2007). In cases when technical knowledge is lacking or a high level of objectivity is required, the commissioner can appoint an external reviewer (GRN, 2007).

There are no review committees in place. However, the public can comment on the draft EIA report and the competent authorities can provide recommendations. Experts from competent authorities indicated that no formal appointment or training was provided on EIA review; as a result, the process is not prioritized and is undertaken as an *ad hoc* activity. It was suggested that an independent review committee made up of different stakeholders be established to assist the environmental commissioner with decision making.

According to experts from the DEA, the environmental clearance certificate often includes conditions the developer should meet during and after project implementation. Interviewees regarded such conditions as a strength of the EIA system. Non-compliance to the conditions of the environmental certificate can lead to fines of an amount not exceeding N$500,000 (USD 33578.61 on 15/08/2021), imprisonment for a period not exceeding 25 years, or both (GRN, 2012).

It is unclear as to what extent EIA findings contribute to decision making, but interviewees perceived that economic impacts such as job creation, investment opportunities, and service provision, are more highly considered in the approval of projects than environmental impacts.

* + 1. **Public participation**

Public participation is mandatory and conducted at screening, scoping, and EIA report review. Regulation 21 requires the proponent to notify the IAP of their intention to undertake an EIA for a listed activity (GRN, 2012). A notice including project information and a timeline for public meetings and comments must be placed once a week for two consecutive weeks in at least two newspapers circulated widely in Namibia. The public is given 21 days to comment on the draft scoping or EIA report, which should be placed at communal areas such as the library and municipal offices (GRN, 2012).

Interviewees commended the public participation regulations but argue that sharing of draft reports at public places can only work in urban areas as many rural areas lack such infrastructure. People in rural areas may also find it difficult to give comments or attend public meetings due to several reasons including long travelling times and distances between villages and towns, lack of awareness about the right to participate in EIA, illiteracy, communication and language barriers as the public invitations are sent out in English newspapers.

Interviewees also indicated that it is a norm that the public is requested to register as IAP and to provide comments via email. The majority of interviewees, however, argued that electronic communication is inappropriate because only a few Namibians have access to computers and the internet, particularly in remote rural areas. Cultural and traditional practices, leadership hierarchies and, gender concerns are some of the components that need improved consideration during public participation processes. Interviewees suggested that for participation to improve EIA awareness and advocacy especially in rural areas should be increased; public meetings should be advertised in local languages and on local radio; guidelines for public participation should be designed for the process to be more consistent.

* + 1. **Monitoring and auditing**

Monitoring and auditing are not legal requirements. Although monitoring appears in the EIA process, the regulations lack provisions to support the implementation. The EMA nevertheless contains inexplicit clauses referring to monitoring compliance in sections 4 (d); 7 (b); 17 (2) and another vague reference to the monitoring of environmental plans in sections 23(b) and 26(3).

The Environmental Management Plan (EMP) is a legal requirement in the Namibia EIA system. However, no specifications or guidelines exist on the usage of the EMP upon project approval. Interviewees noted that apart from lack of legislation, monitoring is also constrained by a lack of finances and human resource capacity.

* + 1. **Experience of Strategic Environmental Assessment (SEA)**

Namibia’s EIA regulations apply to both public and private projects. The EMA (2007) vaguely mentions SEA but no specific clause exists in the regulations about SEA. Hence, there is limited SEA and only a handful was undertaken between 1980-1998 (Tarr & Figueira, 1999), ten undertaken from 2008 through 2013 (Hipondoka et al., 2016) and the most recent SEA was carried out for the National Development Plan (NDP4) in 2015 (Dalal-Clayton & Tarr, 2015). The majority of interviewees suggested the inclusion of SEA requirements in the revised EIA legislation stating it can improve the effectiveness of the system.

* + 1. **Time and costs of EIA**

According to section 35 of the EMA (2007), the cost of the EIA service is the responsibility of the developer. The annexes of fees indicated that the clearance certificate and its amendment cost N$ 300 (20.18 USD on 15/08/2021), while the application for transferring the clearance certificate and the appeal process both cost N$1000 (67.71 USD on 15/08/2021). The consultant determines the cost of the assessment services.

The majority of interviewees noted that EIAs are generally not cheap in Namibia and can cost between N$50 000 (3357.86 USD on 15/08/2021) for a small project and above N$1,000,000 (67157.22 USD on 15/08/2021) for bigger projects and with a timeline between 3 and 12 months. According to a senior Environmental consultant, novice environmental practitioners tend to charge less to make a “quick buck”, while experienced practitioners charge high professional fees. A senior government official 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 in Namibia a proper EIA costs between 0.22% and 2.52% of the total project cost. Retief and Chabalala (2009) however indicated that in most countries, EIA costs between 0.01% and 0.5% of the total project cost.

With the evidence of the strengths and weaknesses found in the EIA process, this criterion is rated as partially met.

**Foundational measures**

Foundational measures include enablers such as EIA system review, training and capacity building, which are in place to improve the performance of the EIA system. In Namibia, the EMA designated the Sustainable Advisory Committee as a body responsible to provide advice on policy amendments. In 2018, the government undertook a series of stakeholder consultations on the amendment of the EMA and the regulations. According to an official from the DEA, comments from the consultations were successfully incorporated, however, the amended legislation awaits cabinet approval before gazetting and implementation.

Interviewees indicated that the EIA system lacks critical provisions on training and capacity building opportunities, EIA expert certification and research. The majority of environmental consultants and scientists expressed that they were motivated to participate in this study because of the dire need for EIA research in Namibia.

One of the notable improvements made by the DEA is the launch of the website: www.eia.met.gov.na in 2019 (MEFT, 2019). The website contains information on the EIA process, an online application system, a link to EIA draft reports open for public comments and a non-compliance form that can be used to report illegal activities related to EIA (MEFT, 2019).

**Table 1:** Review of the Namibia EIA system.

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| **Evaluation criteria** | **Rating** | **Results** |
| ***Systemic measures*** |  | EMA (2007) & EIA Regulations of 2012 clearly defines the EIA process but has shortcomings on timelines and omissions of activities.  |
| 1. **EIA legislation**1.1. Legal provisions for EIA | Partially |
| 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 too short given the EIA office is located in Windhoek. |
| 1.3. Legal specification of time limits | Partially | The overall timeline of the EIA process from screening to a decision is not indicated.  |
| 1. 4. SEA formal provision & experience | Not met | There is no SEA provision in the EMA & Regulations. |
| **2 EIA Administration**2.1 Competent Authority | Partially | DEA is the authority in charge of EIA, but not as a competent authority. The roles of competent authority are unclear.  |
| 2.2 Review body for EIA | Partially | Section 36 of the EMA (2007) assigns the environmental commissioner 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. |
| **3. EIA Procedure.**3.1 Specified screening categories | Partially | Screening approaches are given in the legislation, but screening categories & threshold is 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 an 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 (2007) assigns the EC to review, however no review checklist or guideline exist and no EIA review committee is established. |
| 3.6 Public Participation | Partially | Regulations 21, 22, 23 gives provision for public consultation, but no guideline is available. |
| 3.7 Systematic decision-making approach | Partially | Regulation 18 assigns 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 guidelines exist on the usage of the plan and how it can be implemented. |
| 3.9 Requirement for Impact monitoring | Not met | Monitoring is vaguely mentioned in the Act, but not in the EIA regulation.  |
| 3.10 Experience of SEA | Not met | No formal requirement for SEA in Namibia, hence poor experience. |
| 3.11 Time and cost of EIA | Partially | Timelines are provided for different stages, but no guidelines exist on the total time required to undertake EIA nor the cost. |
| **Foundation Measures**4.1 EIA system implementation and monitoring. | Not met | Provisions for EIA system monitoring are not in the legislation. |
| 4.2 EIA guidelines including sector authority. | Not met | No sector 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. |

1. **Discussion**

The assessment presented in this paper was undertaken based on document analysis of the EIA legislation and the inputs of various stakeholders involved in the EIA process in Namibia. The system has been evaluated against criteria for an ideal EIA system. The following discussion underscores the weaknesses and strengths of the Namibia EIA system.

***Weaknesses of EIA***

* 1. *Inadequate legislations*

The EIA system in Namibia is well placed from a legal perspective. It is supported by the constitution’s Article 95 and based on the Environmental Management Act (EMA) (no 7 of 2007) and the EIA regulations (2012). However, the EMA and the regulations have multiple loopholes and lack foundational measures relevant for effective implementation. Critical systemic measures including SEA requirements and impact monitoring are only vaguely mentioned in the EMA but are not present in the regulations. The absence of such components in the regulations means no provision or guideline is provided on how to undertake the process and no roles and mandates are assigned, hence compliance is not required. The EIA system also lacks provision for key foundational measures including guidelines on the different EIA stages, requirements on the performance review and monitoring of the EIA system, training, certification of EIA experts and research. The above deficiency can affect the performance and effectiveness of the EIA system. Wood (2003) noted that an EIA system that fails to meet a significant proportion of evaluation criteria, not only falls short of recognized international good practice but cannot deliver its intended environmental protection benefits.

The legislation permits the developer to appoint and pay the environmental consultant. It is noted in this study that the appointment and payment relationship grants the developer power over the EIA process affecting the quality of assessment and subsequently the EIA report. Elvan (2018) argues that such arrangements between the developer and consultants affect the quality of EIA reports as they may be prepared for the beneﬁt of the developer. It is therefore important that an independent and impartial administrative body is established to act as a mediator.

Provision to appeal against a project decision is a strength in the Namibia EIA system. However, the 14-day appeal period is inadequate. Additionally, a lack of decentralization of EIA services exacerbates the inadequacy of the appeal process making it difficult for the public to meet the timeline. Sharma (2020) highlighted the importance of decentralization noting that it can improve community quality of life through effective participation in decision-making and can also enhance democracy.

* 1. *Poor monitoring and enforcement*

Monitoring and enforcement capacity is weak. As a result, penalties, fines and imprisonment terms are rarely enforced. EIA offence fines are at a low N$ 100,000 (equivalent to about US$6,000 on 15/08/2021) or 10 years’ imprisonment. Other countries such as Lebanon stipulate a high penalty of US$ 132,000 (Elvan, 2018). However, in comparison to Namibia, Lebanon term of imprisonment for establishing a project without EIA authorization is a mere one year (Elvan, 2018). This points to a lack of comparability and inconsistency in fines and imprisonment terms in developing countries.

* 1. *Weak communication and information sharing*

The Namibia EIA system lacks communication and information access mechanisms. The flow of information between the office of the environmental commissioner and the public is weak. This is evidenced in the fact that the public has no access to information on the number or type of projects that are accepted or rejected. In this case, the public only obtains information through newspapers. While that supports the importance of media in EIA, newspapers often selectively report on sensitive and controversial projects. Countries such as Turkey have an effective policy concerning rights to access environmental information (Elvan, 2018).

* 1. *Unclear roles of competent authorities.*

The competent authorities and other organs of state only participate in the EIA process at the discretion of the environmental commissioner. The DEA dominates environmental affairs, and other departments only offer recommendations but are not involved in decision making. Contrary to the views of Wood (2003) that environment ministries in developing countries are often “bypassed” by other, more powerful ministries, MEFT is powerful and seemingly has excluded other stakeholders.

* 1. *Lack of human and financial capacity*

The Namibia EIA system is faced with a shortage of experienced and qualified EIA professionals both in the regulatory authority and in consulting firms. A report by the National Planning Commission (NPC) (2015) confirms a lack of human resource capacity particularly in the area of EIA inspection and monitoring. Due to limited staff capacity and lack of financial resources, the EIA compliance level stands at 57% (NPC, 2015). Interviewees also indicated that EIA experts in Namibia are not registered or certified to undertake EIA. Limited human resources in EIA is a common phenomenon and has been reported in low and middle-income countries (Kolhoff et al., 2018).

* 1. *Inappropriate public participation methods*

Public participation is mandatory in the EIA process, but the consultation process is weak due to implementation problems. While the regulations direct that public meetings should be advertised in daily newspapers, only 8.9% of the Namibia population has access to daily newspapers (FES & MISA Namibia, 2015). Another weakness is that proponents require the public to register as IAP and to provide comments via email. The latest data show that only 51% of the Namibia population has daily access to the internet (Bahia & Suardi, 2019). Given this context, email and other electronic communications are unsuitable and can weaken community involvement in the EIA process. Radio was suggested as an appropriate medium for EIA communication and information sharing. According to NPC (2015), 69% of Namibians have access to radio and the national broadcaster covers 10 languages on their radio stations. Another important factor in public participation in the context of Namibia relates to cultural and traditional considerations. Environmental practitioners undertaking public meetings need to be aware of the leadership hierarchies in the traditional authorities and to consider gender issues. Gender considerations include the freedom of expression of women during meetings and dressing decency for women in different cultural settings in Namibia. A report by the MISA Namibia (2015) confirms that freedom of expression in Namibia is restricted and is often exercised based on traditional and cultural practices. The full involvement of Indigenous people has been affirmed in the literature as a way to improve project acceptance and to enhance good environmental management practices as well as being an important part of decision making within a democratic society (Boiral et al., 2020; O’Faircheallaigh, 2015).

* 1. *Weak review and decision making approach*

The office of the environmental commissioner undertakes in-house review. The environmental commissioner alone makes decisions on all EIA applications. No review or decision making committee exists in Namibia. This approach is problematic and is criticized for its lack of transparency and accountability, alongside possible political influence, bribery and corruption. Many countries have established review mechanisms from which Namibia could learn useful lessons. For example, in India, a review committee of independent experts is appointed (Rathi, 2017).

* 1. *Lack of information sharing*

The issue of information access and sharing is a problem in the Namibia EIA system. The legislation only requires the environmental commissioner to inform the developer and the competent authority of the decision made on the projects. The public and those affected are excluded, and often only obtain information through newspapers. Generally, Namibia lacks policies on access to information (NPC, 2015). This weakens the public's right to demand information.

* 1. *Lack of system review and monitoring*

While it is commendable that the government of Namibia initiated consultations to amend the EIA legislation in 2018, the long delay to implement the revised legislation can weaken the performance of the EIA system. Arts et al. (2012) noted that while revision of EIA regulations is a positive development, various amendments only deal with "the perennial problem of EIA" without dealing with critical effectiveness issues. 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 implement the amended EIA legislation as further delays can have negative effects on the EIA performance.

**Strengths of EIA**

* 1. *EIA acceptance*

Before independence, EIAs in Namibia were undertaken voluntarily mainly by the mining and infrastructure sectors. In the absence of EIA legislation, many of the mining and exploration EIAs were carried out following the environmental obligations of the mother organization of the respective companies. Data from the NPC (2015) show that the number of EIA applications submitted for authorization increased from 120 in 2012 to 322 EIAs in 2015. This may indicate that EIA is slowly being accepted as an environmental governance tool in Namibia. The increase in EIA applications can be attributed to the continuous promotion of EIA in the national development plans and also as a funding requirement of financial institutions.

* 1. *Preventative effect of EIA*

The Namibia EIA system appears to have a preventative effect, evidenced by several projects that were stopped due to EIA decision making. The Epupa hydropower plant proposed in 1998, the Otjivalunda salt project undertaken in 2012 and the Namibia marine phosphate mining in 2015 were not allowed to commence to date.

1. **Conclusion and Recommendations**

The Namibia EIA system is based on fairly good legislation and institutional arrangements. However, the system is characterized by several implementation problems. Many of the weaknesses found in this study are common in other developing countries and may be considered signs of a maturing system. It is also clear that while international experiences and best practices are important, the success of the EIA system is context-specific, therefore research into particular countries EIA system is critical. The EMA and EIA regulations await cabinet approval since 2018. This study, therefore, offers a good opportunity for policymakers to reflect on concerns and weaknesses in this paper to develop specific guidelines and standards of operations for the EIA process. Following are the suggestion that can help to enhance the performance of the EIA system.

* MEFT should complete the 2018 legislation amendments and embrace an integrated system inclusive of EIA and SEA requirements to improve the robustness of the system. An implementation plan should be designed to clarify the roles and responsibilities of stakeholders, thresholds and screening categories and consideration of alternatives and cumulative effects.
* MEFT should consider developing an open database to publish all submitted EIA reports and the decision taken on projects to encourage communication and information sharing, public scrutiny and research.
* The government should certify DEA as a state-owned enterprise to improve its autonomy and independence. In the new institution, establish a subsidiary body responsible for review and decision making and another to manage 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 to: attract experts into the institution, strengthen the human resource capacity for monitoring and enforcement; provide training and capacity building to EIA practitioners and decentralize EIA services.
* MEFT should develop guidelines and SOP for critical EIA stages such as scoping, public consultation and review, indicating the methods and approaches to ensure consistency and quality of the assessment process.

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