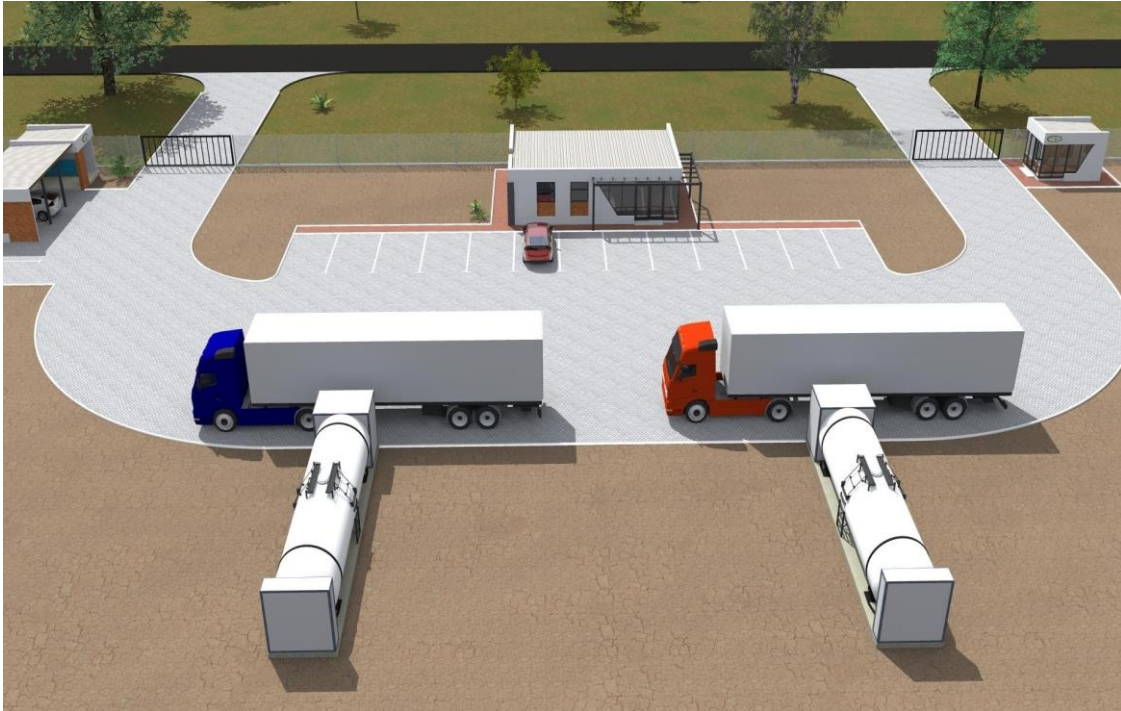


ENVIRONMENTAL SCOPING REPORT (ESR)



**FOR THE CONSTRUCTION AND OPERATION OF A FUEL
DEPOT AND TRUCK-PORT FACILITY AT KATIMA MULILO,
ZAMBEZI REGION.**

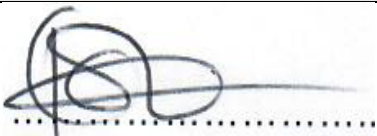

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DOCUMENT INFORMATION		
Title	Environmental Scoping Report (ESR) for the construction and operation of the fuel depot and truck port facility at Katima Mulilo, Zambezi region.	
ECC Application Reference number	003681	
Listed Activity	Activity 9: Hazardous Substance Treatment, Handling and Storage 9.5 Construction of Filling Station or any other facility for the underground and aboveground storage of dangerous goods, including, petrol, diesel. Liquid, petroleum, gas, paraffin	
Location	Wenela Border Post, Katima Mulilo, Zambezi Region	
Proponent	Erongo Petroleum CC POBOX 22762 Kleine Kuppe Contact Person Mr. Pandu Ndiba Hamukwaya 08115946648	
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Executive Summary

Erongo Petroleum CC appointed Tortoise Environmental Consultants (TEC) to undertake an environmental impact assessment for the construction and operations of a fuel depot and truck port facility in Katima Mulilo, Zambezi region. General operations will involve the receipt of fuel from road tankers, dispensing fuel to trucks and vehicles, operations of a truck port and day to day administrative tasks.

The construction, operations and decommissioning activities require compliance with the Environmental Impact Assessment (EIA) Regulations of 6 February 2012 Government Notice No 28, 29 and 30, promulgated in terms of the Environmental Management Act (EMA), Act no. 7 of 2007.

The project's environmental impact assessment presents an assessment of the potential environmental, occupational health and safety, socio-economic and community impacts associated with the construction and operations of the facility, as well as presents devised mitigation measures and design enhancement for the Project.

In order to verify and fully understand the true significance of the impacts of the proposed development on the environment, a site visit was conducted by TEC during November 2022. Impacts are also based on stakeholder engagement, extensive site assessments and desktop reviews of related and relevant literature by the team.

Potential environmental impacts and associated social impacts were identified and are addressed in this report. Impacts on the surrounding environment that may be expected from the facility corresponds to those expected from developments earmarked for light industrial areas. It is however recommended that environmental performance be monitored regularly to ensure regulatory compliance and that corrective measures be taken if necessary. The operations of the fuel wholesale facility will play an important role in contributing to reliable storage, handling and supply of fuel to the industrial sector of Katima Mulilo and the transport industry.

The major concerns related to the construction and operations of the facility are that of potential groundwater, surface water and soil contamination and the possibility of fire. This will however be limited by adherence to South African National Standards and Material Safety Data Sheet instructions. Furthermore, noise pollution should meet the minimum requirements of the World Health Organisation standards. By appointing local contractors and employees and implementing educational programs the positive socio-economic impacts can be maximised while mitigating any negative impacts.

All monitoring and records kept should be included in a report to ensure compliance with the environmental management plan. Parties responsible for transgression of the environmental management plan should be held responsible for any rehabilitation that may need to be undertaken. A Health, Safety, Environment and Quality policy as well as Environmental Policy could be used in conjunction with the environmental management plan. Operators and responsible personnel must be taught the contents of these documents. Local authority or national regulations and

guidelines must be adhered to and monitored regularly as outlined in the environmental management plan.

ACRONYMS

BID	Background Information Document
DEA	Department of Environmental Affairs
DSR	Draft Scoping Report
EA	Environmental Assessment
EAP	Environmental Assessment Practitioner
EIA	Environmental Impact Assessment
ECC	Environmental Clearance Certificate
ECO	Environmental Compliance Officer
EIA	Environmental Impact Assessment
EMA	Environmental Management Act (No. 7 of 2007)
EMP	Environmental Management Plan
ESR	Environmental Scoping Report
I&APs	Interested and Affected Parties
MEFT	Ministry of Environment, Forestry and Tourism
PPE	Personal Protective Equipment
SM	Site Manager
TEC	Tortoise Environmental Consultancy

GLOSSARY OF TERMS

Alternatives - A possible course of action, in place of another, that would meet the same purpose and need but which would avoid or minimize negative impacts or enhance project benefits. These can include alternative locations/sites, routes, layouts, processes, designs, schedules and/or inputs.

The “no-go” alternative constitutes the ‘without project’ option and provides a benchmark against which to evaluate changes; development should result in net benefit to society and should avoid undesirable negative impacts.

Assessment - The process of collecting, organising, analysing, interpreting and communicating information relevant to decision making.

Competent Authority - means a body or person empowered under the local authorities act or Environmental Management Act to enforce the rule of law.

Construction - means the building, erection or modification of a facility, structure or infrastructure that is necessary for the undertaking of an activity, including the modification, alteration, upgrading or decommissioning of such facility, structure or infrastructure.

Cumulative Impacts - in relation to an activity, means the impact of an activity that in itself may not be significant but may become significant when added to the existing and potential impacts eventuating from similar or diverse activities or undertakings in the area.

Environment - As defined in the Environmental Assessment Policy and Environmental Management Act - “land, water and air; all organic and inorganic matter and living organisms as well as biological diversity; the interacting natural systems that include components referred to in sub-paragraphs, the human environment insofar as it represents archaeological, aesthetic, cultural, historic, economic, palaeontological or social values”.

Environmental Impact Assessment (EIA) - process of assessment of the effects of a development on the environment.

Environmental Management Plan (EMP) - A working document on environmental and socioeconomic mitigation measures, which must be implemented by several responsible parties during all the phases of the proposed project.

Environmental Management System (EMS) - An Environment Management System, or EMS, is a comprehensive approach to managing environmental issues, integrating environment-oriented thinking into every aspect of business management. An EMS ensures environmental considerations are a priority, along with other concerns such as costs, product quality, investments, PR productivity and strategic planning. An EMS generally makes a positive impact on a company’s bottom line. It increases efficiency and focuses on customer needs and marketplace conditions, improving both the company’s financial and environmental performance. By using an EMS to convert environmental problems into commercial opportunities, companies usually become more competitive.

Evaluation – means the process of ascertaining the relative importance or significance of information, the light of people’s values, preference and judgements in order to make a decision.

Hazard - Anything that has the potential to cause damage to life, property and/or the environment. The hazard of a particular material or installation is constant; that is, it would present the same hazard wherever it was present.

Interested and Affected Party (IAP) - any person, group of persons or organisation interested in, or affected by an activity; and any organ of state that may have jurisdiction over any aspect of the activity.

Mitigate - The implementation of practical measures to reduce adverse impacts.

Proponent (Applicant) - Any person who has submitted or intends to submit an application for an authorisation, as legislated by the Environmental Management Act no. 7 of 2007, to undertake an activity or activities identified as a listed activity or listed activities; or in any other notice published by the Minister or Ministry of Environment & Tourism.

Public - Citizens who have diverse cultural, educational, political and socio-economic characteristics. The public is not a homogeneous and unified group of people with a set of agreed common interests and aims. There is no single public. There are a number of publics, some of whom may emerge at any time during the process depending on their particular concerns and the issues involved.

Scoping Process - process of identifying: issues that will be relevant for consideration of the application; the potential environmental impacts of the proposed activity; and alternatives to the proposed activity that are feasible and reasonable.

Significant Effect/Impact - means an impact that by its magnitude, duration, intensity or probability of occurrence may have a notable effect on one or more aspects of the environment.

Stakeholder Engagement - The process of engagement between stakeholders (the proponent, authorities and IAPs) during the planning, assessment, implementation and/or management of proposals or activities. The level of stakeholder engagement varies depending on the nature of the proposal or activity as well as the level of commitment by stakeholders to the process. Stakeholder engagement can therefore be described by a spectrum or continuum of increasing levels of engagement in the decision-making process. The term is considered to be more appropriate than the term “public participation”.

Stakeholders - A sub-group of the public whose interests may be positively or negatively affected by a proposal or activity and/or who are concerned with a proposal or activity and its consequences. The term therefore includes the proponent, authorities (both the lead authority and other authorities) and all interested and affected parties (IAPs). The principle that environmental consultants and stakeholder engagement practitioners should be independent and unbiased excludes these groups from being considered stakeholders.

Sustainable Development - “Development that meets the needs of the current generation without compromising the ability of future generations to meet their own needs and aspirations” – the definition of the World Commission on Environment and Development (1987). “Improving the quality of human life while living within the carrying capacity of supporting ecosystems” – the definition given in a publication called “Caring for the Earth: A Strategy for Sustainable Living” by the International Union for Conservation of Nature (IUCN), the United Nations Environment Programme and the World Wide Fund for Nature (1991).

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1 INTRODUCTION

1.1 Terms of Reference

This document is prepared as part of the Environmental Impact Assessment (EIA) and scoping exercise, aimed at obtaining an Environmental Clearance Certificate (ECC) for the proposed construction and operation of a fuel depot and truck port facility in Katima Mulilo, Zambezi region.

1.2 What is an EIA?

An Environmental Impact Assessment (EIA) is a tool to manage negative environmental impacts that may arise from the proposed development and is aimed at guiding the proposed activities to be more environmentally friendly and to comply with the provisions of the Environmental Management Act (Act No.7 of 2007).

The aim of the EIA is to reduce negative impacts (effects) and maximized, positive impacts, through the adoption of best environmental practices and application of the precautionary principle.

1.3 EIA Process

An EIA is a systematic process of identifying, predicting, evaluating and mitigating the potential environmental and social effects that may arise from the activities of a proposed project.

1.3.1 Identification and Mitigation of Impacts

The backbone of the EIA report entails identification of impacts (whether real or perceived) and recommendations on suitable mitigation measures to ensure compliance with the principles of environmental management and highlight risks and measures to ensure an environmentally friendly development.

1.3.2 Purpose of the EIA Scoping Exercise

The purpose of this EIA scoping exercise is to:

- a) Provide description of the proposed activity;
- b) Describe the affected environment (proposed area),

- a) Identify potential environmental impacts / aspects of concern;
- b) Describe the methodology followed to assess the potential impacts;
- c) Mitigate negative impacts that may arise from the proposed project

1.3.4 Rehabilitation

The EIA should not only focus on mitigating the impacts of the activity during the active operations but also should go further and recommend rehabilitation measures at project closure (when activities cease). Rehabilitation measures should not be parked waiting for project closure but should be implemented from the beginning and incrementally throughout the project lifespan.

1.3.5 Scope and Purpose of this Report

The purpose of this report is to present the findings of the EIA for the proposed sand mining activities, as part of the application of the Environmental Clearance Certificate (ECC).

The environmental assessment has been undertaken in accordance with the requirements of the Environmental Management Act, 2007 and the EIA Regulations.

1.3.6 Application for ECC

Upon completion, the EIA Scoping Report and Environmental Management Plan (EMP) will be submitted to the Environmental Commissioner in the Ministry of Environment, Forestry and Tourism (MET), for review and decision, in accordance with Section 8 of the EIA Regulations.

1.3.7 Environmental Assessment Practitioner

Tortoise Environmental Consultants (TEC) has been appointed to carry out the requisite Environmental Impact Assessment (EIA) and develop an Environmental Management Plan (EMP).

1.4 Environment vs Economic Development

Namibia's economy is highly dependent on a healthy environment and striking a balance in meeting demands for economic development (e.g sand mining) and maintaining biological diversity can be a challenge. Therefore, the environment and development sectors should work together and identify synergies in order to ensure that natural resources are harvested in a sustainable manner.

Development takes place on land (in the environment) and hence the quest for economic development requires a trade-off with certain parts of the environment in order for the development to be realized. Meaning, for development to take place, some part of the environment will be affected. However, such impacts should be mitigated through the EMP.

The aim of environmental assessments is to guide the sustainable utilization of natural resources and to mitigate negative impacts that would otherwise compromise the environmental integrity and future ecosystem benefits

1.5 Scope of Study

The scope of the environmental assessment is to, in compliance with the requirements of the EMA:

1. Determine the potential environmental impacts emanating from the operational and possible decommissioning activities of the facility,
2. Identify a range of management actions which could mitigate the potential adverse impacts to acceptable levels,
3. Provide sufficient information to the relevant competent authority and MEFT to make an informed decision regarding the construction, operations and possible decommissioning of the facility.

1.6 Project Justification and Benefits

- Due to Trans-Caprivi (EPZ), Zambezi Region hosts Namibia's largest Transboundary logistics and Transportation, linking land locked countries to Namibia Major ports (Walvis & Luderitz);

- Demand to use Zambezi Roads & Infrastructures is constantly growing with the growth in the development (industry) as well as transport industry, the demand for fuel has been increasing;
- The diesel storage and handling facility will contribute towards a reliable supply in this demand.
- Its presence is also envisaged to reduce traffic congestion caused by large vehicles at Wenela Border Post and elsewhere in town.
- Will serve a strategic purpose for the Katima Mulilo Town and Zambezi Region by contributing to an additional 160 m³ of diesel storage and supply to the local economy;
- Reliable supply of diesel to various sectors (e.g. industrial and commercial) and the local business community;
- Employment and skills training;
- Support for potential additional investments and development in town.

2 PROJECT INFORMATION

2.1 Project Location

The proposed project is located in Katima Mulilo, along the Wenela Border Post which is approximately 700M from the Wenela Border Post, bordering Namibia and Zambia, North-east Namibia. Access to the project site can be made via the main road from Katima Mulilo town towards the Wenela Border post. Regionally, the project site lies within the Zambezi Region, just near the Namibia-Zambia border Post (Wenela) (see Figure 1 below).



Fig 1. Location of proposed fuel storage and truck port site

2.2 Biodiversity and Ecology of the area

Katima Mulilo comprises of mixed sub-tropical woodland, its terrain is well vegetated, mostly made up of swamps, floodplains and wetlands and deciduous woodlands. The woodland savanna is characterized largely by sizeable woody trees canopy with sizeable shrubs layer, on a thick Kalahari sand deposit. Woody tree species in the area mainly include deciduous tree species such as *Baikiaea plurijuga*, *Burkea africana*, *Pterocarpus angolensis*, *Combretum collinum* and *Terminalia sericea*.

The region of Zambezi has a semi-arid climate prevailing, with an average annual temperature of 35 degrees and an annual rainfall ranging between 500 to 650 mm per year.

Generally, the woodland savanna provides a rich habitat range for various wild animals. Literature indicates that, large mammals such as kudu, springbok and Warthogs use to frequent the area, but due to changed land use over the years, which is presently townland comprising of industries, commercial settings and residential units.

Current view of the proposed site



Vegetation around site, mainly comprising of shrubs and herbaceous species



View of shrubs and trees around proposed site



View of Baboons are commonly found in the area



View of Wenela main road that provides access to the site

3 ASSESSMENT AND MANAGEMENT OF IMPACTS

This section presents the potential impacts that may arise from the proposed construction and operation of a fuel depot and truck port facility. The full mitigation measures are presented in the EMP.

3.1 Landscape Alteration

With the de-bushing and removal of vegetation, the fuel depot and truck port activities has potential to alter (change) the natural view of the landscape

IMPACT DESCRIPTION:	Vegetation clearing		
Predicted for (specific activity)	De-bushing and removal of vegetation		
Dimension	Rating		
Duration	Permanent	Reversibility: Reversible	Degree to which impact can be mitigated: High
Extent	Site specific		
Magnitude	Low		
Probability	Fairly likely		
MITIGATION: If possible, rehabilitate the site by replanting more indigenous trees where possible and avoid cutting down trees unnecessarily			

3.2 Access Roads

Establishment or creation of access roads to transport and from the fuel depot and truck port facility to the town.

IMPACT DESCRIPTION:	Access Roads		
Predicted for (specific activity)	Establishment of Road Tracks		
Dimension	Rating		
Duration	Permanent	Reversibility: Reversible	Degree to which impact can be mitigated: High
Extent	Site specific		
Magnitude	Low		
Probability	Very likely		
MITIGATION: Access roads to the site already exist Stick to existing tracks and no new tracks should be established			

3.3 Pollution: Noise and Dust

The proponent should ensure noise from excavator machinery and transportation trucks is kept below the recommended noise levels of -85dB (A).

IMPACT DESCRIPTION	Noise and Dust		
Predicted for (specific activity / project phase)	Construction and operation of fuel depot facility		
Dimension	Rating		
Duration	Short term	Reversibility: Reversible	Degree to which impact can be mitigated: High
Extent	Local		
Magnitude	Medium		
Probability	Definite		
MITIGATION: <ul style="list-style-type: none"> • Use dust suppression measures to mitigate dust impacts • Provide dust masks and ear muffs to machinery operators • Where possible, install silencer on exhaust to reduce noise levels 			



3.4 Oil Spills (Pollution)

Soil pollution may occur as a result of oil leakages, fuel, or lubricants from the machinery and vehicles.

IMPACT DESCRIPTION	Soil Pollution		
Predicted for (specific activity / project phase)	Oil Leakages from Machinery		
Dimension	Rating		
Duration	Short-term	Reversibility: Reversible	Degree to which impact can be mitigated: Medium
Extent	Local		
Magnitude	Low		
Probability	Definite		
MITIGATION: There must be an oil spill response kit on site. Workers should be properly trained on dangers oil pollutions and response actions;			

3.5 Solid Waste Management

Littering and any other unsightly waste at the site or anywhere around the town, as a result of fuel depot operations will be an eye sore.

IMPACT DESCRIPTION:	Solid Waste Management		
Predicted for (specific activity / project phase)	Fuel depot and truck port operations		
Dimension	Rating		
Duration	Short term	Reversibility: Reversible	Degree to which impact can be mitigated: High
Extent	Local		
Magnitude	Medium		
Probability	Highly likely		

MITIGATION:

- No disposal of solid waste on sight
- Adopt the principle of what goes in, goes out

3.6 Socio-Economic Environment

Fuel is an important element for township development, and it is one of the key building blocks for socio-economic development, which further contributes to employment creation, food security and improvement of community livelihood.

IMPACT DESCRIPTION	Socio-economic		
Predicted for (specific activity / project phase)	Development and Employment Opportunities		
Dimension	Rating		
Duration	Long and Short- term	Reversibility: Irreversible	Degree to which impact can be mitigated: Medium
Extent	National & Local		
Magnitude	Medium		
Probability	Definite		
MITIGATION:			
<ul style="list-style-type: none"> • Employ local labour as far as possible • Establish on the job training and other capacity development training programs 			

3.7 Health, Safety and Security

Activities associated with the construction and operational phases are reliant on human labour and therefore exposes them to health and safety risks. Activities such as the operation of machinery and handling of hazardous chemicals (inhalation and carcinogenic effect of some petroleum products), poses the main risks to employees. Security risks are related to unauthorized entry, theft and sabotage.

IMPACT DESCRIPTION	Health, Safety and Security		
Predicted for (specific activity / project phase)	Physical injuries, exposure to chemicals and criminal activities		
Dimension	Rating		
Duration	Long and Short- term	Reversibility: Irreversible	Degree to which impact can be mitigated: High
Extent	Local		
Magnitude	Medium		
Probability	Fairly Likely		
<p>MITIGATION:</p> <ul style="list-style-type: none"> • Selected personnel should be trained in first aid and a first aid kit must be available on site. • The contact details of all emergency services must be readily available. ▪ Implement and maintain an integrated health and safety management system, to act as a monitoring and mitigating tool, which includes: colour coding of pipes, operational, safe work and medical procedures, permits to work, emergency response plans, housekeeping rules, MSDS's and signage requirements (PPE, flammable etc.). 			

4 Public Participation Processes

Public consultation is a requirement by law (EMA No 7 of 2007) to be incorporated into an EIA process, hence it is a fundamental part of the EIA. Public consultation ensures robust decision making by involving Interested and Affected Parties (I&APs). The PPP has therefore been structured to provide I&APs an opportunity to gain more information on the proposed project and for them to provide inputs through the review of documents/reports, and to flag any issue of concern during the PPP process.

4.1 Public Meeting

Consultation with the public forms an integral component of an environmental impact assessment and enables interested and affected parties (IAPs) e.g. neighbouring landowners, local authorities, environmental groups, civic associations and communities, to comment on the potential environmental impacts associated with the facility and to identify additional issues which they feel should be addressed in the environmental assessment.

Public consultation was conducted during February 2022. Due to the ongoing Covid 19 pandemic, measures were implemented to reduce exposure during the public consultation process. Public participation notices were advertised twice in two weeks in the national papers of the New Era on the 10th and 15th of February 2022 respectively. The Public meeting was conducted on the 18th of February 2022 at local restaurant in Katima Mulilo.

5 Conclusion

The diesel retail facility will not only have a positive impact on Katima Mulilo, but also on the transport sector operational in the vicinity. In addition to reliable and convenient fuel supply, the facility will contribute locally to skills transfer and training which in turn develops the local workforce during construction and operations of the facility.

Negative impacts can successfully be mitigated. SANS standards relating to the petroleum industry and prescribed by Namibian law must be followed during all operations of the fuel retail facility. Noise pollution should at all times meet the prescribed WHO requirements to prevent hearing loss and not to cause a nuisance. Fire prevention should be adequate, and health and safety regulations should be adhered to in accordance with the regulations pertaining to relevant laws and internationally accepted standards of operation. Any waste produced must be removed from site and disposed of at an appropriate facility or re-used or recycled where possible. Hazardous waste must be disposed of at an approved hazardous waste disposal site.

The EMP should be used as an on-site reference document for the operations of the facility. Parties responsible for transgressing of the environmental management plan should be held responsible for any rehabilitation that may need to be undertaken. The proponent could use an in-house Health, Safety, Security and Environment Management System in conjunction with the environmental management plan. All operational personnel must be taught the contents of these documents.

Should the Directorate of Environmental Affairs (DEA) of the MEFT find that the impacts and related mitigation measures, which have been proposed in this report, are acceptable, an environmental clearance certificate may be granted to the proponent. The environmental clearance certificate issued, based on this document, will render it a legally binding document which should be adhered to. It should be noted that the assessment process's aim is not to stop the proposed activity, or any of its components, but to rather determine its impact and guide sustainable and responsible development as per the spirit of the EMA.