
GENERAL NOTICE

NOTICE 1469 OF 2006

PROPOSED GUIDELINES AS PART OF THE IMPLEMENTATION OF ENVIRONMENTAL IMPACT ASSESSMENT REGULATIONS IN TERMS OF SECTION 24(5) OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT No. 107 OF 1998) AS AMENDED

The guidelines entitled General Guide to the Environmental Impact Assessment regulations, 2006 and Assessment of Alternatives and Impacts are hereby published for comment.

Interested parties are requested to submit comments in connection with the proposed regulations within 30 days from the date of publication of this notice. Comments must be submitted to the Director: EIM Systems and Tools: Department of Environmental Affairs and Tourism, Private Bag X447, Pretoria, 0001 by not later than 20 November 2006.

Department of Environmental Affairs and Tourism

GUIDELINE 3: GENERAL GUIDE TO THE EIA REGULATIONS, 2006

Guideline 3: General Guide to the Environmental Impact Assessment Regulations, 2006

June 2006



Department of Environmental Affairs and Tourism

GUIDELINE 3: GENERAL GUIDE TO THE EIA REGULATIONS, 2006

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Abbreviations

EAP	Environmental assessment practitioner
ECA	Environment Conservation Act, 1989 (Act No. 73 of 1989)
EIA	Environmental impact assessment
EMF	Environmental management framework
I&APs	Interested and affected parties
NEMA	National Environmental Management Act, 1998 (Act No. 107 of 1998)
PSEIA	Plan of Study for Environmental impact Assessment

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I. INTRODUCTION

In April 2006 the Minister of Environmental Affairs and Tourism passed environmental impact assessment regulations' (the Regulations) in terms of Chapter 5 of the National Environmental Management Act, 1998² (NEMA), The Regulations replace the environmental impact assessment (EIA) regulations which were promulgated in terms of the Environment Conservation Act, 1989³ in 1997.

In order to assist potential applicants, environmental assessment practitioners ("EAPs") and interested and affected parties ("I&APs") to understand what is required of them in terms of the Regulations, what their rights are and/or what their role may be, the Department of Environmental Affairs and Tourism has expanded its Integrated Environmental Management Guideline Series to include the following documents:

- ❖ Guideline 3: General guide to the EA Regulations
- ❖ Guideline 4: Public participation
- ❖ Guideline 5: Assessment of alternatives and impacts
- ❖ Guideline 6: Environmental management frameworks

The additional documents are intended to be guides only and should be read in conjunction with NEMA and the Regulations. The documents are not intended to be a substitute for the provisions of NEMA or the Regulations in any way.

This document is Guideline 3. It provides a broad introduction to the Regulations by explaining the roles and responsibilities of the people involved in environmental authorisation applications, the processes that are involved in applying for environmental authorisation and answering a set of key questions may arise.

¹ Environmental Impact Assessment Regulations, 2006

² Act No. 107 of 1998

³ Act No. 73 of 1989

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2. OBJECTIVES OF THE REGULATIONS

Section 24(2) of **NEMA** empowers the Minister and any MEC, with the concurrence of the Minister, to identify activities which must be considered, investigated, assessed and reported on to the competent authority responsible for granting the relevant environmental authorisation.

The objective of the Regulations is to establish the procedures that must be followed in the consideration, investigation, assessment and reporting of the activities that have been identified. The purpose of these procedures is to provide the competent authority with adequate information to make decisions which ensure that activities which may impact negatively on the environment to an unacceptable degree are not authorised, and that activities which are authorised are undertaken in such a manner that the environmental impacts are managed to acceptable levels.

The procedures are also intended to ensure that:

- ❖ the minimum information that is necessary for decision-making is provided;
- ❖ adequate information is provided to I&APs to enable them to participate effectively;
- ❖ issues, ideas and concerns raised by I&APs are properly considered;
- ❖ issues, impacts and alternatives are considered and assessed in a structured and objective manner; and
- ❖ the requirements for the management of impacts over the life cycle of activities.

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3. UNDERSTANDING THE ROLES OF PLAYERS IN AN ASSESSMENT PROCESS

There are five main role-players, which are likely to be involved in an EIA process. These are the applicant, the environmental assessment practitioner ("EAP"), the public, the competent authority and the Minister or MEC. Each of these role players have different interests and/or responsibilities. The Regulations set out how these interests are given effect to and how the responsibilities must be discharged.

3.1 APPLICANTS

An applicant is a person who applies for an environmental authorisation in order to undertake a listed activity lawfully. The applicant must appoint an independent EAP to manage the application process.

To ensure that the EAP can do his or her work properly and objectively, the applicant must give the EAP access to all information that is relevant to the application – even if that information is not favourable to the application. (The applicant must also make this information available to the competent authority).

The applicant is responsible for certain costs. These may include any relevant application fees, the fees of the EAP, the costs of external reviews if it is determined that the EAP is not independent, the costs of specialist reviews and costs in respect of the provision of security.

3.2 ENVIRONMENTAL ASSESSMENT PRACTITIONERS

An EAP is a person who manages an application for environmental authorisation for an applicant.

Any EAP, who is responsible for managing an application for environmental authorisation, must be both competent and independent. A definition of independence is contained in the Regulations and if the EAP contravenes this requirement, the competent authority has powers to redress the situation.

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Apart from being competent and independent, the EAP must also undertake the work objectively - even if this results in findings that are not favourable to the applicant. In view of this, the EAP must disclose all information that has the potential to influence a decision of the competent authority on the application.

The EAP is also responsible for ensuring that a public participation process is undertaken in accordance with the requirements of the Regulations and for taking into account any comments that are made during this process in the compilation of the reports that will be submitted to the competent authority.

3.3 THE PUBLIC

The Regulations require that the public be given an opportunity to comment on applications for environmental authorisation. Members of the public who want to participate in an assessment process are registered and called I&APs. (A more detailed explanation of the public participation process is set out in Guideline 5).

I&APs may participate and make representations to the EAP regarding an application. I&APs are also entitled to comment on all written submissions which the applicant or EAP makes to the competent authority subject to three requirements –

- ❖ comments must be submitted within the timeframes that have been set;
- ❖ if the comments are made directly to the competent authority, a copy of the comments must be sent to the applicant or EAP; and
- ❖ if the I&AP has any direct business, financial, personal or other interest in the approval or refusal of the application, that interest must be disclosed.

I&APs may also comment on certain other applications, such as applications for the amendment of an environmental authorisation and applications for exemption, where the application may affect the rights or interests of other people.

3.4 THE COMPETENT AUTHORITY

The person who makes decisions in respect of applications for environmental authorisations is known as the competent authority. According to the Regulations, the competent authority is the Minister or an MEC. However, in most cases, these powers are delegated to an official in the relevant department.

The overarching task of the competent authority is to make decisions in respect of the application process and whether to grant or refuse environmental authorisation. (The

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competent authority also has other obligations such as making decisions on applications for changes to environmental authorisations and applications for exemption). In order to provide for certainty, the Regulations indicate timeframes within which the competent authority should make these decisions.

The competent authority must also give reasonable assistance to people who want to object to the application if they are unable to comply with a requirement of the Regulations due to illiteracy, disability or any other disadvantage.

3.5 THE MINISTER OR MEC

If the Minister or MEC is not the competent authority i.e. where the Minister or MEC has delegated decision-making powers in respect of applications for environmental authorisation to a departmental official, the Minister or MEC is responsible for hearing any appeals that are made in respect of the decisions of the relevant department. If the Minister or MEC is the competent authority, there is no appeal in terms of the Regulations. The Minister or MEC may appoint an appeal panel to assist the Minister or MEC.

Like the competent authority, the Minister or MEC must also give reasonable assistance to people who want to appeal if they are unable to comply with a requirement of the Regulations due to illiteracy, disability or any other disadvantage.

Other powers of the Minister and MECs include making guidelines for the implementation of the Regulations and adopting environmental management frameworks.

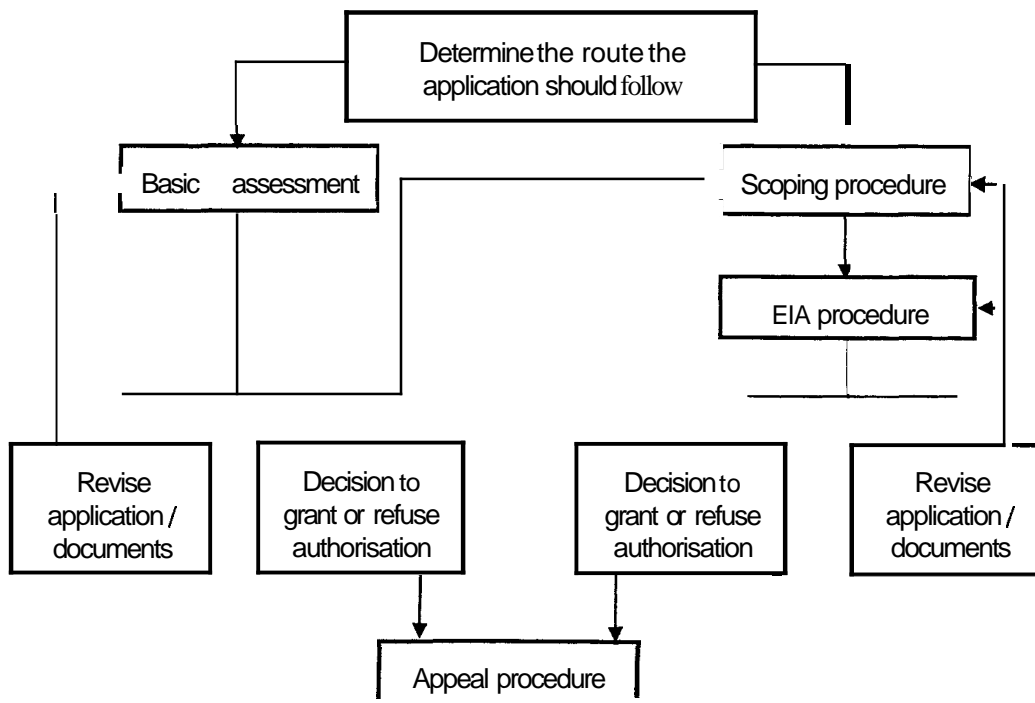
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4. UNDERSTANDING THE EIA PROCEDURES

When an applicant proposes to undertake a listed activity, an application must be made for environmental authorisation. **The** application must be supported by a report, which has been compiled as a result of an assessment procedure. After the competent authority has made a decision on the application, an appeal may be made against the decision, or parts of the decision.

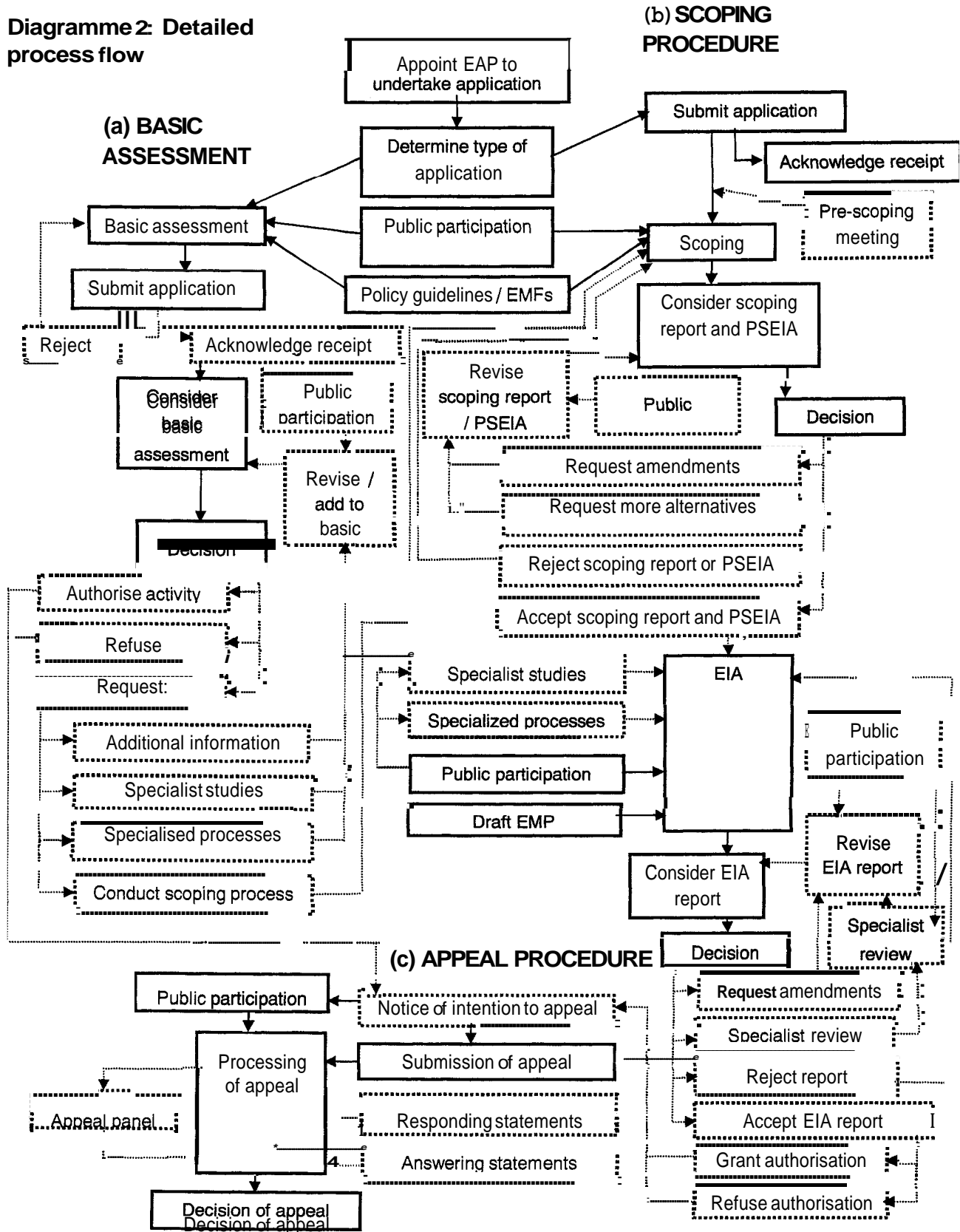
The diagramme below sets out an abbreviated representation of the processes and the relationship between the different processes. **A** comprehensive diagramme setting out all the possible steps that may be taken in an authorisation process is set out at the end of the chapter.

Diagramme 1 : Abbreviated process flow



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Diagramme 2: Detailed process flow



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4.1 DETERMINATION OF THE ROUTE THE APPLICATION MUST FOLLOW

All applications for environmental authorisation must be supported by an assessment. The Regulations provide for two types of assessment processes i.e. the basic assessment process and the scoping and EIA process. The purpose of basic assessment is to provide a mechanism for the complete but concise assessment of activities. A scoping and environmental impact assessment process is reserved for activities which have the potential to result in significant impacts which are complex to assess. Scoping and environmental impact assessment accordingly provides a mechanism for the comprehensive assessment of activities that are likely to have more significant environmental impacts.

The EAP must determine which of these procedures is applicable to the application.

In general, the type of procedure to be followed will be indicated in the notice that lists the activity. However, in certain instances the Regulations provide that the type of procedure indicated in the notice should, or must, differ from the one indicated.

Examples of this include where –

- ❖ an activity being applied for is made up of more than one activity and the scoping and EIA process is required for one or more of those activities, the scoping and EIA process must be followed for the whole application;
- ❖ the EAP believes that the circumstances surrounding the application, such as the environment in which the activity is situated, is such that it will not be possible for a competent authority to make a decision on the basis of a basic assessment process, the competent authority may authorise the EAP to follow a scoping and EIA process instead of a basic assessment process.

4.2 BASIC ASSESSMENT

The basic assessment process includes all the aspects required by NEMA but in a way that facilitates a concise process. This is mainly achieved by indicating what information the competent authority requires in the Regulations, thereby limiting the number of interactions between the EAP and the competent authority.

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This means that the competent authority is presented with all the appropriate documentation at the time it receives the application since the EAP would already have conducted the public participation process and compiled a basic assessment report containing the information specified in the Regulations. Because the public participation process and assessment take place before an application is made, the EAP must notify the competent authority of the intention to submit an application.

4.2.1 Submission of application and basic assessment report

The application to the competent authority can only be made once the basic assessment report is completed. The basic assessment report and all other documentation required in terms of the Regulations must be submitted together with the application form to the competent authority.

After receiving the basic assessment report the competent authority must either –

- ❖ acknowledge receipt of the application and the basic assessment report, or
- ❖ reject the application and basic assessment report.

The application and basic assessment report can be rejected where it does not comply with the requirements set out in the Regulations or specified by the competent authority, for example, where information on potential impacts or alternatives is omitted. A report that is rejected may be resubmitted after the necessary changes have been made.

4.2.2 Consideration of basic assessment report

If the basic assessment report is accepted, the competent authority will consider the contents of the basic assessment report, including any attachments, and make a decision to:

- ❖ grant authorisation in respect of all or part of the application;
- ❖ refuse authorisation in respect of all or part of the application;
- ❖ request further information or investigation, where the report is not adequate for the purposes of decision-making but could be adequate if limited additional information is provided; or
- ❖ refer the application to a scoping process where substantial additional investigations or assessments are required to make a decision.

A request for further investigation can include a request for further public participation, a specialist study, a specialised process or consideration of alternatives.

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Where additional information or investigations are requested by the competent authority, a revised basic assessment report or supplementary document must be produced and submitted to the competent authority. The revised report or supplementary document must be made available to I&APs for comment.

4.3 SCOPING AND ENVIRONMENTAL IMPACT ASSESSMENT

The scoping and EIA process involves a more complex and intensive assessment of the potential impacts of an activity. The process takes place in three broad phases, namely submission of an application form, scoping and the EIA.

4.3.1 Submission of application

Where an application for environmental authorisation must be supported by a scoping and EIA process, an application form, which can be obtained from the competent authority, must be completed and submitted to the competent authority before scoping is undertaken.

The applicant may request a pre-scoping consultation with the competent authority before conducting scoping.

4.3.2 Scoping

The purpose of scoping is to determine the “scope” of the EIA that will be conducted in respect of the activity for which authorisation is being applied for. The emphasis during scoping is to identify:

- ❖ issues;
- ❖ potential impacts; and
- ❖ potential alternatives.

Public participation is a key element of scoping and must be conducted in accordance with at least the minimum requirements as set out in the Regulations. The scoping process culminates in the compilation of a scoping report. The minimum requirements of a scoping report are set out in the Regulations and include a plan of study for EIA.

4.3.3.1 Consideration of scoping report and plan of study for EIA

After receiving a scoping report, the competent authority will consider the report and make a decision to:

- ❖ request amendments to the report;

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- ❖ request further alternatives to be considered;
- ❖ reject the scoping report or plan of study for EIA because it does not substantively comply with the requirements of the Regulations; or
- ❖ accept the scoping report.

A decision to grant or refuse the application cannot be made directly after the scoping process.

4.3.3.2 Revision or additions to the scoping report or plan of study for EIA

Where the competent authority requests amendments to a scoping report or a consideration of more alternatives, a revised scoping report or plan of study for EIA must be compiled and submitted to the competent authority. The revisions must be made available to I&APs for comment. A report that is rejected may be amended and resubmitted.

4.3.3 Environmental impact assessment

When the competent authority accepts a scoping report and a plan of study for EIA, the EAP must proceed with the EIA. The purpose of the EIA is to:

- ❖ address issues that have been raised during the scoping phase;
- ❖ assess alternatives to the proposed activity in a comparative manner;
- ❖ assess all identified impacts and determine the significance of each impact; and
- ❖ formulate mitigation measures.

Public participation is also an essential part of the EIA process. During the EIA process, public participation is conducted in accordance with the plan of study for EIA as opposed to the minimum requirements set out in the Regulations.

After the different aspects of the assessment have been undertaken, including any specialist studies and specialized processes, an EIA report is compiled, which must contain at least the information listed in the Regulations, including a draft environmental management plan.

4.3.4.1 Consideration of EIA report

The consideration of the EIA report occurs in two phases. In the first phase, the competent authority, after receipt of the EIA report, will make a decision to:

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- ❖ accept the report;
- ❖ request amendments to be made to the report;
- ❖ refer the report for specialist review; or
- ❖ reject the EIA report because it does not contain the information required by the Regulations.

The second phase occurs after the competent authority has accepted an EIA report, or after receipt of the findings of a specialist reviewer. During this phase, the competent authority will make a decision to:

- ❖ grant all or part of the application; or
- ❖ refuse all or part of the application.

4.3.4.2 Revision of EIA report

In instances where the competent authority requests amendments, the EIA report must be revised and made available to I&APs for comment prior to being resubmitted.

4.4 APPEAL

Any affected person may appeal a decision of the competent authority to the Minister, where the national Department of Environmental Affairs and Tourism is the competent authority, or to the MEC, where the provincial department of environment is the competent authority. No appeal is provided where the Minister or MEC is the competent authority.

4.4.1 Notice of intention to appeal and appeal

To make an appeal, a notice of intention to appeal must be submitted to the Minister or MEC within 10 days of being notified of the decision. If the person appealing (the appellant) is the applicant, the appellant must provide a copy of the notice to all registered I&APs. If the appellant is someone other than the applicant, the appellant must provide a copy of the notice to the applicant. The appellant must also provide information indicating where and for what period the appeal submission will be available for inspection by I&APs.

The appeal must be submitted within 30 days of lodging the notice of intention to appeal on an official form published by the competent authority.

4.4.2 Responding and answering statements

A person who has received a notice of intention to appeal from an appellant may make a submission - called a responding statement - to the Minister or MEC within 30 days from the date that the appeal was made available for inspection.

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Where new information is introduced in a responding statement, the appellant is entitled to make a further submission - called an answering statement - within 30 days of receipt of the responding statement.

4.4.3 Processing of appeal

After receiving an appeal as well as any responding and answering statements, the Minister or MEC will process the appeal. The Minister or **MEC** may appoint an appeal panel to assist his or her consideration of the appeal. Once the Minister or MEC has reached a decision he or she will notify the appellant and any respondents of the decision in writing.

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5. FREQUENTLY ASKED QUESTIONS

5.1 WHEN IS AN ENVIRONMENTAL AUTHORISATION REQUIRED?

An environmental authorisation must be obtained in order to undertake any activity listed in Government Notices R. 386 and R. 387 of 21 April 2006. lawfully Environmental authorisations will also be required for any activity that has been identified by the Minister or an MEC in terms of section 24(2)(a),(b) or(d) of NEMA and published in a government gazette. An application may not be made if the competent authority has refused a similar application within a period of three years unless new information is provided. If there is uncertainty as to whether authorisation is required, advice should be obtained from the relevant competent authority before the activity is undertaken.

5.2 WHEN MUST AN APPLICATION FOR AUTHORISATION BE MADE?

An application for environmental authorisation must be made before the activity commences. An activity may not commence until an environmental authorisation has been obtained as it is illegal in terms of NEMA and the Regulations to start an activity without an environmental authorisation.

A possible exception to this requirement is where an activity has been identified in terms of section 24(2)(d) of NEMA. These activities relate to existing activities that may have a detrimental effect on the environment. In the case of these activities it will not always be possible to obtain authorisation before the activity commences and authorisation must be obtained as provided for in such notices. Although not a clear exception, it is a defence in terms of NEMA that an activity had to be undertaken as a result of an emergency.

5.3 WHO MUST AN APPLICATION BE MADE TO?

An application for environmental authorisation must be made to the competent authority. Section 24C indicates when the Minister, or the national Department of Environmental Affairs and Tourism, if the Minister has delegated the powers to the department, will be the competent authority. In all other instances, the competent authority will be the MEC responsible for environment, or the provincial department responsible for environment if the MEC has delegated the powers to the department.

Contact details of the different competent authorities are set out in Appendix A.

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5.4 CAN SCOPING AND EIA BE DONE FOR AN ACTIVITY LISTED FOR BASIC ASSESSMENT AND VICE VERSA?

The list that prescribes basic assessment for certain activities has been constructed in such a way that the activities in the list are generally suitable for a concise process. There may, however, be instances where an application may be particularly complex and it will be difficult for a competent authority to make a decision based on a basic assessment report. In these cases, the applicant may apply to the competent authority for permission to apply scoping instead of basic assessment. Basic assessment may not be done for an activity where a scoping and EIA process is indicated.

5.5 IS AN ENVIRONMENTAL AUTHORISATION STILL REQUIRED IF APPROVALS OR LICENSES HAVE BEEN OBTAINED FROM OTHER AUTHORITIES?

Yes. The requirement to obtain an environmental authorisation is distinct from the requirements of other legislation.

5.6 WHAT HAPPENS TO AUTHORISATIONS AND PROCESSES UNDER THE 1997 REGULATIONS?

Authorisations that have already been granted in terms of the **1997** regulations will be regarded as authorisations issued in terms of the new Regulations. No new application needs to be made in respect of the activities which are already authorised, although the provisions of the new Regulations will apply to the authorisation.

Any application or appeal which has been made in terms of the **1997** regulations and which is not finalised when the new Regulations commence, will be handled in terms of the provisions of the **1997** regulations.

5.7 HOW WOULD A MEMBER OF THE PUBLIC KNOW THAT AN APPLICATION FOR AUTHORISATION HAS BEEN, OR WILL BE, MADE?

The EAP has to comply with certain minimum notification requirements, including the placing of a notice on the site where the proposed activity is to be undertaken and publishing a notice in a newspaper. Government is currently in the process of establishing a *Government Gazette* in respect of EIA applications. Once the gazette is operational, EAPs will be allowed to publish the required notices in the gazette. The EAP must also

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specifically notify certain people of the application. These people include those adjacent to the site or within 100 metres of the site if they may be directly affected by the activity, the municipal councillor and any organisation of ratepayers that represents the community in the area.

5.8 HOW ARE COMMENTS FROM THE PUBLIC TAKEN INTO ACCOUNT?

The **EAP** is obliged to include a summary and copies of all comments that are received from **I&APs** as well as an explanation of how the comments have been taken into account in a basic assessment report, scoping report and **EIA** report. The competent authority will consider the issues raised by **I&APs** in making its decision on the application.

5.9 CAN A PERSON REQUIRING AN ENVIRONMENTAL AUTHORISATION UNDERTAKE THE PROCESSES REQUIRED IN THE REGULATIONS?

An applicant cannot compile any of the reports or undertake the processes required by the Regulations. The applicant must appoint an **EAP** to manage an application on his or her behalf. There is a range of requirements of **EAPs**, including the fact that an **EAP** must be independent and have the appropriate expertise to conduct the assessment.

It is important that an applicant chooses an **EAP** carefully since the Regulations provide certain consequences if the **EAP** is not independent or competent. For example, if the **EAP** is not independent, the competent authority may require the applicant to appoint another **EAP** to redo the work, or may require the applicant to pay for an external review of work that has already been done. If the **EAP** does not provide work of an adequate standard to the competent authority, the competent authority may reject the reports, which will result in delays for the processing of the application.

5.10 HOW LONG WILL IT TAKE THE AUTHORITY TO MAKE A DECISION?

The competent authority will make a decision on an application that has followed basic assessment within 30 days of receiving all the relevant information.

In respect of an application that has followed scoping and **EIA**, the competent authority will inform the applicant that the **EIA** report is accepted or rejected or request the applicant to make changes to the report or advise the applicant that the report has been sent for specialist review within **60** days and will make a decision to grant or refuse an application within 45 days of accepting the report or of receiving the findings of a specialist reviewer.

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5.11 HOW ARE ENVIRONMENTAL AUTHORISATIONS TRANSFERRED?

An environmental authorisation is given to a person identified in the authorisation. The environmental authorisation may therefore need to be transferred in certain circumstances, for example, when a business, which involves the authorised activity, is sold. The environmental authorisation will specify any conditions that must be complied with for the transfer of the authorisation.

5.12 CAN AN ENVIRONMENTAL AUTHORISATION BE CHANGED?

Environmental authorisations can be changed at the request of the authorisation holder. To request a change to the environmental authorisation, the authorisation holder must submit a completed application form to the competent authority. If the request would amount to a substantial change to the current environmental authorisation, the competent authority will instruct the authorisation holder to undertake a public participation process and, in most cases, to conduct further investigations and assessments. The provision for amending environmental authorisations cannot be used to request changes that are likely to have a significant impact on the environment – these must be addressed by means of a new application for environmental authorisation.

The competent authority can also change environmental authorisations in certain circumstances. Before making any change, the competent authority will give the authorisation holder an opportunity to comment on the proposed changes and, if the proposed change is substantive, conduct a public participation process. In such an instance the public participation process must be conducted by the competent authority.

5.13 MUST ANY FEES OR COSTS BE PAID WHEN MAKING AN APPLICATION OR APPEAL?

The Regulations provide that fees may be imposed in four instances. These are –

- ❖ applications for environmental authorisation,
- ❖ applications for amendments to environmental authorisations that are requested by the authorisation holder,
- ❖ applications for exemption, and
- ❖ appeals.

Although no fees were prescribed when the Regulations came into force, these may be introduced in the future.

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In addition to application fees, the competent authority is entitled to recover the costs of a specialist reviewer from an applicant where a high level of objectivity is required and it does not appear that the documents are objective or where the technical knowledge required to review any aspect of the report is not available within the competent authority.

5.14 HOW LONG IS AN ENVIRONMENTAL AUTHORISATION VALID?

The validity of an environmental authorisation is determined when the authorisation is given. The environmental authorisation will specify whether the authorisation is valid for a fixed or indefinite period.

5.15 WHAT HAPPENS IF A LISTED ACTIVITY IS UNDERTAKEN WITHOUT AN ENVIRONMENTAL AUTHORISATION?

A person who undertakes a listed activity without an environmental authorisation may be prosecuted and be liable to a fine of up to R5 million and/or to imprisonment for a period not exceeding 10 years. (The competent authority may also require that the activity cease and that the environment be rehabilitated).

People who have undertaken an activity without authorisation may apply for rectification in terms of section 24G of **NEMA**. The consideration of these applications is subject to an administrative fine of up to R1 million. This fine is separate from any criminal penalty that may be imposed.

5.16 IS IT POSSIBLE TO GET EXEMPTION FROM THE REGULATIONS?

A person who is subject to the Regulations may apply for exemption from the provisions of the Regulations, with the exception that no exemption from a public participation process may be granted where the rights or interests of other people may be affected.

To obtain exemption, an application form must be submitted to the competent authority which explains why an exemption is required and includes any necessary supporting documents.

5.17 CAN I&APS PARTICIPATE IN APPLICATIONS FOR EXEMPTION?

Where the rights or interests of other people may be affected by an application for exemption, the competent authority will instruct the person applying for exemption to

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undertake a public participation process. **I&APs** are accordingly entitled to participate in an exemption processes where the rights or interests **of** other people may **be affected by** a decision to grant or refuse exemption.

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Guideline 5: Assessment of Alternatives and Impacts

**in support of the Environmental Impact
Assessment Regulations, 2006**

June 2006



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GUIDELINE 5: ASSESSMENT OF ALTERNATIVES AND IMPACTS

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Abbreviations

EIA	Environmental impact assessment
I&APs	Interested and affected parties
NEMA	National Environmental Management Act. 1998 (Act no 107 of 1998)
Regulations	Environmental Impact Assessment Regulations. 2006

GUIDELINE 5: ASSESSMENT OF ALTERNATIVES AND IMPACTS

I. ODI

In April 2006 the Minister of Environmental Affairs and Tourism passed environmental impact assessment regulations' (the Regulations) in terms of Chapter 5 of the National Environmental Management Act, 1998² (NEMA). The Regulations replace the environmental impact assessment (EIA) regulations which were promulgated in terms of the Environment Conservation Act, 1989³ in 1997.

In order to assist potential applicants, environmental assessment practitioners ("EAPs") and interested and affected parties (I&APs) to understand what is required of them in terms of the Regulations, what their rights are and/or what their role may be, the Department of Environmental Affairs and Tourism has expanded its Integrated Environmental Management Guideline Series to include the following documents:

- ❖ Guideline 3: General guide to the Environmental Impact Assessment Regulations, 2006
- ❖ Guideline 4: Public participation
- ❖ Guideline 5: Assessment of impacts and alternatives
- ❖ Guideline 6: Environmental management frameworks

The additional documents are intended to be guides only and should be read in conjunction with NEMA and the Regulations. The documents are not intended to be a substitute for the provisions of NEMA or the Regulations in any way.

This document is Guideline 5: Assessment of Alternatives and Impacts in support of the Environmental Impact Assessment Regulations, 2006. It provides a basic guide to the assessment of alternatives and impacts which are key components of an EIA process. The purpose of the document is to create a common understanding amongst the different role-players what is required in the assessment of alternatives and impacts and alternatives.

¹ Environmental Impact Assessment Regulations, 2006

² Act No. 107 of 1998

³ Act No. 73 of 1989

GUIDELINE 5: ASSESSMENT OF ALTERNATIVES AND IMPACTS

2. ASSESSMENT OF ALTERNATIVES

2.1 THE OBJECTIVES OF ASSESSING ALTERNATIVES

The Regulations require that alternatives to a proposed activity be considered. Alternatives are different means of meeting the general purpose and need of a proposed activity. Alternatives may include location or site alternatives, activity alternatives, process or technology alternatives, temporal alternatives or the no-go alternative. (The no-go alternative is the option of not undertaking the proposed activity or any of its alternatives. The no-go alternative also provides the baseline against which the impacts of other alternatives should be compared).

The identification, description, evaluation and comparison of alternatives are important for ensuring the objectivity of the assessment process. In cases where there is no objective and thorough assessment of alternatives, the EIA process usually only confirms a chosen activity and the value of the assessments as an input to decision-making may be compromised.

2.2 NEED AND DESIRABILITY OF THE PROJECT

In order to ensure that the assessment of alternatives is appropriate, it is important to develop a clear definition of the need and desirability for the proposed activity. This definition of need and desirability will help to set the context of the activity and enable the determination of appropriate alternatives to the proposed activity. It will also help the competent authority to assess the implications of the different alternatives, including the reasonableness of the no-go alternative, in a context of the risks and benefits of the proposed activity. Without a proper description of the need and desirability for a proposed activity, it is difficult for a competent authority to make an informed decision.

2.3 THE SELECTION OF ALTERNATIVES

The Regulations indicate that alternatives that are considered in an assessment process be reasonable and feasible. I&APs must be provided with an opportunity of providing inputs into the process of formulating alternatives. Once a full range of potential alternatives has been identified, the alternatives that could be reasonable and feasible should be formulated as activity alternatives for further consideration during the basic assessment or scoping and EIA process.

The number of alternatives that are selected for assessment should not be set arbitrarily, but should be determined by the range of potential alternatives that could be reasonable

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and feasible and should include alternatives that are real alternatives to the proposed activity. The process of selecting alternatives should be clearly documented.

The assessment of alternatives should, where possible, be done in a way that feeds back into the planning or design of the activity, thereby optimising the positive aspects and minimising the negative aspects that are highlighted during the assessment process. The assessment process should also be iterative where necessary to reflect the optimal formulation of alternatives. In instances where it is clear that such an interactive and iterative process has been followed in the development of a preferred alternative, it may be appropriate to terminate the assessment of other alternatives, excluding the no-go alternative, that have been considered and assessed in such a process during the course of the assessment. In order to justify the termination of the assessment, or further assessment of any alternative, it is, however, important to document the interactions and iterations properly.

It should be noted that the no-go alternative may sometimes not be a “real” or “implementable” alternative (for example, where the capacity of a sewage pipeline has to be increased to cope with current demand). It should, however remain the default option and must always be included to provide the baseline for assessment of the impacts of other alternatives and also to illustrate the implications of not authorising the activity.

2.4 THE ASSESSMENT OF ALTERNATIVES

The assessment of alternatives should follow the impact assessment process described in the next section and should, as a minimum, include the following:

- ❖ the consideration of the no-go alternative as a baseline scenario (even in cases where the no-go alternative is not a realistic alternative);
- ❖ a comparison of the selected alternatives; and
- ❖ the providing of reasons for the elimination of an alternative.

Where alternative locations or sites are identified as alternatives, the features of each location or site should be investigated to the same level of detail for the purposes of the comparative assessment of the alternatives. The comparative assessment should at least include the following aspects :

- ❖ capital and operating costs;
- ❖ direct, indirect and cumulative impacts;
- ❖ mitigation measures;
- ❖ physical, legal or institutional constraints; and
- ❖ compliance with policy and legal requirements.

GUIDELINE 5: ASSESSMENT OF ALTERNATIVES AND IMPACTS

3. ASSESSMENT OF IMPACTS

3.1 THE OBJECTIVES OF ASSESSING IMPACTS

The Regulations require that a basic assessment or scoping and environmental impact assessment (EIA) process be undertaken to support an application for environmental authorisation. An key component of these processes is the the identification and assessment of potential impacts of the proposed activity.

The objective of the assessment of impacts is to identify and assess all the significant impacts that may arise from the undertaking of an activity. The findings of impact assessments are used to inform the competent authority's decision as to whether the activity should be authorised, authorised subject to conditions that will mitigate the impacts to within acceptable levels or should be refused.

It is sometimes difficult to make predictions in respect of the impacts that may occur. Value judgments may therefore be required on less than perfect information. The use of a logical approach, where uncertain elements are assessed, in a clear and methodical process, helps to ensure that the assessment is focused and provides a basis for making predictions and value judgements that will ultimately inform the decision of the competent authority. The process of assessing impacts

3.1.1 Types of impacts

Impacts are the changes in an environmental parameter that result from undertaking an activity. The change is the difference between the effect on the environmental parameter where the activity is undertaken compared to that where the activity is not undertaken. Impacts occur over a specific period and within a defined area.

Different types of impacts may occur from the undertaking of an activity. The impacts may be positive or negative and may be categorized as being direct (primary), indirect (secondary) or cumulative impacts.

Direct impacts are impacts that are caused directly by the activity and generally occur at the same time and at the place of the activity (e.g. noise generated by blasting operations on the site of the activity). These impacts are usually associated with the construction, operation or maintenance of an activity and are generally obvious and quantifiable.

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Indirect impacts of an activity are indirect or induced changes that may occur as a result of the activity (e.g. the reduction of water in a stream that supply water to a reservoir that supply water to the activity). These types of impacts include all the potential impacts that do not manifest immediately when the activity is undertaken or which occur at a different place as a result of the activity.

Cumulative impacts are impacts that result from the incremental impact of the proposed activity on a common resource when added to the impacts of other past, present or reasonably foreseeable future activities (e.g. discharges of nutrients and heated water to a river that combine to cause algal bloom and subsequent loss of dissolved oxygen that is greater than the additive impacts of each pollutant). Cumulative impacts can occur from the collective impacts of individual minor actions over a period of time and can include both direct and indirect impacts.

3.1.2 Approaches to the assessment of impacts

Assessment of impacts include:

- ❖ identifying and assessing the potential impacts associated with a proposed activity and its alternatives;
- ❖ predicting the nature, magnitude, extent and duration of potentially significant impacts;
- ❖ identifying the range of mitigation measures that could be implemented to lessen the impacts of the activity; and
- ❖ evaluating the significance of residual impacts i.e. impacts that remain after taking mitigation measures into account.

There are different approaches that can be adopted to the undertaking of the assessment of impacts, but they should always be based on a methodology that includes:

- ❖ a clear process for impact identification, prediction and evaluation;
- ❖ specification of impact identification techniques;
- ❖ criteria for evaluating the significance of impacts;
- ❖ the design of mitigation measures to address impacts;
- ❖ defining types of impacts (direct, indirect or cumulative); and
- ❖ specifying uncertainties.

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The four components of an impact assessment study are discussed in more detail below.

3.1.3 Impact identification

The identification of the potential impacts of an activity on the environment should include impacts that may occur during the commencement, operation and termination of an activity.

In order to identify impacts it is important that the nature of the proposed activity is well understood so that the potential impacts that are associated with the activity can be understood. The process of identification and assessment of impacts includes the:

- ❖ determination of current environmental conditions in sufficient detail so that there is a baseline against which impacts can be identified and measured;
- ❖ determination of future changes to the environment that will occur if the proposed activity does not take place;
- ❖ an understanding of the activity in sufficient detail to understand its consequences; and
- ❖ the identification of significant impacts which are likely to occur if the activity is undertaken.

3.1.4 Impact prediction

After all the potentially significant impacts have been identified the nature and characteristics of the impacts can be predicted. Impact prediction, or impact forecasting, involves the consideration of physical, biological, socio-economic and cultural information to estimate the likely characteristics and parameters of the impact. The aim of impact prediction is to provide a basis for determining the likely significance of each impact with sufficient accuracy to develop appropriate mitigation measures.

Factors that should be taken into account in impact prediction include:

- ❖ the nature of the impact i.e. positive, negative, direct, indirect, cumulative;
- ❖ the magnitude of the impact i.e. severe, moderate, low;
- ❖ the extent and location of the impact in terms of the area covered, volume distribution, etc;
- ❖ when the impact will occur i.e. during construction, operation and/or decommissioning as well as whether the impact will occur immediately or be delayed;
- ❖ the duration of the impact i.e. short term, long term, intermittent or continuous;
- ❖ the extent to which the impact can be reversed or not;
- ❖ the likelihood or probability of the impact actually occurring; and

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- ❖ the significance of the impact on a local, regional or global level.

The methods used to predict the characteristics of impacts should always be clearly described to the extent that the competent authority that evaluates the assessment will be able to understand exactly how the predictions were made. The methods include:

- ❖ professional judgement;
- ❖ quantitative mathematical models;
- ❖ experiments and physical models;
- ❖ physical or visual simulations or maps (including GIS tools);
- ❖ case studies; and
- ❖ past experience.

The choice of which method to use in a given situation will depend on how significant the impact is likely to be. In general, the more significant an impact is likely to be, the more sophisticated the methods used to predict impacts should be.

Where possible, impacts should be predicted quantitatively to make a comparison between alternatives with baseline conditions easier and to facilitate impact monitoring and auditing after the EIA process. If quantification is not possible it is important to use methods that allow the impacts to be estimated and compared systematically. For example, rating techniques can be used to assist impact estimation as well as to assign values where there is insufficient data and/or a high level of uncertainty.

In some instances the use of qualitative descriptions is unavoidable. An example of this is environmental attributes such as scenic quality and sense of place. In such instances the description of impacts should be based on some type of classification and the impacts should be summarized in appropriate formats such as maps, cross section drawings or photomontages.

3.1.5 Mitigation of potential impacts

Once the impacts have been identified and predicted, appropriate mitigation measures need to be established. Mitigation measures are the steps that are taken to reduce the identified impacts as far as possible. Mitigation measures should address the predicted factors of the impacts clearly to demonstrate how the impacts will be reduced through mitigation. The objectives of mitigation are to:

- ❖ find more environmentally sound ways of doing things;
- ❖ enhance the environmental benefits of a proposed activity;
- ❖ avoid, minimise or remedy negative impacts; and
- ❖ ensure that residual negative impacts are within acceptable levels.

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The mitigation of impacts should be organised in a hierarchy of actions namely:

- ❖ Firstly, avoid negative impacts as far as possible through the use of preventative measures;
- ❖ Secondly, minimise or reduce negative impacts to “as low as practicable” levels; and
- ❖ Thirdly, remedy or compensate for negative residual impacts which are unavoidable and cannot be reduced further.

3.1.6 Evaluation of the significance of impacts

After the impacts of an activity have been predicted and mitigation measures have been determined, the impacts must be evaluated to determine how significant the impacts are likely to be.

The process of evaluating significance distinguishes between ‘as predicted’ (the impact before mitigation is considered) and ‘residual’ impacts (the impact after mitigation measures have been taken into account). This process consists of two parts namely:

- ❖ evaluating the significance of ‘as predicted’ impacts to define the requirements for mitigation and other remedial actions; and
- ❖ evaluating the significance of the ‘residual’ impacts that remain after mitigation measures are taken into account.

Key factors that should be considered in evaluating the significance of an impact include:

- ❖ environmental standards, guidelines and objectives;
- ❖ level of public concern (including both norms and values); and
- ❖ scientific and professional evidence of the:
 - loss or disruption of valued resource stocks and ecological functions;
 - negative impact on social values, quality of life and livelihood; and
 - foreclosure of land and resource use opportunities.

The determination of the significance of an impact should also be based on a methodical approach that includes:

- ❖ the use of procedures and guidelines established by the competent authority;
- ❖ the adoption of relevant criteria from comparable cases;

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- ❖ a consistent approach to the comparison of alternatives; and
- ❖ documenting the reasons for the judgements made.

There are various sets of criteria that can be applied to assist in the determination of significance. The criteria selected for assessing individual activities should be based on the environmental context of the areas in which the activities occur.

The evaluation of the significance of the impact must always consider the likelihood of the impact eventuating and acceptability of risk. Four other criteria to evaluate whether adverse impacts are significant include considering whether the impact will result in:

- ❖ environmental loss and deterioration;
- ❖ social impacts resulting directly or indirectly from environmental change;
- ❖ non-conformity with environmental standards, objectives and guidelines; and
- ❖ likelihood and acceptability of risk.

3.2 THE ASSESSMENT OF CUMULATIVE IMPACTS

The assessment of cumulative impacts on a site-specific basis is complex - especially if many of the impacts occur on a much wider scale than the site being assessed and evaluated. It is often difficult to determine at which point the accumulation of many small impacts reaches the point of an undesired or unintended cumulative impact that should be avoided or mitigated. There are also often factors which are uncertain when potential cumulative impacts are identified. In view of the range of issues that may influence the identification and assessment of potential cumulative impacts, it is therefore important that the approach which has been adopted is clearly explained.

Authorities, including the competent authority, may often have information which can assist in the assessment of cumulative impacts. This information may include:

- ❖ spatial information;
- ❖ statistics on other similar applications or applications that could have impacts on the same type of environmental resources;
- ❖ time series monitoring results; and
- ❖ legal or policy thresholds and limits.

3.2.1 Types of cumulative impacts

Cumulative impacts can arise from one or more activities. A cumulative impact may result in an additive impact i.e. where it adds to the impact which is caused by other similar impacts, or an interactive impact i.e. where a cumulative impact is caused by different impacts that combine to form a new kind of impact. Interactive impacts may be either

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countervailing (the net adverse cumulative impact is less than the sum of the individual impacts) or synergistic (the net adverse cumulative impact is greater than the sum of the individual impacts).

3.2.2 Steps in assessing cumulative impacts

The assessment of cumulative impacts should not be done separately from the assessment of other impacts. Cumulative impacts however tend to have different time and space dimensions and therefore require specific steps which may even mean that some of the actions in the assessment process that preceded general impact identification may have to be revisited after potential cumulative impacts have been identified to ensure that the scope of the **EIA** process is adequate to deal with the identified cumulative impacts. Four general steps, which are discussed below, are recommended to ensure the proper assessment of cumulative impacts.

a) Determining the extent of cumulative impacts

To initiate the process of assessing cumulative impacts, it is necessary to determine what the extent of potential cumulative impacts will be. This can be done by adopting the following approach:

- ❖ identify potentially significant cumulative impacts associated with the proposed activity;
- ❖ establish the geographic scope of the assessment;
- ❖ identify other activities affecting the environmental resources of the area; and
- ❖ define the goals of the assessment.

b) Describing the affected environment

The following approach is suggested to the compilation of a description of the environment:

- ❖ characterise the identified environmental resources in terms of their response to change and capacity to withstand stress;
- ❖ characterise the stresses affecting these environmental resources and their relation to regulatory thresholds; and
- ❖ define a baseline condition that provides a measuring point for the environmental resources that will be impacted on.

c) Assessment of cumulative impacts

The methodology which is used for the assessment of cumulative impacts should be coherent. In general the methodology should comprise of the following:

- ❖ an identification of the important cause-and-impact relationships between proposed activity and the environmental resources;
- ❖ a determination of the magnitude and significance of cumulative impacts; and

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- ❖ the modification, or addition, of alternatives to avoid, minimize or mitigate significant cumulative impacts.

4. CONCLUSION

The main purpose of the assessment of alternatives and impacts *is* to provide the competent authority with relevant and objective information that will enable the authority to make informed decisions on an application for environmental authorisation. In order to achieve this purpose it *is* important that:

- ❖ methodologies that are used are clearly described **so** that it can be understood and considered by the competent authority and I&APs;
- ❖ methodologies and techniques are applied in such a way that accurate and objective information and/or opinions are provided;
- ❖ **any** issues raised by I&APs in respect of alternatives and impacts are addressed in the comments and responses report; and
- ❖ the assessment of alternatives and impacts results in options that represent the minimum impact on the environment.

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The references that are indicated in bold were the main references used in the compilation of this guideline.