



Integrated Environmental Management Information Series

Screening 1



Department of
Environmental Affairs and Tourism

Other topics in the series of overview information reports on the concepts of, and approaches to, integrated environmental management are listed below and the first six are currently available on request. Further titles in this series are being prepared and will be made available periodically. Sequence of release and titles are subject to change.

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PREFACE

This document is one of a series of overview information reports on the concepts of, and approaches to integrated environmental management (IEM). IEM is a key instrument of South Africa's National Environmental Management Act (NEMA). South Africa's NEMA promotes the integrated environmental management of activities that may have a significant effect (positive or negative) on the environment. IEM provides the overarching framework for the integration of environmental assessment and management principles into environmental decision-making. It includes the use of several environmental assessment and management tools that are appropriate for the various levels of decision-making.

The aim of this document series is to provide general information on techniques, tools and processes for environmental assessment and management. The material in this document draws upon experience and knowledge from South African practitioners and authorities, and published literature on international best practice. This document is aimed at a broad readership, which includes government authorities (who are responsible for reviewing and commenting on environmental reports and interacting in environmental processes), environmental professionals (who undertake or are involved in environmental assessments as part of their professional practice), academics (who are interested and active in the environmental assessment field from a research, teaching and training perspective), non-governmental organizations (NGOs) and interested persons. It is hoped that this document will also be of interest to practitioners, government authorities and academics from around the world.

This document has been designed for use in South Africa and it cannot reflect all the specific requirements, practices and procedures of environmental assessment in other countries.

This series of documents is not meant to encompass every possible concept, consideration, issue or process in the range of environmental assessment and management tools. Proper use of this series of documents is as a generic reference, with the understanding that it will be revised and supplemented by detailed guideline documents.

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All sources used have been acknowledged by means of complete references.

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SUMMARY

This document provides an overview of the screening process in integrated environmental management (IEM). It aims to overcome some of the existing confusion between the screening and scoping stage of environmental assessment by clarifying the purpose and definition of screening.

Screening determines whether or not a development proposal requires environmental assessment, and if so, what level of assessment is appropriate. Screening is therefore a decision-making process that is initiated during the early stages of the development of a proposal.

The document differentiates between two types of screening. *Mandatory screening* is defined as that process which is typically administered by an environmental authority or some other institution with vested powers to instruct and become party to a screening process. Various approaches to *mandatory screening* exist, including initial consultations with authorities, use of lists of actions, activities, projects and/or sensitive environments, preliminary environmental evaluation, decision-support systems, or the decision-maker's discretion.

Pre-application screening, on the other hand, is undertaken outside a formal process, typically at the discretion of a development proponent. *Pre-application screening* is the process whereby key environmental issues associated with a proposed development are anticipated at the earliest opportunity, and are considered as an integral part of pre-feasibility investigation. Questions pertaining to the need for, and desirability of the proposed development must be considered, and issues such as technology and location alternatives have to be appraised at an appropriate level of detail. *Pre-application screening* often involves some form of fatal flaw analysis.

The responsibilities of different parties involved in the screening process are summarized. However, responsibilities may vary depending on the circumstances and nature of the screening process. Project and environmental information required by the screening process is identified.

An overview of screening practices in developing countries and countries in transition highlights the range of approaches that may be applied, and provides examples of situations where *pre-application screening* is currently applied.

The document concludes with an identification of some of the current challenges and short-comings associated with screening. These include capacity constraints by decision-making authorities to undertake effective and adequate screening, weaknesses associated with relying on lists for screening, difficulties in assigning impact significance and determining thresholds, and the confusion arising between the reporting requirements of screening, scoping and a full environmental impact report.

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1. Introduction

In the context of integrated environmental management (IEM), screening determines whether or not a development proposal requires environmental assessment, and if so, what level of assessment is appropriate. Screening is thus a decision-making process that is initiated during the early stages of the development of a proposal.

In practice, the purpose of screening is often misinterpreted as an opportunity to provide decision-makers with the information usually contained in an environmental assessment in an attempt to gain authorization for a proposal without the need to proceed further with the environmental assessment process. Apart from burdening decision-makers with superfluous detail that is unnecessary for making the screening decision, the information presented will generally have been compiled without adequate consultation with stakeholders. Key issues that may influence the decision may therefore have been overlooked.

There is thus a need to refocus on the definition, approaches to, and information requirements of screening in order to improve the effectiveness and efficiency of the entire environmental assessment process.

2. Purpose of this Document

The purpose of this document is to provide an overview of screening, set in the context of integrated environmental management.

The overview is structured to differentiate between what might be termed *mandatory screening*, which is typically administered by an environmental permitting authority or some other institution with vested powers to undertake the screening process, and *pre-application screening*, which is undertaken outside a formal process, typically

at the discretion of a development proponent. In fulfilling this purpose, the discussion that follows begins with a review of some common definitions of screening in order to provide a context in which to expand on both the rationale for, and details of its practical application. Here reference will be made to screening methods, roles and responsibilities for screening, the objectives and outcomes of the process, and an overview of screening as it is practiced in some developing countries and countries in transition. The document concludes with a summary of some of the challenges and shortcomings of screening practice.

It is not the purpose of this document to provide a set of guidelines on the practical requirements of undertaking screening. It rather aims to provide an overview of what screening entails and when it should be undertaken.

3. Definition and Function of Screening

A definition of screening provided by Sadler (1996) is that it is a process involving the determination of whether or not an individual proposal (project, programme, policy, etc.) requires further environmental assessment, and if so, what level of detail this assessment should entail. Other definitions of screening show a high degree of commonality (Box 1).

Box 1: Definitions of screening.

Department of Environment Affairs (DEA, 1992):
"The classification of proposals".

IFC (1998): "...environmental screening of each proposed operation to determine the appropriate extent and type of environmental assessment".

UNEP (1996): "the process of determining whether or not an individual proposal requires detailed environmental assessment and the level of assessment that should occur"

IAIA (1999): "to determine whether or not a proposal should be subject to environmental impact assessment (EIA), and if so, at what level of detail."

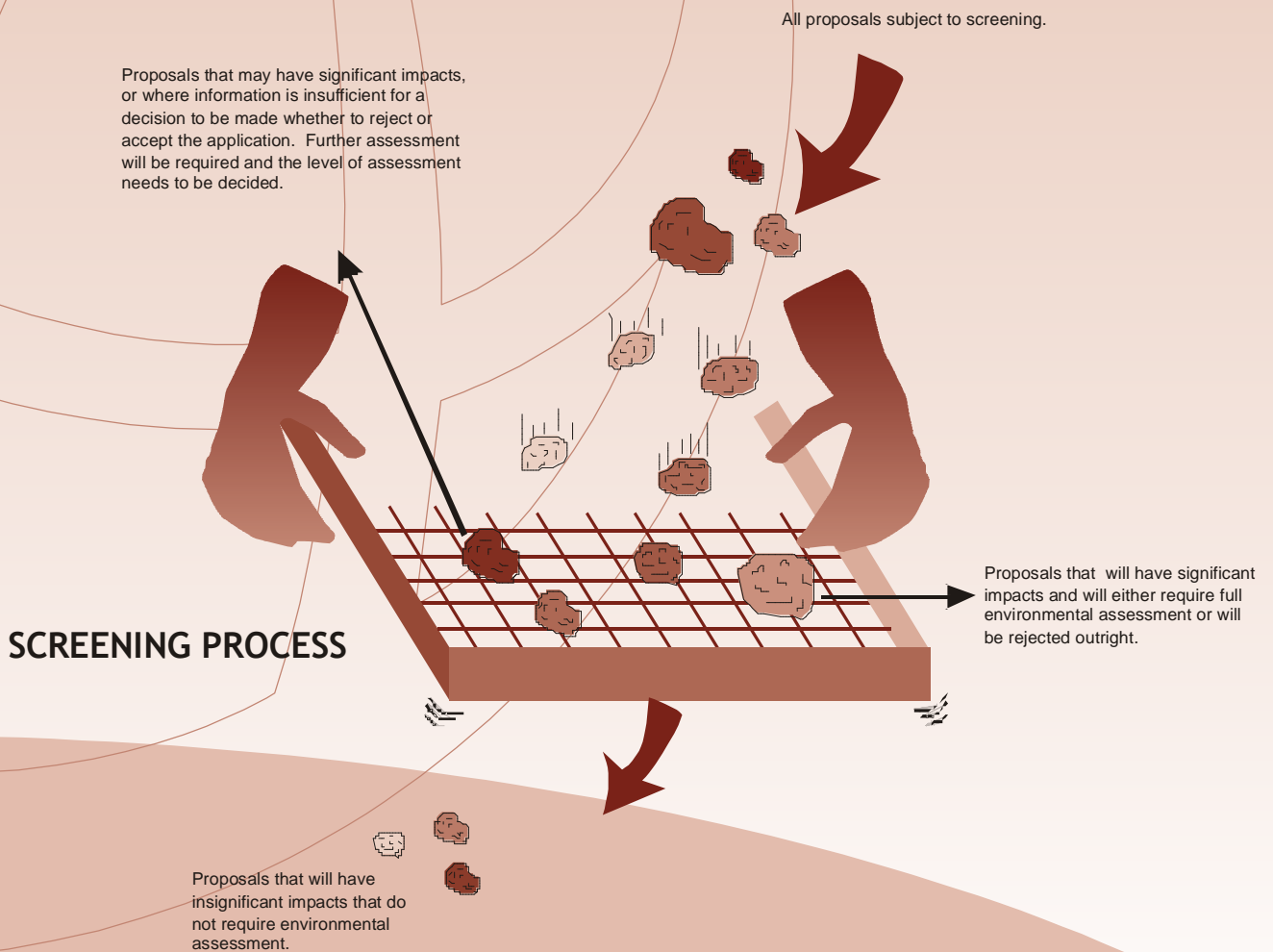
Wood (2000): "deciding whether the nature of the action and its likely impacts are such that it should be submitted to environmental assessment."

Considering the definitions of screening that are provided here, it is clear that screening is a process instituted at an early stage of a proposal's life cycle, and that it comprises two important steps. The first step is to determine whether or not a development proposal requires environmental assessment. When the outcome of this first step is a decision that an environmental assessment is to be undertaken, the second step of screening determines

the level of the environmental assessment to be initiated.

The screening process can therefore be compared to the function of a sand screen that separates fine grains of sand from the gravel or stones. All development proposals are initially subjected to this "screen". Proposals that have insignificant environmental impacts and don't require environmental assessment are like the fine grains of sand that are small enough to fall through the mesh of the screen. On the other hand, proposals for which there is inadequate information to make a decision or where it is clear that the proposal will have significant environmental impacts, are like the coarser gravels or stones that are caught by the screen. These proposals will either be rejected outright or will require environmental assessment. In the case of the latter the appropriate level of assessment then needs to be determined (see Figure 1).

Figure 1: Alternative outcomes of the Screening Process.



In determining whether a proposal requires further environmental assessment, should be rejected outright, or should be exempt from environmental assessment, the screening process should take into consideration the alignment of the proposal with existing policies and plans, the scale of the proposed development, the intensity of potential impacts and the significance of potential impacts. The interpretation of whether or not the possible effects of a proposal might be significant is thus a fundamental aspect of screening.

However, providing an objective definition of significance is difficult. Significance is largely determined by prevailing societal values that are, in turn, influenced by the associated social, economic, political and biophysical context. Although a number of criteria for judging impact significance have been developed, this remains an element of screening that can expose inconsistencies in the process and potentially jeopardize its essential purpose. For example, when significance is not properly determined, a proposed development that may warrant a comprehensive environmental assessment might be exempted; and conversely, a development that should be exempted in this regard might unnecessarily be subjected to a comprehensive environmental assessment. For a more detailed discussion of impact significance refer to document 5 in this information series.

4. Pre-Application and Mandatory Screening

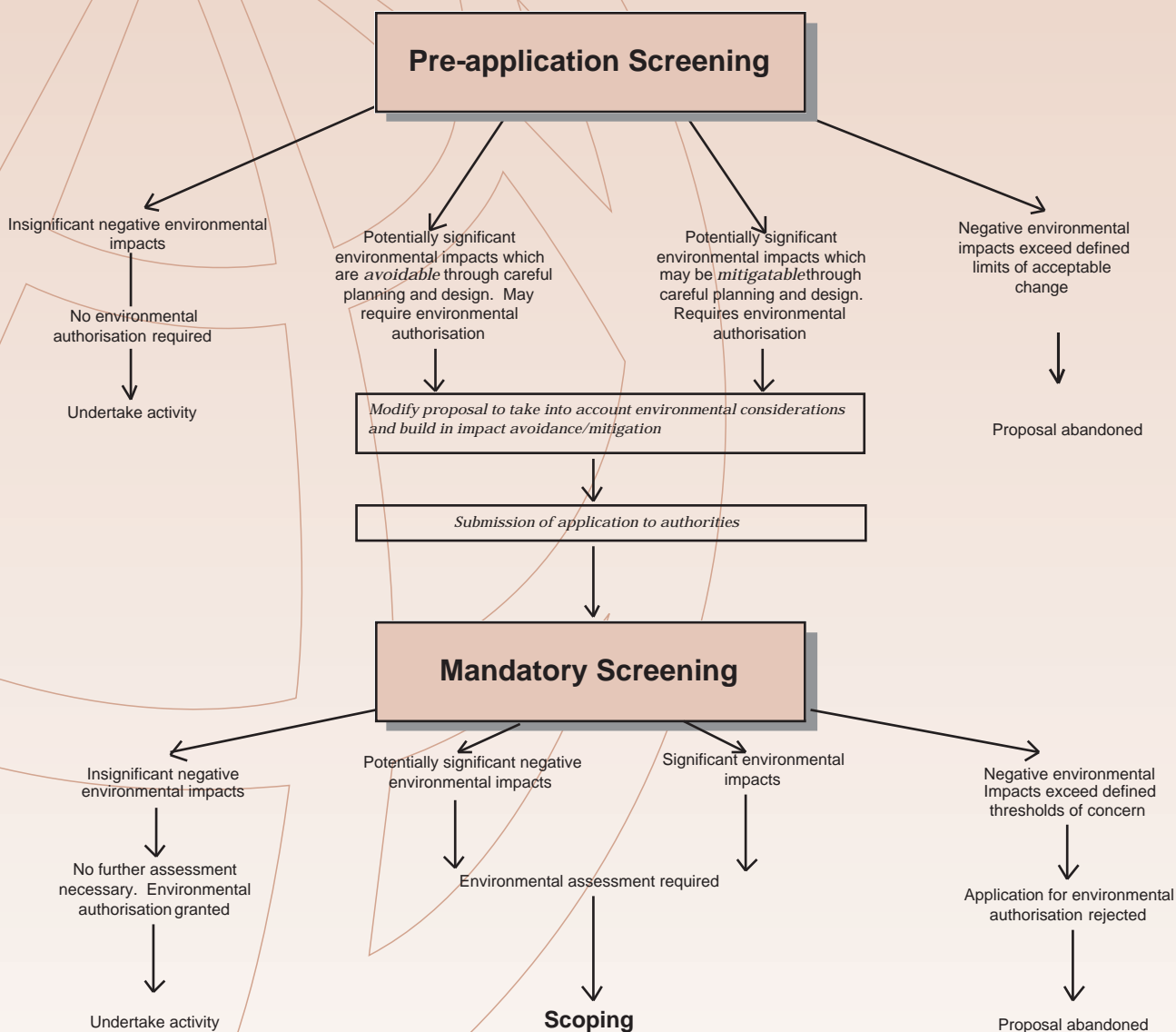
Integrated environmental management is “a philosophy which prescribes a code of practice for ensuring that environmental considerations are fully integrated into all stages of the development process in order to achieve a desirable balance between conservation and development” (Department of Environment Affairs, 1992). The IEM philosophy, with its supporting principles, is a cradle-to-grave approach that is relevant to the planning, assessment, implementation and management of any local, national

or international proposal (project, plan, programme or policy) that has a potentially significant effect on the environment and sustainable development.

Set in the context of IEM, screening holds an important position as a locus where environmental considerations associated with a proposal can be taken into account during the planning stages (pre-feasibility or feasibility stages) and/or the initial stage of the environmental assessment (EA). These considerations are assessed within the framework of the screening process (Figure 2).

In this context of IEM, environmental considerations are first taken into account either through *mandatory screening*, which is typically administered by an environmental authority or funding body, and/or *pre-application screening*, which is typically undertaken at the initiative of a development proponent prior to submitting an application to the lead authority to authorize an activity.

Figure 2: Overview of the Generic Screening Process.



4.1 Pre-application screening

In terms of the principles of IEM requiring environmental considerations to be integrated into the development process, it is the responsibility of the proponent to respond, as fully and as early as possible, to the environmental implications arising from a proposal. This should ideally be undertaken prior to the application for environmental authorization and/or the initiation of any formal process of environmental assessment. Described here as *pre-application screening*, this process should be initiated at the same time as any other pre-feasibility type investigations (e.g. technical and financial studies).

Pre-application screening is the process by which key environmental issues associated with a proposed development are anticipated at the earliest opportunity, and are considered as an integral part of pre-feasibility investigations. Here questions pertaining to the need for, and desirability of the proposal must be considered, and issues such as technology and location alternatives should be appraised at an appropriate level of detail. Significant environmental impacts also have to be anticipated, and mitigation options accommodated in initial development designs. It is a process that often takes the form of a preliminary evaluation (described in section 4.2.3). In pre-application screening the initiative for undertaking such a preliminary evaluation is taken by the proponent prior to an instruction by the lead authority or potential funding body to do so.

An important aim of pre-application screening is to establish whether there are aspects of a proposed development that are either technically flawed or have the potential to give rise to significant or unacceptable environmental consequences - the identification of potential 'fatal flaws'. Since the 'fatal flaw' concept is quite subjective in terms of its definition, a brief discussion of what it might constitute is required here.

4.1.1 Technical fatal flaw analysis

The technical aspects of a proposed development can be relatively easily reduced to a form that makes it possible to objectively and quantitatively reveal potential fatal flaws. For example, the technical feasibility of port construction can be determined by environmental parameters such as the water depth, which can be attained through dredging, and the consequent limitation that this imposes on vessels expected to utilize the facility. Taking into account high dredging costs, the presence of hard bedrock could constitute a technical fatal flaw, which may result in the abandonment of the proposal.

4.1.2 Financial and economic fatal flaw analysis

For many large projects there are clearly costs and benefits beyond the consideration of the financial investor. Many private infrastructure proposals give rise to wider and longer-term social, economic and environmental impacts, which do not appear in the private investor's balance sheet. For example, a financially viable project could give rise to negative externalities (such as an increased number of respiratory diseases stemming from a decline in air quality from industrial developments). If the cost of these externalities would be factored in from the outset (for example, the cost of meeting the increased demand for health services), a decision could be taken at an early stage - and before significant extra costs are incurred - on whether or not the proposal is viable in broader economic terms and over the long term. On the other hand, a non-viable, short-term financial result could become a viable economic project if positive externalities arise over the longer term (e.g. strong social and developmental benefits).

These broader economic implications need to be borne in mind when determining whether a proposal requires environmental assessment, and if so, what level of assessment is appropriate.

Similar to the screening of technical issues, the screening of financial and economic aspects of a proposed development is also reducible to a form that can reveal fatal flaws generally on a quantitative (e.g. monetary) basis. Ultimately the purpose of such an economic analysis is to make better investment decisions, and to alert decision-makers, who are subject to a variety of conflicting pressures, to the cost of economically suboptimal resource allocations as early as possible in the proposal life cycle.

4.1.3 Ecological fatal flaw analysis

The assessment of ecological fatal flaws requires a significant departure from the quantifiable mode of analysis according to which the technical, financial and economic aspects associated with a proposed development are considered. The assessment of ecological impacts tends to be an imprecise task and contains a high level of predictive uncertainty. This uncertainty tends to increase in the screening process as attempts are made to reduce the inherent complexity of ecosystems in order to make a rapid preliminary evaluation of possible ecological fatal flaws which would influence whether or not the proposal requires assessment, and the level of assessment required.

Taking cognizance of these uncertainties, the focus of ecological fatal flaw analysis should be directed at identifying and describing the ecological assets of the target area - in particular those that are recognized to be of global significance - and predicting the consequences of a proposal that will manifest as irreversible/irreparable impacts on these assets. For example, irreversible or irreparable impacts may include the extinction of species, and the elimination of threatened habitat, which presents high levels of risk to the functional integrity of the ecosystem extending beyond the immediate area in which a proposal would be implemented.

Impact predictions that are made in the course of ecological fatal flaw analysis generally involve a comparison between an anticipated impacted state and a reference standard (e.g. the existing background state). A comparison can also be made between an anticipated impacted state and thresholds at which species or ecosystem functioning is expected to be jeopardized. The precautionary principle should be adopted where there is uncertainty regarding the impact of a proposal on ecosystems.

Pre-application screening thus aims to establish whether a proposed development is flawed in terms of anticipated environmental impacts and whether or not the proposal needs to be authorized by the lead authority. Pre-application screening could therefore:

- eliminate the need for further environmental assessment, because the proposal has been abandoned on the basis of the fatal flaw analysis;
- eliminate the need for further environmental assessment, because there is certainty that the proposal will not require environmental authorization to proceed;
- require adjustments to be made to the proposal prior to submission of the application to the authorities to authorize the activity.

If there are no flaws that militate against advancing to the next phase of the environmental assessment process, which is typically mandatory screening (section 4.2), pre-application screening will have provided a good foundation upon which *mandatory screening* and, possibly, environmental assessment, can then proceed.

4.2 Mandatory screening

Mandatory screening is a process by which the anticipated environmental consequences of a proposed development are considered, prior to the proposal being authorized or rejected, to determine whether an environmental assessment is required, and if so, the level of assessment required.

The administration of this form of screening is usually the responsibility of the lead authority tasked with the implementation of regulations or guidelines pertaining to environmental assessment, or a funding body such as the World Bank, which may require an environmental assessment prior to making the decision on whether or not to assist with the financing of the proposal.

As a process, mandatory screening has the following key objectives:

- to classify development proposals in terms of the level of environmental assessment required;
- to ensure that only those proposals expected to potentially give rise to environmental impacts of high significance are subjected to further environmental assessment; and
- to expedite development approval where significant environmental impacts associated with a proposed development are not anticipated.

The outcome of screening is the classification of a proposal in terms of either 'no requirement' for further environmental assessment or a form of assessment generally specified by the same set of regulations or guidelines that define the requirements for screening. Typically four categories of classification exist:

- (1) The proposal is expected to result in no significant environmental impacts and further environmental assessment is not required, with the assumption

that there will be adherence to accepted environmental standards.

- (2) Certain environmental aspects of the proposal (including mitigation options) are unclear and an environmental assessment, undertaken according to a specified process, is required. The complexity of such an assessment will depend on the circumstances that are pertinent to the proposed development.
- (3) The proposal will definitely give rise to significant impacts and will automatically require a comprehensive environmental assessment.
- (4) The proposal is rejected on the basis of the significant environmental impacts which exceed the defined thresholds of concern and which cannot be mitigated.

There are several approaches that are used to classify development proposals in the course of screening (Wood, 2000). The following approaches will be discussed here:

- Initial consultation.
- Lists of actions/activities/projects and/or sensitive environments.
- Preliminary evaluation.
- Decision support systems.
- Decision-maker's discretion.

In practice, screening will generally make use of a combination of these approaches.

4.2.1 Initial consultation

The screening process may begin with an initial consultation between the development proponent and the decision-maker (such as the lead authority or the funding body), possibly with some form of involvement by key interested and affected parties. The purpose of such consultation is to secure a first level of understanding on the following:

- The policy and legal aspects relating to environmental authorization; i.e. the requirements of the national, regional or local environmental authorities (or conceivably, a funding institution) responsible for authorizing the proposal.
- The environment's ability to satisfy the resource needs of the proposal, as well as the potential for conflict between the proposal and the environment (its biophysical, economic, social, cultural and political components).
- The community requirements that have to be accommodated in the process of environmental assessment.
- Any environmental issues that need immediate attention or investigation.

4.2.2 List-based approaches

Project or activity lists are often used in screening to specify developments that automatically require environmental assessment. This approach directs the process towards the environmental assessment of only those developments that are classified as having the potential to result in significant environmental impacts. By doing this, the number of applications for environmental authorization is reduced and the load on institutions responsible for the administration of the authorization process is eased.

Examples of developments that automatically require some process of environmental assessment prior to possible authorization include the construction of nuclear reactors, major dams, port developments, oil exploration and major industrial developments. Listed activities might also include comparatively benign developments that are unlikely to individually give rise to environmental impacts of high significance, but which could result in significant cumulative environmental impacts (e.g. structures required for telecommunication networks).

An approach to screening that complements the listing of

where the location of a proposed development in a listed sensitive environment triggers the requirement for environmental assessment prior to possible authorization. *Listed environments* might include national parks, wetlands, biodiversity hot spots, areas supporting rare and endangered species, threatened habitats, areas particularly sensitive to the effects of habitat fragmentation and environments highly valued for the environmental services they deliver.

The above list-based approaches to screening may also be informed by specified environmental thresholds, which, if not exceeded, may result in exemption from the requirement for environmental assessment of a particular proposal. These thresholds might, for example, relate to some specified limit in the size of a development, its demand for environmental resources (e.g. water), its emissions or the number of people it could affect.

The use of *exclusion lists* is a third list-based approach to screening according to which there is an automatic rejection of projects applying for authorization or funding, unless the proponent can justify exemption in this regard. Proposals which may be included in exclusion lists are, for example, production or activities involving harmful or exploitative forms of forced labour or child labour, production or trade in weapons, or production or trade in ozone-depleting substances subject to the international phasing out process. Only if exemption is granted, will a decision be taken on the level on which assessment is required.

4.2.3 Preliminary evaluation

An alternative to the list-based approach to screening is the requirement for a preliminary evaluation in order to inform the decision to either exempt a proposed development from a comprehensive environmental assessment, reject the proposal or to define the level of further assessment that must precede environmental authorization. A preliminary evaluation should:

- describe the proposal and any alternatives that are being considered;
- describe how stakeholders will be consulted and how their concerns will be taken into account;
- identify potential environmental issues.

4.2.4 Decision-maker's discretion

In contrast to the above examples of relatively well-structured approaches to screening, the screening process may also be conducted on a case-by-case basis at the discretion of the lead authority or some other decision-maker. In this situation, screening may be undertaken by the decision-maker with or without engaging other parties, such as a review committee or panels of experts. Where there is discretionary decision-making, the ideal should be to strengthen and broaden engagement in the review process, and thus increase the level of objectivity and avoid what might be perceived as *ad hoc* or inconsistent decisions.

4.2.5 Decision support systems

In order to aid and streamline environmental decision-making, especially in the case of routine development proposals, decision support systems may be used either as an alternative or a supplement to other approaches to screening. They may, for example, incorporate a scoring system based on a set of appraisal criteria, which allows decision-makers to rapidly categorize proposals according to these scores. Other more sophisticated decision support systems, including computer-based systems, are typically encoded with expert knowledge to direct the process of decision-making in a tightly structured manner (Canter and Sadler, 1997).

5. Responsibility and Accountability for Screening

Having made the distinction between mandatory and *pre-application screening*, it is clear that the various parties

involved in screening have different responsibilities and accountability in the process. Depending on the circumstances, screening may be the responsibility of the development proponent, an institution such as the national, provincial or local lead authority accountable for environmental authorization, or a potential funding body. Responsibilities within the screening process may also be assigned to other parties, such as a review panel or environmental consultants, who may be tasked either to assist the development proponent or the lead authority. These responsibilities are summarized in sections 5.1, 5.2 and 5.3 below.

5.1 Responsibility of the proponent

- To ensure that proposals that might require environmental assessment are submitted to the lead authority or other key decision-makers for screening.
- To provide accurate and sufficiently detailed information on both the proposed development and the affected environment in order to enable the lead authority (or other decision-makers) to make an informed and responsible decision on the need for further environmental assessment.

5.2 Responsibility of the decision-maker

- To ensure that applications for environmental authorization or funding are correctly processed with minimum delay.
- To ensure that the proponent provides sufficient information upon which a decision can be made concerning the immediate authorization or rejection of the application, or the need for further environmental assessment.
- To request additional information if insufficient information is provided by the project proponent.

- To ensure that all environmental considerations, including social, biophysical and economic issues, are taken into account in the decision-making process.
- To adopt an impartial and transparent screening process, which includes the right to appeal the decisions made.

5.3 Responsibility of the consultant

- To inform the proponent on the legal requirements for environmental assessment and best practices for *pre-application* or *mandatory screening*.
- To assist the proponent or the lead authority in fulfilling their respective screening responsibilities, either through the generation or the interpretation of project and environmental information.

6. Information Needed for Screening and Decision-Making

The screening process aims to provide sufficient information on a proposed development and the environment for a decision to be made on the need for, and level of environmental assessment.

The collation of information for the screening process may involve some preliminary engagement with stakeholders, the consideration of development alternatives, the identification of key issues, consideration of specialist expertise, preliminary assessment of possible impacts, the assignment of impact significance, consideration of mitigation options, and reporting of preliminary environmental information. However, although these information requirements are similar to those typically associated with an environmental assessment, screening should not be confused with full environmental assessment. The difference lies in the level of detail expected of screening versus that required of a full environmental assessment. The information required for

the screening process is of a far more qualitative, superficial and preliminary nature than that required of a full environmental assessment.

Examples of the type of information that may be required to inform the process of environmental screening are presented in Box 2.

Description of the proposal and the receiving environment

A development proposal submitted for screening should document, in brief:

- The name of proponent;
- Relevant background information about the proponent;
- A description of what is proposed;
- The need for the proposal;
- Types of processes that might be used (e.g. technical processes, means of transport, approaches to training and capacity-building, approaches to stakeholder engagement);
- The sources and quantities of raw material and supplies required;
- Possible new infrastructure/social service requirements (e.g. power, water supply, housing, transport, education, hospital);
- The source of funding;
- A summary of planning or other investigations already undertaken;
- Relevant policies, laws or guidelines;
- An indication of how the proposal fits into any wider programme or policy;
- The timing of implementation/construction and initial operations;
- The expected life of the proposal;
- A description of the receiving environment, including the biophysical, social and economic components (e.g. air and water quality, demographics, literacy levels, economic activities);
- An initial indication of the proposal's potential environmental impacts (e.g. waste generation, human health impacts, noise, employment opportunities); and
- An indication of any feasible or prudent alternative(s) to the proposal.

Source: Adapted from UNEP (1996)

7. Overview of screening practices

7.1 Screening practices in developing countries and countries in transition

The approach to screening varies between countries that practice environmental assessment. In South Africa screening is part of the regulated approach to environmental impact assessment (EIA), but it is described as the "application for authorization to undertake an activity" rather than screening per se (DEAT, 1998).

Screening in other African countries such as Tunisia, Turkey and Egypt is largely based on screening lists that define whether development proposals require preliminary assessment or a full EIA (George, 2000). Elsewhere in Africa, where EIA regulations are not yet promulgated, the screening process is generally defined according to criteria developed by funding agencies (e.g. the World Bank) or built into industry best practice approaches to EIAs. For example, licensing agreements between the governments of Angola and Cameroon and international oil companies include the requirement for an EIA even though national regulations have yet to be promulgated.

Some countries in the Asia-Pacific region, such as Taiwan, have developed screening systems that take into account the specific characteristics of individual projects. However, since this approach to screening generally requires a high level of expertise from the administering authority, it is inappropriate for application in countries within the region where such administrative competence does not yet exist. Here, the previously described approach to screening based on listed activities and listed environments is more typically applied. The procedure in India, for example, establishes the need for further environmental assessment through reference to listed project types and threshold criteria (some expressed in terms of project costs), where the outcome of screening distinguishes between a "rapid" or "full EIA" (George, 2000). In Nepal, the screening system allows for an initial environmental examination, which may subsequently lead to a full EIA.

In former Soviet countries, which have maintained the state environmental review as the equivalent process to EIA, there is no formal screening phase in the environmental authorization of proposed developments. All development activities requiring planning approval are subject to state environmental review, which is conducted by the state environmental authority or a committee established by this authority. Here the need for, and approach to environmental assessment is based on authority discretion, which typically results in the exemption of a range of developments from environmental assessment (George, 2000).

Most South American countries apply screening based on listed project types that require EIA. In Brazil and Mexico these lists also define whether environmental decision-making is vested with the provincial or national authority. Screening in a country such as Venezuela takes into account whether or not a proposed development is located in a sensitive environment.

In general, the screening process in countries where environmental assessment is least developed will often

be based on the discretion of a government authority. Such discretion might be exercised by a senior official, an appointed committee or, in the case of several countries in sub-Saharan Africa, the head of state. Even in the case of countries with well-developed systems for environmental assessment, there is a degree of discretion built into the screening procedure. However, most countries base their screening on activity or environmental sensitivity lists. This approach curtails the degree of discretion and flexibility that is exercised by an environmental authority in determining whether or not a proposal should be submitted for environmental assessment (George, 2000).

7.2 Challenges and short-comings of screening practice

One of the fundamental problems associated with the screening process is the lack of capacity by the environmental authority or decision-making body to undertake effective and adequate screening. This problem is exacerbated where screening approaches are inappropriate or flawed. In developing countries the use of imported screening methodologies may be too complex and or inappropriate to be applied effectively (Biswas, as cited in Wood, 2000). Further problems arise when the screening requirements of the national government vary from those of international funding agencies (Wood, 2000).

A shortcoming of project or activity lists is that projects of the same general type of activity may vary greatly in size, plant requirements, process and layout and, therefore, in their impact on the environment (Jones, 1999). This essentially limits the effectiveness of lists that do not include some environmental threshold to screen out proposals that do not require environmental assessment. Without these thresholds, lists merely add to the administrative burden of the decision-maker. Where resources are insufficient to handle the large volume of applications, the risk increases that proposals that might have a significant impact may be overlooked and approved without adequate environmental safeguards attached to

the development authorization.

On the other hand, the designation of thresholds is not without problems, and these tend to be associated with the difficulty of determining impact significance. For example, a threshold for housing developments requiring environmental assessment may be set at 100 residential units; however, there is clearly little difference in the impact significance of 99 units - the development of which may not require environmental assessment. This procedural weakness may encourage development proponents to formulate proposals that fall just below the threshold requiring environmental assessment. The combined or cumulative effect of authorizing a number of such proposals is thus overlooked.

All too often there is not a clear distinction between screening, scoping and the assessment of environmental impacts. This threatens to undermine the entire environmental assessment process as proponents attempt to avoid undertaking a full environmental assessment by adding more information than is necessary into the screening phase. This mini assessment is generally undertaken with little or no prior engagement with stakeholders, and poses the risk that key issues may be overlooked as incorrect assumptions are made regarding the concerns of affected stakeholders regarding the proposal.

A poor screening process may lead to incorrect decisions concerning whether a proposed development should be authorized without further study or whether a full environmental assessment should be undertaken to inform decision-making. The lack of universally accepted criteria to determine the significance of impacts makes it impossible to guarantee consistency in decision-making.

8. Conclusions

Screening plays an important role in IEM by determining whether or not a proposal requires environmental assessment, and if so, what level of assessment is appropriate. There is, however, a need to ensure that screening remains clearly differentiated from scoping and from a full environmental assessment in order to reduce the burden on administrators and to improve the effectiveness and efficiency of the environmental assessment process. For similar reasons, pre-application screening by proponents should be encouraged.

9. References

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10. Glossary

Definitions

Affected environment

Those parts of the socio-economic and biophysical environment affected by the development.

Affected public

Groups, organizations and/or individuals who believe that an action might affect them.

Alternative proposal

A possible course of action, in place of another, that would meet the same purpose and need. Alternative proposals can refer to any of the following, but are not necessarily limited to these:

- alternative sites for development
- alternative projects for a particular site
- alternative site layouts
- alternative designs
- alternative processes
- alternative materials

In IEM the so-called “no-go” alternative also requires investigation.

Authorities

The national, provincial or local authorities that have a decision-making role or interest in the proposal or activity. The term includes the lead authority, as well as other authorities.

Baseline

Conditions that currently exist. Also called “existing conditions.”

Baseline information

Information derived from data that:

- record the existing elements and trends in the environment; and
- record the characteristics of a given project proposal

Decision-maker

The person(s) entrusted with the responsibility for allocating resources or granting approval to a proposal.

Decision-making

The sequence of steps, actions or procedures that result in decisions, at any stage of a proposal.

Environment

The surroundings within which humans exist and that are made up of:

- i. the land, water and atmosphere of the earth;
- ii. micro-organisms, plant and animal life;
- iii. any part or combination of (i) and (ii) and the interrelationships among and between them; and
- iv. the physical, chemical, aesthetic and cultural properties and conditions of the foregoing that influence human health and well-being. This includes the economic, cultural, historical, and political circumstances, conditions and objects that affect the existence and development of an individual, organism or group.

Environmental Assessment (EA)

The generic term for all forms of environmental assessment for projects, plans, programmes or policies. This includes methods/tools such as EIA, strategic environmental assessment, sustainability assessment and risk assessment.

Environmental consultant

Individuals or firms that act in an independent and unbiased manner to provide information for decision-making.

Environmental Impact Assessment (EIA)

A public process that is used to identify, predict and assess the potential impact of a proposed project on the environment.

The EIA is used to inform decision-making.

Fatal flaw

Any problem, issue or conflict (real or perceived) that could result in proposals being rejected or stopped.

Impact

The positive or negative effects on human well-being and/or the environment.

Integrated Environmental Management (IEM)

A philosophy that prescribes a code of practice for ensuring that environmental considerations are fully integrated into all stages of the development and decision-making process. The IEM philosophy (and principles) is interpreted as applying to the planning, assessment, implementation and management of any proposal (project, plan, programme or policy) or activity - at local, national and international level - that has a potentially significant effect on the environment. Implementation of this philosophy relies on the selection and application of appropriate tools for a particular proposal or activity. These may include environmental assessment tools (such as strategic environmental assessment and risk assessment), environmental management tools (such as monitoring, auditing and reporting) and decision-making tools (such as multi-criteria decision support systems or advisory councils).

Interested and affected parties (I&APs)

Individuals, communities or groups, other than the proponent or the authorities, 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. These may include local communities, investors, business associations, trade unions, customers, consumers and environmental interest groups. The principle that environmental consultants and stakeholder engagement practitioners should be independent and unbiased excludes these groups from being considered stakeholders.

Lead authority

The environmental authority at the national, provincial or local level entrusted, in terms of legislation, with the responsibility of granting approval to a proposal or allocating resources and of directing or coordinating the assessment of a proposal that affects a number of authorities.

Mitigate

The implementation of practical measures to reduce the adverse effects or enhance the beneficial effects of an action.

Non-governmental organizations (NGOs)

Voluntary environmental, social, labour or community organizations, charities or pressure groups.

Proponent

Any individual, government department, authority, industry or association proposing an activity (e.g. project, programme or policy).

Proposal

The development of a project, plan, programme or policy. Proposals can refer to new initiatives or extensions to, and revisions of existing ones.

Public

Ordinary 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 who may emerge at any time during the process, depending on their particular concerns and the issues involved.

Roleplayers

The stakeholders who play a role in the environmental decision-making process. This role is determined by the level of engagement and the objectives set at the outset of the process.

Scoping

The process of determining the spatial and temporal boundaries (i.e. extent) and key issues to be addressed in an environmental assessment. The main purpose of scoping is to focus the environmental assessment on a manageable number of important questions. Scoping should also ensure that only significant issues and reasonable alternatives are examined.

Screening

A decision-making process to determine whether or not a development proposal requires environmental assessment, and if so, what level of assessment is appropriate. Screening is initiated during the early stages of the development of a proposal.

Significant/significance

Significance can be differentiated into impact magnitude and impact significance. Impact magnitude is the measurable change (i.e. intensity, duration and likelihood). Impact significance is the value placed on the change by different affected parties (i.e. level of significance and acceptability). It is an anthropocentric concept, which makes use of value judgements and science-based criteria (i.e. biophysical, social and economic). Such judgement reflects the political reality of impact assessment in which significance is translated into public acceptability of impacts.

Stakeholders

A subgroup 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 (I&APs). The principle that environmental consultants and stakeholder engagement practitioners should be independent and unbiased excludes these groups from being considered stakeholders.

Stakeholder engagement

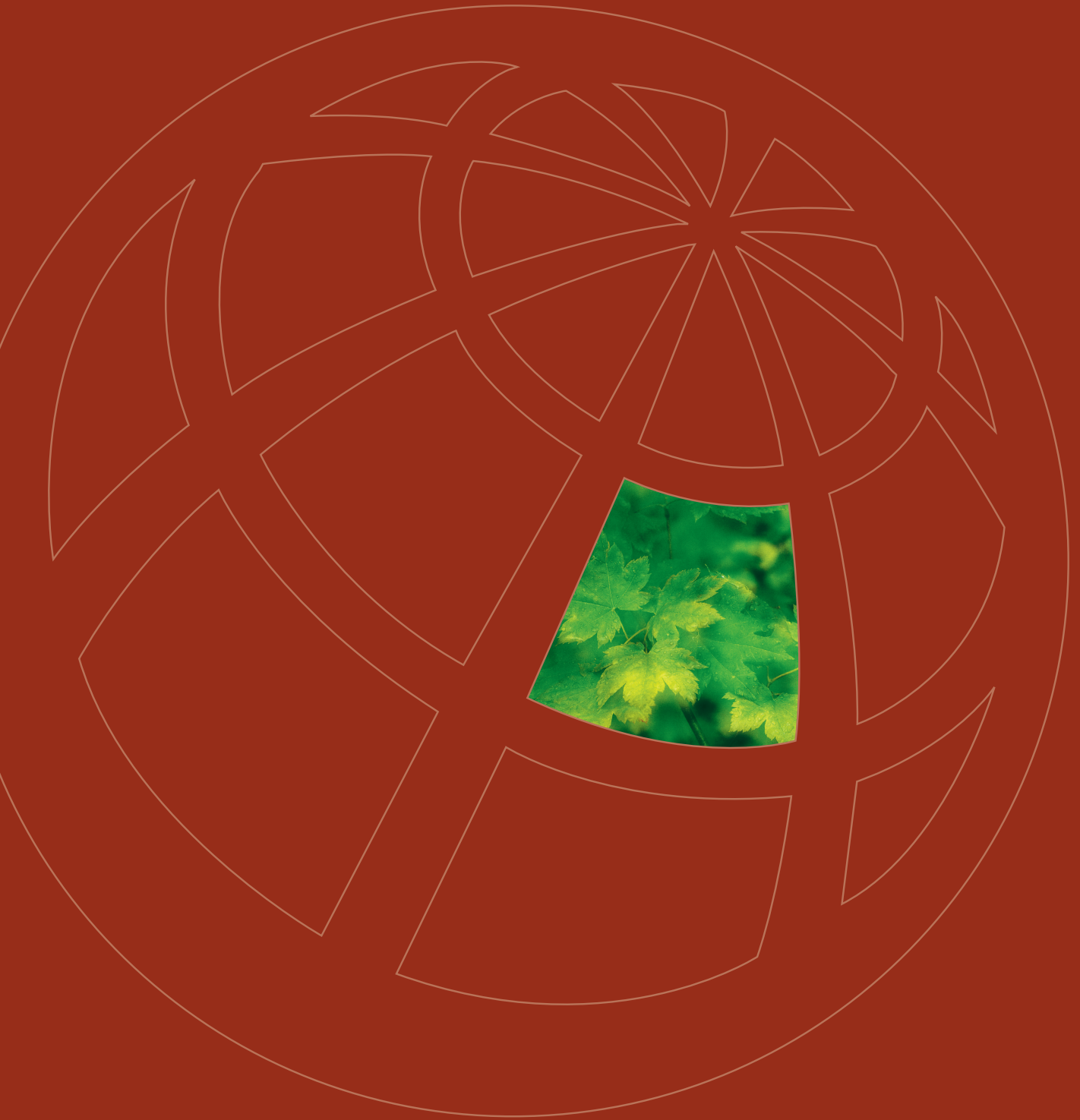
The process of engagement between stakeholders (the proponent, authorities and I&APs) during the planning, assessment, implementation and/or management of proposals or activities. The level of stakeholder engagement varies, depending on the nature of the proposal or activity and the level of commitment 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".

Stakeholder engagement practitioner

Individuals or firms whose role is to act as independent, objective facilitators, mediators, conciliators or arbitrators in the stakeholder engagement process. The principle of independence and objectivity excludes stakeholder engagement practitioners from being considered stakeholders.

Abbreviations

CBO	Community-based Organization
EA	Environmental Assessment
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
EMS	Environmental Management Systems
I&AP	Interested and Affected Party
IEM	Integrated Environmental Management
NGO	Non-governmental Organization
SEA	Strategic Environmental Assessment



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