An Introductory Guide to EIA in Tanzania

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Authorship and Acknowledgements

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An Introductory Guide to the EIA Process in Tanzania

This briefing paper explains the role of Environmental Impact Assessment (EIA), summarises the basic procedures involved in its implementation and explores its potential role in contributing to improved decision-making and development planning in Tanzania.

Introduction

EIA is now increasingly being seen and used within the wider context of serving 'sustainable development' objectives. This role was highlighted at the United Nations Conference on Environment and Development (UNCED) in 1992. Principle 17 of the Rio Declaration, agreed at UNCED, and to which Tanzania is a signatory, states:

> *"Environmental impact assessment, as a national instrument, shall be undertaken for proposed activities that are likely to have a significant adverse impact on the environment and are subject to a decision of a competent national authority".*

African environment ministers recently reaffirmed this commitment and pledged to formalize the use of EIA within legislative frameworks at the project, programme and policy levels. It is hoped that this briefing paper will help to improve understanding and awareness of the potential role of EIA in Tanzania still further.

What is EIA?

Environmental impact assessment (EIA) is a process which can be used to improve decision-making and ensure that development options under consideration are environmentally, socially and economically sound and sustainable. It is concerned with identifying, predicting and evaluating the foreseeable impacts, both beneficial and adverse, of proposed development activities, alternatives and mitigating measures, and aims to eliminate or minimise negative impacts and optimise positive impacts. EIA relates to a process rather than a particular activity and the environmental impact study itself is only one component of the process.

The terms 'impact assessment' and 'environmental impact assessment' are umbrella terms frequently used to cover a broad range of techniques, e.g. social impact assessment, risk assessment, environmental impact assessment. To date, EIA itself has been applied generally at the project level, but increasing attention is now being given to its role at the level of policies, plans and programmes (when it is known as strategic environmental assessment). These related techniques are described later in this paper.

The EIA process is designed to provide clear and systematic information to decision-makers and the public throughout the project cycle. Increasingly, impact assessment is also being viewed as a key mechanism for involving the public in the planning process through participation.

Why is impact assessment important?

Impact assessment is an important management tool for improving the long-term viability of projects. Its use can help to avoid mistakes that can be expensive and damaging in environmental, social and/or economic terms. Usually, the cost of undertaking an EIA accounts for only a small proportion of total project costs - a recent analysis of World Bank-supported projects in Africa found that EIA usually costs less than 0.1% of overall project costs. Importantly, savings to the project from an impact assessment can often be considerably more.

Who is involved in the EIA process?

Five principal groups of stakeholders should be involved. These include :

(i) **Project proponents** who are responsible for commissioning and paying for the EIA process. Proponents usually include government ministries and departments, private sector companies and development agencies.

(ii) **Service providers** who undertake or provide inputs to the EIA process. They include individuals; organizations; research and academic institutes; NGOs; and both local and international consulting companies.

(iii) **Reviewers** who are responsible for 'quality control'. They are responsible for determining the level of environmental assessment required (screening), and ensuring that work proceeds according to agreed, clear and comprehensive terms of reference. They also review the EIA process and communicate their findings to decision-makers. Although currently there are no agencies currently fulfilling this function on a statutory basis in Tanzania, in future they are likely to include government ministries, universities and colleges, and environmental NGOs, together with local and international experts.

(iv) **Decision-makers** who are responsible for making decisions on project development once an environmental impact statement (EIS) has been submitted.

(v) **The public** who are the most important stakeholders. The public can contribute ideas and information that can help to avoid unforeseen problems, improve project design and contribute to monitoring. Experience also shows that development projects imposed on local communities often fail or under-perform because they lack a sense of local ownership and public support. They can also result in conflict. EIA provides a mechanism for public involvement in decision-making. The public also includes interest groups. These are groups that might not be directly affected by a development proposal, but which have interests in particular aspects of the environment, such as conservation organisations. Many of these groups can make valuable contributions to EIAs.

When should the EIA be undertaken?

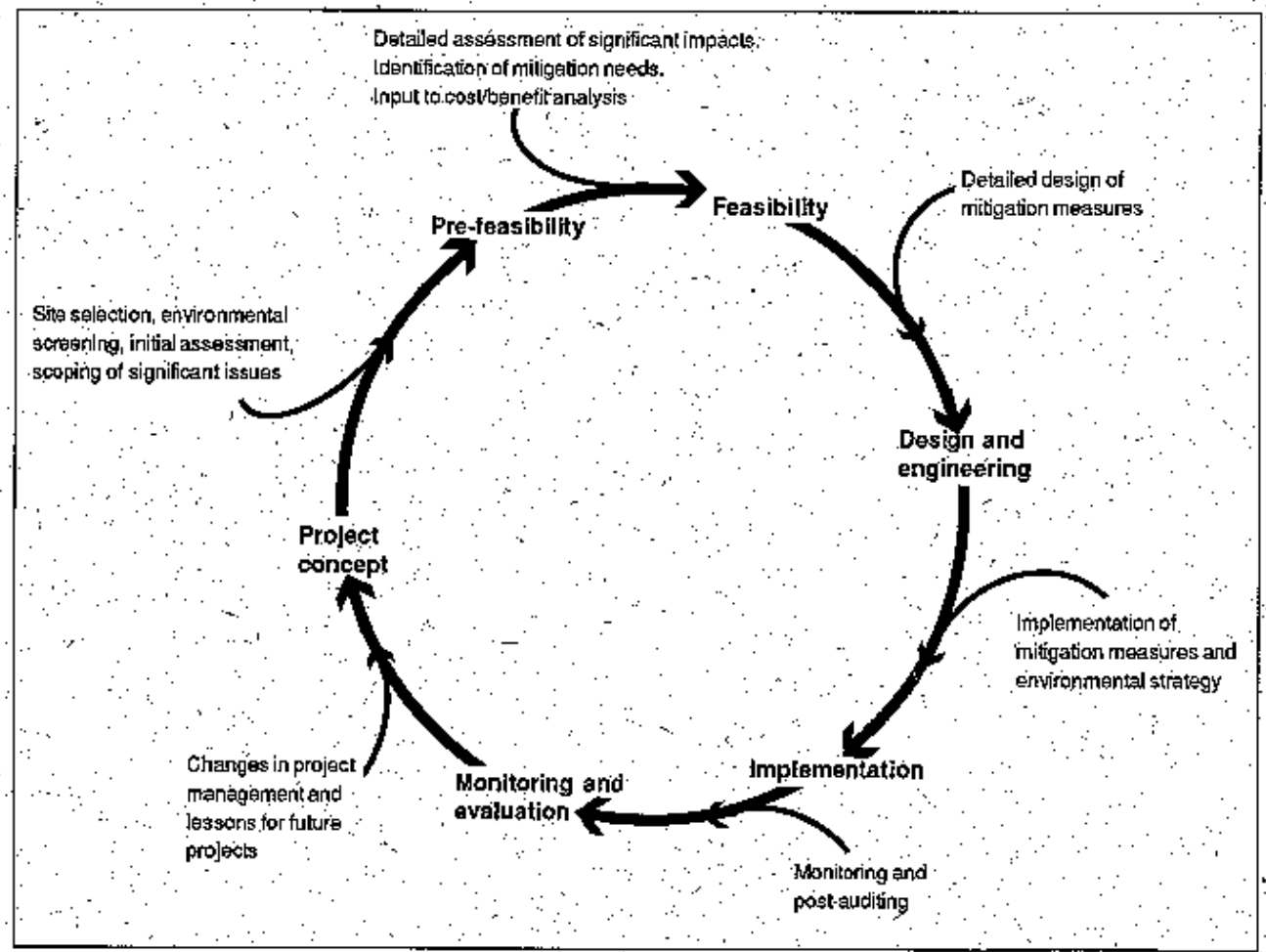
EIA should be initiated as early as possible in the project cycle and should include a provision to cover the monitoring of project implementation and operation, and eventually an audit of the project. In some cases, it will also be important to include project decommissioning within the EIA. *(See Figure 1).*

EIA and Tanzania

There is currently no national legal requirement for EIA in Tanzania, nor supporting institutional mechanisms. There is also a lack of awareness at governmental level of the potential benefits that EIA can bring. Despite this, a number of EIA studies have been undertaken in Tanzania during the past 15 years. These have focused mainly on large development projects supported by development assistance agencies.

Various initiatives are underway which have the potential to create a policy environment that could be more supportive of EIA. These include a national environment policy; an Environmental Protection Bill; a National Environmental Action Plan; a National Conservation Strategy for Sustainable Development; and a proposed new land policy. All of these initiatives refer explicitly to role that EIA could play although, as yet, there has been no clear statement of proposed institutional procedures, responsibilities or legislation.

Figure 1: EIA and the Project Cycle



Making EIA Effective

Tanzania still has much work to do in developing the resources and conditions required to enable EIA to function effectively. Considerable effort will be required to ensure that EIA procedures and guidelines are tailored to the specific context, needs and resources available to EIA in Tanzania. These include:

• *Institutional and Political Conditions*

Clear and explicit procedural guidelines, together with institutional and legal provisions, are prerequisites for effective EIA. Strong political commitment is also vital to ensure that the EIA process is resourced, developed and respected by the government, private sector and public alike. A robust review process can also play an important part in making EIA more effective.

• *Human Resources*

Awareness and understanding of the role of the EIA process, and the contribution it can make to improved decision-making and planning, is crucial. In Tanzania, there is an urgent need to raise such awareness of the potential value of EIA. There exists a wealth of skills and expertise in Tanzania relevant to EIA. However, careful targeted training will be required if these resources are to be employed effectively. The availability of human resources trained to undertake and manage EIA is another crucial prerequisite.

• *Financial Resources*

Financial resources are needed for the initial establishment of EIA institutional structures. However, the financial cost of undertaking EIA is usually a small proportion of total development costs - usually less than 1% of project costs. In fact, the cost of not undertaking EIA may often exceed the initial cost of the EIA process.

The Environmental Impact Assessment Process

The EIA process consists of a number of different steps or elements (see box 1 and figure 2).

Box 1. Steps in a Typical EIA Process

1. Registration
2. Screening
3. Preliminary assessment
4. Scoping
5. The EIA study
6. Review
7. Monitoring
8. Post-project auditing
9. Decommissioning

But, not every development project requires each element of the EIA process, and *screening, preliminary assessment* and *scoping* are used to determine the extent and focus of assessment required.

The following steps are undertaken as components of most EIA processes:

Registration is a simple administrative procedure which requires project proponents officially to register their intention to undertake a development activity. It allows all new projects to be screened for their potential impacts by the appropriate authority. Responsibility for registering a proposed project lies with the proponent.

Screening determines the level of assessment necessary. Past experience shows that certain types of project are not likely to have serious adverse environmental consequences, and therefore do not require detailed assessment. By contrast, other types of projects have the potential to cause significant impacts and routinely require a comprehensive EIA.

Preliminary assessment is used to identify key impacts on the environment; describe their magnitude and significance; and evaluate their importance for decision-makers.

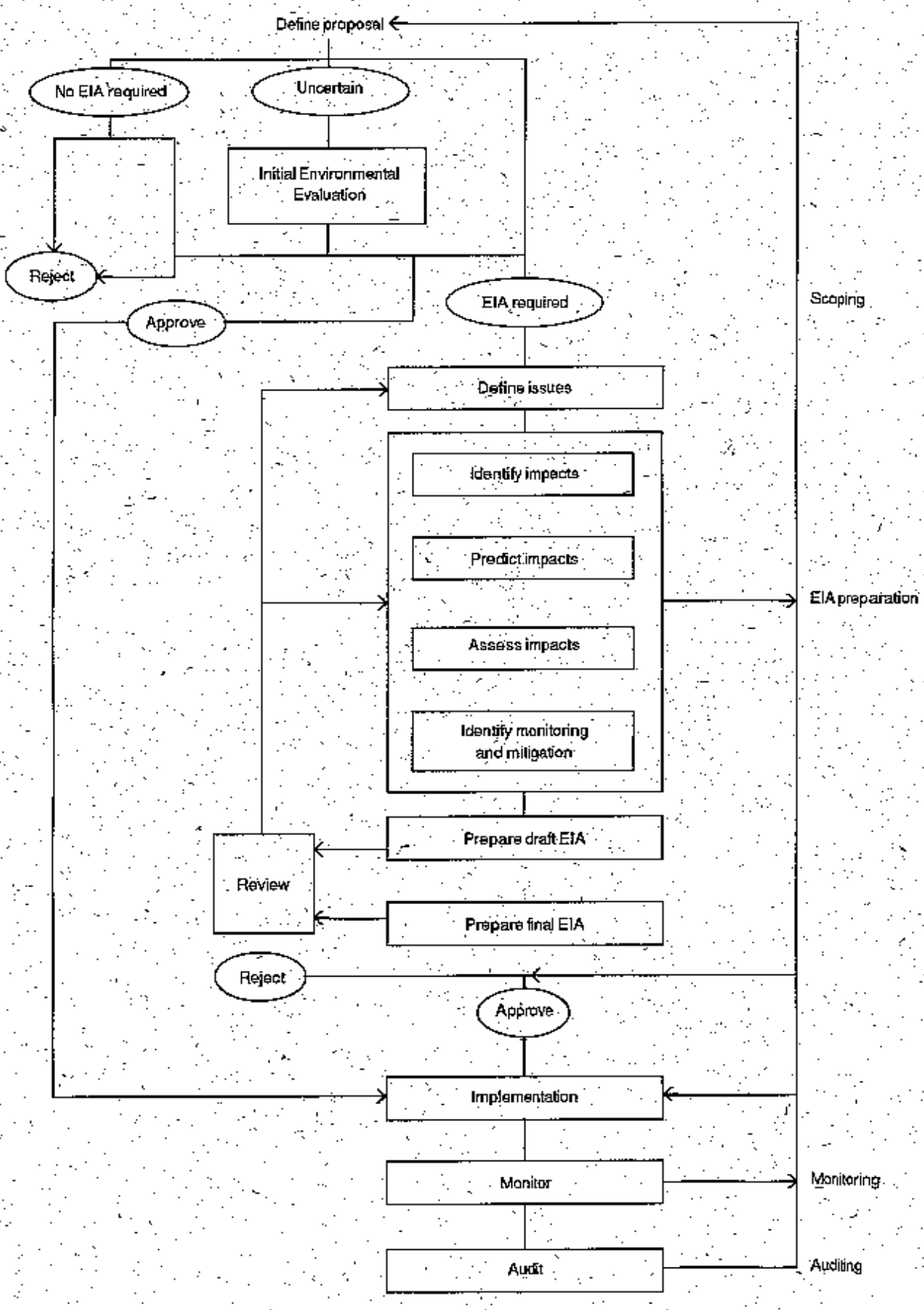
Scoping is used to focus the EIA on the key issues for decision-making; identify information needs and review alternative options to the project. Scoping is also used in the preparation of the terms of reference for the subsequent EIA study process. It also offers a crucial opportunity for facilitating public participation in the project. In some countries, such as the Netherlands, independent commissions are involved in the process to ensure that scoping is undertaken without bias.

The environmental impact assessment study. EIA studies attempt to predict which impacts will occur as a result of the project and their likely significance. Importantly, they also identify measures to mitigate or avoid these impacts, or optimize the benefits of the project.

Most EIA studies include the following steps :

- *Impact identification* specifies those impacts that should be investigated in detail;
- *Examination of alternatives* considers alternative sites for the project and, where practicable, alternative designs and operating processes; and the environmental implications of each;
- *Evaluation and assessment of impacts* attempts to determine the significance of impacts at a local, national and international level;

Figure 2: Stages in the EIA Process (after Wathern, 1988)



- *Development of mitigation options* seeks to determine measures to prevent or reduce impacts as early as possible in the project cycle, so that these can be built into project design. Ideally, these measures are drawn together into a coherent *environmental management plan* which should be included in the overall budget for the project;

- *Information dissemination and documentation* is achieved conventionally through the compilation of an environmental impact statement (EIS). A common misconception is that EIS have to be large, and highly technical documents. They do not! Experience elsewhere indicates that technically good EIA studies may fail to influence the decision-making process because of poor presentation and communication. Careful report organization, and the inclusion of clear summaries, maps and figures, can improve communication considerably. The inclusion of carefully defined recommendations (e.g. the location and design of mitigation measures, alternative route alignments, erosion control measures) is vital to project design. Ideally, an EIS should contain the following:

    - an executive summary of the EIA findings;
    - a description of the proposed development project;
    - baseline data;
    - a clear statement of the major environmental and natural resource issues that need clarification and/or elaboration;
    - a clear statement of predicted impacts, their likely significance and a rationale of how these conclusions were reached;
    - a clear statement of the proposed mitigation measures required;
    - a clear statement of those impacts that are likely to remain after mitigation is implemented (the so called residual environmental impacts); and
    - a description of the monitoring procedures required to ensure that mitigation and unforeseen impacts are assessed once project implementation begins.

Alternative and complementary methods can also be used to improve communication and information exchange. These methods include local language videos, local radio programmes, meetings and workshops. These can be particularly effective in areas where literacy, social or cultural barriers prevent local people accessing the EIS. A summary of the EIS, which should focus on issues most relevant to decision-making, should also be made available. This should also be made available in local languages where these differ from that used in the main statement.

Review. The review phase is an essential component of an effective EIA process. It is used to ensure that the EIA study has adhered to the agreed terms of reference, and provides an impartial mechanism for assessing the quality of the EIA and its adequacy for decision-making. In most countries, a draft version of the EIS is made available for review and public comment. It is important that draft copies are accessible to a broad range of stakeholder groups, including local communities. In some countries, such as the Netherlands, an independent commission provides a review of each impact assessment. Guidelines to assist in the review of the quality of EIA, and to provide a framework for coherence and consistency of review quality, have now been prepared for a number of countries.

Monitoring assesses the effect of the project on the natural and cultural environment. Inclusion of a framework for monitoring can improve significantly the effectiveness of EIA since it can provide a mechanism for ensuring that mitigation measures have been carried-out and determining whether predictions were accurate. In theory, the results of monitoring can then feedback into the project cycle so that appropriate revisions to project design and operation can be made. In practice, attention to monitoring is often inadequate, in many cases because inadequate provision is made for monitoring in project costs and design.

Post-project audit. Auditing provides a mechanism to learn from experience, and to refine project design and implementation procedures. Auditing also provides regulatory agencies with a framework for checking compliance with, and the performance of, an environmental management plan. In most instances, the auditing process will depend heavily on the existence of relevant and good quality monitoring data.

Related Impact Assessment Techniques

A number of other specialist disciplines fall under the umbrella terms of 'environmental assessment' or 'impact assessment'. In some cases, these techniques maybe incorporated as part of an EIA. Some of the more prominent of these techniques are as follows:

Social impact assessment (SIA) identifies and quantifies the impacts on human populations resulting from changes to the natural environment. The technique has now developed as a discipline in its own right and is applied in many countries.

Environmental health impact assessment (EHIA) provides a comprehensive and rigorous mechanism for identifying, predicting and appraising environmental factors which might affect human health. Factors can include ge-

ology, vegetation, demography, economics, pollutants (physical, chemical or biological) as well as the availability of health services.

Risk assessment addresses risks to human and ecosystem health and welfare posed by development initiatives. Risk assessment has been widely adopted by, for example, the chemical industry as a process to help avoid major disasters.

Strategic environmental assessment (SEA) is a process for identifying and addressing the environmental consequences (and associated social and economic effects) of policies, plans and programmes (PPPs). It can also be applied to enable cumulative impacts between projects, policies and programmes to be taken into consideration. It provides a mechanism to ensure that plans, programmes and policies are more sustainable and helps avoid costly impacts or problems at the project level. The technique is still in its infancy, and it will be some years before there is sufficient experience to implement SEA effectively, especially in developing countries.

Cumulative effects assessment (CEA) is used to predict the combined effects of multiple activities, rather than the effects of specific development activities. For example, it might be used to predict, and find ways of addressing the environmental and social implications of power generation or tourism policy. Most elements of the process are similar to 'conventional' EIA. The most important difference is the inclusion of larger spatial scales in the analysis. These may translate into regional patterns of change. Examples of cumulative effects include the long-range transport of environmental pollutants, groundwater depletion and pollution, and linkages between fisheries declines and wetland losses.

Finding Out More About EIA

A number of agencies and organisations can provide general and technical advice on environmental management (including EIA) in Tanzania. They include:

The Institute of Resource Assessment (IRA)
National Environment Management Council (NEMC), Vice President's Office
Division of Environment (DoE), Vice President's Office
AGENDA - Business Care
The Archi Institute
Centre for Energy, Environment, Science and Technology (CEEST)
Environmental Society of Tanzania (EST)
Journalists Environmental Society of Tanzania (JET)
Wildlife Conservation Society of Tanzania

A more comprehensive list of organisations with experience relevant to EIA can be found in:

Environmental Assessment in Tanzania : A Needs Assessment for Training (1995), IRA Research Paper No. 36. IIED Environmental Planning Issues No. 9. Institute of Resource Assessment/International Institute for Environment and Development. August 1995.

Available from the Institute of Resource Assessment, University of Dar es Salaam, Tanzania.

A useful review of existing impact assessment guidelines can be found in:

A Directory of Impact Assessment Guidelines (1995), Compiled by Dilys Roe, Barry Dalal-Clayton and Ross Hughes. IIED, London.

Available from the International Institute for Environment and Development, 3 Endsleigh Street, London, UK.

About the Institute of Resource Assessment

The Institute of Resource Assessment (IRA), formerly the Bureau of Resource Assessment and Land Use Planning (BRALUP), was established in 1982. The Institute is an autonomous, inter-disciplinary research organisation in the University of Dar es Salaam, under the direct responsibility of the Chief Academic Officer and reports directly to the University Senate. The Institute has been delivering training and contributing expertise to EIA studies in Tanzania for over seven years. It cooperates with, advises, and provides consultancy services to government, public authorities and other organisations on a range of environment and development issues.

About the International Institute for Environment and Development

The International Institute for Environment and Development, is an independent, non-profit organisation which seeks to promote sustainable patterns of world development through research, services, training, policy studies and public information. The Institute advises policy makers and supports and collaborates with southern specialists and institutions working in similar areas. The Institute also holds an extensive collection of impact assessment guidelines which is available as a reference resource for partner organisations.

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