

The University of Calgary

# Increasing Environmental Impact Assessment Effectiveness in the Kingdom of Swaziland

Management Recommendations to Improve  
the Process and Practice of EIA  
in a Developing Country in Sub-Saharan Africa

*A Master's Degree Project submitted to the Faculty of Environmental Design  
in partial fulfillment of the requirements for the degree of  
Master of Environmental Design (Environmental Science).*

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## ABSTRACT

### Increasing Environmental Impact Assessment Effectiveness in the Kingdom of Swaziland

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*Prepared in partial fulfillment of the Master of Environmental Design (Environmental Science)  
degree  
in the Faculty of Environmental Design, The University of Calgary.*

Supervised by Prof. William A. Ross

The Kingdom of Swaziland is a small developing country in Sub-Saharan Africa which has adopted legal requirements for Environmental Impact Assessment (EIA) in 1996. In conducting a case study analysis of an EIA that was conducted "in-house" by the national conservation agency of Swaziland, I determined that the EIA was poorly integrated into the project cycle, local traditional communities were under-represented during public participation, and the EIA was partially constrained by the severe shortage of available background information. Perceptions of corruption in government and inter-institutional conflict between the proponent, key stakeholders and government also reduced the effectiveness of the EIA process. Despite these problems, many modifications to project design, through the use of alternatives in the EIA, resulted in 1) an improved project with fewer environmental impacts, 2) project design that satisfied stakeholder concerns, 3) an operationally superior project, and 4) lower construction costs.

An analysis of constraints faced by EIA in Swaziland include: 1) poor institutional location of the authority responsible for EIA administration, enforcement and review; 2) information and data limitations; 3) public participation problems including cultural and cross-cultural issues in traditional communities, and poor political representation; 4) a shortage of trained human resources, and 5) insufficient detail in the legal requirements for mitigation and monitoring aspects of EIA follow-up.

Management recommendations suggested include the relocation of the authority responsible for EIA administration and review, the improvement of aspects of the EIA regulations, and training and education programs for various groups involved with EIA. Other suggestions include increasing the enforcement capabilities of the authority responsible for EIA administration and review, and the adoption of a particular proposed method for involving indigenous traditional institutions in encouraging the participation of rural communities.

*Key Words:* environmental impact assessment (EIA), Africa, Swaziland, developing country, public participation, indigenous culture, cross-cultural

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## Introduction

Modernity provides many reasons to question the short-term survival of the human species. The average twelve-year-old Canadian can readily cite evidence of this, listing such issues as habitat destruction, global warming, and plummeting species diversity. The ability of humans to survive the consequences of their actions over the long term has yet to be demonstrated. However, although the human species is unique in the degree of its destructive capacity, we are also unique in the degree to which we are able to learn from our experiences (Diamond, 1992). Perhaps the single most important question to the future of humanity is: Can we learn to develop and exercise wisdom faster than we are able to destroy our own environmental life-support systems?

The broad recognition of the need for sustainable development is an example of the type of wisdom on which the future of humanity depends. However, there is a great distance between recognizing the importance of sustainable development and implementing it effectively. Environmental Impact Assessment (EIA) is one means of trying to ensure the ecological sustainability of our economic developments; it is a tool in the survival kit of our species. This document reports the results of a project aimed at analyzing and improving the implementation of EIA in the Kingdom of Swaziland, a small developing country in sub-Saharan Africa that is the home of the Swazi people.

Africa as a continent faces a severe environmental crisis (Aw, 1996). It has a rapidly rising population and a dwindling natural resource base that is under ever-increasing pressure. Widespread poverty results in less sustainable practices of resource use that degrade the environment more and further increase poverty. One consequence of this cycle is widespread human suffering. People are unable to meet their basic needs, due to degraded environmental conditions, health problems, poverty, and hunger (which are often exacerbated by the inequitable allocation of resources). Another consequence is a natural environment that is devastated--its ecological integrity shattered, its habitat value tremendously reduced, and its productive capacity bankrupted.

The Kingdom of Swaziland is still in an early phase of this deadly cycle of environmental degradation and poverty. It does suffer from a myriad of environmental problems, including deforestation, overgrazing, soil erosion, industrial pollution, and deforestation (IUCN, 1993). Swaziland is also faced

with problems such as widespread poverty, malnutrition, and disease. Despite the difficulties they face, many Swazis enjoy a quality of life that is far superior to that of the world's poorest countries. Hunger is an occasional problem in specific regions, yet Swaziland does not experience regular famine. Although there are many severe endemic diseases, most Swazis enjoy relatively good health, as demonstrated by relatively long life expectancies (CPC Medialab, 1995).

Nonetheless, Swaziland is tottering on the precipice of a major environmental crisis. Its birth rate is among the highest in the world, and the population is growing dramatically, with an estimated doubling time of 29 years (CPC Medialab, 1995). In 1980, the population was under 600 000. By 1992, it had grown to 882 000. Estimates for the year 2010, only twelve years from the present, are almost one and a half million. While the population of Swaziland is exploding, it is exerting increasing pressure on natural resources, and that natural resource base is shrinking (IUCN, 1993).

It is because of resource degradation and population pressures such as those in Swaziland that the necessity of sustainable development has become widely recognized in Africa. It is imperative that in meeting the economic requirements for development today, we do not sacrifice our ability to meet the needs of the future. As Oumar Aw of the African Development Bank states (1996:135),

*Environmental problems are at the centre of the sustainable development challenge facing Africa. Thus, the long-term economic and social development of the continent requires a rational management and utilization of its natural resources. Ultimately, the survival of the continent depends on the ability of African countries to reverse the degradation of the continent's natural resource/life support systems, and to overcome the deterioration of the environment...*

Environmental Impact Assessment is a globally recognized way to improve the sustainability of development projects. By identifying, predicting, managing and evaluating the environmental and social impacts of development projects, EIA enables governments to incorporate consideration of the long-term sustainability of proposed development projects into decision-making in addition to the economic benefits that have historically been the major basis for such decisions in the past. EIA has been applied to increase the sustainability of development projects in some countries for almost thirty years (Roe et al., 1995). Although it still is faced with outstanding issues to be resolved, the practice of EIA has evolved considerably over time (Roe et al., 1995), and has proven itself to be capable of playing an important role in promoting sustainable development (Sadler, 1996).

It is primarily in developed Western countries such as the United States and Canada that EIA has evolved. International development agencies have become strong supporters of the adoption of environmental assessment in general and EIA in particular as integral parts of the development process of developing countries (e.g. World Bank, 1991a; Wramner, 1992), and many developing

countries have begun to practice EIA (Biswas and Agarwala, 1992), either on an informal basis or with legal foundations. As a tool that has proven itself effective for furthering the goals of sustainable development, EIA has much to offer developing countries. In Africa, it is a potential means of controlling the vicious cycle of environmental degradation and poverty. As Kakonge and Imbevore (1993:305) point out,

*Africa is acutely aware of the ravages that environmental degradation has brought to its economies and of the fact that future environmental degradation has begun to undermine the prospects of future development and even survival. The new era of economic growth in Africa must begin with the widespread application of EIA as a tool for protecting the environment and for measuring sustainability.*

It is important that developing countries adopt EIA as an environmental management tool, to benefit from the experiences of those countries where EIA has been practiced for a relatively long time, and to have the opportunity to avoid the often costly trial and error that led to the improvement of EIAs in industrialized countries.

Historically, the transfer of technology from more developed to less developed countries has often failed because of the effects of cultural, social, economic and political differences in context (e.g. Henry, 1990). Some of the differences between industrialized and developing countries have been recognized in theory and practice to influence the effectiveness of EIA. The literature describes many cases where the different conditions of developing countries constrain the effectiveness of EIA. Rather than indiscriminately adopting EIA processes directly from industrialized countries, there is an increased awareness that developing countries must adapt the EIA process to reflect their social, cultural, and economic conditions (e.g. Kakonge, 1997; Kakonge, 1996; Jiggins, 1995; Ebisemiju 1993; Kakonge 1993; Biswas, 1992b; Werner, 1992; Wandesforde-Smith et al., 1985).

In addition to the need for adapting EIA to conditions in particular countries, there is also a widely perceived need to share the experiences of EIA among developing countries. Many constraints to effective EIA implementation are common to most developing countries. By recognizing problems that have been experienced in other countries with similar conditions and how they have been managed, developing countries can improve their own EIA systems. This is widely supported in the literature (e.g. Aw, 1996; Kakonge, 1993; Bisset, 1992; Biswas, 1992b), which indicates that “there is a need to *exchange experiences in EIA application*, particularly (to) identify problems encountered in the use of EIA, gaps in procedures, and how to better integrate EIA into development planning and the decision-making process” (Aw, 1996:148). Based on the results of the 1988 International Conference on Environmental Impact Assessment, Asit Biswas, senior consultant to the United Nations Development Programme, the

United Nations Environment Programme and the United Nations Industrial Development Organization states,

*“There is an urgent need for an objective and reliable review of the current status of the effectiveness of using EIA in developing countries, methodologies used, their relative merits and constraints, main features of their implementation process, and the institutional arrangements within which such assessments are carried out” (1992a:viii).*

Swaziland has recently legislated a formal requirement for EIA that is supported by detailed regulations describing the process and the legal responsibilities it invokes (e.g. GOS, 1996). There are, however, aspects of the EIA process and its application that are not fully effective due to specific constraints in Swaziland. Because of the increasing population demands on a shrinking resource base, it is essential to the well being of the Swazi nation that sustainable development becomes a reality, and to that end, it is important that EIA in Swaziland be as effective as possible.

It is for the above reasons that this report has been written. **This report presents the results of a project conducted with the purpose of producing management recommendations to improve the effectiveness of Swaziland’s EIA process and its application.**

The structure and organization of this report is as follows:

Chapter 1 will further clarify the purpose of this project by explicitly defining what “effectiveness” is in terms of EIA, and will describe the methodology that forms a basis for this project.

Many issues pertaining to EIA in Swaziland are influenced by the conditions that exist there. Chapter 2 will briefly introduce the reader to some background aspects of Swaziland that are relevant to EIA, including its history, geography, demographics, economics, economic and political conditions, and cultural traditions. Although this will be a very cursory and incomplete description, it will familiarize the reader with some of the particular conditions that make Swaziland different from the industrialized and predominantly Western countries in which EIA originated. Chapter 2 will also provide a short background overview of Swaziland’s EIA process and the laws that support it, as well as providing some information on the government institution responsible for overseeing EIA compliance and its review, because the effectiveness of EIA depends on both the process itself and its application.

Empirical accounts of EIA application in a specific context can help identify general EIA problems and solutions. By examining an actual demonstration of EIA in Swaziland, many important elements of EIA practice can be recognized. Chapter 3 will provide a brief case study of a particular EIA that I conducted in Swaziland, focusing on the context of the EIA, the challenges that arose in

practice to the effectiveness of the EIA, the effects of the EIA, and the insights that were gained by it.

In order to make recommendations to improve Swaziland's EIAs, it is first necessary to recognize the current weaknesses. Chapter 4 will examine selected constraints that reduce the effectiveness of EIA in Swaziland. These are identified in part on the basis of similar conditions to those cited in the literature as constraints on EIA effectiveness, and in part on practical experience.

Chapter 5 will recommend interventions to help deal with some of the constraints facing EIA in Swaziland to help improve its effectiveness. These recommendations will be directed primarily at improving certain aspects of EIA legislation, promoting education of specific groups, and improving practical aspects of EIA organization, management and operation.

Chapter 6 will summarize the overall results, and identify possible directions for future consideration, and offer general conclusions.

Sustainable development is a necessity for Swaziland, and EIA seems to be a way of making it a reality. Hopefully, this document will prove useful in a number of ways, by sharing practical experiences of EIA in Swaziland, by describing some of the constraints to effective EIA, and by offering recommendations to improve its effectiveness.



## **1. Methodology**

This chapter will describe the methodology that this project follows towards producing management recommendations to increase EIA effectiveness in Swaziland. Before doing this, a clarification of the term “effectiveness” as it relates to EIA is required.

### **1.1 Defining EIA Effectiveness**

What is “effectiveness”? Sadler (1996:37) states that “... the term ‘effectiveness’ refers to whether something works as intended and meets the purpose for which it is designed”. This definition brings out a subtle distinction, that the *intention of the design* is the relevant factor in determining effectiveness. Other definitions of effectiveness as it relates to impact assessment have supported this idea, by describing effectiveness as “a measure of whether the approach, technology or project does in fact do the job it was designed to do” (Jiggins, 1995). However, without an explicit identification of what EIA was designed to do, this definition risks circularity. Increasing EIA effectiveness could mean simply maximizing the desirable effects of EIA. Defining these in terms of design is complicated because EIA produces both manifest and latent effects. Some of the desirable effects of EIA are not necessarily intentional products of its design, but are incidental. In fact, as will be discussed below, some important benefits of EIA are not directly related to its purpose.

What, then, are the intentions of EIA? Since evaluating EIA effectiveness is a determination of how well these intentions are met, they need to be addressed explicitly.

#### **1.1.1 The Purpose of EIA**

Many purposes of EIA have been defined, and have evolved over time. Early conceptions of EIA followed a technocratic paradigm of rational planning, that the purpose of EIA is to predict impacts, to inform interested parties of the

environmental effects of a proposed project. For example, Munn (1979) held that EIA was mostly a tool for predicting, assessing, estimating and communicating the effects of proposals (Munn, as cited in Ebisemiju, 1993). This idea has been criticized because purely technical considerations do not dictate the way that decisions are made about projects. Decisions about projects are influenced by many factors, including corporate goals and the power and politics of interest groups. For EIA to be useful in practice, political realities must be considered as well. This led Formby (1990) to state that “the ultimate purpose of EIA is not just to assess impacts; it is to improve the quality of decisions” (as cited in Ortolano and Shepherd, 1995:4).

This is still a somewhat vague statement, because of the ambiguity of the word “quality”. How exactly does effective EIA affect the quality of decisions? By what basis can the quality of decisions be judged? This can be best answered by considering the overall purposes of EIA. Box 1.1 describes some of the purposes that are ascribed to EIA in published literature.

**Box 1.1: The Purpose of EIA**

Two reasons that EIA is used are because it is better to prevent problems than to remedy them, and because without an understanding of the consequences of choices about development it is impossible to achieve sustainable development (Ross and Jones, 1994).

EIA is “an examination, analysis and assessment of planned activities with a view to ensuring environmentally sound and sustainable development” (UNEP, 1987).

EIA is “a procedure for assessing environmental implications of a decision to enact legislation, to implement policies or plans, or to initiate development projects... and the conveying of this information at a stage where it can materially affect their decision to those responsible for sanctioning the proposal” (Wathern, 1988).

EIA is “a systematic analysis of the potential environmental impacts of a development proposal and the ways in which these effects can be minimized prior to implementation... EIA is (a) means of integrating environmental factors into the planning and decision-making processes in support of sustainable development” (Appiah-Opoku, 1994a).

“The overall purpose of environmental assessment is to prevent bio-physical and socio-economic damage through enlightened decision making” (Gibson, 1993, in Appiah-Opoku, 1994b).

“Impact assessment is a process to improve decision-making and to ensure that the project/programme options under consideration are environmentally and socially sound and sustainable” (Roe et al. 1995).

EIA is “a tool and procedure designed to ensure that adequate environmental considerations enter into the decision-making process” (Ebisemiju, 1993).

Based on the common themes of the above (and other) descriptions of the purpose of EIA, the following is offered as a description of the main purpose of EIA, which can be applied to evaluate effectiveness:

*The intention of EIA is to improve the quality of decisions within and about a project, towards ensuring that economic developments are ecologically sustainable in the long term<sup>1</sup>. It does so by identifying, predicting and evaluating relevant impacts of proposed projects based partially on past experiences in order to prevent costly mistakes.*

EIA effectiveness throughout this document will refer primarily to the degree to which the process realizes this intention, as it appears to be of foremost importance.

### **1.1.2 Other Positive Effects of EIA**

EIA has other important desirable effects that it is designed to achieve, and some that may be incidental yet are beneficial and should be encouraged. In determining the effectiveness of EIA, the ability of the process to achieve these benefits is secondary to the above described primary purpose, but these are nonetheless latent elements of EIA effectiveness.

One of the most important effects of EIA is on project design. EIA can lead to the introduction of mitigation measures to reduce, avoid, or compensate for environmental damages caused by a project. It can do this by redesigning or down-scaling the project to minimize undesirable impacts, by habitat reclamation, or by protecting environments similar to those adversely affected to reduce the net damage (Ortolano and Shepherd, 1995).

Projects that are not sustainable have been withdrawn due to the recognition of more sensible alternatives as a result of the EIA process (van de Gronden, 1994, as cited in Ortolano and Shepherd, 1995). EIA can also serve as a way of settling controversy among the public and government by highlighting the legitimacy of sound projects (Ortolano and Shepherd, 1995). Also, EIAs can improve project details, such as location or management strategies (van de Gronden, 1994, as cited

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<sup>1</sup> The concept of sustainable development in this project will be interpreted to as it is described in the *Brundtland Report* (Brundtland, 1987) and *Caring for the Earth: a strategy for sustainable living* (IUCN, 1990). A detailed analysis of the meaning of sustainable development is beyond the scope of this project, but it includes development that supports equitable economic growth, empowers the disadvantaged and does not impair the ability of the environment to support future generations.

in Ortolano and Shepherd, 1995). Public acceptance and a public sense of ownership can result from good public participation in EIA (Jiggins, 1995), and this can greatly facilitate management during project operations.

The beneficial effects of EIA described above result from improvements to proposed projects. There are other potential benefits offered by the EIA process itself. For example, public participation is a part of the EIA process, resulting in public empowerment. EIA can support empowerment through offering a means of by which people who are likely to be affected by a development (as identified during scoping) can influence that project (Paul, 1987, as cited in Cook and Donnelly-Roark, 1994).

Other process benefits of EIA include the enhancement of inter-agency coordination in government, which is often necessitated by the interdisciplinary and cross-sectoral nature of the issues addressed by EIA. As well, EIA can change the operational structure and activities of proponents to better integrate environmental considerations into regular activities (Ortolano and Shepherd 1995).

Even though they are different from the main purpose of EIA, these benefits are probably responsible, at least in part, for the general recognition that EIA is a beneficial process and the widespread adoption of EIA in development planning. Although these benefits are not the primary intention of EIA, they are nonetheless desirable effects and in offering recommendations towards increased EIA effectiveness, these should be increased where possible.

**To summarize, in this report the term EIA effectiveness will refer to the degree to which EIA is able to achieve the results for which it was designed, primarily in terms of decision making but also in terms of other benefits, such as its ability to positively influence project design.**

## **1.2 Methods**

This section describes the general methodology of this project. In this project, I did the following:

### **1. Describe background conditions (Chapter 2)**

In order to provide the necessary understanding of the context that surrounds the practice of EIA in Swaziland, it was necessary to describe relevant background conditions prior to the analysis that follows. The effectiveness of EIA is not a product of the prescribed process alone, but also of the way it is applied. This depends on many surrounding factors such as cultural, socio-economic, political

and institutional conditions (Kakonge, 1997; Jiggins, 1995; Ebisemiju 1993; Biswas, 1992b; Werner, 1992; Biswas and Geping, 1987). The conditions described include:

- relevant cultural, political, social and economic conditions
- the legislated EIA process
- the institutional arrangements that support it in practice

The specific methods of gathering this information are described below.

## **2. Conduct a case study (Chapter 3)**

The EIA process in application was be examined empirically based on the critical analysis of an EIA that I conducted in Swaziland to determine:

- the role, motivations, context and effects of the EIA; and
- the challenges that arose and options for dealing with them.

This was directed towards both the development of concepts, in identifying constraints on EIA effectiveness, and will later be referred back to for the purposes of illustration of EIA issues in developing countries. The case study was based on information from my personal logbooks, EIA documentation, organizational correspondence, and personal experience.

## **3. Analyze constraints (Chapter 4)**

This section was directed towards the recognition and analysis of selected conditions that constrain EIA effectiveness in Swaziland. Since recommendations were formulated with the purpose of improving EIA effectiveness, it was necessary to understand the constraints that currently limit it, so that recommendations could be made that are appropriate for addressing the relevant issues in Swaziland.

Selected constraints were identified and analyzed based on:

- the results of the case study;
- norms identified by the literature;
- a comparison of conditions described by relevant literature to lead to constrained EIA effectiveness with the conditions that exist in Swaziland;
- rational analysis of the EIA process in light of its intended goals and context; and,
- discussions held in a professional context with members of the Swaziland Environment Authority (Swaziland's EIA administration and review agency).

#### 4. Prescribe recommendations (Chapter 5)

Recommendations to increase the effectiveness of EIA in Swaziland have been formulated on the basis of both relevance in light of the recognized constraints and feasibility within the setting of Swaziland. As necessary, these recommendations focus on ways of increasing (after Sadler, 1996):

- the degree to which the policy is based on sound principles, and the process in practice conforms to the policy;
- the degree to which the objectives of EIA are achieved by the EIA process; and,
- the efficiency of the process.

##### 1.2.1 General Rationale

The methods of case study, literature review, and comparison of theoretical norms to practice have been widely recognized as suitable and used for similar purposes in many other research projects. Case research is a widely-used method of examining EIA effectiveness in the context of developing countries (e.g. Kakonge, 1997; Nardini et al., 1997; Adger and Chigume, 1992; Hirji and Ortolano, 1991). An advantage of case research is its ability to analyze a particular case empirically, holistically, and intensively. Another strength of case research is that it is well suited to studying interrelationships, which are quite relevant in the application of EIA. Having the benefit of real-life, practical experience, case study is a useful method for development and illustration of concepts in research. The use of personal documents such as logbooks as study materials for case study purposes is a recognized method in conducting a case study (Foreman, 1971).

A case study examines a case in depth as opposed to less thorough analyses of a greater breadth of cases. The ability to generalize on the basis of a case study is sacrificed for the thoroughness that can only come from a single sample, making it possible to investigate at a much finer level of detail. Generalizations based on case studies must be made cautiously because of the chance that conclusions are drawn based on an aspect of a given case that is atypical (Foreman, 1971).

Applying theoretical norms from the literature to a particular EIA system is done in Chapter 4, the section analyzing constraints in this study. In the Final Report of the *International Study of the Effectiveness of Environmental Assessment* (1996), Sadler states that this is a widely used method of evaluating environmental assessment effectiveness. It is particularly useful in establishing the necessary fundamentals of effective environmental assessment. Sadler (1996) also sites the evaluation of specific activities or components as a potentially useful level of studying environmental assessment effectiveness. It is applied here for that purpose.

The combination of a particular case study and a more broad analysis of constraints that is based on many sources is a good one. As described above, case study is an effective method for thoroughly analyzing an empirical case, but its conclusions do not necessarily lend themselves to generalization. On the other hand, extending general theory from literature to a particular setting lacks the strength of empiricism, but has broad applicability. This project uses a case study partially for concept development, but then applies a literature review for a basis of generalization, the result being the identification of constraints that both have definitely occurred in Swaziland and may be reasonably expected to continue. By using a variety of methods for identifying constraints to EIA effectiveness in Swaziland, this project is able to take advantage of the strengths of certain methods to compensate for the weaknesses of others, so that the resulting conclusions can be more broadly-founded.

It is not yet feasible to apply any quantitative methods of EIA quality analysis to Swaziland. Quantitative methods of analyzing EIA quality have been employed in several studies of EIA effectiveness, by calculating the percentage of EIAs that exhibit a certain desirable quality, or by comparing numbers of EIAs completed over time, between jurisdictions within a country, or internationally (e.g. Aw, 1996; Hirji and Ortolano, 1991; Nor, 1991; Lemons and Porter, 1991). None of these methods can be meaningfully applied to Swaziland because of its limited history of EIA. Swaziland's EIA legislation was passed in April of 1996. This limits the possibility of using quantitative methods of analysis because there have not been of a substantial number of full EIAs from which to draw quantitative comparisons. This makes any meaningful system-wide outcome review impossible, because there are not enough full EIAs that have been conducted in Swaziland to analyze statistically. Although quantitative analysis is not an option, this does not severely limit this study. As Ortolano et al. (1987) point out, many elements of EIA effectiveness can only be measured qualitatively, and with a degree of subjectivity.

### **1.2.2 Field Methods**

Information on background cultural, social, political and economic conditions in Swaziland has been taken from published accounts wherever possible. However, relatively little documentation is available on some current conditions. An understanding of Swazi traditional social mechanisms, the importance of cultural customs and beliefs, and the political situation were developed on the basis of my first-hand experiences working as the environmental officer of the Swaziland National Trust Commission and living in rural Swaziland over an extended period, from April 1995 to April 1997. I have not been trained as a cultural anthropologist, and have not systematically established the validity of all of the

described perceptions of customs and values through structured social research. However, by living in rural Swaziland, and both befriending and working professionally with traditional and “Westernized” Swazis over a long-term period, many socio-cultural realities became clearly and consistently illustrated through direct experience, demonstration, and interpersonal communication.

The idea of long-term interaction and observation as a means of developing an understanding of another culture’s perspective is the fundamental principle of participant observation, a standard method used extensively in anthropology and increasingly in other social sciences (McElroy and Townsend, 1989). It is particularly useful for dealing with sensitive topics in a cultural setting. Developing friendship and rapport with cultural informants is an effective means of gaining an “insider” perspective on subtle cultural norms. Most other social research methods with more rigid approaches can not do this as effectively (McElroy and Townsend, 1989). Although my primary work in Swaziland was not directed towards cultural research, elements of participant observation were very informative about certain aspects of Swazi culture, and have formed the basis for statements about socio-cultural conditions in present-day Swaziland where no published reference could be found.

Perceptions of cultural customs and values drawn from my personal experience were consistently supported in discussions held in Swaziland with other non-Swazi development workers from many countries, including Britain, Holland, Italy, Germany, the United States and Canada. I am more confident in the objectivity of my observations of Swazi culture due to this triangulation and consistent consensus of my own opinions with others who have also experienced long-term interaction with Swazis. This confidence is further strengthened because observations appear to be consistent even across observers from a diversity of cultural backgrounds.

My first-hand experience as the environmental officer of the Swaziland National Trust Commission has led to my working professionally and extensively with various officials in the environmental field, and the development of an understanding of the institutional setting within which conservation in general and EIA in particular must function. The description of the formal EIA system in Swaziland was developed by reviewing the relevant legislation and guidelines that the government of Swaziland produced to facilitate the implementation of EIA as a standard process of development. The EIA process and its supporting documents were the subject of extensive discussions with high-level officials of the Swaziland Environment Authority, which is the agency in charge of EIA enforcement and review. Further discussions were held with the consultant who facilitated the drafting of the EIA laws and guidelines.

Informant interviews are a widely used method for social research (Tremblay, 1982). This has been applied to EIA in developing countries before. Ross

(1994:219) points out that “the research approach of interviewing those involved in the process professionally to identify strengths and weaknesses is well-suited to reveal the state of development of the (EIA) process”. Even when interviews are not formally structured, conclusions can be verified by checking their consistency with the views of all people who provided information (Ross, 1994). This latter approach was one method used in the present project for identifying constraints that limit EIA effectiveness in Swaziland, in addition to the case study analysis and application of relevant principles from the literature that will be outlined in detail later in this document.

### **1.2.3 Literature Review**

A literature review was conducted to benefit from the experiences and conclusions of others who have studied EIA and its application in developing countries. Part of the basis for identifying constraints, described in the constraints analysis section of this document, was the review of conditions known to constrain EIA in other developing countries, followed by consideration of their applicability to Swaziland on the basis of identifying the existence of similar conditions. The identification of conditions that are recognized as affecting the practice of EIA in developing countries in general was done on the basis of a brief literature review. This review was also used to establish the relative importance of the certain aspects of EIA to the over-all effectiveness of EIA.

This literature review involved the identification and study of published information and guidelines, primarily from the library resources at The University of Calgary, additional professional and academic journals, and internet resources. Relevant bibliographies compiled for development agencies and research projects were examined to help identify potentially useful information sources.

It is worth noting that while in many other research documents the results of literature reviews are described early in the document, in this report the results of the literature review are largely absent until Chapter 4. This is because it is used primarily during the identification of general constraints to EIA effectiveness on an issue by issue basis. As described above, this project is structured to use the literature review partially to test or generalize the results of the case study. The literature review is therefore described after the case study and the description of relevant background conditions of Swaziland.

#### 1.2.4 Case Selection

The case study was undertaken to provide an opportunity for an empirical examination of EIA in Swaziland. The case studied is the EIA of the Swazi Cultural Village Project of the Mantenga Reserve. This has been chosen for several reasons.

First, as environmental officer of the Swaziland National Trust Commission, I was the principal assessor and author of this EIA, which I was requested to conduct “in-house” by Director of Parks of the Commission. I have a more detailed knowledge and insight of it than I do of any other EIA, or than anyone else does of this EIA. This is important because case research is intended to be holistic and thorough: I am intimately familiar with the way it fit into project planning and development, with the interactions between the proponent and the relevant government agencies, with the dynamics that affected the scoping process, and with all other aspects, because I was personally involved. Since the inclusion of specific details is one of the strengths of the case study method, this case capitalizes well on my personal experience and knowledge.

Second, it was the only full EIA that had been completed in Swaziland before I left. While there have been other documents submitted as EIAs, these have been very brief (ranging from approximately five to forty pages) and lack many of the basic characteristics of EIAs (such as scoping, and impact evaluation). Whether or not these reports qualify as EIAs is questionable. They are not likely to be broadly illustrative as case studies, except as limited cautionary examples. Thus, another reason for the selection of this particular EIA as a subject for the case study was the limited available choice.

Third, the EIA that was selected as the subject of the case study has been confirmed to be a good EIA by many authorities, on the basis of their experiences and professional practice standards. As such, it has the potential to yield insights into managing EIA effectiveness within the constraints of Swaziland. This EIA was considered effective by many objective authorities, including the government review office and ex-patriot EIA specialists from Holland, England and Scotland--all countries with considerable experience with EIA. The satisfaction of previously concerned and critical stakeholders and the proponent is additional evidence that this EIA was effective. Perhaps most importantly, as an EIA that was conducted in Swaziland, the selected EIA has a direct application to this project. It is on this basis that its quality is judged to be sufficient for the purposes of the case study.

Also, it should be borne in mind that the purpose of the case study here is not to evaluate the Mantenga EIA itself, but to use it as a vehicle for identifying opportunities to increase EIA effectiveness in Swaziland.

Bias arises as an issue in the subjective evaluation of the quality of my own work, because I was both the principal assessor of the EIA that is the subject of the case study, and I am the author of the case study. There are two ways that this issue is addressed here. First, as described above, various objective evaluations of the EIA have been conducted, so there is no need to base any assumptions of EIA quality on my own subjective evaluation. Second, the quality of the results of the EIA process is mostly relevant in determining the suitability as a case study. Most of the elements of the case study itself are not based the quality of the document, but on the interrelationships of the conditions and events that surrounded it. The point of the case study is to develop and illustrate concepts and not to assess my own performance in this EIA. Where the quality of the EIA arises as a relevant issue in the case study, it is assumed based on the objective evaluations described above.



## **2. Background Information**

This chapter will describe background information that is relevant to the project. First, it will provide background information on Swaziland and the Swazi people that is relevant to EIA in Swaziland. Then, it will describe Swaziland's EIA laws and process.

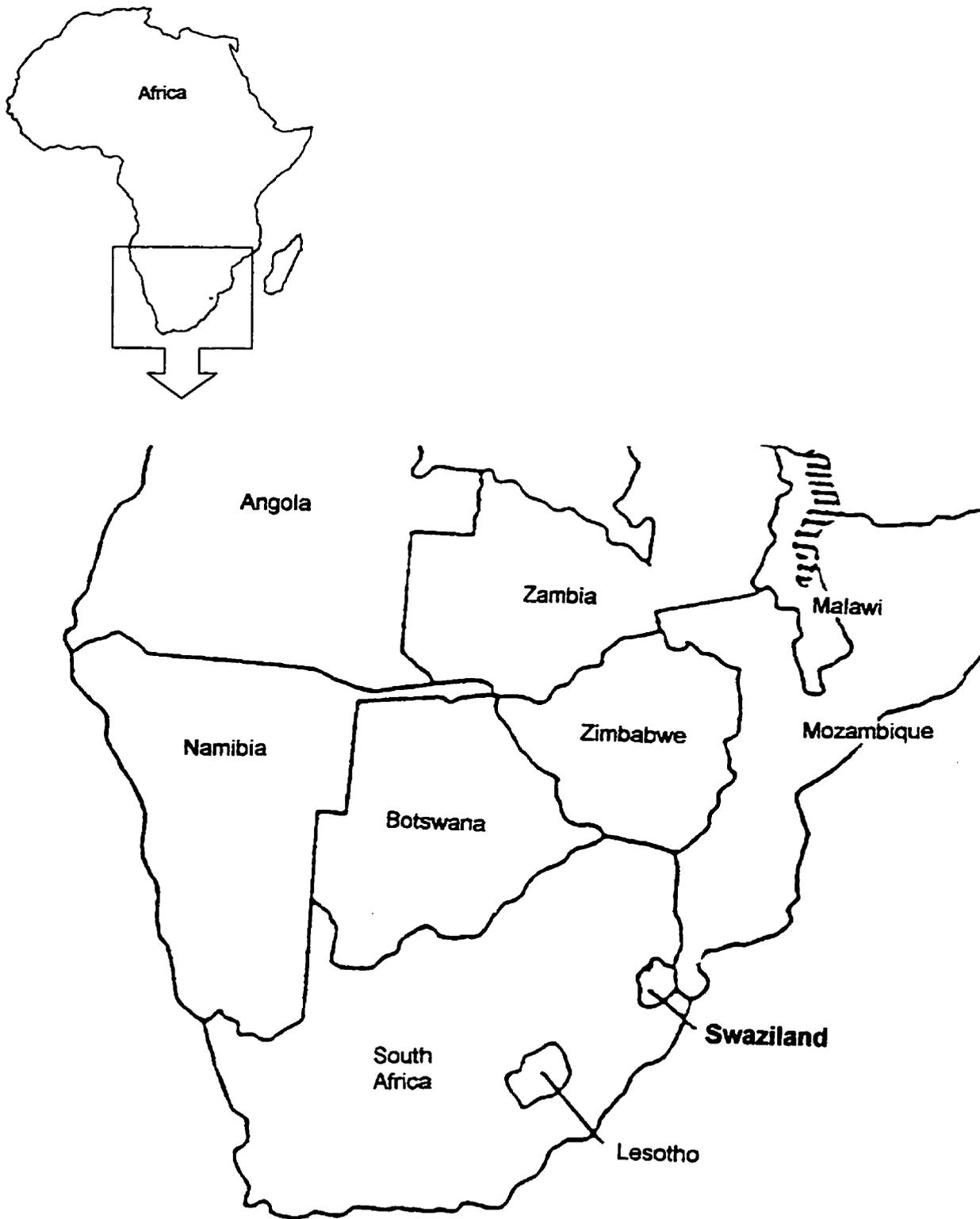
### ***2.1 Background Information on Swaziland***

The effectiveness of an EIA system is a product of both the system itself and its practice, which is greatly influenced by the setting in which it occurs. This section will offer the reader some basic background information on Swaziland, including its geography, history, political, economic and environmental conditions. It will also briefly describe aspects of the influence of traditional Swazi culture on modern Swaziland.

#### **2.1.1 Geography**

Swaziland is a relatively small landlocked country located in Southern Africa between Mozambique and South Africa (see Figure 2.1), covering an area of approximately 17 363 square kilometres (WUSC, 1994). It is the home of nearly a million people, most of whom are members of the Swazi tribe.

Even though it is relatively small, Swaziland boasts great natural beauty with a relatively high diversity of flora and fauna, due largely to variations in topography and climate leading to a broad range of ecological conditions. These include rolling mountain grasslands with rocky outcrops, lush river valleys with tropical vegetation, and scrub savannah that is often thought of as typical African bush country. Topographical elevations vary widely, and annual rainfall varies



**Figure 2.1** The location of Swaziland. [Adapted from Booth (1983) and Kuper (1963)]

drastically in different regions<sup>2</sup> (IUCN, 1993). With the different soils and rainfalls of each area, the climate varying from tropical to near temperate, and the radically different vegetation and corresponding wildlife of each region, the ecological diversity of Swaziland is striking, despite its small size.

## **2.1.2 History of the Swazi People and Swaziland**

The practice of EIA is influenced by the government in which it operates. To understand the operation of the Swazi government, it is necessary to briefly consider the political system in which it exists. This system is traditionally based, with ethnic distinctions between clans influencing its daily operation, and is a product of the way the Swazi tribe was formed. A brief review of the historical formation of the Swazi tribe will be helpful in order to understand the complex system of government, the relationships between the ancestral clans on which it is based, and the political system in which it is set.

### ***2.1.2.1 Early History***

The Swazi are generally considered an Nguni people, but approximately 25% of Swazis are of Sotho origin, and 5% are Tsonga<sup>3</sup> (Kuper, 1963). Historically, the area now known as Swaziland was inhabited by the KoiSan bushmen, who were pushed out of the area by the Sotho in the sixteenth century. The Swazi invaded from east-central Africa in the north around the year 1750, under the rule of a king from the Nkhosi Dlamini clan. Over many years, surrounding clans pledged their allegiance to Swazi kings, some voluntarily and some involuntarily. All clans hold the leaders of the Dlamini clan as the rulers of ultimate superiority (Kuper, 1963). Although the various clans were distinct in many ways, such as in their histories, dialects, dress, food and rituals, the different clans homogenized considerably over time, through intermarriage and shared benefits such as protection and land. This led to their becoming a single unified Swazi people, composed of different clans of varying status and power, ruled by members of the royal Dlamini clan (Kuper, 1963).

### ***2.1.2.2 Modern History***

The current political situation is a product of the hierarchy produced by the way the Swazi tribe was formed, coupled with more modern historical events. Over

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<sup>2</sup> Elevations vary from 1800 to 200 m above sea level, and annual rainfall varies regionally from 1200 to 700 mm (IUCN, 1993).

<sup>3</sup> Nguni, Sotho and Tsonga are distinct groups of peoples from various areas of Southern Africa who speak Bantu languages (Booth, 1983).

the last century and a half, Swaziland was exploited for resources and labour by both the British and the Boers (Dutch settlers of South Africa). Swazi sovereignty gave way to the political persecution of Swazi royalty, and taxation to Pretoria. Swaziland became a British protectorate, but eventually, due to changing economic and political situations in combination with skilled leadership, the Swazi royal family regained power (Kuper, 1963).

In 1968 Swaziland regained full independence from the British, with the traditional ruling Dlamini clan once again holding supreme power. A small group of educated Swazis formed a petite bourgeoisie, based on their recognition of interests different from both white settlers and from the traditional ruling class of royalty and clan chiefs. A constitution was drafted, with King Sobhuza II as supreme ruler (Booth, 1983).

Following a major labour dispute in 1973, which involved a questioning of royal authority and which was blamed partially on the existence of political parties beyond the monarchy, the king declared a formal state of emergency. As a result of this declaration, known as the Proclamation of 1973, the constitution (and all the rights and freedoms it entailed) was suspended, parliament was dismissed, and all public meetings and political parties were banned. The state of emergency was a royal response to “the importation into our country of highly undesirable political practices alien to and incompatible with the way of life in our society, and designed to disrupt and destroy... our method of political activity” (Royal Proclamation quoted in Fransmen, 1982, as quoted in Booth, 1983). This state of emergency has never been lifted, despite a large political underground dedicated to this goal.

### **2.1.3 Major Development Issues in Swaziland**

Swaziland faces many problems that are common to other developing countries. These include high population growth rates, poverty, health problems, and growing environmental crises. This section will provide an overview of some of the economic and environmental conditions in Swaziland, and issues that arise from them.

#### ***2.1.3.1 Population and Distribution***

One of the reasons that provisions for ensuring sustainable development, such as EIA, are so urgently needed in Swaziland is because of its tremendous rate of population growth.

The present population of Swaziland is not known with great accuracy, because of the difficulties in conducting systematic polls in rural areas, but was estimated to be 814 000 in 1993, and has been more recently estimated to be approximately

one million, most of whom are Swazis<sup>4</sup>. Over half of the population is below the age of eighteen. The population growth rate is approximately 3.4%, which is one of the highest in Africa, with 6.21 children per woman on average. Even with a relatively high infant mortality rate, the population doubling time is approximately 29 years (CPC Medialab, 1995). The rapidly increasing population has led to greater pressure on natural resources and increased settlement on areas of marginal value. Population control programs directed at promoting family planning exist, but are often ignored or ridiculed in rural areas, in which agricultural success and old age security have traditionally been ensured by having many children.

Swaziland's tradition of communal land use combined with the historic concession of areas to private interests has led to two different types of rural land ownership, these being Swazi Nation Land and Individual Tenure Farms, in addition to urban land. Due partially to this system of ownership, there is considerable variation in population distribution. Approximately 13% of the population lived in urban or peri-urban areas in 1990, two thirds of whom were concentrated in the areas in and around Mbabane and Manzini, the largest cities. This number is increasing due to internal migration. Almost 70% of the population live on Swazi Nation Land (which by area is around two thirds of Swaziland), and about 17% live on Individual Tenure Farms (IUCN, 1993).

#### ***2.1.3.2 Education and Health***

Swazis enjoy a relatively high level of education, with a literacy rate of 55% and over one quarter of total government expenditures going towards education (CPC Medialab, 1995). Health conditions in Swaziland are relatively poor, with only seven percent of the rural population having access to safe drinking water. Significant numbers of people suffer from bilharzia, typhoid, and malaria. The infant mortality rate is approximately ten percent. AIDS is also an issue of major concern in Swaziland (CPC Medialab, 1995). There is a need for economic development as a means of improving health and living conditions, but if it is done without the consideration of environmental issues these problems may become more severe.

#### ***2.1.3.3 Economics***

Poverty relates to EIA in two ways. It leads to numerous constraints on EIA, and it increases the need for economic development, making EIA more important as a way of achieving development without making costly mistakes. For these reasons, selected aspects of Swaziland's economic situation are described below.

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<sup>4</sup> In 1993, the population was estimated to be composed of 84% Swazis, 13% other African black nationals, and 3% other people (primarily whites of European ancestry) (CPC Medialab, 1995).

The gross domestic product of Swaziland in 1994 was US\$488 million, with a per capita income of US\$730 (WUSC, 1994). This is one of the highest in all of Africa (IUCN, 1993). Nonetheless, poverty is a major issue in Swaziland, due to inequalities in income distribution. Many people live below the poverty line, because 26% of the national income is commanded by the top five percent of the population, while the bottom 40% of the population share only 11% of the national income. Of the population, 72% live in rural areas that have little access to medical facilities, tap water, transport, or electricity. Over half of rural dwellers lack access to potable water, 64% lack adequate sanitation, and food insecurity is high (Matsebula, 1997).

The population growth rate (approximately 3.4%) is greater than the economic growth rate (approximately 2.5-3%), resulting in a falling Gross Domestic Product per capita (Dlamini, 1997). Unemployment in 1995 was at 22% and is increasing. Swaziland benefited economically from apartheid in neighbouring South Africa because South African owned industries were based in Swaziland to avoid anti-apartheid sanctions and because apartheid-free Swaziland was a politically attractive local alternative to South Africa for other countries wanting to do business in the region (CPC Medialab, 1995). Since the fall of apartheid both of these conditions have changed, and, in combination with the incidence of politically charged labour disputes, these changes resulted in many foreign investors leaving Swaziland. Attracting foreign investors has recently become a major goal of Swaziland's development strategy (WUSC, 1994).

Agriculture is the backbone of Swaziland's economy. Commercial agriculture is extremely important economically, as are the manufacturing industries based on the processing of agricultural products. Swaziland's main exports are sugar, citrus and cotton, and woodpulp, from pine grown in vast timber plantations. Although mining has historically been crucial to Swaziland's history and economic development, it is no longer of great importance (IUCN, 1993), while tourism is of growing economic importance (CPC Medialab, 1995).

Most rural Swazis practice subsistence agriculture using traditional methods, with maize being the main food crop (WUSC, 1994). Only 22% of traditional farmers participate in the market economy. Cattle are important to rural Swazis both as a major traditional source of prestige and as a source of cash for many subsistence farmers (IUCN, 1993).

Swaziland's economy is directly dependent on its natural resources and environmental well-being for the ecological processes that make possible the agro-industries, and the manufacturing industries that depend on them. The practice of subsistence agriculture that feeds most of the country is, of course, directly dependent on the same ecological processes as commercial agriculture. The natural beauty of Swaziland is also economically an important attractant for

international tourism. Thus, EIA is important to Swaziland's economy, because it can help to avoid unacceptable damage to the natural systems that play such an important role.

#### ***2.1.3.4 Environmental Issues***

Swaziland faces a number of environmental problems that are likely to increase as the population expands. These are described in the report Environmental Synopsis: Swaziland, conducted by the Swaziland International Union for the Conservation of Nature in 1993. Keeping the largest numbers of cattle possible is encouraged by Swazi culture. Most of these cattle graze on Swazi Nation Land, which is communally used and therefore makes the application of range management principles difficult. Consequently, overgrazing on Swazi Nation Land is a major problem. Between overgrazing, highly erodible soils and occasional torrential downpours, soil erosion is another major issue. Water problems include seasonal drought and water pollution from manufacturing and agricultural industries. Solid waste disposal and overloaded sewerage leading to discharge of pollutants into surface waters are urban environmental issues. High demand for fuelwood has led to deforestation problems in many areas. Associated with these issues, and aggravated by others such as invasive species (e.g. *Eucalyptus* spp. and *Acacia mearnsii*), biodiversity loss is an issue of growing importance (IUCN, 1993).<sup>5</sup>

#### **2.1.4 The Relevance of Tradition in Swaziland**

Swazi traditions are rich, diverse, and of great cultural importance. They influence everything from the way the country is governed to the daily life, behaviour and beliefs of the majority of people in the country. This section will now briefly explore some aspects of the influence of traditionalism in Swaziland.

##### ***2.1.4.1 The Traditional Government System***

As will be discussed in detail later in this project, systems of government can constrain the effectiveness of EIAs in a variety of ways.

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<sup>5</sup> Many of these are results of rural Swazis interacting directly with their surroundings, combined with increasing population pressures and the tragedy of the commons. Large scale industries, which EIA is well placed to evaluate and in some ways control, have less of a role in many people's lives than they do in more industrialized countries. This reduces the potential of EIA to solve the environmental problems. Although EIA still has an important role in conserving environmental quality, this is one reason why it is no substitute for initiatives such as environmental education.

The system of government in Swaziland is one of the most obvious influences of traditional culture. The entire power structure of government leadership is traditionally based. Traditions dictate the management of the land that most of the population lives on, the family hierarchies of the homesteads on it, and the government of the chiefdoms in which those homesteads are located. Entire clans have different positions in the power hierarchy, most obviously so with the royal Dlamini clan but also between lesser clans, based on factors such as their provision of queen mothers, national positions dictated by heredity, and historical skills of individuals within a clan.

Alan Booth, in his book Swaziland: Tradition and Change in a Southern African Kingdom (1983:p 34) describes traditionalism in Swaziland as follows:

*Swazi society places great emphasis on traditionalism and conservative values, partly in response to the stresses that have confronted it over the past two centuries. In addition, its rulers have consciously (sometimes forcibly) emphasised those ideals as the guiding ideology of the nation, which, remaining predominantly rural, generally accepts them.*

The ultimate power of government in Swaziland rests with the King and the Queen Mother. They rule through a two tiered system of government, one traditional and one modern. The traditional system sees the King advised by an inner council of aristocrats, who are accountable to none other than the King and Queen Mother and are extremely powerful, operating behind closed doors. A second council, which is somewhat more democratic, is the Swazi National Council, consisting primarily of Chiefs and Indvunas (counselors for individual chiefdoms). Swazi Nation Land is divided into chiefdoms, ruled by hereditary Chiefs to whom inhabitants owe loyalty. In addition to these traditional councils, Swaziland has a Western style parliament in which issues are debated, that also advises the King. The King has veto power over all parliamentary decisions, and is completely empowered to appoint or dismiss all high level government employees, including the Prime Minister.

A growing number of educated Swazis are critical of the traditional system of national government in Swaziland. They claim that it is not representative of public interests, and argue that the voting system, known as tinkundla, used for selecting members of parliament, is a questionable process. In this system, traditional leaders suggest candidates for the King's approval, possibly for their own interests, and voting is done publicly under the watch of Chiefs and their representatives, who have considerable power over the voter's welfare. Since political parties are outlawed due to the 1973 Proclamation, there are no different political groups from which to choose. It is argued that the government's use of the tinkundla system is to foster the illusion of democratic freedom while maintaining an absolute monarchy. As will be discussed in Chapter Four, political systems such as this can constrain the effectiveness of aspects of EIA.

Another claim of critical groups is that since the position of Chief is hereditary, Chiefs do not necessarily possess good leadership skills, yet are virtually all powerful within their chiefdoms without being accountable to their subjects. They also argue that the royal Dlamini clan and inner councils often advise the King to further their own self interests, and that a disproportionate number of high positions in government are awarded to members of the Dlamini clan or other high ranking clan members. more on the basis of bloodline than of competence.

Although the majority of Swazis are relatively traditional rural people with little formal education or money, over the last 20 or so years there has been a growing middle class of Swazis. These people are well educated, and recognize that their interests are different from the ruling class (Booth, 1983). This small middle class has been largely responsible for internal pressures for political reform.

In response partially to internal pressure (expressed in national strikes that have brought the nation to the brink of civil war), but more notably to external pro-democracy international pressures, a new constitution is being drafted, that is expected to include numerous political reform measures. There is much public controversy about the Constitutional Reform Commission composition, which was based on royal appointment, and a lacks a democratic methodology to ensure that it is representative (Matsebula, 1997; Amnesty International, 1997). Regardless, the existence of such political reform measures indicate that the government is showing signs of trying to respond to the pressures of modernity without sacrificing the integrity of tradition.

#### ***2.1.4.2 Influence of Tradition on Daily Life***

Cultural differences affect the adoption and application of foreign processes and technologies such as EIA. Some aspects of traditional culture that are likely to influence the application of EIA will now be described.

The cultural traditions of Swaziland manifest themselves in the daily lives of Swazi people, particularly in rural areas. Although there are obvious influences of modernity through most of the country, such as radios, modern clothing and commercial products, many traditions continue as they always have. Polygamy is still regular practice, social status within a clan is largely defined by the number of cattle owned, and elders are deeply respected.

Most people feel the influence of supernatural or magical forces as common influences on daily events. This ranges from traditional beliefs in spiritual afterlife of ancestors that influence the present to attributing problems to witchcraft and demons. Although the belief in magic is most openly expressed among the traditional people who live mostly in rural areas, it is also a subtle influence on many well educated Swazis who are “westernized” in other ways.

The belief in magical forces acts as one of many hidden behavioural motivators that make it difficult for non-Swazis to interpret the behaviour of Swazis. For example, Swazi cultural norms of politeness demand great interpersonal subtlety and tact, both in making requests indirectly through gentle hints and in indirect manners of conflict. This degree of subtlety is often misinterpreted by foreigners. As will be discussed in Chapter 4, the Swazi approach to conflict, widespread belief in magical realism, and other cultural factors are likely to constrain public participation in EIA.

### ***2.1.4.3 Xenophobia***

The flipside of the emphasis Swaziland places on its traditions is a relatively high level of xenophobia, encouraged by the monarchy and widespread among rural Swazis. Partially due to historical exploitation of Swaziland by foreign powers, and partially out of interest in cultural conservation in the face of spreading Western culture, the monarchy often attributes internal problems to foreign influences. As mentioned earlier, foreign influence was allegedly the cause of the suspension of the constitution and banning of political parties since 1973 (although it is widely considered to have been a reaction against the less traditional political alternatives offered by the Swazi petite bourgeoisie). Foreign influence was also the supposed cause of major labour disputes and national strikes that led to protests that were violently suppressed by the police force and army in both 1996 and 1997. By blaming outside influence, the government and monarchy have been able to deny any problems with the status quo of the traditional system that empowers them.

Partly as a result of the blaming of problems on foreign influences, many rural individuals are distrustful of outside influences. Often, rural people have little formal education, and base their opinions on the views of their chiefs, who are members of the traditional power hierarchy and are often very xenophobic. At times this has confounded development interests<sup>6</sup>. As will be discussed in detail later, distrust of foreigners can be a problem for effective EIA, particularly in a country such as Swaziland with a limited local EIA capacity that can be reasonably expected to rely heavily on foreign consultants.

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<sup>6</sup> For example, an extremely powerful Chief (who was at one time the Prime Minister of Swaziland) announced to his chiefdom that the use of condoms advocated by family planning and health organizations was an un-Swazi innovation akin to “putting your children in plastic bags”. This view was rapidly taken up by his thousands of subjects.

#### ***2.1.4.4 Traditional and Modern Legal Systems***

Another important role of tradition in daily life in Swaziland involves the judiciary. There are two legal systems that function in Swaziland: one traditional, and one modern. The traditional system is highly developed, but has not yet been recorded in writing. The modern system follows Roman-Dutch legal dictates, while traditional Swazi law involves a hierarchy extending through local councils and Chiefs, potentially reaching up to the King, the ultimate legal authority in the country. The two parallel systems meet at certain levels. Depending on the nature of the issue, litigants may have the right to choose the legal system in which they are to be tried, or the case may fall under the clear jurisdiction of one of the legal systems (Kuper, 1963).

Differences between the two systems may make each one more or less desirable to a certain litigant. Traditional courts are more likely to reflect traditional values. Trials involving property rights and women's issues have historically been perceived as receiving more sympathy in the modern system (Kuper, 1963). Some historical conflict exists between the two systems. One extreme example of this involves witch-finding. While witch-finders historically helped to identify criminals in the traditional system, the act of witch-finding is a serious offence under the modern justice system. Neither system is always superior to the other. Superiority is considered on an issue specific basis when there is conflict between the two justice systems (Kuper, 1963).

Swaziland's EIA regulations are part of the modern legal system, and their applicability on Swazi Nation Land, governed by traditional law, is still unclear (Ypma, 1997). Political critics claim that the modern court system often results in judgements which seem to be partial to the interests of the monarchy, and that the modern court system has occasionally been manipulated in the interests of the government. For example, after a judge ruled that the detention of certain people alleged to be political activists was illegal, the judge was removed from his position of Acting Chief Justice by the government (Amnesty International, 1997). Critics also claim that the justice system is corrupted by personal favouritism, and is inconsistent in its distribution of justice.

Although at times the government has appeared to manipulate the courts for its own ends, the courts still appear to function with a high degree of autonomy in daily affairs. There have been no legal tests of Swaziland's EIA regulations to date.

## 2.1.5 Background Information on Swaziland's EIA Legislation and Process

Formal legal EIA requirements are relatively new to Sub-Saharan Africa. As recently as 1994, no countries in the region had any explicit EIA requirements, and any EIAs that were conducted were done to satisfy the donor requirements of international development agencies (Cook and Donnelly-Roark, 1994). Swaziland's EIA regulations are some of the earliest in the region.

### 2.1.5.1 Legislation and Documentation Supporting EIA

Swaziland has a long history of environmental legislation, the earliest formal example of this being the *Forest Preservation Act of 1910*. In 1992 the *Swaziland Environment Authority Act* was legislated. This is the act that serves as a legal umbrella beneath which later environmental legislation falls. Through this act, the Swaziland Environment Authority was created and empowered to act as a government environmental watchdog, responsible for formulating environmental regulations, standards and guidelines, developing economic incentives to encourage compliance, promoting training and education in the environmental field, and ensuring that environmental considerations are part of the development process (SEA, 1995a). Originally placed in the Ministry of Natural Resources and Energy, the Swaziland Environment Authority was moved to the Ministry of Tourism in 1997.

Under the duties brought about by the *1992 Swaziland Environment Authority Act*, the Swaziland Environment Authority is the government agency responsible for ensuring the ecological sustainability of economic developments. This was formally legislated to include overseeing EIA processes by *The Environmental Audit, Assessment and Review Regulations, 1996* (which will be referred to as "the Regulations" herein). These Regulations detail the requirements for Environmental Audits<sup>7</sup> and two levels of assessment for proposed projects, those being Initial Environmental Evaluation and EIA. Because the focus of this project is on EIA, the process for conducting Environmental Audits on existing developments will not be dealt with, and the Initial Environmental Evaluation process will only be described below where it relates directly to the EIA process.

In addition to describing the legal requirements of EIAs, the Regulations include details of EIA processes and EIA document contents. There are two other documents that also guide people through the EIA process, both of which are produced by the Swaziland Environment Authority. One of these documents is

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<sup>7</sup> An Environmental Audit is a form of assessment conducted on existing operational developments, as opposed to EIAs or Initial Environmental Evaluations, which are conducted on proposed projects.

the 1995 *National Guidelines for Environmental Audit, Assessment and Review of Projects* (referred to as “the Guidelines” herein) which strives to improve people’s understanding of the regulations by describing the EIA procedures, their intentions, and the roles played by various people and bodies in them. The second clarifying document is the Swaziland Environment Authority’s 1995 *Environmental Management Manual*, which is aimed at improving the understanding of the EIA process by officers in government ministries who, as members of potential authorizing agencies (government bodies legally empowered to issue permits and licenses) are likely to be involved in project screening and monitoring.

These two secondary documents were necessary because the Regulations are hard for many people to follow, as they are written in legal terminology, with requirements for specific steps described out of sequence. Although all three documents prescribe how EIA should be done, the Regulations offer the only legally binding requirements. This review will focus on the Regulations for this reason, and will only refer to the secondary documents when clarification is necessary or when they suggest steps in EIA that are excluded from the Regulations. The following description is of the EIA process as it is prescribed in the Regulations (GOS, 1996).

#### ***2.1.5.2 Swaziland’s EIA Process***

The overall EIA process is applied to any project that requires a permit, license, approval or consent from a government authorizing agency, or any project that is forwarded for inclusion in the National Development Plan. Through this process, a proposed development project can be granted an Environmental Compliance Certificate, which is a legal prerequisite to the development of included projects. Although not explicitly defined in the EIA legislation, the manual of the Swaziland Environment Authority uses the term environment in a broad sense to include socio-economic and cultural environments (SEA, 1995a), which enables the EIA Regulations to also include assessments that are not dealing with biophysical issues alone.

#### ***2.1.5.3 Screening and Categories***

Screening is conducted by the authorizing agency to whom the proponent has applied for a license or permission to develop. The authorizing agency is defined legally as those “empowered by law to issue a permit, license, consent or approval” for an activity (e.g. the Ministry of Housing for housing developments) (GOS, 1996). With the assistance of lists in the Guidelines and the *Environmental Management Manual*, the authorizing agency screens proposed projects into one of three categories, each reflecting different assessment levels.

Category 1 includes most small scale projects. If the Swaziland Environment Authority approves the classification of a project into this category, the project is granted an Environmental Compliance Certificate without any further environmental assessment.

Category 2 projects are those that have the potential to cause problems but may not require a full EIA due to their small to medium scale. This typically includes small housing developments, medium scale agro-industries, and Category 1 type projects that are located in the proximity of environmentally sensitive areas (Ypma, 1997). The classification of a proposed development into Category 2 requires the proponent to submit an Initial Environmental Evaluation, which the Swaziland Environment Authority will use to decide if a full EIA is warranted. If it is not warranted, the proponent is awarded an environmental compliance certificate and the process is finished. If on the basis of the Initial Environmental Evaluation it appears that an EIA is required, the project is reclassified into Category 3.

Category 3 projects are all those that have the potential to cause significant impacts. Typically, these are large scale or located in sensitive areas, and require an EIA before the Swaziland Environment Authority can decide whether or not to issue an Environmental Compliance Certificate. The Swaziland Environment Authority has the power to re-categorize projects should they disagree with the screening judgement of the authorizing agency, and it is the only agency that can do so.

All proponents of projects that fall into Category 3 must conduct EIAs, and produce an EIA document plus a separate document detailing mitigation and monitoring plans, called a Comprehensive Mitigation Plan. This two document system is intended to simplify matters for the people who will be implementing the mitigation measures and conducting monitoring. The Comprehensive Mitigation Plan describes the proponent's construction and operation phase commitments that are part of the basis for project approval, without detailing the planning issues that required them. The underlying planning issues are considered in detail only in the main EIA document, for the consideration of the Swaziland Environment Authority.

#### ***2.1.5.4 EIA Terms of Reference and Contents***

The process for conducting EIAs for Category 3 projects is as follows. First, the proponent (or its consultant) conducts issue scoping<sup>8</sup>. Although the regulations

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<sup>8</sup> Scoping is the process of identification and prioritization of issues (Kennedy and Ross, 1992). In order for EIAs to be useful in providing direction for decision makers, it is essential that they focus on the issues relevant to the project approval decision (Roe et al., 1995). By doing this early in the

say that this should involve or include concerned or affected parties, government agencies, NGOs and interested members of the general public, there is no specific requirement for how this should be done. The *National Guidelines* indicate that this can occur “at the discretion of the proponent”, and should (but does not necessarily) involve the public at the scoping stage. The *Guidelines* describe possible methods of, and principles for, obtaining public input (SEA, 1995b).

Taking into account the results of scoping, the proponent prepares a Terms of Reference draft for the EIA. This draft is submitted to the Authority for approval. If approval is not granted, the proponent is free to revise and re-submit the draft. If the Terms of Reference is approved, the proponent can begin compiling the EIA. Minimum legal requirements for EIA content are described in the Regulations, and must be reflected in the Terms of Reference (See Box 3.1).

#### ***2.1.5.5 EIA Documentation, Reviews and Appeals***

This Terms of Reference document is submitted to the Swaziland Environment Authority for approval. Following approval, the EIA is conducted as proposed by Terms of Reference and the EIA document is produced, along with the accompanying Comprehensive Mitigation Plan. The Swaziland Environment Authority reviews these documents, and after deciding whether or not they are adequate, conducts a public review process in which the Authority elicits objections, comments and any other submissions from interested and affected persons. These submissions are sent to the proponent and the authorizing agency.

Based on the results of the reviews by the public and the Swaziland Environment Authority, either an Environmental Compliance Certificate is issued or a public hearing is held. In the event of a public hearing, the Swaziland Environment Authority appoints three to five people holding appropriate professional qualifications to be hearing officers. After conducting the hearing, these officers submit a report of their findings to the Swaziland Environment Authority. The Swaziland Environment Authority then either decides on project approval, or requests additions to the EIA documents from the proponent.

The EIA process from the initial application for a license or permit through to the project approval or rejection stage is outlined in Figure 3.1.

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process, precious resources are used to consider the important issues, and are not wasted unnecessarily on trivial ones (Ross, 1987). Scoping is essential to keep EIA focused on issues that decision makers care about, and to prevent EIAs from becoming voluminous (Beanlands and Duinker, 1983).

### Box 3.1: Content Requirements of EIA Documents

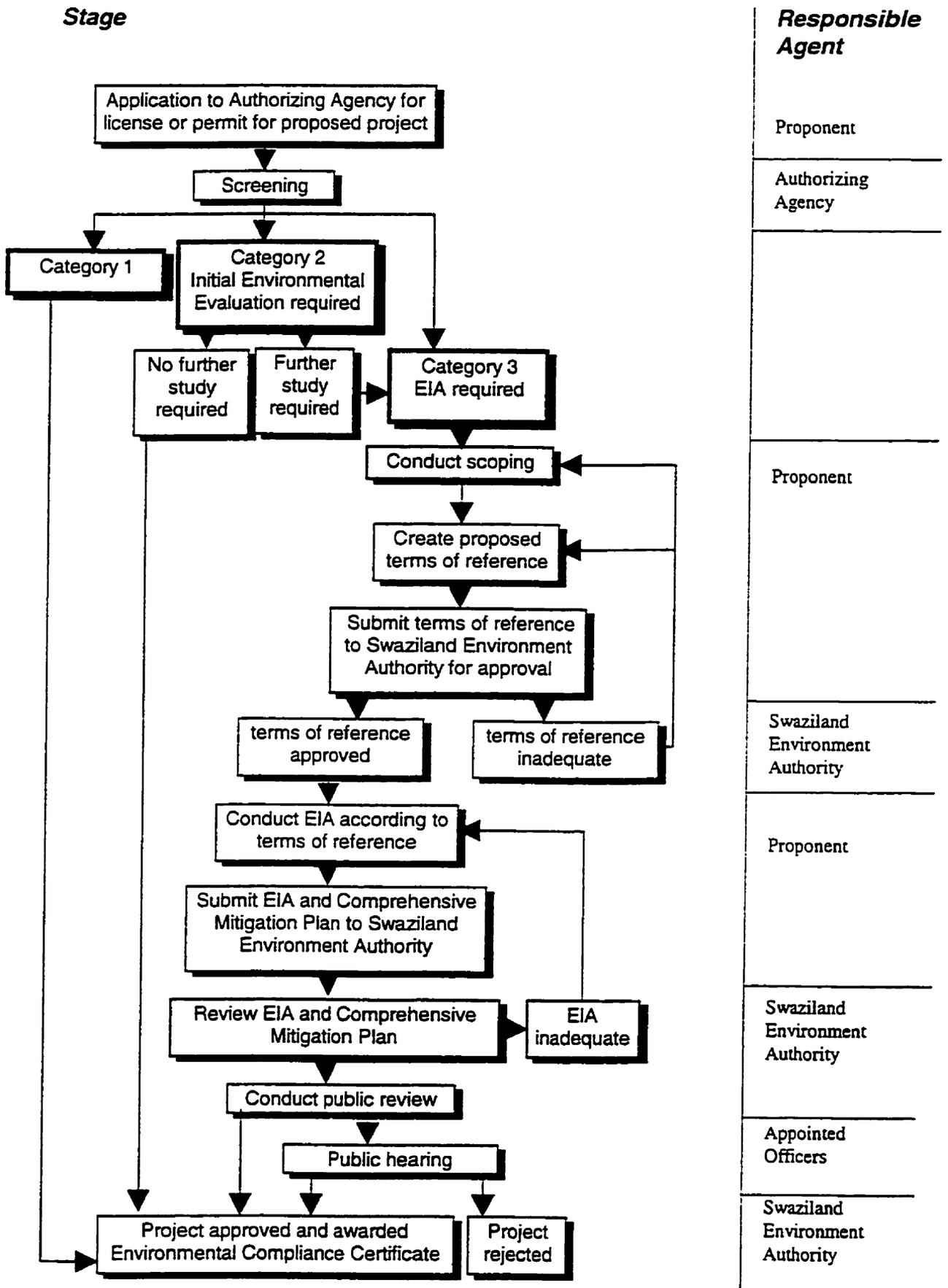
According to the Regulations (GOS, 1996), EIA documents must include:

- an executive summary that emphasizes the key issues and findings for the Swaziland Environment Authority, authorizing agencies and the public;
- an introduction detailing the purpose of the EIA and the boundaries (in space and time) of impact prediction;
- a description of the project and its reasonable alternatives, plus associated projects;
- a description of the type and quality of relevant aspects of the environment, with reference to bio-physical and social components and processes;
- a prediction and evaluation of impacts for all alternatives;
- an analysis of the alternatives and the selection of the preferred alternative on the basis of environmental impacts;
- an impact management plan dealing with mitigations and including a schedule for implementation; and,
- a record of EIA consultations with government, NGOs and the public.

The decisions of the Authority can be appealed by anyone with a substantial interest in the decision, who is aggrieved, and has paid a certain appeal fee. The act then specifies that the Minister (presumably of the ministry within which the Swaziland Environment Authority is based) will make a final decision, with the help of expert opinion if necessary. All additional costs of this appeal are borne by the appellant.

#### ***2.1.5.6 Project Monitoring***

Once a project has been awarded an Environmental Compliance Certificate, the authorizing agency is responsible for incorporating the mitigation and monitoring responsibilities, described in the Comprehensive Mitigation Plan, into the relevant authorization documents that are issued to a proponent. The authorizing agency is also responsible for conducting periodical inspections to ensure that the proponent is keeping its environmental commitments that were part of project approval, and for evaluating the impacts that are actually occurring during project construction and operation. After conducting each inspection, the authorizing agency must write and submit a Project Compliance Report to the Swaziland Environment Authority. The Swaziland Environment Authority can also conduct its own inspections as it chooses to.



**Figure 3.1** Swaziland's environmental assessment process



## **3. Case Study of the Mantenga Village EIA**

### **3.1.1 Introduction**

This section will examine the EIA of the Swazi Cultural Village Project of the Mantenga Nature Reserve (referred to herein as “the Mantenga EIA”). The Mantenga EIA was conducted by me in Swaziland in 1996, shortly after the EIA Regulations were legislated. This case study focuses on aspects of the EIA process, and the events that occurred within and around it<sup>9</sup>. It draws strongly on my own direct personal knowledge of the case. Following the description of the case, certain aspects of the Mantenga EIA will be interpreted as possible indicators of specific conditions that relate to EIA effectiveness in Swaziland, and the feasibility of drawing conclusions based on this case study will be examined.<sup>10</sup>

The temporal boundaries of this study include the times when events that motivated the EIA occurred, the EIA was being conducted, and the results of the EIA were presented, and the relevant decisions reached. It was not practically feasible to assess the reliability of information on the implementation phase of the project, which is therefore not included in this case study. Most of the events described here occurred from January to September 1996.

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<sup>9</sup> This case study will not focus on the detailed analysis of the EIA documents themselves, or on the proposed development project. However, even though the EIA documents and the project they describe and evaluate are not the subjects of this study, some description of them is necessary as it is relevant to the EIA process.

<sup>10</sup> The description of the case includes some details which are not directly relevant to the conclusions. They are included because of the aforementioned “recognized need to exchange experiences in EIA application” in developing countries (Aw, 1996:148). For this reason, this case study is being used partially as an opportunity to document certain details about experiences that have not been documented elsewhere.

### **3.1.2 Institutional Setting and Administrative Context**

The Mantenga EIA set a number of precedents. This was the first time the full EIA process was applied since it became a legal requirement<sup>11</sup>. I was told by the Swaziland Environment Authority that the Mantenga EIA was also the first EIA undertaken by the government of Swaziland or any of her parastatal organizations, and the first time that a full EIA did not require the involvement of a foreign consultancy firm.

The proponent of this EIA was the Swaziland National Trust Commission (SNTC), the parastatal organization charged by the government to ensure the conservation of Swaziland's natural and cultural heritage. The SNTC is in charge of protected area management, as well as museums and historic sites. As the environmental officer of the SNTC, I conducted this EIA "in-house" at the request of the Director of Parks.

### **3.1.3 The Project**

The project that was the subject of the EIA involved the development of a demonstrational cultural village in the interior of the Mantenga Nature Reserve. Although not a real village with residents, the Swazi Cultural Village would be an authentically built representation of a traditional homestead staffed by demonstrators of traditional Swazi practices. Other associated proposed developments included visitor accommodation, a gatehouse, a campground and a picnic area. Proposed supporting infrastructure included the substantial upgrading of a 1.4 kilometre road through the Mantenga Nature Reserve, and the creation of parking areas, electricity, and ablution facilities, all inside the reserve.

The objectives of the project were to provide educational opportunities to further cultural conservation in Swaziland, to attract visitors to the Mantenga Nature Reserve, and to provide revenue for the SNTC (Ehrlich, 1996). The intended audiences for the project were Swazi visitors (particularly school groups) and international tourists.

### **3.1.4 Motivations for the EIA**

Several factors motivated this EIA, including public controversy, donor pressure, and the desire of the proponent to set a good example.

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<sup>11</sup> Since this time, two other full EIAs have been started.

The legal requirements of the EIA Regulations were slightly ambiguous in this case, due to the coincidental timing of the project. The construction of the village (but none of the other project elements) had already begun before the EIA regulations were passed. At that time, the project was neither entirely a planned project nor an existing project, and might have been a possible candidate for an environmental audit (the procedure used to assess existing developments) as opposed to an EIA. An EIA was undertaken because it was considered to be more useful since most of the project elements that had the potential to be more disruptive had not yet been fully planned, much less implemented. An EIA was undertaken as opposed to an Initial Environmental Evaluation because of the likelihood of significant impacts, due to the location of the project in one protected area and adjacent to another.

Public concern was another factor that motivated the Mantenga EIA. The Mantenga Nature Reserve is surrounded on three sides by the Mlilwane Wildlife Sanctuary (referred to herein as "Mlilwane"), a privately owned game reserve. Mlilwane representatives were very concerned about both the direct and transboundary environmental effects of the project. Ted Reilly, the chairman and owner of Mlilwane, is a very influential and high-profile man in Swaziland. He is an ex-commissioner of the SNTC, often advises the King on environmental issues, and was also a very vocal critic of the Mantenga Cultural Village project. Thus, this project was the subject of a national controversy that was a regular news item before the decision to undertake an EIA. The SNTC, I was told, considered an EIA to be a reasonable means of investigating the controversial issues that were causing public concern.

External donor concerns were another important motivation. The European Union was donating approximately half of the funds for project construction to the SNTC from the European Development Fund. The senior officers of the SNTC informed me that upon hearing Reilly's concerns (brought to their attention as described below) the project sparked a debate in European Union parliament on the subject of funding projects without due environmental consideration. Following this, the European Union requested that an EIA be conducted.

In the face of donor pressure and public controversy, the SNTC decided to conduct the EIA. Partially, this was because the SNTC felt that it should act as a role model of responsible environmental management, by setting a good example. As it was described in the EIA document, "If the national conservation body does not conduct itself in an environmentally responsible manner, how can the government expect profit-motivated commercial industries to do so?" (Ehrlich, 1996:10).

### **3.1.5 EIA Integration into the Project Cycle**

At the time the EIA was commissioned, the construction of the village had already begun. If the project had already been fully planned, or already in a much later stage of construction, the EIA would have been unable to produce alternatives within the project for consideration in project design. Producing alternatives after all the project design decisions have already been made is an empty gesture. However, formal planning had not yet been done for the vast majority of the project, and many options in terms of project components, scale, and location were still open. This was unintentional, and mostly due to good fortune-- the various factors that motivated the EIA happened to exert their influences before major planning decisions were made. This only was possible because of a lack of explicit detailed planning done formally before construction began. The result was considerable opportunity for the EIA to modify project design.

Unfortunately, the senior decision-makers of the SNTC were not initially willing to halt construction while the EIA was undertaken. According to the EIA Regulations, any Class 3 project (requiring an EIA) would not be given the licenses needed to begin construction until an Environmental Compliance Certificate was obtained, after the EIA process. However, the Mantenga project was already under construction before the EIA began, so licensing was not an applicable control. It was only after the EIA had been underway for a month that I persuaded the senior management of the SNTC to freeze developments until the EIA process was completed, for the integrity of the EIA and on the basis of the importance of this EIA as a demonstration of responsible management.

The Swaziland Environment Authority did not demand that the Mantenga developments be halted during the EIA.

#### ***3.1.5.1 Project Integration and Time Constraints***

Time limitations were related in part to the poor integration of the EIA into the project cycle. Because the EIA was only commissioned after construction had begun, construction schedules with contractors had already been organized (partly related to seasonal weather conditions). SNTC management felt it was very important to have the village component of the project operational by peak tourism season (only four months after the EIA was commissioned) to help achieve the secondary project objectives of increased visitor use of Mantenga and generating revenues.

Revenue generated plays an important role as a performance indicator in the deliberations of the Ministry of Economic Planning and Development on the value

of parastatals such as the SNTC and the corresponding financing from government over the next fiscal year. The SNTC has a very limited operating budget, to the point of functioning under conditions that could be considered an ongoing crisis. This is manifested in under-staffing and capital shortages, such as staff housing, vehicle and equipment shortages, and greatly reduced the SNTC's capacity to fulfill its responsibilities. Thus, revenue generation from Mantenga was considered by the Chief Executive Officer of the SNTC to be important enough an issue to resist freezing development for the EIA, both for direct and indirect reasons.

When the senior decision-makers of the SNTC did eventually decide to freeze the project developments for the EIA, they agreed to do so only for one month. Because this EIA involved a number of precedents, it was important that it provide a good demonstration. Continuing construction during the EIA process is against the entire principle of EIA, and made it seem that the SNTC regarded EIA only as a bureaucratic requirement. Since this was obviously true to a degree, there was a certain urgency to finish the EIA within the limited time for which the SNTC eventually agreed to delay construction, unless this haste would seriously compromise the quality of the EIA<sup>12</sup>.

### ***3.1.5.2 The Effects of Inter-organisational Conflict***

Inter-organizational conflict between the SNTC and the Mlilwane Trust, which is the private organization that owns and operates the Mlilwane Wildlife Sanctuary, is a factor that led to the premature dismissal of stakeholder concerns. Had these concerns been taken seriously at first, the Mantenga EIA would have been initiated earlier.

There is a long history of conflict between the SNTC and Ted Reilly, owner of Mlilwane Wildlife Sanctuary and chairman of the Mlilwane Trust. Reilly is a former commissioner of the SNTC who resigned in 1988, alleging that the SNTC was both corrupt and incompetent, while the SNTC accused him of making decisions as an SNTC commissioner in support of his own self interest<sup>13</sup>. Even though Mlilwane and the SNTC have many goals in common, there has been constant animosity between the two organizations since, and practically no co-operation. Much of this battle had been waged publicly in the news.

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<sup>12</sup> I do not believe that haste seriously compromised the quality of the EIA, but it still created some disadvantages, particularly that it limited the scoping period and reduced editorial time on the document before submission. Neither of these problems was severe. In the opinions of all reviewers, scoping was considered sufficient, if not ideal, and the EIA documents were sufficiently clear, coherent and understandable.

<sup>13</sup> A key issue at the time was whether the land which is now Mantenga Nature reserve (run by the SNTC) should be handed to Mlilwane for it to manage.

This history, combined with later events that heightened mistrust, has affected the Mantenga EIA in many ways. First, the initiation of the EIA might have occurred earlier, before any project construction, had Reilly's concerns been initially taken by the SNTC and Ministry of Natural Resources with an attitude of openness and trust. The history of conflict led the SNTC to exclude Mlilwane from any contact during the early planning of the project at Mantenga, so that by the time Mlilwane's concerns had arisen, parts of the project were less likely to change.

My professional contact with the senior decision-makers of the SNTC made it apparent to me that the conflict between Mlilwane and the SNTC led the SNTC to prematurely discount Reilly's concerns as a stakeholder and owner of adjacent land as being motivated by mere self-interest. Reilly, feeling he had not received due consideration from the SNTC through formal channels due to the history of conflict, used alternative methods to draw the issue to the attention of the European Union. Before the EIA was commissioned, Reilly invited and hosted European Union representatives as his personal guests at Mlilwane, which was viewed most suspiciously when the European Union requested an EIA on the Mantenga project shortly after.

In the view of the Ministry of Natural Resources and Energy (the home of the Swaziland Environment Authority at that time), by going directly to a donor with his concerns, Reilly circumscribed proper channels and ignored the Ministry's authority on the issue. On the basis of my professional contact with him, it appeared that, from Reilly's perspective, his circumscribing proper channels was necessary due to corruption in the Ministry of Natural Resources and Energy and the political influence of friends of the senior SNTC management. It also appeared that Reilly felt that the reluctance of the Swaziland Environment Authority to accept the legitimacy of his concerns was influenced by an earlier conflict between himself and high-ranking individuals within the Ministry of Natural Resources and Energy regarding another issue.

Because of the mistrust fostered by this history, Reilly took it on himself to hire an independent consultant from South Africa to do a brief assessment of the proposed developments at Mantenga. The Swaziland Environment Authority felt that this was a further intrusion on its territory, as it is the ultimate responsibility of the Authority to assess the need for an EIA. This did not make the SNTC generally more receptive to his concerns, because the field visit with the consultant was done without permission, and therefore an act of trespass. On the basis of my professional contact with the senior decision-makers of the SNTC, this incident appeared to make the SNTC even less receptive to Mlilwane's concerns.

Had there been a history of co-operation and trust between Mlilwane and both the Ministry of Natural Resources and Energy and the SNTC, it is possible that Reilly's concerns could have caused the Swaziland Environment Authority to request an EIA at an earlier time.

### **3.1.6 Terms of Reference**

I submitted two EIA Terms of Reference documents to the Swaziland Environment Authority. The first one described the generic content of the EIA, with a detailed description of the scoping activities that would be used to determine key issues. The second Terms of Reference, which was submitted two months later, after the scoping activities described in the first one had been conducted, gave a more detailed breakdown of the content of the final document, incorporating the issues identified during scoping. The EIA Regulations do not require the submission of Terms of Reference in two stages, but I considered it appropriate, because while the Regulations only require descriptions of scoping activities, descriptions alone do not ensure that adequate scoping is conducted. Because of the high-profile of this EIA due to the controversy surrounding the proposed development, among other reasons, the credibility of this EIA was very important. It seemed reasonable to me that using an appropriate and explicit method for scoping that had been approved by the Swaziland Environment Authority added credibility to the EIA process.

### **3.1.7 Issue Scoping and Public Participation**

Information and consultation with the public and stakeholders occurred in a number of ways. Stakeholder specific meetings were held with representatives of the Mlilwane Wildlife Sanctuary, who had been the principal voice of concern about the project. In addition to presenting their own concerns, Mlilwane also submitted a short document from a planning consultant identifying additional concerns about the project on its behalf. Later, I presented a copy of the notes of the meeting to Mlilwane for confirmation that its concerns were adequately summarized.

A public meeting to identify issues of concern, along with a project description, was publicized in the national newspapers on days of peak circulation, and on national radio, in both SiSwati and English. Traditional representatives were given hand-delivered invitations to this meeting, encouraging them to attend and bring any interested community members. I conducted this meeting in the immediate vicinity of the project. National and local government representatives, traditional leaders, surrounding land and business owners and interested members of the general public attended, in addition to SNTC representatives. English-SiSwati translators were used throughout the meeting. After a detailed verbal description of the project, the floor was opened for questions, comments and suggestions. Opportunities were made for people to exchange views. I encouraged the public to voice by post any additional concerns that might arise in weeks following the meeting.

Newspaper reporters were invited to come to scoping meetings as well, but this unfortunately resulted in inaccurate sensationalist articles (e.g. ToS, 1996a). Considerable time that could have been better spent on the EIA was diverted to correcting the published misinformation. After numerous meetings between myself and senior editors, in which I described the significance of the published errors, corrections were eventually published (e.g. ToS, 1996b).

Scoping proved to be very useful to the EIA, not only for identifying issues of concern but also for gaining other information from the public, such as historic uses and problems associated with the area, feasibility issues, planned adjacent land uses, and unrecognized project supporters.

The only NGO to express active interest in the project was Yonge Nawe Environmental Action Group, the most active environmental NGO in the country. I met with its representatives to inform them about the proposed project and its alternatives, and also to brief them on issues that had arisen during earlier scoping. They supported some of the issues voiced by other participants earlier, and suggested additional concerns.

The Swaziland Natural History Society was also invited to participate in the EIA. It declined, however, because it felt that it was unlikely to change the project, partly because construction was already underway and partly because of low confidence in the objectivity of the Swaziland Environment Authority due to the political influence of the SNTC.

Scoping also involved meetings with technical experts. The use of internal experts was often possible, because of the nature of the SNTC. For example, the SNTC has professional ecologists and protected area managers on staff who were useful in providing background information, predicting potential problems, and offering management suggestions<sup>14</sup>. At times, I found it necessary to consult with certain technical experts external to the SNTC, such as with professional engineers to determine likely results of different alternatives of upgrading the road. As issues were identified, they were shared, by mailings and personal communication, with members of the public involved in scoping. During the study, as certain alternatives proved more environmentally, socially and economically desirable than others, the project design changed significantly towards smaller scale and more acceptable locations and arrangements. The public was kept informed of the latest project design changes by project update mailings.

Interestingly enough, the presence of the village itself proved to be of very little concern to any participant, in terms of undesirable impacts. The related

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<sup>14</sup> The objectivity of SNTC ecologists was not an issue of concern, because although the SNTC was the proponent, it also is charged with conserving Swaziland's natural heritage. As the organization that manages the Mantenga Nature Reserve, it was in the SNTC's direct interest to accurately predict any likely ecological concerns associated with the project.

components and supporting infrastructure were greater causes of concern. The major issues included were as follows:

- the disturbance of wildlife by project construction and operation,
- possible erosion into an adjacent river resulting from the road upgrade,
- security concerns regarding both visitor safety and anti-poaching patrolling capability,
- biogeography effects resulting from changing patterns of local wildlife migration,
- aesthetic effects,
- habitat loss due to clearing for construction, and
- species specific concerns regarding particular locally or regionally rare mammals, birds and plants.

The consultations that were part of EIA scoping marked the first time that Mlilwane had been formally consulted for its views and opinions by the SNTC, and (based on my professional contact with Mlilwane) the consultations were positively received as such. However, Mlilwane's confidence in the EIA as a means to better project decisions was diminished due to a particular event that occurred while the EIA process was happening.

At one point while the EIA was being prepared, the SNTC chose to hold an official public visit of the cultural village, which was mostly constructed by that time. High-ranking government employees and members of the royal family were invited to this event, which was accompanied by a *braai*, a festive barbecue at which lots of game meat was enjoyed (meat being of great cultural significance as it is a symbol of status and prestige in Swaziland). Regardless of the intentions of this visit, many powerful people were quite vocal about their political support for the project by the end of the day. This had the effect of making a Mlilwane representative believe that the EIA was now an irrelevant gesture, because of the level of political support gained for the project by this alleged "tactic".

Unfortunately, I was not informed that this visit was planned until the day it occurred. Following the visit, I pointed out to the senior decision-makers of the SNTC that the visit had the potential to damage the credibility of the EIA (and the SNTC as its proponent), but these protests were after the fact.

### ***3.1.7.1 Scoping and Time Constraints***

During scoping another important motivation to finish the EIA quickly was provided to me by the Swaziland Hotel and Tourism Association, who stated that the operation of this project would make a disproportionate increase in national tourism benefits. Its latest market analysis concluded that the typical international tourist passes through Swaziland while traveling from Kruger National Park, South

Africa, in the north, to Kwa-Zulu Natal in the south. Although there are many casino-type attractions for international tourists at night there are very few daytime family attractions such as this project was expected to provide, thereby crossing a critical threshold. The trickle-down of this would effectively double tourist spending and was expected to be nationally significant, benefiting many hotels, tour operators, handicraft artisans and their salespeople, and restaurants. The Association viewed it as critically important to have the Cultural Village operational by peak tourism season.

### ***3.1.7.2 Limited Participation of Local Communities***

Most of the Swazi nationals who participated in scoping were members of the middle class, as opposed to members of the traditional rural local communities. A number of measures were taken to encourage the participation of local communities in the EIA. These yielded only limited success. The main public meeting was held within walking distance of the proposed project site and local communities. Participation was sought through the Chiefs of the surrounding chiefdoms, who are the traditional channels of representation. Written customized invitations in both English and SiSwati were hand-delivered directly to the Chiefs themselves.

Public information about the project and participation opportunities was carried out through media that previous analysis with cultural informants had identified as appropriate for reaching rural Swazis. These included regular notices in the front pages of the most widely read national newspaper on peak circulation days. Written announcements were in English only, because most people do not read SiSwati, which is primarily a spoken language. Announcements describing the project and inviting participation were read on both SiSwati and English radio stations.

Actual participation of local communities after this information campaign proved to be limited to high-ranking male representatives of Chiefs. The representatives who came participated actively in the meeting, voicing their views on the project's likely effects. As described in more detail later, this limited participation of local communities was a problem to the scoping of the Mantenga EIA.

Limited participation by local communities would have been a much greater problem had it not been for two factors. First, the creative invention and combination of alternatives in the project planning made it possible to greatly minimize probable physical effects of concern on surrounding communities. The main recognized concern affecting surrounding communities was due to the proximity of developments to a river that provided water for downstream communities, and the resulting possible erosion and pollution of that water supply. By relocating elements of the project, and down-scaling the proposed level of road

upgrade, the predicted effects of development on the river were minimized to an insignificant level. Field study of soil suitability at different sites for various methods of sewerage also established that certain alternatives would have no effect on the river. By changing project design, the proposed development was improved in many ways--and the importance of possible limitations of the scoping process was reduced.

The second reason that the limited participation by local communities was not a larger problem was that all of the land between the Mantenga Nature Reserve and the main access points was privately owned, and not Swazi Nation Land. There were no traditional communities adjacent to the project or in any areas expected to have increased traffic due to the project. It is still possible that, given a better opportunity, members of the local traditional communities would have voiced concern for issues that were never recognized in the scoping process as it was conducted. Had there been a greater likelihood of the project affecting local traditional communities, it is obvious that a better method of determining their views and concerns would have been more necessary.

### **3.1.8 Alternatives in Project Design**

During site planning visits, many of which occurred after much scoping, environmental issues were a major influence on project design details. The original plans were modified substantially to accommodate concerns raised in scoping. During the EIA, the scale of the entire project was reduced, components altered and relocated, and use limits and mitigations agreed upon. Because of the time limitations involved in the Mantenga EIA, I organized site planning visits at which senior decision makers, project planners and environmental personnel were in the field together. This facilitated efficient project modification without long bureaucratic delays.

In many cases, the input received from the public during scoping helped to motivated the identification and consideration of alternatives that were not previously considered. Thorough consideration of alternatives served not only to reduce potential undesirable environmental impacts, but also to improve the project's design functionally and to save a considerable sum of money during construction.

The result of incorporating EIA into planning was a very different project design from the one originally proposed. The original accommodation was supposed to be a hotel, bar and restaurant in reserve interior, which was modified to five self-sufficient rondavel huts by the village and ten chalets at the reserve periphery. The road was supposed to be upgraded to a level above gravel standard, but this was modified to eventually become a "BG-Block eco-technology" road made of erosion

resistant concrete blocks that vegetation can grow through. Parking at the village site was reduced and re-located to be invisible from Mlilwane, and bus parking totally eliminated at the village site. An actively promoted interpretive trail was proposed to further reduce vehicular use of the road. The village site was designed to use only independent solar energy when electricity was required, eliminating the need for unsightly and expensive cables to reach the external power grid. All of these modifications were included to avoid potential problems identified during the EIA. As described above, having the freedom to choose alternatives so as to influence project design also helped to compensate for limitations in this case.

Due to the hostility between the SNTC and Mlilwane certain management responses to potential problems arising from the Village project in Mantenga were not feasible as alternatives, according to each of the organizations, even though they might have been very effective otherwise. For example, enforcement was an issue that arose from security concerns due to drawing visitors to a high crime area, and poaching concerns due to the increased presence of non-staff personnel. Theoretically, the co-ordination of patrol forces between Mantenga and Mlilwane could have easily led to more effective policing of the area, which would provide important benefits to both the SNTC and Mlilwane. However, the impossibility of co-operation between the SNTC and Mlilwane made the co-ordination of law enforcement patrols impossible. Similarly, many other potentially effective and inexpensive management alternatives were made impossible by this situation, which stopped them from being considered as useful mitigation measures that would benefit both parties.

#### ***3.1.8.1 Data Limitations***

A major problem faced during the EIA process was a shortage of reliable data regarding baseline conditions. Even though the project was in a protected area, while there was some research available (such as vegetation surveys), there was no comprehensive species inventory, and very little secondary information available. Professional judgement of both the rangers who patrol the reserve, the ecologists of the SNTC, and myself played a much larger role than it otherwise would have needed to in determining baseline conditions.

Published papers that are applicable to this area are rare and questionable. For example, only two surveys of freshwater fish have ever been conducted in Swaziland, and they have mutually exclusive results. The only useful data from published sources pertained to behavioural responses of wildlife to disturbance, and even these were mostly based on field experience and anecdotal evidence. Red Data Books describing the status of rare species in the region had not been published since 1986, because of a lack of funding.

Fortunately, the opportunity to choose among alternative sites for project components made it possible at times to structure the project so that, all else being equal, many potential problems, the seriousness of which could not be accurately estimated because of data shortages, were avoided altogether by selecting a project alternative the impacts of which could be reasonably predicted (with available data) and evaluated to be acceptable.

The opportunity to do systematic primary research on baseline conditions was limited by the speed with which the EIA had to be completed, the financial limitations of the SNTC (manifested in the small ecology staff) and the extremely high diversity of the study area (relative to unprotected areas of Swaziland).

One strategy to help deal with the limited data available that failed was the use of existing EIAs on similar projects. I requested these from proponents who had developed similar projects before. All developments suitable for such study were located in South Africa. Unfortunately, no responses to requests for relevant experiences were received until months after the EIA was completed.

### **3.1.9 The EIA Document**

After the project proposal had been modified to incorporate the best alternatives, the EIA document and Comprehensive Mitigation Plan were compiled. The length of the EIA document was 137 pages in length total (the main document being 92 pages, plus 44 pages of appendices) and the accompanying Comprehensive Mitigation Plan was 19 pages. The EIA included:

- an executive summary (3 pages);
- a description of the institutional setting, the project rationale (in terms of need and objectives) and location (13 pages);
- physical and temporal boundaries of the assessment (and a justification for those boundaries) (2 pages);
- detailed descriptions of the design and location alternatives of the project's components and mitigation measures and the rationale for the chosen alternatives (21 pages);
- baseline data on surrounding land uses and biophysical characteristics of the area (5 pages plus appendices);
- the predicted socio-economic, biophysical and cultural effects of the project and its mitigation measures (38 pages); and,
- final conclusions and recommendations based on the evaluation of those effects (3 pages).

Appendices included copies of the preliminary and final Terms of reference, descriptions of scoping procedures and notes from all scoping meetings, representations of visual effects, some detailed baseline data (such as species lists),

technical considerations (such as road specifications and biogeographical details) and a nontechnical summary of the EIA (written at a level appropriate for an average Swazi high-school Form 3 student).

The accompanying Comprehensive Mitigation Plan included details (for each impact) on each of the following:

- mitigation measures,
- justifications for choice of mitigation measures,
- costs of mitigation measures,
- timing and frequency,
- means of verification and reporting procedures,
- responsible agents,
- monitoring programs,
- thresholds for further management, and
- suitable management responses.

### **3.1.10 Document Submissions and Reviews**

Before submission, I made sure that the draft EIA documents were circulated among the senior staff of the SNTC for their review and approval. I did this in order to ensure that all commitments made in the EIA documents were understood and accepted by those with both the authority to make such commitments and the responsibility to ensure that such commitments are fulfilled. No external objective peer review was possible before submission, because all people in Swaziland with sufficient expertise in relevant subjects already had specific roles in the Mantenga EIA. The only two bodies with experience in protected area design and management in Swaziland are the SNTC and the Mlilwane Trust, who were already involved in the Mantenga EIA as proponent and stakeholder, respectively. The only organization with staff experienced in EIA is the Swaziland Environment Authority, who were to be the formal review agency after EIA submission.

The results of the EIA were presented to the SNTC commissioners, who were previously unfamiliar with EIA. They told me that they were extremely satisfied with the results and recognized many of the benefits of the process to the project and to the SNTC.

The EIA documents were submitted to the Swaziland Environment Authority to inform its decision about project approval. The staff of the Authority told me they were very pleased with the EIA (and particularly with the way it was organized). With the mitigations described in the EIA and Comprehensive Mitigation Plan, they were satisfied with the proposed project, which was granted an Environmental Compliance Certificate. Unfortunately, for unknown reasons, the Swaziland

Environment Authority did not hold the public review period that is legally required for EIAs prior to making approval decisions. This excluded the public from contributing their comments or concerns to the EIA review, and probably increased cynicism in participants, whom I told during scoping that they would have an opportunity to review the final documents.

I also sent copies to the European Union via the Ministry of Economic Planning and Development. After a reviewing it, the European Union informed the government that it fully satisfied its concerns. Another copy was sent to Ted Reilly of the Mlilwane Wildlife Sanctuary, who told me that he too was very pleased with the EIA and felt that the project modifications and mitigation measures adequately addressed all of his project-specific concerns. Mlilwane privately extended its congratulations to the SNTC for the EIA, but expressed concern over the ability of the Swaziland Environment Authority to enforce the commitments made in the EIA.

### ***3.2 Case Interpretations and Tentative Conclusions***

The circumstances and events of the Mantenga EIA can be interpreted to illustrate a number of concepts, some of which are described below. These are tentative in certain respects because a single case study does not necessarily form a sufficient basis for reaching generalized conclusions. When common relevant conditions are found to exist in other cases with similar effects, however, it is more reasonable to extrapolate the broad applicability of conclusions. This is discussed in more detail later in this section.

#### ***3.2.1.1 Project Cycle Integration***

The integration of EIA early in the life cycle of a proposed development can greatly influence its effectiveness (Wramner, 1992). If the integration of the EIA into the project cycle of the Mantenga developments is typical, poor project cycle integration is a constraint to EIA effectiveness in Swaziland. The Mantenga EIA was not intentionally integrated into project planning, which is evidenced by the fact that construction began before the EIA. It was fortunate that few project details had been planned by this time<sup>15</sup>, and that many realistic alternatives were still

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<sup>15</sup> There was relatively little detailed planning of the Mantenga project before the EIA. Crisis management, as opposed to pro-active management, is more of a norm in Swaziland than it is in Canada. I found this to be necessarily so in many cases, because of the number of uncontrollable variables that are part of daily life in Swaziland. For example, electricity, telephones and transport are less reliable, which can confound organization, and also affects those people you may be relying on. In the face of so many unpredictable variables, which can have compound effects, it is more efficient to solve many (but not all) problems that have occurred than it is to avoid them. The effects

feasible. Some broad major decisions had been made, such as the choice to locate the project in Mantenga as opposed to another SNTC nature reserve. Late integration may have been due to a lack of awareness of the need for an EIA, coupled with the above described incentives to avoid delays in project implementation<sup>16</sup>. The continuing of construction during the EIA supports the idea that the SNTC viewed it to a degree as a bureaucratic requirement.

Poor integration may have been exacerbated by a low awareness of the EIA requirements and benefits. As a project proponent, the SNTC was not adequately aware of the EIA requirements in Swaziland. This was probably due, in part, to the fact that the EIA legislation was not yet passed when the Mantenga project was conceived, and passed shortly after the earliest construction had begun. However, the new laws were circulated in a legal gazette, and one commissioner of the SNTC is responsible for bringing new laws to the attention of the senior management. This never happened or was ignored, possibly to avoid implementation delays or because the relevance of the laws is not obvious from the legislation. If the SNTC had been aware of the various benefits of EIA, it would probably have been initiated during early project planning out of self-interest.

### ***3.2.1.2 Importance of Alternatives in EIA***

The analysis and selection of best alternatives is an important part of EIA (Scholten, 1992). Because the Mantenga EIA began before many important project details were finalized, it was possible for the consideration of a broad range of alternatives to have a major effect on the project's ultimate design. The flexibility offered by the range of potential alternatives benefited the EIA and project in many ways. It made it possible to sidestep potential problems by avoiding the developments that I believed had a greater chance of influencing a) ecosystem components about which there was insufficient data, and b) components related to issues about which thorough scoping was not feasible. Having a broad range of alternatives to choose from helped to reduce the scope of the EIA, to compensate for certain background data and scoping limitations.

The modifications of project design that arose from integrating the EIA with detailed project planning did more than avoid unnecessary environmental disturbance. They also improved the project, by having project components

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of uncontrolled compound variables manifest themselves many levels of Swazi life, and may help to explain why there was relatively little detailed planning of the Mantenga project before the EIA.

<sup>16</sup> The SNTC may have been unaware of the risk of increasing the delays by not commissioning an EIA before construction. It would have been reasonable for the Swaziland Environment Authority to formally order a development freeze on construction until an Environmental Compliance Certificate had been issued, which requires an EIA for a project of this nature. This would have caused greater delays, which, had they resulted in the village not being operational during peak tourism season, would have been cost the SNTC potential revenue.

harmonize with their surroundings to better maintain the natural qualities of the reserve, and more appropriate to conditions from an engineering perspective without sacrificing project goals<sup>17</sup>. Design modifications in this case proved to be cheaper, which is particularly important considering the financial limitations of the SNTC. This EIA improved the project. If the project had been more thoroughly planned by the time the EIA started, this might have not been the case. It was only due to the wide range of feasible alternatives that design benefits of EIA could be so fully realized. If EIA is to be most effective, it is essential that alternatives can be meaningfully evaluated and appropriately integrated into project design.

### ***3.2.1.3 Local Participation***

Despite the use of media deemed appropriate by experienced rural outreach workers, and the attempt to involve formal traditional representatives, there was not enough participation by members of local communities. Participation of local communities proved to be limited to high-ranking male representatives of Chiefs. No actual Chiefs attended, which may have been due to a lack of interest, motivation, or understanding of the potential effect of the EIA on their communities. None of the Chief's general subjects participated, even though Chiefs were asked to bring any interested subjects from their chiefdoms. This might have been because 1) it was not viewed as socially appropriate for subjects to attend planning meetings that were aimed at their Chief's level, 2) a lack of interest in long-term planning, or 3) subjects were never encouraged to participate by the Chiefs.

Had this project been more likely to affect local communities, this scoping problem would have been a much greater constraint to the EIA than it actually was. Since the methods of informing the public about participation opportunities were identified as appropriate for rural communities by experienced rural community outreach professionals, yet there was little local participation, it is obvious that there are other constraints to the participation of rural communities. The use of appropriate media is not sufficient to encourage their participation in EIAs. Different approaches are required.

### ***3.2.1.4 Limited Data Availability***

Even though the Mantenga developments were inside a protected area managed by an institution that has a programme for ecological research, very little background information existed on the area. Sufficient published research from other sources

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<sup>17</sup> For example, research during the EIA revealed that the road area was prone to occasional flooding. The BG-block road that was selected as an alternative in the EIA is not only more aesthetic and cheaper, but it is also much more resistant to flooding than any of the other road upgrade alternatives.

was also unavailable. Although some primary field research (e.g. vegetation surveys, habitat quality appraisals, viewshed and sight-line appraisals) was conducted for the Mantenga EIA, it was not enough to fully compensate for this shortage. The protected areas of Swaziland are relatively well researched in terms of ecology relative to unprotected areas. Since background data are important to EIA, it is likely that data limitations will be a broad constraint to EIA effectiveness in Swaziland.

### ***3.2.1.5 Poor Administrative Practices***

There were many ways that the Swaziland Environment Authority should have influenced this EIA that were not done even though they were clearly within the Swaziland Environment Authority's range of responsibilities. This EIA should have been formally required at an early time, when they first heard that a medium-scale development was planned inside a protected area, adjacent to both a river and another protected area, about which there was controversy. Because the proper channels did not respond to concerns, Mlilwane approached the donor directly, which only aggravated tensions between the proponent, the government and Mlilwane. This should not have been such an ambiguous screening decision. In the Third Schedule of the EIA Regulations (GOS 1996), many examples are offered of environmentally sensitive areas that apply to this project site, such as areas containing or supporting populations of rare or endangered species, zones of high biodiversity, and areas used extensively for recreation and aesthetic reasons. Any project located in an environmentally sensitive area is required to be screened into Category 3, which calls for an EIA. As it is clearly in an environmentally sensitive area, if this project was screened properly, the EIA probably would have been started earlier, and unnecessary conflict with Mlilwane may have been avoided.

Once the Swaziland Environment Authority was informed that an EIA was being undertaken, it would have been both possible and reasonable for them to halt project construction until the Authority's decisions based on the EIA were reached. This did not happen.

Also, there should have been a public review of the EIA before any decision was reached. This is a requirement spelled out in the Regulations, and is very important to the EIA process over all. The lack of public review prevented most public participants from recognizing that their concerns helped shape both the EIA and the project and probably fostered public cynicism about the EIA process in general.

It is possible that these omissions were caused by negligence, or political motivation. In any case, the Swaziland Environment Authority did not fulfill its responsibilities in the EIA process. It is unlikely that this was due to political motivation, because by the time the review was supposed to have occurred, all major issues of public concern had been fully addressed-- it is unlikely that the

review would have revealed any problems. I believe that negligence is a more likely cause that the review was not conducted, probably due to the inexperience of the Swaziland Environment Authority with the relatively new EIA process.

### ***3.2.1.6 Corruption, Inter-Personal and Inter-Institutional Politics***

In a small country such as Swaziland, there is a greater opportunity for personal issues to arise between key stakeholders. This is partly because the authority to make decisions is focused on fewer people. As the events described above have shown, conflicts between key stakeholders constrained this EIA during screening and scoping, and reduced the range of feasible mitigation alternatives.

From my professional contact with stakeholders, I know that fears of corruption, which were often founded on past experiences, reduced confidence in the EIA process in general. EIA is only viewed as an effective contribution to good decision making if the agency that is reviewing it is committed to objective decision-making. Interpersonal politics between people in powerful positions can make this objectivity seem questionable and prone to outside influence at times. This illustrates that EIA must not be seen by proponents as a purely bureaucratic undertaking. If the public have little confidence in the objectivity of decision makers during bureaucratic processes and EIA is perceived as such a process, then there is a real risk that proponents will attempt to avoid EIA altogether.

Since Mlilwane was consulted during the EIA, and its concerns were eventually reflected in the final project design, conflict about this project was reduced considerably. This EIA was also the first consultation between the Mlilwane and the SNTC since their conflict began in 1987, and is a small move toward greater co-operation between the two organizations. It is also noteworthy that it was not the effects of the EIA on government decision makers that pleased Mlilwane, but the effects on the design of the project. This reinforces the importance of early EIA integration that allows the effective use of alternatives in EIA to influence project design. It is also illustrative of how EIA can legitimately increase stakeholder support for a project.

### ***3.2.1.7 Experience Changing the Proponent's Perspective***

Initially, based on my professional contact with the proponent, I believe that the senior management and commissioners of the SNTC viewed EIA at worst as a bureaucratic loophole, and at best as a means of settling controversy and satisfying the concerns of foreign donors. By the time the EIA was completed, both the senior management and the commissioners of the SNTC experienced and recognized its short and long term economic and project design benefits, as they demonstrated from comments made to me after the EIA was presented to them and by future

actions that included requesting an environmental assessment on a different proposed development (this time at an appropriately early stage in project planning). The SNTC's appreciation for EIA that resulted from the Mantenga EIA has greatly increased the chances of early integration of EIA into all future large projects proposed by the SNTC. Just as proponent experience with EIA is able to increase EIA effectiveness, inexperience with EIA may constrain it.

### 3.2.2 Discussion

Some of the major constraints faced by this application of EIA in Swaziland were time limitations, paucity of background data, inter-organizational and personal conflicts between stakeholders, and difficulties in eliciting full participation of surrounding communities. Even so, the Mantenga EIA demonstrates in a Swazi context that EIA can offer many design benefits arising from careful consideration of alternatives, which can be effectively employed if the details of the proposed project are not yet planned. This consideration of alternatives can help in some ways to compensate for data deficiencies and scoping problems, but only to a degree. Improved project design can result in increased support from formerly critical parties, and can demonstrate that EIA offers genuine benefits to proponents, as opposed to just being a bureaucratic requirement.

Many of the conclusions drawn from this case study are interrelated. For example, this case illustrated that poor integration of EIAs may be a problem in Swaziland. This may result from proponent's inexperience of in EIA preventing them from realizing its importance to design. The meaningful and early use of alternatives can result in considerable design benefits, but if proponents are unaware of this they are less likely to integrate EIA early, thus making those benefits less likely. If proponents do not realize benefits from EIA, it will be further perceived as a bureaucratic hurdle. Due to the widespread perception of corruption in Swaziland, people have little confidence in the bureaucracy, and of processes that are perceived as bureaucratic. This means that it is particularly important that proponents realize the benefits of EIA, and also that the Swaziland Environment Authority complies with its responsibilities as described in the Regulations, to support confidence in the process.

#### 3.2.2.1 *Limits to Extrapolations from a Case Study*

It should be remembered that as a single case the Mantenga EIA involved some unique conditions that may not necessarily apply to other EIAs in Swaziland. Some of these case-specific conditions have been described above<sup>18</sup>. Although some

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<sup>18</sup> It is possible that some of the problems described are transitional, because of the precedential nature of this EIA. However, this is not likely to be the case, because similar problems are

conclusions can be rationally reached, it is impossible to empirically evaluate how typical many of the case study experiences are in terms of Swazi EIAs on the basis of this case alone, or on the basis of traits shared with other cases, because there have not been a body of EIAs done in Swaziland to serve as a basis of comparison. As more EIAs are conducted, there will be a growing body of empirical evidence indicating the applicability of the following points to other developments in Swaziland.

If it is in many respects beyond the scope of the case study to determine the broad applicability of these conclusions, and if there are not yet any other cases that can be examined to establish their applicability, then how can the relevance of the issues that arose during the Mantenga EIA be determined? If similar problems to those described in the case study have been encountered in other instances, they are not due to circumstances unique to the Mantenga EIA. Although there is no basis for this comparison within Swaziland, if similar EIA experience have been had in other developing countries, it would indicate that these problems reflect widespread conditions, and not specific circumstances that are unique to the Mantenga EIA. If this is true, and it is also true that the underlying conditions that constrain EIA in other developing countries exist in Swaziland, then it is reasonable to interpret the constraints encountered in the Mantenga EIA as being indicative of general constraints to EIA in Swaziland.

Therefore, the tentative conclusions based on this case can be reasonably expected to reflect general constraints to EIA effectiveness in Swaziland, and apply to future EIAs in Swaziland, if similar problems have been encountered in many other instances. This is one of the things the following chapter will attempt to do.

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widespread among countries that have much longer histories of EIA practice, as the literature review sections in following chapter will demonstrate.



## **4. Constraints**

### ***4.1 Introduction***

This chapter will identify and describe selected constraints to EIA effectiveness in Swaziland. This will include, where appropriate, accounts of the importance of the constrained aspect of EIA on overall effectiveness and the relevant conditions that lead to that constraint as described by the literature<sup>19</sup>. The applicability of each constraint to EIA effectiveness in Swaziland will be discussed based on evidence such as: the presence of relevant related conditions; empirical experiences of those involved with Swazi EIA; and conformity of the process, its administration and practice with theoretical norms as described in the literature.

### ***4.2 Institutional Location of the Swaziland Environment Authority***

At the time of its formation in 1992, the Swaziland Environment Authority was part of the Ministry of Natural Resources and Energy and was moved to the Ministry of Tourism in early 1997. On the basis of the literature dealing with EIA experiences in other developing countries, it is reasonable to expect that this institutional setting may hamper its activities in overseeing EIA.

#### ***4.2.1.1 Relevant Literature***

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<sup>19</sup> This chapter will include the identification of various constraints to EIA effectiveness in developing countries as identified by the literature. As MacDonald (1994) points out, many of these constraints also occur in developed countries. However, the degree of these problems is significantly greater in many developing countries because of causal differences (as will be discussed in more detail later in this document). This section will focus on constraints primarily in the context of developing countries, because it is more relevant to subject of this project. However, this should not be interpreted as a denial that many of these issues also exist in some form in developed countries.

The literature based on experiences in other developing countries indicates that conflicts exist between government agencies due to their intended goals. Some agencies are traditionally oriented towards production and economic growth, while others (such as the agencies that usually deal with EIA) are responsible for assessing and evaluating development. The groups that each agency deals with tend to be different, the former dealing with groups that most often enjoy the benefits of development, and the latter dealing with groups that are most often left with the incidental social and economic costs of development (Friedland et al., 1977, as cited in Rickson et al., 1990).

In most of the developing world, growth-oriented agencies have more power than agencies responsible for evaluation or regulation of development. These two types of agencies often come into conflict because of their different orientations (Rickson et al., 1990). Murphy (1982) suggests that the office responsible for environmental review be as independent as possible from the agencies that are responsible for development. This may serve to increase autonomy from the greater powers of pro-development bodies.

Bisset (1992) observes that the historical emphasis of developing countries on economic growth, coupled with the relatively recent advent of agencies responsible for environmental evaluation of projects, has resulted in a lower hierarchical status of environmental agencies. This constrains their enforcement abilities, in terms of EIA procedures and the quality of EIA reports.

Because of power inequalities the sphere of influence and effectiveness of an environmental review agency depends on its hierarchical position in the government, in addition to formal legal authority. Legal provisions that give power to these agencies are necessary but insufficient (Lim, 1985). Ebisemiju (1993) notes that "(m)ost environmental agencies in developing countries are subsidiary parts of one ministry or another... They are invariably circumscribed because of their low status in the bureaucracy, underfunding and inadequacy of skilled staff and facilities. They lack political 'clout'" (Ebisemiju, 1993:253).

Two other studies cited by Ebisemiju (1993) analyze the relative efficiency of various different institutional arrangements of environmental agencies, and conclude that the best institutional option is to place the environmental agency in a ministry with a very high profile and responsibility for budgetary control and national economic planning, or within the President or Prime Minister's office (Ibarra, 1987; Szekely, 1987). The placement of an environmental review office into a ministry responsible for planning might also be wise because of the links between EIA and the cost-benefit analysis of proposed projects (Kakonge and Imevbore, 1993).

#### **4.2.1.2 Application to Swaziland**

The legal power of the Swaziland Environment Authority is not lacking. The EIA Regulations and the *Swaziland Environment Authority Act, 1992* have clauses that ensure their supremacy over conflicting legislation. However, the issue of political “clout” does legitimately apply to Swaziland. Because of the placement of the Swaziland Environment Authority in one of the many “regular” ministries, the range of its influence is not recognized by many other ministries.

One event that appears to demonstrate the low perception of the political status of the Swaziland Environment Authority was the poor attendance by representatives from other ministries at a recent EIA training workshop run by the Swaziland Environment Authority. Although private industry sector and NGOs were well represented, government attendance was virtually nil even at a session created almost exclusively for their benefit. Based on my professional experiences in Swaziland, I do not believe that would ever have happened to a government body that was viewed as politically powerful such as the Ministry of Economic Planning and Development because it would be considered culturally disrespectful, and other government agencies would have feared the eventual repercussions of the resulting damaged relations.

Another event that appears to demonstrate the low political status of the Swaziland Environment Authority was its recent transfer from the Ministry of Natural Resources and Energy to the Ministry of Tourism, a completely unilateral move about which the Authority were not even consulted prior to the public declaration of the transfer. If the Swaziland Environment Authority was considered to be politically powerful, it is much less likely they would have been completely excluded from the planning of such a drastic change.

Ypma (1997) has stated that an extreme shortage of staff limits the capacity of the Swaziland Environment Authority to enforce EIA regulations<sup>20</sup>. This situation probably would not exist if the Swaziland Environment Authority were more politically influential, because more influential agencies are typically less constrained by staff shortages (Bisset, 1992).

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<sup>20</sup> Some other factors that limit the effectiveness of the Swaziland Environment Authority have been describe by Ypma (1997) as including: a lack of a process for identifying priority EIAs, resulting in inefficient use of staff efforts; lack of expertise, particularly in terms of knowledge about what is technically feasible in different types of projects; and, a lack of government standards by which to judge projects (e.g. emission level standards). These are not going to be dealt with in depth in this document: They are only identified here so they may be recognized as additional constraints on the operation of the Swaziland Environment Authority.

The transfer from the Ministry of Natural Resources and Energy to the Ministry of Tourism will likely worsen the problem of low political recognition. Other government agencies may have understood why they must submit development plans to the Ministry of Natural Resources and Energy, but for a ministry such as the Ministry of Agriculture to have to submit development plans for agricultural projects to the Ministry of Tourism for approval must seem very strange indeed, and will build animosity by making the Ministry of Tourism appear to be more powerful than other sectoral ministries. As has been pointed out in relation to EIA before, most organizations prefer the freedom of autonomy over external control (Hirji and Ortolano, 1991). External control is more likely to breed resentment if it seems unreasonable.

In addition to the low status implications of being located inside a sectoral ministry, the particular choice of ministry will also reduce the effectiveness of the Swaziland Environment Authority. As the literature indicates, some ministries and agencies are more likely to deal with the benefits of economic development, and others with its environmental and social costs. The Ministry of Tourism is, generally speaking, more likely to deal with the benefits of economic development, which include tourism developments. By the nature of its sector, the Ministry of Natural Resources and Energy was more likely to deal with conservation of natural resources and the effects of development on natural resources, which are issues that EIA deals with.

In the current situation the agency responsible for EIA, which is largely concerned with the hidden social and environmental costs of development, is answerable to a Minister who is more likely to be concerned primarily with the economic benefits of development. The relocation of the Swaziland Environment Authority to the Ministry of Tourism is likely to reduce its effectiveness as an EIA review agency.

### ***4.3 Late Integration of the EIA into Project Planning***

#### ***4.3.1.1 Relevant Literature***

A brief review of relevant literature indicates that there is widespread agreement that early integration of EIAs into project planning is important, and not achieved often enough in developing countries. Van de Gronden (1994) states that an important part of EIA is its capacity to improve the planning of projects, by influencing project decisions such as location and design (as cited in Ortolano and Shepherd, 1995). Analysis of alternatives for avoiding or minimizing adverse impacts is an essential part of EIA (Scholten, 1992). If all the details of a project have already been planned before the EIA is undertaken, some of the most important benefits of EIA will never be realized, because the alternatives never enter into consideration during the making of project planning decisions. Wramner

(1992) reinforces the importance of this issue, saying that “EIA is not enough to bring about environmentally sound development projects. Unless it is incorporated early enough in the project cycle to influence planning and design... the effort is in vain” (Wramner, 1992:169).

The significance of this problem is clarified when it is considered in light of another point raised by the literature. Werner (1992) separates the functions of EIA into 1) a tool for making decisions about the environmental acceptability of a project, and 2) a planning tool to avoid or reduce undesirable impacts caused by a project, assuming project approval occurs. Out of several thousand EIAs that have been conducted over the years in Thailand and the Philippines, none has ever been denied approval due to unacceptable environmental consequences. Because of this, Werner concludes, EIA serves mainly a planning purpose in those countries.

This point can be applied to emphasize the importance of early integration of EIA into project planning in the context of developing countries. If EIA is mainly a planning tool in those countries, and its utility as such requires consideration of alternatives that can only occur with early integration into project planning, then it is extremely important that the early integration does happen. However, late integration of EIA into planning activities is common in developing countries, as the literature reflects (e.g. Rickson et al., 1990; Biswas, 1992; Bisset, 1992; Nor, 1991; Kakonge, 1996).

The importance of early integration of EIAs into the project cycle has been widely recognized in the literature. In a review of the African Development Bank’s experiences integrating EIA into development projects, where Aw (1996) emphasizes the utility of early integration of EIAs for design improvement, adding that some of the main ways that EIA can directly influence a project are by contributing to the design of projects and the analysis of alternatives. One way of dealing with the problem of EIAs occurring too late in the planning process is to require an explicit analysis of project alternatives in the terms of reference of the EIA (Aw, 1996).

Ebisemiju (1991:266) also agrees that “environmental assessment should be carried out at the inception of a proposed action when there is still a real choice between alternative courses of action”. This does not occur in most developing countries, where EIA is usually conducted as an exercise that is separate from other planning activities, after most details have been established. This leaves “little or no opportunity to consider alternatives. EIA then becomes a postscript to planning and is used basically as a perfunctory endorsement of... actions rather than to influence decisions” (Ebisemiju 1991: 266).

Werner (1992) recognizes this problem in various Asian countries, and attributes this in part to a lack of interdisciplinarity of planners, because “(e)nvironmentalists do not communicate with project engineers who... are not aware of the

environmental consequences of their work” (p.19-20). In addition to increasing the effectiveness of EIA, its early integration with project planning will also serve to reduce project implementation delays (Werner, 1992). In developing countries, this late integration of EIAs in developing countries is one of the main reasons for the delays in project implementation that are cited by opponents of EIA as increasing their costs, and reducing their relative benefit (Biswas, 1992).

Another example of a developing country where poor EIA timing and integration with planning occurs is Malaysia, where in some cases preparation of EIAs has been conducted after most of the project planning was done. This reduced the scope of alternatives considered, and has the tendency to make EIA “accommodate projects rather than force shifting of locations or changing of engineering design” (Nor, 1991:136). This might be due to the perception held by industry that EIA is a bureaucratic hurdle to development, as opposed to a planning tool for making good decisions (Nor, 1991).

Ortolano and Shepherd (1995) suggest two causes of the use of EIA late in the project cycle as a means of rationalizing decisions. First, proponents often feel that it is only reasonable to do EIA once the project is clearly defined and approval seems probable. Second, proponents undervalue environmental goals relative to economic ones. (It is noteworthy that this refers to EIA in general, and not particularly to EIA in developing countries).

#### ***4.3.1.2 Application to Swaziland***

It is reasonable to believe that late integration of EIAs into project planning could be a serious obstacle to EIA in Swaziland. It is clearly prevalent in other developing countries, and there is no apparent reason to believe that the relevant conditions that lead to late EIA integration in most developing countries are in any relevant way different from those in Swaziland. Late integration could particularly be a problem for Swaziland because the EIA process is so dependent on the selection of best alternatives, which is in turn dependent on early EIA integration into the project cycle.

This was a recognized concern when Swaziland’s EIA regulations and guidelines were drafted. The environmental assessment regulations of 1996 influence the early integration of EIA with project planning by legally requiring a description and analysis of reasonable alternatives. The Guidelines specify more detailed requirements, by including descriptions of alternatives, predictions and evaluation of potential impacts for all alternatives, and an analysis and comparison of alternatives, under the mandatory contents of EIA terms of reference. A detailed explanation of the need to integrate EIA with early project decisions and alternative

analysis is included. With reference to preliminary feasibility studies, the Guidelines state:

*It is unwise for any proponent to undertake such studies, omitting environmental issues, and be told, subsequently, to prepare an environmental study. At this stage... it is time-consuming and expensive to have to alter, or even abandon, a project because the environmental study shows that significant adverse impacts will occur and cannot be mitigated to make them acceptable. This is a waste of time and money for all participants in the authorization procedure. (SEA, 1995:Par.26).*

The solution proposed by the Guidelines is to ensure that proponents are aware of the EIA regulations, because this “enables the proponent... to integrate environmental concerns into their activities in a non-disruptive, complementary and cost-effective manner” (SEA, 1995b: Par.28).

Although addressing this issue in the Regulations and Guidelines is a good idea, it is not likely that it will be sufficient to remedy the problem of late integration. The inclusion of an emphasis on awareness is very laudable in the Guidelines, because the requirements in the Regulations are not likely to solve this problem. This is because of a practical consideration --the EIA process is only triggered for a project when an approach has been made to an authorizing agency for a license of permit. This does not necessarily happen before many important project decisions have already been made, since it is reasonable to believe that proponents do not apply for permits until they have a particular, possibly detailed, project they propose to develop. By the time most people start considering the regulations or the guidelines that recommend that EIA is integrated early, it may already be too late. Similarly, it is likely that proponents will not refer to the guidelines until they are already involved in the EIA process, which, again, will probably happen after major decisions have been made and a permit requested.

This problem is likely to be greatest during the first few years as proponents gain experience with the EIA system, partly because the benefits of early integration of EIA will take time to be recognized. After proponents have applied for permits and licenses, this problem may also be exacerbated by inexperienced authorizing agencies that fail to screen proposed projects into the EIA system at the earliest feasible time.

Just as proponents may be ignorant of the need to integrate EIA into the project cycle early, they may also be ignorant of the benefits of doing so. As described above, one reason cited for why integration does not occur early in the project cycle is because proponents undervalue environmental goals as compared to economic goals. This is based on the fallacy that EIA is expensive, when in reality, it is very cost effective to proponents, because it is cheaper to anticipate and prevent problems than it is to remedy them (Ross and Jones, 1994). This cost-effectiveness is one of the benefits of EIA. As long as proponents do not realize the cost-

effectiveness of EIA, they may continue to leave it out of the planning phases of projects.

Similarly, if proponents are ignorant of the benefits that EIA can offer to them, and therefore view EIA as a bureaucratic hurdle, then the belief may be self fulfilling if it prevents them from considering alternatives during planning. Without consideration of alternatives, the decision-making potential of EIA is greatly reduced, many design benefits will not occur, and EIA really will be more of a bureaucratic requirement as opposed to a useful planning tool. This will further reduce the utility of EIA indirectly (because some of the secondary benefits of EIA will not occur if design benefits do not happen) as well as directly (by failing to improve project design). For example, the cost savings that happen when an industry does not have to pay to clean up environmental accidents are a benefit of EIA to industry, and this benefit is maximized if environmental considerations have been designed into the project.

The neglect of EIA during early project planning stages is based partly on perceptions held by proponents: that EIA is expensive (Biswas, 1992), and a bureaucratic hurdle (Nor, 1991). Since early integration is important for EIA to be effective, it is also important to change the beliefs of proponents that lead to this neglect, by making them aware of the benefits that EIA can offer them. In Swaziland, proponents who do not realize this will only discover the expectation of integrating EIA early once they are in the process, which happens after they apply for a license, too late to be of use in early project planning.

In the case of the Mantenga EIA, the proponent was unaware of the benefits of EIA and viewed it partially as a bureaucratic hurdle. The Mantenga EIA was not started before construction had begun on proposed developments. It is only due to good fortune that this did not prove to be too late for the EIA to influence project design, because, as described above, so many planning decisions had not yet been made. This will not always be the case for future EIAs in Swaziland. Although structured, pro-active management has not been the norm, it is slowly gaining appreciation<sup>21</sup>. Since detailed project planning is increasingly more likely to occur, it will be important to EIA effectiveness in Swaziland to ensure that EIAs are integrated into the project planning process early enough to substantially influence project design, location and operation.

#### **4.4 Data Limitations**

A shortage of background data on environmental and social conditions is widely recognized in Swaziland. In order to predict and evaluate impacts of a proposed

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<sup>21</sup> Perhaps the recent introduction of formal EIA legislation is an illustration of this trend.

project, it is necessary to know relevant aspects of ecosystem functions and the conditions that exist before the project against which the predicted conditions can be contrasted. Information and data limitations are a widespread constraint to EIA through the developing world, including Swaziland.

#### ***4.4.1.1 Relevant Literature***

Limitations of data act as a major constraint on the effective practice of EIA in many developing countries. This is widely noted in the literature, as the following examples illustrate.

Werner (1992), Wramner (1992), Kakonge (1993) and MacDonald (1994) all cite the lack of baseline data in developing countries as a barrier to implementing EIA. Although background data shortages are a problem in industrialized countries as well, the problem is more severe in developing countries.

In their *Comparative Study of Impact Assessment Methods in Developed and Developing Countries*, Lemons and Porter found that the greatest problems encountered in impact assessment in developing countries were incomplete and incorrect data resources, leading them to conclude that “the reportedly serious problems with data resources lend a sense of urgency for support to developing countries to enhance their statistical data collection, processing and reporting capabilities” (1991:64-5).

Participants at the International Conference on Environmental Impact Analysis for Developing Countries, 1988, identified poor data availability and reliability as “one of the most important constraints for carrying out reliable EIAs in developing countries” (Biswas, 1992:241). This problem is compounded because the data that are available are often not reliable, and available data are difficult to access.

Appiah-Opoku (1994:108) states that “many Third World countries have poor data-collection capacities (and) insufficient and poorly organized baseline data”. This may be remedied by increasing the role of indigenous ecological knowledge systems in the EIA process. Jiggins (1995) also cites data limitations in Africa as a problem for environmental assessments, and recommends participatory methods for remedying it.

A shortage of good data on environmental resources in African developing countries is also cited by Aw, who states that “(w)ith respect to EIA, the (African Development) Bank has learned from experience that there are rarely ‘pre-project’ baseline data on environmental conditions against which to assess potential impacts or to evaluate actual impacts” (Aw, 1996:146).

A lack of baseline data is cited also by Bisset (1992) as an important constraint that is one of the main problems hindering EIA effectiveness in developing countries. Compared to developing countries, the preparation of EIA in industrialized countries is facilitated by the greater availability of data. If the baseline data in developing countries is not available, "they have to be obtained and this is expensive in terms of human and other resources" (p. 215). One way of dealing with this constraint may be thorough scoping that avoids the collection of irrelevant data (Bisset, 1992).

#### ***4.4.1.2 Application to Swaziland***

Data limitations are a major constraint to EIA in Swaziland. This was illustrated by the Mantenga EIA, which suffered from the low availability of data on background conditions such as comprehensive species inventories and rare species lists, limited and conflicting published information, and little time and money to conduct primary field research. To put this issue into perspective, it should be recalled that the project proponent, the Swaziland National Trust Commission, is one of the few major institutions that does conduct ecological research in Swaziland.

Considered from a Canadian context, it might seem surprising at first that Swaziland is faced with such data shortages, considering how relatively small it is<sup>22</sup>. It appears to be a relatively simple task of compiling comprehensive background data on many existing conditions from an area of this size, but this has proven not to be the case.

Financial constraints are one reason why there have been so little data compiled. It is widely recognized among the organizations that conduct research which might be useful in compiling background data on environmental and social conditions (e.g. the University of Swaziland, the National Herbarium, and the Swaziland National Trust Commission) that widespread financial constraints result in their being understaffed (which limits the number of researchers) and under-equipped (which limits the amount of research possible by the existing staff). Little is known even about the ecology of the protected areas, which have been relatively well studied, as compared to most of the country.

Another reason why Swaziland's size belies the challenge posed to researchers is because of its ecological diversity. Diversity of ecological components and human interactions with their environments have been noted to be factors that make EIA more difficult in many developing countries than it is in many developed countries (Tanh and Tam, 1992). Swaziland is an extreme example of this. As mentioned earlier, Swaziland boasts a relatively high diversity of flora and fauna, due largely to extreme variations in topography and climate. There is also great seasonal

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<sup>22</sup> Swaziland covers less than 17 500 square kilometres (less than 132 kilometres squared).

variation in conditions within each area. This is further complicated by erratic events including drought, heatwaves, and flooding. With the different soils and rainfalls of each area, the climate varying from tropical to near temperate, high seasonal variability and stochastic events, and the radically different vegetation and corresponding wildlife of each region, the ecological diversity of Swaziland is striking. Further, this tremendous ecological diversity results in a diversity of complex interrelationships between people and their environments. This is made even more complex by the diversity of lifestyles people lead, ranging from traditional rural pastoralists and subsistence agriculturists in a traditionally governed system of tribal lands to modern urban residents.

Between the diverse ecology and range of interactions between people and the environment, and the financial limitations of institutions that conduct research, the paucity of background data on conditions in Swaziland is likely to persist as a constraint to EIA effectiveness.

## ***4.5 Public Participation***

Public participation in EIAs involves the information and consultation of interested and affected parties regarding project design and implementation as it occurs during EIA preparation, review and compliance<sup>23</sup>. The countries in which EIA evolved are participatory democracies with experience in public participation. In Swaziland, conditions are less favorable to public participation. Public participation will be reviewed in more detail than the other constraints discussed in this chapter. This is a reflection of the variety of challenges it faces in Swaziland, and the specific natures of those challenges. This section will review some of the relevant literature as it deals with limitations to public participation in EIAs in developing countries. It will also consider specific conditions in Swaziland that are likely to reduce public participation in EIA, thus constraining EIA effectiveness.

### ***4.5.1.1 Importance, Goals, Principles and Benefits of Public Participation in EIAs***

Before reviewing the relevant literature on certain particular aspects of public participation, this section will identify the general principles, benefits, and importance of public participation in EIAs in developing countries.

Public participation at important process stages is an essential element of the effectiveness of environmental assessment (Sadler, 1996; Aw, 1996). Local understanding of a project, which is dependent on public participation, is a factor

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<sup>23</sup> This definition is a synthesis of those described by Cook and Donnelly-Roark (1994), Ortolano and Shepherd (1995) and the World Bank (1991).

that may increase the success of development projects (Kakonge, 1996). In a review of control mechanisms that increase the effectiveness of EIA it was stated that “opportunities for public involvement in project planning play a key role in the exercise of each of the control mechanisms” (Ortolano et. al, 1987:286).

Some potential goals of public<sup>24</sup> involvement in EIA, as described by the Federal Environmental Assessment Review Office of Canada (1988) are cited in Ortolano and Shepherd to include 1) the identification of public concerns and values, 2) the accumulation of economic, social and environmental information from the public, 3) the information of the public about proposals, alternatives, and potential consequences, 4) increased credibility and 5) positive influence on decision making (Ortolano and Shepherd, 1995).

Public participation offers many benefits to EIA in developing countries in addition to serving as an important process control mechanism. Through public involvement, it may increase the acceptance of, and reduce opposition to, a good project (Scholten, 1992). In Africa, public participation has shown itself useful in improving the design of projects and preventing misconceptions about projects and their impacts (Aw, 1996), while many cases where public participation were not undertaken during development in Africa resulted in low project acceptance by local people, and a mistrust of developers (Kakonge, 1997). Another important function of public participation is that it helps to prevent EIAs that are merely justifications of projects (Scholten, 1992), which is perhaps most relevant in developing countries where many EIAs are conducted late in the project cycle.

It has been claimed that public participation in EIAs is sometimes viewed as a potential cause of delays in the development process (Murphy, 1982), but more recent views indicate that by increasing public involvement and decreasing public opposition, there are fewer environmental appeals, which serves to speed up the process, as well as to save money (Scholten, 1992).

Public participation should occur at many stages of the EIA process, starting early in the process, before major planning decisions are made (Kakonge, 1997). It is an essential part of effective scoping (Ross, 1995), but can be influential in many other parts of the EIA process as well. Public participation can influence the initial screening classification of a project, thus helping to determine the level of assessment required for it. The public is a potential source of data on both environmental and social conditions during issue prediction (Aw, 1996), and should have the opportunity to comment on the draft EIA (Cook and Donnelly-Roark, 1994) and, if necessary, in public hearings or decision appeals. It is essential that

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<sup>24</sup> This is most important when applied to members of the core public (those most likely to be directly affected in a more significant way), but can also apply to interested members of the periphery public (who are not as directly affected). It should be noted that this distinction is not always clear, as different groups can be located at different points on the continuum between the core and peripheral extremes.

follow-through occurs on issues raised during public participation, so that the public can see the influence of their participation. Otherwise, people will become cynical and assume that participation was an empty gesture, which is likely to decrease future participation (Cook and Donnelly-Roark, 1994).

If public participation is to be used effectively in EIA, it must be able to influence the direction or conclusion of an environmental assessment. This requires the distinction between the presentation of information about the environmental assessment and genuine participation in which the public provides input (MacDonald, 1994). A similar distinction is between public participation that informs people about projects and planners about people's perceptions, and public participation that enables people to influence design and implementation (Cook and Donnelly-Roark, 1994).

Many studies point out that relatively little public participation is undertaken during EIAs in developing countries, as compared to industrialized ones (e.g. Aw, 1996; Ebisemiju, 1993; Schroll, 1995; Wramner, 1992; Bisset, 1992; Biswas, 1992; Kakonge, 1995). Public participation faces many challenges in developing countries.

#### ***4.5.1.2 Cultural and Cross-Cultural Issues: Literature Summary***

The EIA process as it is generally followed evolved in Western countries with democratic political systems (Schroll, 1995). The conditions in these countries are different in many ways from the conditions in developing countries. A number of these conditions have been cited as constraining the public participation aspects of EIA.

Some of these are relatively subtle, such as behavioural norms of other cultures<sup>25</sup>. It has been noted that "who participates and how people should participate in decisions about development depend upon cultural definitions of appropriate behaviour..." (Rickson et al., 1990:235). The dialogue that is fundamental to effective public participation must be based on an understanding of the ways that people within a specific culture communicate, both as individuals and collectively (Kakonge, 1996). In Africa, cultural norms can make participants unwilling to seem opposed to government policies, preventing them from effectively participating in meetings (Aw, 1996).

Cultural norms may seem extremely subtle from an outside perspective. Considerable expertise may be required to correctly interpret forms of communication that seem obvious to someone within a culture but imperceptible to

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<sup>25</sup> The term "culture" is defined by Harris and Moran (1991:23) as "... the cumulative deposit of knowledge, beliefs, values, religion, customs, and mores acquired by a group of people and passed on from generation to generation".

someone from a different culture. Most EIAs in Africa are done by private external consultants (Aw, 1996), most of whom have not “absorbed the voluminous anthropological literature and studies from the communication field demonstrating the importance of cross-cultural communication, culturally embedded interpretation and bias, and local knowledge” (Jiggins, 1995:57).

Another issue in which awareness of local norms is essential pertains to the recognition of locally appropriate media. The range of appropriate media for publicizing public participation opportunities may be reduced because of certain conditions in developing countries, such as poverty which reduces the availability of electronic receivers such as telephones, radios, or televisions, and illiteracy, reducing the utility of printed matter (MacDonald, 1994). Visual and oral communication is more likely to be required by a largely illiterate public, and the choice of appropriate media should be based on sociological understandings about the relevant groups (Kakonge, 1996).

#### ***4.5.1.3 Cultural and Cross-Cultural Issues: Application to Swaziland***

The literature recognizes that cultural norms of behaviour influence both the range of people who participate in decisions as well as how they should participate. In Swaziland, it is likely that cultural norms will have a pronounced effect on public participation. Public participation will be constrained in Swaziland partially because of the challenges posed by a strongly emphasized traditional culture that is xenophobic, based on an entrenched traditional power hierarchy, non-confrontational on an individual level, and motivated in subtle ways to not voice controversial opinions.

Xenophobia is a widespread cultural norm. Swazis (particularly in rural areas) are distrustful of foreigners, especially if they do not display familiarity with Swazi social subtleties. Although people in any culture can be offended by social errors due to cross-cultural misunderstandings, the situation in Swaziland goes beyond that, to a point where foreign-ness itself is often considered a basis for mistrust<sup>26</sup>. Because only a few people in Swaziland are able to conduct EIAs, it is reasonable to believe that EIAs will be conducted by external consultants for some time. The participation of members of rural communities is therefore harder to elicit if consultants are foreign. There is, at present, no system for providing local counterparts to foreign EIA practitioners.

The emphasis on tradition also strengthens the cultural importance of respecting power hierarchies, which are traditionally defined. Based largely on heredity, tradition dictates a very specific power structure within each chiefdom. The *Indvuna* serves as a counselor to the Chief who is the representative of the King in

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<sup>26</sup> I say this based on my professional and personal contacts with rural Swazis.

his or her chiefdom. Many of a Chief's rural subjects have very little experience in participatory democracy outside of meetings at a Chief's *kraal*, an outdoor area at the Chief's homestead that serves as the Chief's court for community meetings. Traditional rural people may feel that direct participation that influences important decisions via personal interactions with important figures (such as members of the national government or proponents of development projects) could be construed as disrespectful to their Chief-- it could be construed as an attempt to circumvent the Chief's authority, which is the Chief's hereditary right.

Many hidden behavioural motivators make it difficult for non-Swazis to interpret Swazi behaviour (e.g. Watts, 1922). Again, this can be expected to pose a problem for EIA consultants, especially since Swaziland will probably be reliant on external EIA consultants for some time. Effective participation must involve two-way communication, which is very difficult in the cross-cultural context, since behaviors only have meaning relative to the cultural context in which they are done. Meaning can be delivered in many context specific ways<sup>27</sup>. The interpretation of communication cues is culture dependent, and the different context of Swazi culture can lead to serious misunderstandings when interpreted from the perspective of another culture, and visa-versa.

One aspect of this that may be particularly important to public participation is a cultural bias of Swazis against open disagreement. It is considered quite rude in traditional Swazi culture to voice open dissent to an expressed opinion. Civilized conflict is only conducted indirectly, and concerns are often not directly voiced, but indicated through subtle cues of tonality and body language. Great cultural sensitivity is required for a non-Swazi to correctly interpret the views of rural Swazis. Thus, if foreign consultants are likely to conduct public participation in EIAs, it is very possible that they will form mistaken beliefs about public opinions regarding project support.

An example of a subtle cultural motivator of behaviour is the belief in magic. Concerns about magical reprisal can play a role in any process in which there is a possible conflict of views, and therefore has relevance to public participation in EIAs. In Swazi society, people are often afraid to voice opinions that conflict with others for fear of magical reprisal. This can lead to people under-representing their concerns during public participation in EIA.

While there are social benefits to many cultural adaptations, there are also circumstances for which cultures may be maladapted. Cultural factors are likely to reduce the utility of many methods of public participation in Swazi EIA that are effective in other countries, by reducing participation in those methods, increasing mistrust between proponents and the public, heightening the risk of cross-cultural

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<sup>27</sup> For example, studies indicate that the total impact of a message on a receiver is only 7% based on the words used, 38% on tone, volume and inflection, and 55% on non-verbal basis including facial expressions, body positions, and hand gestures (Harris and Moran, 1991).

misunderstanding, and increasing people's reluctance to publicly and authentically represent their own interests. This indicates that there is a need for improved or different additional methods to be used in public participation.

The seriousness of these problems is exacerbated because traditional culture is strongest among members of rural communities, and large-scale development projects more often occur in rural areas than in urban ones. This means that rural residents are likely to be affected more directly by major development projects, because of their proximity. Also, the traditional lifestyle involves a more direct dependence on environmental resources for fuelwood, water, subsistence agriculture and cattle grazing, that further increases the likelihood that the effects of major developments will be felt more directly by rural people. These factors increase the significance of the cultural issues raised above as constraints to the effectiveness of many methods of public participation.

A separate cultural issue that will be identified affects the nation in general. It concerns government corruption. Because social power in Swaziland is strongly influenced by bloodline and clan affiliations, many influential positions are filled by members of the royal Dlamini clan, or people from other clans that are traditionally powerful. Critics claim that lineage is more important than competency as a criterion for claiming many important positions. Personal and familial connections also reduce accountability, because many high-ranking officials have broad social networks of family and friends who can be counted on for political support.

The ultimate result, critics claim, is that many high government offices are filled with people who are under-qualified, able to ignore many official responsibilities, and engage in corruption (e.g. AIA, 1997). This is widely recognized as a problem, even by government itself, resulting in the recent creation of a government Anti-Corruption Unit. In terms of reducing EIA effectiveness, corruption leads to public cynicism regarding government processes in general, and may do so for EIA specifically. If the public at large is not convinced of the integrity of the EIA process, it is less likely to believe that participation will be productive, and will not participate. This problem was clearly illustrated by the Mantenga EIA by the cynicism of the Swaziland Natural History Society and the initial cynicism of the Mlilwane Wildlife Sanctuary representatives.

#### ***4.5.1.4 Political Representation and Human Rights: Literature Summary***

Political considerations also affect public participation in EIA. It has been claimed that most developing countries lack the institutions of participatory democracy, the protection of fundamental human rights including free speech and assembly, and "are ruled by dictators who suppress freedom of speech and criticism of government policies while promoting ethnic interests and pervasive corruption..."

(Appiah-Opoku 1994a:16). Protections for human rights permit and encourage people to voice opposition to government decisions, and most African countries have no such protection<sup>28</sup> (Cook and Donnelly-Roark, 1994). Non-representative governments can constrain people from voicing their opinions to environmental decision makers, and single party governments can also strongly discourage public participation and the opposition it can create to developments (MacDonald, 1994). Such governments "... are unlikely to enthusiastically embrace decision-making techniques having underlying presumptions that impact assessment is an educational, participatory, and scientific process and that data collected as part of impact assessment should be made public." (Rickson et al., 1990:240). Oppressive governments also limit the range of ways that the public might express itself. For example, demonstrations or protests are rarely carried out in Africa, because of fears that they would be viewed as protests against the government, as opposed to one of the government's projects or policies (Kakonge, 1996).

#### ***4.5.1.5 Political Representation and Human Rights: Application to Swaziland***

As an absolute monarchy in which political parties are illegal, the government of Swaziland does not embrace participatory democracy. The tinkundla voting system is widely criticized as reflecting only the interests of the King and the royal family, who form the ruling class, resulting in the public being able to choose only from conservative right-wing candidates who all support the status quo. Swaziland is a single party monarchy. As the literature indicates, experience has shown that single party governments, such as this, do not enthusiastically embrace public participation in decision making.

The current Constitutional Review Commission is an indication that Swaziland may be undergoing political change. The capacity of the Constitutional Review Commission to effect significant change has been widely criticized, since it is composed predominately of right wing conservative supporters of the monarchy. Furthermore, although the Commission is supposedly engaged in a participatory process, it is also an example of how single-party government can restrict participation, because of new laws that give it the authority to fine or jail for five years opponents who insult or belittle the Commission (Amnesty International, 1997). If no significant government reforms materialize, the political climate will continue to be unfavorable to the public participation that is an essential part of EIA.

Other conditions that the literature indicates affects public participation of EIA in developing countries are human rights, particularly as they relate to freedom of speech and assembly. The same royal declaration of 1973 that proclaimed a state of emergency that is ongoing, and renders any political activity illegal, has also

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<sup>28</sup> The execution of environmentalist Ken Siro-Wira by the government of Nigeria is an extreme example of this.

suspended the old constitution and the rights enshrined in it (Booth, 1983). The 1973 declaration also restricts the rights of free expression and freedom of assembly (Amnesty International, 1997), technically prohibiting criticism of the government and any unauthorized gathering of more than three people.

Over the last few years, the enforcement of these laws has been notably growing increasingly relaxed. In reality, it is possible to criticize government to a limited extent, as has been illustrated by critical editorials in newspapers. As well, unauthorized public gatherings that involve criticism of the government have become increasingly tolerated, again only to limited extent. Many meetings can be held without legal repercussion, provided that they are not too much opposed to government policy. However, there are still clear restrictions enforced, as illustrated by the government's violent response to peaceful demonstrations, and recently proposed legislation that will enable the government to control the content of newspapers and the dissemination of information (ToS, 1997).

While these laws can restrict public participation directly by restricting criticism of the government's activities, human rights issues in Swaziland also play an indirect role in restricting public participation that may have even greater effects on public participation in EIAs. When human rights abuses are known to be directed at critics of the government, people are more afraid to voice opposition, as the literature points out (e.g. MacDonald, 1994). In Swaziland, there are numerous instances of such human rights abuse. These include the kidnapping and attempted assassination of labour activists by people widely believed to be government operatives, and the attempted deportation of activists. Amnesty International identifies many violations of human rights in Swaziland in its *1997 Report*, that cites:

- dozens of arrests for participation in strikes, demonstrations and meetings that have been declared illegal;
- the detainment of prisoners of conscience in secret locations, followed by secret legal hearings in which they were denied bail;
- the regular torture of detainees at the hands of the police; and,
- the use of live ammunition on unarmed demonstrators.

Amnesty International further recognizes in Swaziland a "pattern of detention, ill-treatment and harassment of government opponents" (Amnesty International, 1997:2). These events contribute to the reluctance of many Swazis to become involved in any kind of activity that appears political or opposed to government policy, and also makes rural Swazis more intimidated by dealing with the national government. The results of this are subtle and often unspoken, but pose very real problems for public participation in Swaziland.

Non-representative single party governments and human rights restrictions reduce the potential for effective public participation and reduce the utility of EIA, but are

obviously controlled by factors so external to the EIA process that no recommendation to increase EIA effectiveness will influence these conditions. They are simply external limitations within which EIA must work, and should be recognized as such.

Even so, if the current constitutional review results in a repeal of the state of emergency that has been legally ongoing since 1973, and if the resulting government situation is improved in a manner that remedies these human rights issues, it is possible that public participation, and ultimately EIA, will be less constrained. Swaziland is currently under a time of change, and the results may be dramatic.

#### ***4.5.1.6 Traditional Systems of Local Government in EIA: Literature Summary***

Traditional systems of government and representation may have certain advantages to offer public participation in EIAs. In Africa, indigenous systems of representation, which are traditionally based on participatory consensus, may present the best option for public participation in environmental decision-making, as they are already established and adapted to the socio-cultural system in which they exist (Appiah-Opoku, 1994b). The *Pitso* system of Lesotho, which minimizes conflicts through open debate at the community level, is an example of a representative traditional system that can be used to increase the participation of local communities in the EIA process (Kakonge, 1996).

Although traditional systems of representation have something to offer public participation in EIA, socio-cultural factors can limit the potential range of representation they offer to EIA. As Jiggins states, “(t)he participation of stakeholders... does not in itself remove inequalities in power, status, and what might be termed wisdom” (1995:60). Social inequalities that affect specific different groups in Africa can exclude people on the basis of sex, age, and ethnos<sup>29</sup> (Cook and Donnelly-Roark, 1994), and if these exist in indigenous systems, then social inequalities will be a factor in public participation that relies on indigenous institutions for representation.

Community based public participation that relies on traditional representation systems can also be dominated by the views of the community leadership, leading to non-representation. (Kakonge, 1996; Cook and Donnelly-Roark, 1994). Elite community groups can dominate local participation to serve their own self-interest (Rickson et al., 1990). As well, the observation has been made that, in Africa, “the power of political leaders (in single party systems) is rooted in charisma and clan allegiances rather than in legitimacy derived from an accepted political system.

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<sup>29</sup> Ethnos may be based on religious, racial, national or cultural groups. In Swaziland, clan affiliation is a common ethnic distinction.

Consequently, they are vulnerable to attack and prone to construe any disagreement as a political challenge” (Rickson et al., 1994:86)<sup>30</sup>.

#### *4.5.1.7 Traditional Systems of Local Government: Application to Swaziland*

Traditional systems of participation are used in Swaziland at the community level, in the form of meetings at the Chief’s kraal. These are usually about specific issues, and there is open opportunity for community members to voice their views for debate.

As the Mantenga EIA illustrated, attempting to include local communities in public participation by including the traditional representatives can be insufficient. The attempt to have Chiefs bring concerned community members to the main scoping session was unsuccessful, showing either that the Chiefs did not feel it was appropriate to bring their subjects to a formal meeting, or that there was either no interest or awareness of the EIA process and project at the community level. The fact that only representatives of the Chiefs (but no actual Chiefs) participated indicates further that Chiefs do not recognize the potential importance of EIA as it relates to their chiefdoms, or do recognize it but are unmotivated to attend.

Much of this problem arises from the attempt to involve only traditional representatives of the rural public, as opposed to the rural public themselves. Critics of local government systems point out that Chiefs do not necessarily represent the interests of the public, and may lack the competency or motivation to do so. Chiefdom is hereditary, or granted by the King, and a Chief is therefore neither a chosen representative of his or her subjects, nor accountable to his or her subjects. Chiefs are accountable to the King and Queen Mother only, and cannot be deposed by their subjects.

Critics also claim that chiefs tend to be pro-economic development even at social cost within their chiefdoms, because economic development is viewed as progress. This reflects well upon them at higher levels of traditional government, and ultimately serves their own interest. The traditional control mechanism of Chiefs is that prestige depends partially on numbers of followers, and subjects who do not support their Chiefs are free to move to another chiefdom. In practice, this is rarely done, although Chiefs have been known to exile their subjects.

Chiefs also are generally traditional conservatives with strong pro-monarchy sentiments, since they are empowered by traditional monarchy, and often are intolerant of any radical differences of opinion in their chiefdoms. Chiefs are very powerful as ultimate authorities within their chiefdom, excepting the King and

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<sup>30</sup> In Swaziland, this can be applied on the level of community government and on the national level.

Queen Mother. The right to distribute grazing and agricultural lands belongs to the Chief, and in a society in which subsistence agriculture is a major source of food and cattle are a major source of status, this is a very significant power.

Chiefs operate on a basis of tribal law that is entirely oral at present. Tribal law also operates on entirely separate judicial system. The two tiered system of government results in EIA Regulations that can specify the roles and duties of bodies in the modern government, but not of those in the traditional government (Ypma, 1997).

Social inequalities can also reduce representation at the local level. Relatives of the Chief have more local power than unrelated subjects. Also, women are traditionally under- represented at the local community level. Although the mother of the Chief does share the power of the Chief, women who are among the Chief's subjects are traditionally expected to be less assertive than men in public. Traditional society is both patrilineal, patrilocal, and patriarchal. Also, individual family homesteads are controlled by men, and traditional law gives males precedence over females (Kuper, 1963).

Because of the above reasons, social critics claim that traditional representatives cannot be relied upon to adequately represent the interests of their subjects. This means that basing public participation exclusively on traditional representatives may not represent the genuine interests of members of affected rural communities, and that alternate (possibly multiple) methods are needed.

#### ***4.5.1.8 Additional Public Participation Issues: Literature Summary***

Several other issues that affect public participation in developing countries are identified in the literature. Many developing countries have no legal framework for public participation (Kakonge, 1996). For example, in Chile, a case study of an EIA found that public participation failed in the past because it was unstructured, informal, and excluded from requirements that were spelled out in the terms of reference (Nardini et al., 1997).

Other problems identified by Kakonge (1996) to commonly constrain public participation in Africa include overly technical documents, in which their technocratic nature was used as a tool to exclude participation and push through projects, inadequate dissemination of project information, and governments with limited experience in effective public participation. These governments "often exhibit a superiority that sets them apart from local and often illiterate populations" (Kakonge, 1996:312).

The capacity of local people and institutions can constrain public participation in developing countries. Low literacy and education levels are examples of this (Cook and Donnelly-Roark, 1994; Biswas, 1992; Rickson et. al, 1990). Kakonge (1996) and Cook and Donnelly-Roark (1994) note that poverty causes people to focus more on immediate day to day concerns and less on the remote future. Other constraints are rurality (which can make it difficult to reach people), proliferation of local languages, and conflicts between traditional and modern legal systems (Cook and Donnelly-Roark, 1994). Effective public participation also assumes skills in conflict management, perception, listening, co-operation and communication, which may be absent (Jiggins, 1995). The existence of a middle class also is essential to public participation (Schroll, 1995), but many developing countries typically have small or no middle class. Public ignorance is another constraint. In developing countries, most members of the public do not know the role of EIA (Kakonge and Imevbore, 1993). In places where the public is ignorant about EIA, pressure on governments to use it effectively is reduced (Bisset, 1992).

Late integration of EIA into the project cycle is a constraint that affects the effectiveness of public participation in EIAs (Ortolano and Shepherd, 1995), and since late integration is a common problem in developing countries, it is probably acts as a constraint on public participation in those countries.

#### ***4.5.1.9 Additional Public Participation Issues: Application to Swaziland***

Although these additional constraints that are identified in the literature as affecting public participation could be relevant to Swaziland in many ways, they will not be discussed in as much detail in this project as the previous constraints to public participation were. However, they will be briefly described in a Swazi context, so that they can be recognized as other factors that will influence public participation and may act in combination with the issues that have been focused upon above.

In Swaziland, there is no specific framework for ensuring public participation in the EIA process. There is a legal requirement that some consultation must occur before a Terms of Reference document is produced, which is regulated as follows (Government of Swaziland, 1996: 11(1)):

*A proponent... shall, before preparing an EIA report and CMP (Comprehensive Mitigation Plan), effect a consultation process to involve or include concerned or affected Government agencies, local authorities, non-governmental organizations and any other interested and affected persons to help determine the scope and effect of the project or work to be carried out.*

This is commendable in that it seems intended to promote appropriate participation, but does not clarify the degree of participation required. There is also no legal requirement to verify to the Swaziland Environmental Authority (the agency

responsible for Terms of Reference approval) that adequate efforts were made to include the public. Considering the range of barriers public participation faces in developing countries, it is quite important that every effort is made to support the process. The absence of an explicit framework for public participation during scoping activities is a shortcoming.

Two other opportunities for participation in later stages of the EIA are specified in the Regulations, during project review and during public hearings, if the latter prove necessary. There is no legal requirement for public participation after a draft EIA document has been prepared, before submission to the Swaziland Environment Authority.

Late integration of EIA into the project cycle has been described in a Swazi context, but it should be noted that due to the importance of integrating EIAs into the project cycle on public participation effectiveness, the factors that are described above as relevant to influencing EIA integration are also relevant to influencing the effectiveness of public participation.

Poverty, rurality, illiteracy and the lack of a middle class were all factors described in the literature as likely to constrain public participation in EIAs. Although literacy and education levels in Swaziland are relatively high for Africa, with a literacy level of approximately 55% (CPC Medialab, 1995), it is still very low compared to developed countries. As well, this figure is a national average, but literacy in rural areas is much lower than in urban areas, so it may be much lower than 55% for many affected communities. It is noteworthy that although the Regulations describe detailed requirements to ensure public availability of EIA documents, there are no regulations that ensure that the documents are in a form that is understandable by most Swazis.

In Swaziland, approximately 87% of the population live in rural areas (IUCN, 1993). Many of these people can only be accessed by poor quality roads, if accessible by road at all. Access problems make participation of rural communities more difficult.

Swaziland has a middle class, who have been the most active group in terms of political criticism of the government and are well poised to participate in EIAs. Many interested public participants in the Mantenga EIA were members of the middle class.

As described earlier, due to widespread poverty rural Swazis are likely to be more preoccupied with immediate concerns than with future ones, and will probably be less interested in public participation.

#### ***4.5.1.10 Summary of Public Participation Issues***

A brief review of the relevant literature indicates that many factors can constrain public participation in developing country EIAs. These factors include nondemocratic government systems that do not support the rights to assembly and free speech, and certain cultural norms that are not conducive to public participation. Traditional systems of representation may provide a good means of public participation, but are also prone to certain problems of nonrepresentation, due to social inequalities and domination by the social elite.

In Swaziland, the political system is not based on any tradition of representative democracy and freedom of speech and assembly are constrained in ways that can discourage people from engaging in any participation that may appear politically opposed to the government. Elements of traditional cultural factors that are likely to influence participation in EIAs include xenophobia, entrenched status hierarchies, means of expression and communication that are particularly prone to cross-cultural misunderstanding by foreign consultants, and subtle but pervasive traditional motivations to avoid conflict. Traditional representatives are criticized as not being motivated to adequately represent the interests of their rural subjects.

Other additional issues cited by the literature to potentially constrain public participation in Africa include illiteracy, poverty, ruralism, public ignorance of EIA, a lack of legal framework, technocentrism, inexperience of governments in conducting public participation, lack of a middle class, and integration of EIAs in the project cycle too late for meaningful participation. Many of these issues pose problems to public participation in Swaziland.

### ***4.6 Human Resources***

A shortage of people trained in EIA is a constraint to EIA administration, practice and review in many countries, including Swaziland. For this reason, most EIA in Swaziland is practiced by foreign consultants. This shortage poses a problem for EIA effectiveness in Swaziland, because it results in poor compliance of authorities with their responsibilities, and increases the potential for cross-cultural misunderstandings to arise.

#### ***4.6.1.1 Literature Summary***

Many authorities identify a lack of human resources trained in EIA as a major problem that limits the effectiveness of EIA in developing countries (e.g. Murphy, 1982; Aw, 1996; Werner, 1992; Brown, 1997; Wramner, 1992; Biswas, 1992; Kakonge, 1993).

Lemons and Porter, in their (1991) *Comparative Study of Impact Assessment Methods in Developed and Developing Countries*, found that a lack of qualified personnel was the considered to be second biggest problem encountered in impact assessment in developing countries, after data limitations. A shortage of people trained in EIA in developing countries leads to poor quality EIAs and EIA review that results in proponents and the public becoming cynical of the EIA process (Bisset, 1992).

As a response to the shortage of trained human resources, EIA training should be accelerated through workshops, seminars, short term training and group training, as well as integrating interdisciplinary courses into university curricula (Kakonge and Imbevore, 1993). The need for both short-term and long-term multidisciplinary practical EIA training courses in developing countries has also been recognized by Biswas (1992), who specified that they are particularly needed because impact prediction in EIA is largely based on professional judgment and/or past experience, both of which are in demand in developing countries. Aw (1996) recommends the use of counterparts whenever external consultants are required for EIAs, as a means of increasing local EIA capacity.

#### **4.6.1.2 Application to Swaziland**

Swaziland shares the experience of other developing countries in its shortage of people trained in EIA. This is evidenced in the use of external environmental consultants. Ypma (1997) describes as a constraint faced by the Swaziland Environment Authority (SEA) in the enforcement of EIA legislation the...

*(l)ack of manpower for effectively policing and enforcing the EIA regulations. Currently only two people are charged with ensuring that the whole EIA procedure is conducted to the SEA's satisfaction. Since the promulgation of regulations the number of EIAs required by law has increased. At the moment all the Interested and Affected Parties... still need to be educated on the proper use of the EIA regulations... (T)his adds severely to the manpower problem.*

The small number of EIAs conducted has also served to limit the experience of the Swaziland Environment Authority in reviewing EIA. This may account for oversights such as neglecting to conduct public review during the Mantenga EIA process.

Screening is a particularly noteworthy stage of EIA where limited local expertise is likely to constrain the effective application of EIA. Screening is conducted by people in the government authorizing agencies who are approached by proponents for licenses and permits for development. The people who do screening are guided by lists that are not exhaustively inclusive nor exclusive-- although the lists offer guidance, they do not dictate projects which specific kinds of projects absolutely require EIAs or which absolutely do not require EIAs. People involved in screening therefore have to exercise their own case specific judgement on whether

or not developments involving a given scale, type of activity, and location are likely enough to cause significant impacts to merit an EIA. While the existence of a category that requires only an Initial Environmental Evaluation reduces the all-or-nothing potential of this decision, there is still much room for error. If the error is in favour of not conducting an assessment, it is less likely to be noticed. The people conducting screening are not environmental specialists, and most probably have very limited backgrounds pertaining to environmental issues. They are unlikely to possess the skills to exercise the judgement required for consistently effective screening (Ehrlich, 1997).

#### ***4.7 Follow-up and Post-Project Analysis***

Although improving the quality of decisions made about a proposed project is one of the major goals of EIA, the process should not stop once the decision regarding project approval has been made. EIA is a process that must extend into the implementation phase of projects. This section deals with the parts of the EIA process that occur during project implementation, and the constraints they face in developing countries in general and Swaziland in particular.

##### ***4.7.1.1 Literature Summary***

Several aspects of the EIA process occur after project approval has been granted, during project implementation. These include implementation of the mitigations, the monitoring of conditions to determine the occurrence of uncertain impacts and, if necessary, their management, and evaluating predictions for the benefit of future practice. The term “post-project analysis” refers to these undertakings, and can be defined as the environmental studies undertaken during the implementation phase of a project, after the decision to proceed has been taken (UN, 1990). Monitoring and auditing are two other terms that often refer to activities that are part of post-project analysis. Kakonge states that a good monitoring and audit system is “one of the most important parts of EIA” (Kakonge, 1997:117).

Although follow-up is very important to EIA effectiveness, it is not sufficiently conducted in the developing world. A UN study in 1992 identified a lack of monitoring and the skills and equipment it relies on as a constraint to the widespread use of EIA (UN, 1992, as cited in Kakonge, 1993). From the view of the African Development Bank, it has been noted that “(t)here is rarely any follow-up monitoring or implementation of mitigation measures which may have been recommended by the EIA study”, which “significantly reduces the usefulness of EIA and prevents it from becoming an effective tool for impact management” (Aw, 1996:146). Biswas (1992) and Werner (1992) also indicate that a lack of follow-up

or post-project analysis is a significant problem in developing countries. Thanh and Tam (1992) recognize the need for follow-up studies, and also identify the need for more post-project analysis (described as “project evaluation”) in developing countries to help facilitate learning from experience. They recommended that post-project analysis become integrated into the project cycle to improve future EIAs in developing countries.

#### ***4.7.1.2 Application to Swaziland***

The importance of follow-up in Swazi EIA has been recognized to a degree, as the EIA requirements indicate by the requirement of a separate Comprehensive Mitigation Plan document, that outlines the required mitigation measures and monitoring plans. By including the Comprehensive Mitigation Plan as a separate document, the people who implement mitigations and monitoring do not have to go through an entire EIA to determine their responsibilities.

According to the EIA Regulations, a Comprehensive Mitigation Plan must identify (GOS, 1996: Second Schedule D):

- *the impacts to be prevented or reduced in severity*
- *benefits to be enhanced*
- *mitigation measures to achieve the above*
- *costs, institutional (sic) and training requirements*
- *monitoring programmes to track project-related impacts and implementation of mitigation measures*
- *community liaison procedures needed*

and must also contain explicit descriptions of the schedules and targets for implementation, the reporting procedures to be followed, work programmes, a budget, and staffing and training requirements.

These legal requirements are insufficient to ensure effective mitigation and monitoring. In both the EIA and the Comprehensive Mitigation Plan, there is no requirement to justify confidence in the choice of mitigations. This means that there is no basis offered for assumptions about the effectiveness of the proposed mitigation measures, and, therefore, of predictions about the effects of the project that they are supposed to improve or prevent. This is a serious limitation of the effectiveness of the Swazi EIA process in informing decision-makers.

Although the regulations demand that monitoring programmes be described, they do not require many of the details that are important to ensuring that monitoring is effective. The Comprehensive Mitigation Plan is not required to specify whose responsibility monitoring should be, a means of determining where and when samples should be taken, specifically how the data will be applied, how the results

will be evaluated, and what management responses are proposed for different scenarios. These details are necessary components of an EIA monitoring plan (Ross, 1995).

One of the major control mechanisms of EIA is the power of the review agency to not sanction a project for which an unacceptable EIA has been done (Ortolano et al., 1987). However, because mitigation and monitoring both occur after project approval decisions have been made and are no longer uncertain, proponents may not feel as compelled to conduct the implementation phase aspect of the EIA. In light of this, it is reasonable to believe that the limited enforcement capability of the Swaziland Environment Authority (Ypma, 1997) may lead to problems ensuring compliance in mitigation and monitoring.

Swaziland's EIA regulations fulfill some, but not all, of the roles of post-project analysis. Although regulations exist for implementation of mitigations and monitoring, neither of these serve to guide future EIAs by studying projects after EIA, during construction and operation, to identify and manage unexpected effects. The monitoring requirements in the Regulations only apply to environmental effects that have been recognized as uncertain during EIA. They do not include any means to use hindsight to recognize undesirable environmental effects that were completely unpredicted during EIA. Post-project analysis enables the recognition of such unpredicted impacts, particularly where there was insufficient information available during the EIA process. Therefore, the monitoring and follow-up regulations fulfill many but not all of the important roles of post-project analysis. Since data limitations have been identified as an EIA constraint in Swaziland, the need to identify unpredicted and undesirable effects of development projects is greater than it otherwise might be, both so that the effects can be managed appropriately and so that the same mistake need not be repeated needlessly in the future.

By making possible the evaluation of past EIA through comparison of predicted impacts with impacts that really occurred, more thorough post-project analysis can serve as a resource for future EIAs, helping to improve the accuracy of future predictions. Because Swaziland as a nation has both limited experience and limited expertise in EIA, this benefit may be considerable. For these reasons, the exclusion of the above aspect of post-project analysis from the EIA requirements is a constraint on the effectiveness of EIA in Swaziland.

## **5. Recommendations**

### ***5.1 Introduction***

This section will offer recommendations to increase the effectiveness of Swazi EIA. These recommendations are based on both the empirical experiences of conducting the Mantenga EIA, which was the subject of the earlier case study, and the constraints that were recognized as factors that limit EIA effectiveness in Swaziland. Recommendations follow general principles that are described below, and involve institutional rearrangements, modifications of the EIA regulations, and educational initiatives for specific groups having roles in the EIA process. Also, a method is suggested to increase the effectiveness of public participation in Swaziland's rural traditional communities.

### ***5.2 General Principles***

Recommendations suggested in this section are based on a number of guiding principles. First, recommendations should be relevant, in that they should address important constraints on EIA effectiveness. Recommendations must also be realistic, in that they must be culturally, socially and economically feasible within the conditions of Swaziland.

Recommendations should be as efficient in achieving their purposes as possible. This means they should:

- take advantage of existing mechanisms and institutions, as it is usually more efficient to use what is already existing in new ways to achieve goals than it is to invent entirely new means;
- ensure that the most fundamentally important requirements of effective EIA are supported by a number of mechanisms, so that if an individual mechanism should prove ineffective, its purpose will be met to a degree by other mechanisms; and,

- ensure that each of the suggested interventions support many requirements of effective EIA.

There are limits to the above. Sometimes there is only a single way to achieve a certain requirement of EIA effectiveness. Also, if a single mechanism can reliably fulfill its function, then the costs of redundancy may be unwarranted and undesirable. Many conditions that are external to the EIA process have been noted to affect EIA practice. Redundancy is a means of increasing confidence that the requirements for effective EIA are met even in the face of uncontrollable external variables. This is only feasible to a certain degree.

Many conditions have been already identified in this project to constrain EIA effectiveness. Where possible and desirable, recommendations will address the causes of these conditions. Where this is impractical, recommendations will focus on reducing the effect of the constraining condition on effectiveness of EIA, or compensating for the constraining condition's effects.

### ***5.3 Institutional Relocation of the Swaziland Environment Authority***

The present location of the Swaziland Environment Authority in the Ministry of Tourism presents a significant barrier to the effectiveness of EIA. The location of the Swaziland Environment Authority within a low status ministry does not give it the political power and influence that enable it to conduct its responsibilities most effectively. As well, the Ministry of Tourism is a ministry that deals primarily with the benefits of economic development, which reflects poorly on the autonomy of the Swaziland Environment Authority.

In Chapter Four, literature was cited suggesting that environmental agencies in developing countries should be situated in high-profile powerful ministries, such as those responsible for planning (Ebisemiju, 1993; Kakonge and Imevbore, 1993). This should be implemented in Swaziland. The Swaziland Environment Authority would be better located in the Ministry of Economic Planning and Development, which is a high-profile ministry<sup>31</sup>. This move would increase the Swaziland Environment Authority's political influence and status in the regard of other sectoral ministries, and would accordingly reduce the likelihood of their being circumscribed. As a part of a higher profile ministry, the Swaziland Environment Authority would have more prestige, and is likely to receive better funding and therefore better staffing, which would help relieve the current constraint of low staffing levels.

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<sup>31</sup> The Ministry of Economic Planning and Development is obviously a ministry which deals largely with groups that experience the benefits of development (as opposed to the costs), as is the Ministry of Tourism. However, it is more logically situated to deal with the non-financial costs of development than is the Ministry of Tourism.

In addition to increased political influence, staffing and funding would lead to the Swaziland Environment Authority having a greater enforcement capacity, because of greater staff availability, improved facilities, and a lesser chance of meeting political resistance in carrying out activities. This would help ensure that the EIA process is followed and that EIA reports of acceptable quality are produced, because the adherence of proponents to regulations could be better enforced. As well, more enforcement would lead to more compliance with regulations, such as the scrupulous implementation of mitigation and monitoring procedures in projects after proposal approval, because of the higher risk of it being recognized by the Swaziland Environment Authority.

In Swaziland there is a common perception that power is often exercised on the basis of personal connections, as demonstrated in Chapter Three and described in Chapter Four. Swazis place greater emphasis on political status and connections to power, relative to authority as dictated by formal structure, than is the case in Canada. This is often demonstrated in people's actions, in terms of the degree to which they are willing to accommodate authority.

Greater political influence and status would raise the recognition of the importance of EIA among the various sectoral ministries that have roles to play in the process, which would therefore become more receptive to the responsibilities created for them by the Regulations. This would 1) increase their participation in government training workshops, so that they are better informed to carry out their responsibilities well, and 2) provide greater motivation to carry out those responsibilities carefully.

For example, further training is required for the people that will conduct screening in authorizing agencies. If screening agents are better trained, they will more capable of doing their jobs well. The more influential the Swaziland Environment Authority becomes, the more likely it is that authorizing agencies will be willing to participate in training and exercise better informed judgment in practice during screening.

The relocation of the Swaziland Environment Authority to the Ministry of Economic Planning and Development could also be of direct use to the Ministry. Many large developments in Swaziland receive funding from international aid organizations with EIA requirements of their own. Having the agency that is responsible for EIA within the Ministry of Economic Planning and Development would reflect well from a development aid perspective, as well as contributing to the sustainable development that international aid organizations require. This is likely to result in increased amounts of international aid money for Swaziland.

The appropriate way to actualize this recommendation is probably to have the director of the Swaziland Environment Authority approach the Office of the Prime Minister to relocate the Authority as described.

## **5.4 Enhance Regulations**

The effectiveness of EIA in Swaziland could be increased by enhancing the EIA Regulations in certain areas. This section will suggest four changes to legislation, one of which pertains to existing regulations and two of which propose new additions to the regulations.

### **5.4.1 Detailed Requirements in Comprehensive Mitigation Plans**

#### **5.4.1.1 Mitigation**

Detailed descriptions of mitigation and monitoring techniques are required in the Comprehensive Mitigation Plans that must accompany EIA documents. These plans are intended to ensure that mitigations are implemented with the result of avoiding or reducing undesirable impacts. To achieve this goal, there should be a requirement for the justification of proposed mitigation measures. At present, there is no requirement for the EIA to establish any basis for confidence in selected mitigation measures.

Since mitigation measures can play an important role in moderating the undesirable effects of development, their consideration is an important part of decisions that are based on evaluation of predicted effects. These decisions require a basis for confidence that the mitigation is appropriate and reliable to achieve the result for which it is proposed. The onus of establishing the justification for confidence in mitigation measures should be on the proponent. Since mitigation details are in the Comprehensive Mitigation Plan, this would be a reasonable place to include the justification of confidence in proposed mitigations.

Adding this requirement to the Regulations would remedy the problem of there being no basis to evaluate the reliability or appropriateness of proposed mitigation measures, as described in Chapter Four. Having to justify the choice of mitigation measures and their reliability would result in greater scrutiny of possible mitigations, leading to better understandings of their effects and better predictions of overall impacts. This can help to reduce or avoid unpredicted impact or levels of severity of impacts resulting from ineffective mitigations. Also, it offers decision-makers a means to evaluate the reliability of predictions in EIAs.

### **5.4.1.2 Monitoring**

In Chapter Four, it was pointed out that fundamental details of monitoring are absent from Comprehensive Mitigation Plans. There is a requirement in the EIA Regulations that monitoring plans be described, but there is no requirement for the inclusion of information that is necessary to ensure that the monitoring plan is to be effective. The requirements of the Comprehensive Mitigation Plan should be expanded to describe the following:

- who is responsible for monitoring,
- a means for determining where and when samples should be taken,
- what analyses will be applied to the data, and,
- how the results will be evaluated.

It is also particularly essential that clear descriptions of the management responses to various scenarios that monitoring may identify be included in Comprehensive Mitigation Plans. This would enable the results of monitoring to lead to the necessary interventions.

The inclusion of some of these details in Comprehensive Mitigation Plans is recommended by the EIA Guidelines. Since these are fundamentals of effective monitoring, they should be required by the Regulations as well as the Guidelines. The Regulations do include requirements for many of the essential details of mitigation measures to be included in Comprehensive Mitigation Plans. Not including a similar level of detail regarding the fundamentals of monitoring is inconsistent, and results in documents that need not provide any basis for the Swaziland Environment Authority to decide whether or not proposed monitoring is adequate.

Including these monitoring details in Comprehensive Mitigation Plans will make monitoring more effective, by increasing the proponent's accountability through clear lines of responsibility, which will help ensure that monitoring is conducted according to EIA commitments. It will also enable the Swaziland Environment Authority to better evaluate the scientific methodology of monitoring, and the adequacy of proposed management responses to various scenarios that are identified by monitoring.

Another addition to the follow-up and monitoring requirements that would be beneficial is a requirement for a commitment to the later study of effects that arose that were unpredicted in the EIA, and of the effects predicted in the EIA that failed to arise<sup>32</sup>. Detailed plans for this need not be described before EIA approval, but a commitment from the proponent to develop such a study later

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<sup>32</sup> Monitoring as described in the Regulations can only study impacts which were recognized as uncertain during the EIA, but cannot identify occurring impacts that were completely unpredicted.

should be necessary for the granting of an Environmental Compliance Certificate for any project screened into Category 3.

This would enable the Swaziland Environment Authority to see that undesirable impacts that were not predicted are recognized and managed. This is particularly important in light of the data limitations in Swaziland. As a learning tool for future EIAs, requiring a study of how predictions compared to reality would make it possible to retrospectively evaluate the accuracy of past predictions and the effectiveness of mitigation measures. Along with monitoring, it would also make it possible to determine how effective environmental management efforts have actually proven for the project. By analyzing cases with the benefit of hindsight, this could facilitate the development of local expertise. Such regulations would help to compensate for the limited enforcement capabilities of the Swaziland Environment Authority, because proponents are more likely to comply with commitments if they know that their project will be subject to later study.

Established sources should be consulted by the Swaziland Environment Authority to determine the necessary content of these studies, and the techniques for developing them for projects, so that appropriate regulations can be formulated<sup>3</sup>.

#### **5.4.2 Require an explicit framework for scoping**

There should be a requirement in the Regulations for an explicit accounting of how scoping is conducted in EIAs. Current regulations require that many stakeholders be consulted, but without descriptions of how they were identified, how they were consulted, and why the means of consultation was appropriate for the stakeholders and adequate for the EIA. These details are necessary to establish the credibility of the scoping process, and should be required by the Regulations. It is not reasonable for the Regulations to require a single standardized scoping process for all projects, because of the range of different groups likely to be interested or affected by different projects, but those who

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<sup>3</sup> Sources that might prove useful to this include:

Culhane, P.J. 1993. "Post-EIS environmental auditing: A first step to making rational environmental assessment a reality." *The Environmental Professional* 15(1):66-75.

United Nations Task Force on Environmental Impact Assessment Auditing, Post-project Analysis in Environmental Impact Assessment: Analysis of European and North American Case Studies, United Nations, Geneva, 1990.

Davies, M. and Sadler, B. 1990. *Post-project Analysis and the Improvement of Guidelines for Environmental Monitoring and Audit*. Ottawa. Environment Canada Report EPS 6/FA/1.

conduct EIAs should bear the responsibility of establishing that the scoping process that was used was both effective and suitable for the proposed project.

This responsibility should require that a draft pre-scoping Terms of Reference document describe who is being consulted, why they are being consulted, and how they are being consulted, as well as providing the basis for confidence that the means of consultation are expected to result in adequate participation and representation of the parties involved. This should also include a description of the means (e.g. media) by which the public will be informed, so that the Swaziland Environment Authority can assess its utility.

By requiring proponents to commit to appropriate scoping plans before the final Terms of Reference is agreed upon, proponents are more likely to carry out thorough, credible scoping with all the parties likely to be interested or affected by a development. This will allow the EIA to better focus on relevant issues, saving time and money by avoiding issues of little importance (and avoiding efforts to unnecessarily resolve background data limitations) while including all the relevant issues. More thorough and credible scoping would also increase the likelihood that all stakeholders have been adequately represented and that their interests are adequately reflected in project design. Considering the many constraints on public participation in Swaziland, this is particularly desirable.

If proponents were required to have the Swaziland Environment Authority approve the scoping process used in EIAs, it would be able to assess to what degree the EIA identifies and addresses the most relevant issues, and therefore how adequate in that respect it is as a basis for decision-making. This would also enable the Swaziland Environment Authority to evaluate how the constraints on public participation described in Chapter Four were dealt with. If used in conjunction with follow-up study of the project, the evaluation of scoping methods in EIAs could result in the eventual identification of the most credible and effective methods of conducting public participation that are particularly suited to the conditions of Swaziland.

## ***5.5 Training and Education***

The EIA process requires many people to fulfill specific roles in certain ways if it is to be effective. Since EIA is a fairly recent requirement in Swaziland, many people with roles to play in EIA do not recognize their roles, or are not adequately knowledgeable to fulfill them properly. As indicated in Chapter Four, limited expertise is a constraint to EIA effectiveness in Swaziland and much of the developing world. It is not surprising, then, that there is a need for greater education and training to increase EIA effectiveness, as education is a reasonable

means to improving people's abilities to play their parts. There are many opportunities for education to improve the effectiveness of EIA in Swaziland.

To date, there has been some EIA training in Swaziland. The Swaziland Environment Authority held a week long series of day-long workshops in March of 1996 directed at proponents, authorizing agents in government, and NGOs. Lectures in EIA have also been part of the Malolotja Environmental Education Centre's programme of Environmental Literacy for Facilitators of Change, and of the Mananga Management Centre's course in Environmental Management in Development. These efforts should be continued and expanded towards the following target groups.

### **5.5.1 In-Depth Training for Reviewers and Practitioners**

It is very important that both reviewers and practitioners gain expertise in their areas. This will require a program that is more in depth than any that have been offered to date. As Ross (1994:230) writes of EIA training courses in the context of developing countries:

*Such courses can provide the human resources necessary to implement the system effectively. More people will be able to work as consultants preparing EISs; more will be capable of reviewing the EISs and managing the system; and more will understand that EIA, used appropriately as a planning tool, can contribute significantly to sustainable development in a cost-effective manner.*

All of these benefits will increase EIA effectiveness in Swaziland. Courses should be directed toward not only increasing the number of people qualified to review or practice EIA, but also to increase the expertise of the people who are currently doing so. Increased expertise will lead to better EIA review, and greater nationalization of skills needed to conduct good EIAs.

Nationalization of EIA expertise should be a priority for Swaziland. When Swazi nationals conduct EIAs, they are likely to do so with a greater cultural sensitivity than any expatriate is likely to have. This should largely resolve the problems associated with cross-cultural communication during public participation. As well, rural Swazis may feel more comfortable voicing concerns to a fellow Swazi.

Professional judgment will play an inordinately major role in EIA predictions in Swaziland as a means of compensating for data limitations. This makes it all the more important to increase the understanding and practical experience of practitioners. One way to fast-track this while pursuing the nationalization of EIA expertise is to require foreign practitioners to take Swazi counterparts for EIAs in Swaziland, as was generally recommended for EIA in developing countries by Aw (1996) and in the Middle East by Ross and Jones (1994). Many international agencies now use counterparts as an effective means of skills transfer and building

of national capacity in developing countries. As is often the case, in EIA this relationship is likely to be mutually beneficial. The foreign practitioner will presumably have the skills to transfer to his counterpart, while the Swazi national will have the greater knowledge of Swazi culture that is an asset to the EIA.

Authorizing agents are another group of EIA practitioners that require training. As discussed in Chapter Four, problems in screening are particularly likely to limit the effective application of EIA in Swaziland, because in many cases screening agents are unlikely to possess the skills and knowledge to adequately make the necessary judgement.

Two kinds of educational courses are required to fix this problem, one directed at increasing environmental awareness and knowledge and another at applying it to the EIA process. Good environmental education courses are available in Swaziland that will increase both environmental knowledge and appreciation. The three day programmes of either the Malolotja or Mlawula Environmental Education Centres are effective and adaptable to particular group focuses. The Swaziland Environment Authority should organize workshops for people who will be undertaking project screening that describe the underlying EIA theory but focus mainly on practical screening exercises. Ideally, the practical workshop in EIA screening should follow the general environmental education course. It should be feasible for the two to be combined, with the practical workshop conducted at the environmental education centre by the Swaziland Environment Authority following the general environmental education course.

### **5.5.2 Building the Capacity of Likely Proponents**

Late integration of EIAs into project planning was recognized as a constraint to EIA effectiveness in Swaziland. In order to increase the early integration of EIAs into the cycle of proposed projects, proponents must be motivated to begin EIA at an early stage of planning, before they apply for a permit or license to develop.

This should be facilitated by ensuring that they are familiar with the direct benefits of EIA to proponents. In addition to familiarizing proponents with the relatively new legal EIA requirements, these courses should illustrate that EIA leads to better developments that are often more profitable, avoids the greater expense of repairing later environmental damage, increases local support for projects, and often protects the resource base that proponents depend on industrially. They should also illustrate the proper integration of EIA into the project cycle. Examples from Swaziland should be used where possible, including previous EIAs and counter examples of instances where avoidable industrial pollution proved to be very expensive to industry. These courses need not be in great depth, but simply describe the EIA process and clarify the benefits

and responsibilities relevant to proponents, and should be directed at government, parastatal, and private organizations that are likely to propose developments that will require EIAs.

By increasing the awareness and motivation of proponents to integrate EIA early during project planning, the meaningful use of alternatives becomes a possibility. This enables EIA to be more effective as a design tool, increases the chances of accommodating stakeholder interests, and allows for flexibility in the face of limited data availability. It is also more likely to prevent EIAs that are conducted after planning and serve only as a bureaucratic rationalization exercise for a preconceived project. Also, emphasizing the benefits of EIA to proponents may help to compensate for their reluctance to accept the loss of decision-making autonomy inherent in the external control imposed upon them by EIA process imposes.

### **5.5.3 Building the Capacity of Traditional Leaders**

In Chapter Four, there were many constraints identified to public participation in EIA in Swaziland, particularly for members of traditional rural communities. The support of traditional leaders would be very helpful for facilitating the inclusion of their subjects during the participation stages of EIA. Chiefs and Indvunas should be familiarized with the purposes, principles and process of EIA. This could be accomplished in a short course that could be connected to the regular meetings of the Council of Chiefs at the request of the Swaziland Environment Authority. In making this request, the Authority should point out to the Council representatives that this course could offer Chiefs the expertise they require to attract development to their Chiefdoms. This course should emphasize to Chiefs 1) the importance of EIA in maintaining the quality of life in rural areas while supporting development, and 2) the need for scoping to gain input of views, opinions, concerns and information from the public.

Doing this would help traditional leaders to recognize the benefits that EIA can offer them, which is likely to increase their cooperation in future EIAs. Also, by familiarizing traditional leaders with the EIA requirements of development aid organizations, it can be illustrated that development aid is often dependent on EIA, which is likely to further increase traditional leader's support for and cooperation in future EIAs. Support of traditional leaders will increase the receptivity of traditional rural communities to participation efforts, by making it more internalized, and will probably make rural residents more willing to discuss issues openly with outsiders. It would also help to facilitate the realization of the public participation method described later in this section.

#### **5.5.4 Capacity Building Among Organizations Conducting Rural Education**

There are many organizations that conduct community outreach or rural education that can be valuable for raising local people's awareness of their role in EIA. Environmental education officers, NGO information officers, government extension officers and others have experience in raising awareness about specific topics in rural communities<sup>34</sup>. Further education efforts should be directed at these people. This course should emphasize the ways in which EIA supports the environmental, social and related health goals that are shared by their respective organizations, and the role of and need for public participation in EIA, in addition to familiarizing them with the overall process.

This would achieve two goals. First, when an project arises that is likely to affect a given rural community, these people could be instrumental in informing the community about EIA in general, helping to compensate for some of the constraints to public participation that were identified in Chapter Four. Second, because many of these organizations are interested in issues that are likely to be affected by development, there are opportunities for their involvement in EIA both in scoping as interested parties and as possible sources of information on relevant conditions. In addition to improving scoping, this may help in some ways to compensate for certain limitations on public participation. By increasing the understanding of such organizations of the process, there is a greater chance of their participation directly in EIAs.

The potential role of NGOs and government extension officers as facilitators for public participation in African EIA has been recognized in the literature (Kakonge, 1997; World Bank, 1991b, as cited in Kakonge, 1993). It has also been observed that a role of NGOs in developing countries can be to represent the interests of local people in the EIA process in some cases where the public is too poor or uneducated to participate themselves (Rickson et al., 1990).

It has also been recommended in the literature by Merideth that traditional communities in developing countries be educated about EIA prior to the proposal of any particular development. The involvement of communities in EIA is usually a reaction to development proposals that originate from outside of the society, which increases the dependence on the project alternatives chosen by project proponents when community goals are determined. It is claimed that this could be prevented by ensuring that communities are familiar with the advantages offered to them by EIA prior to the proposal of any specific project (Merideth, 1992).

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<sup>34</sup> A detailed list of institutions with mechanisms for raising public awareness in rural communities can be found in the Public Information, Education and Participation section of the Swaziland Environmental Action Plan, compiled under the Swaziland Environment Authority under the Capacity 21 programme of the UNEP. The National Environmental Education Programme also has details about such institutions.

Merideth's recommendation is not suitable for Swaziland, where any education programme aimed at rural people in general is going to be a massive undertaking, because so much of the population lives in rural areas, and is difficult to access. As well, there are many other priorities for rural educators that are more important to rural communities, such as health practices, general environmental awareness, sustainable agricultural practices, and range management. All of these are directly linked to the lives of rural residents, while EIA theory is only potentially relevant if an EIA that requires their participation should arise. The organizations that conduct rural education in Swaziland are severely constrained by limited staff, finances and equipment, and cannot afford to focus education programmes on issues that are not immediately and directly relevant (This has also been recognized as a constraint that applies to many NGOs in Africa (Kakonge, 1996)).

On the other hand, increasing public awareness of EIA in rural areas only when EIAs are going to occur in those specific areas is more likely to be effective, and NGOs and government extension officers involved in rural education are reasonable agents to contribute to this<sup>35</sup>. Directing efforts only at particular rural areas in this way will make it possible for education efforts to be more focused, and therefore more efficient and effective. It also will ensure that education efforts are directly relevant to their audience.

By training (or further training) the EIA practitioners, reviewers, likely proponents, traditional leaders, authorizing agents, and organizations that conduct rural education, each will develop better understandings of the importance of EIA and the roles they should play in it. This will make these groups more likely to do their part in EIA, by raising levels of understanding, appreciation and motivation, and more likely to do it better, by increasing capacity. As well, further training will, in some of these groups, expand the number of people who are able to become involved in EIA professionally.

## ***5.6 Increase Enforcement Capabilities of the Swaziland Environment Authority***

During the Mantenga EIA, stakeholders voiced concern about the ability of the Swaziland Environment Authority to enforce the proponent's mitigation and monitoring commitments. A staff shortage leading to enforcement limitations was identified by Ypma (1997) as a significant constraint to the effectiveness of the Swaziland Environment Authority.

The staff of the Swaziland Environment Authority should be increased to enable enforcement, because this is essential to ensuring EIA follow-up, and indirectly to

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<sup>35</sup> It may also be feasible to hire independent groups such as university personnel for this purpose.

public confidence in the process. Also, the necessary equipment, such as vehicles, must be available for enforcement-without these, the benefits of additional staff will be severely limited.

It was mentioned earlier in this chapter that increased staffing and equipment for enforcement are probable results of the recommended relocation of the Swaziland Environment Authority. Even if this move never happens, the Swaziland Environment Authority requires additional staff and equipment to be capable of enforcing the EIA Regulations. If the funds for this are not provided, the long term financial costs of dealing with the problems that arise from poor environmental management will be much greater. Enhancing the capacity of the Swaziland Environment Authority is preventative and likely to be much more cost-effective.

If future experience indicates that proponents do not comply with commitments because of doubts about the Swaziland Environment Authority's ability to enforce, it may be necessary for the Swaziland Environment Authority to demonstrate its willingness to enforce the Regulations. Enforcement has been recommended to demonstrate to proponents the enforcement capability of an environmental review agency in the developing world before (e.g. Ross, 1994)<sup>36</sup>.

### ***5.7 A Proposed Method for Conducting Participation of Rural Communities***

Numerous constraints to effective public participation have been identified in Chapter Four. Many of these apply particularly to people in rural communities. Many, but not all, of the constraints identified can be avoided by incorporating the traditional forum of participation into the EIA process. As the relevant literature indicated, even with the constraints of traditional social inequalities, traditional systems of representation have much to offer EIA because they are both already established and already adapted to the surrounding socio-cultural system (Appiah-Opoku, 1994b). It is an indigenous African political tradition that community meetings let ordinary tribe members participate in decision-making, and contribute to the reaching of consensus (Ayittey, 1991, in Appiah-Opoku, 1994b). Historically, because consensus-building traditionally was dependent on community participation, the participation of all adult community members was required for the necessary broad agreement on community decisions (Appiah-Opoku, 1994a). Traditional systems of community representation have been recognized as potential means of increasing EIA effectiveness in other countries of the sub-Saharan African region (e.g. Kakonge, 1996).

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<sup>36</sup> Also see Ross (1994) for details on the selection of an appropriate case for the demonstration of enforcement capability.

In Swaziland, community members do contribute their opinions during the traditional community meetings at the Chief's kraal, and this could be used to increase EIA effectiveness if applied to public participation stages of the EIA process. A specific way of achieving this is suggested as follows. During EIAs, the Minister responsible for the Swaziland Environment Authority, and therefore for EIAs, should write a letter requesting that Chiefs hold certain meetings to discuss proposed developments. Chiefs are likely to call meetings on specific subjects if requested to do so by a government minister. When Chiefs call meetings, many of their subjects attend and participate. Prior to any meetings, the proponent or its representative should familiarize himself<sup>37</sup> as well as possible with protocol and appropriate norms of behaviour at a Chief's kraal meeting.

During the first meeting, with the Chief as facilitator and, if necessary, with the aid of translators, the proponent or consultant should inform the community about the EIA, the project, its likely effects, and issues already recognized, and answer questions. This would also be a suitable time to identify sources of indigenous knowledge. To provide enough time for consideration and discussion of people's concerns within the community, the next meeting should be conducted at least two weeks after the first. The objective of this second meeting would be to identify and prioritize community concerns. Finally, a meeting should be held at the Chief's kraal after the draft EIA is completed, before it is submitted to the Swaziland Environment Authority, to describe the results of the EIA, illustrate how concerns were incorporated into the EIA process, and to take further comments. Minutes should be taken in SiSwati by an assistant to the proponent or consultant, for later submission to the Swaziland Environment Authority.

This method of public participation is likely to be representative of the views and concerns of members of rural communities. It would not only serve to educate and inform communities about development (which has been cited as one of the main purposes of EIA (Rickson et al., 1990)) but also would provide an accurate and open perspective of their interests and concerns. This, if applied to the wise choice of project alternatives, leads to better project design. Better understanding of local concerns also leads to more relevant EIAs that will provide a better basis for the consideration of the Swaziland Environment Authority when making decisions about project approval. In addition to enabling the local communities to contribute effectively, this method of participation for rural communities also provides an opportunity to illustrate to them that their concerns have modified the project. This will probably increase local support for the project, which benefits the proponent as well as increasing general public support for the EIA process.

If this method is to be implemented, the Swaziland Environment Authority is well placed to determine which aspects of it require inclusion in the Regulations, and which should only be supported through the Guidelines. At a minimum, this

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<sup>37</sup> It is a cultural reality in rural Swaziland that male presenters are more likely to be effective at a community meeting.

process should be required for all Category 3 projects that are likely to affect traditional rural communities.

It should be noted that while this method of public participation is appropriate for consulting rural communities, other scoping and public participation should also be employed in EIAs (e.g. consultations with technical specialists and interest groups). Considering the variety of constraints to effective public participation in Swaziland, the use of a variety of scoping and participation methods should be encouraged. This method is not intended to replace all other methods, but to complement them by enabling traditional rural communities to participate more effectively.

### **5.8 Priorities**

Although all of the above recommendations are relevant, some are more pressing than others. The three recommendations that should be given the highest priorities are as follows (in descending order):

1. Train government authorizing agents. Because in most cases these agents are the points of entry to the EIA system, they are fundamental to achieving the purposes of EIA. The quality of the rest of the EIA system is irrelevant if proposed projects are not subjected to the process. As described in Chapter 4, government authorizing agents are not capable of fulfilling their responsibilities adequately at present.
2. Improve follow-up aspects of EIA legislation to ensure that adequate monitoring and mitigation measures occur. These are essential aspects of ensuring that unacceptable impacts do not arise from development projects, and are inadequately supported by currently regulations.
3. Relocate the Swaziland Environment Authority to the Ministry of Economic Planning and Development. This would increase the prestige of the Authority, leading to easier implementation of the other recommendations and better enforcement of--and compliance with--the EIA regulations.

### **5.9 Conclusions**

These recommendations span many areas of EIA, from the institutional organization of the government to procedures for utilizing traditional Swazi community fora. Although all of these recommendations are feasible, some are more ambitious than others, because they depend on the cooperation of many

people who are not directly involved in EIA. Taking up this challenge will be a necessary part of increasing EIA effectiveness. Although implementing these recommendations will involve many actors, this is a necessary response to the range of different types of constraints that EIA faces. The EIA process depends on many stakeholders fulfilling a variety of responsibilities at various levels, due to the range of people involved in the development process, and the complex ecological interrelationships of ecosystem components that include people.

Based on the conditions of Swaziland and the constraints they pose to EIA effectiveness, these recommendations should result in better EIA regulations, a more effective EIA regulatory and review agency, more people better able to understand and fulfill their roles in the EIA process, and an EIA process that, in practice, is more conducive to economic development that is ecologically sustainable in the long term.

## **6. Summary and Conclusions**

This section will summarize the conclusions of this report, and will identify some possible directions for environmental assessment in the future. Having completed a case study and an analysis of constraints to EIA in Swaziland, and having made recommendations in response to these constraints, the following observations and conclusions were drawn.

### ***6.1 Summary of the Case Study***

The case study of the Mantenga EIA process revealed EIA initiation issues including a low awareness of the legal EIA requirements, the perception of EIA as a bureaucratic formality, the late integration of EIA into the project cycle, and little detailed formal planning of the development.

The case study also identified constraints to public participation. Some factors that reduced the effectiveness of public participation during the Mantenga EIA included limited participation by traditional rural communities, incomplete application of the public review process by the government review agency, proponents initially disregarding stakeholder concerns as being motivated by self-interest, and stakeholder's perception of undue political influence of the proponent as a means of trivializing the relevance of the EIA results.

Data limitations and poor application of the EIA Regulations by the Swaziland Environment Authority were two other issues that arose.

In addition to project approval, the effects of the Mantenga EIA included significant modifications to project design, leading to fewer adverse impacts, an operationally superior project, cheaper construction, and incorporation of stakeholder concerns. This resulted in both the proponent and major stakeholders recognizing the benefits of EIA, as well as greater project support by stakeholders.

## **6.2 Summary of Constraints to EIA Effectiveness in Swaziland**

The description of selected constraints on EIA effectiveness in Swaziland included the following issues:

1. The institutional location of the Swaziland Environment Authority in the Ministry of Tourism is not conducive to its effective operation, because it is an inappropriate location for the agency. Literature indicates that this sort of institutional location of EIA review agencies in developing countries is not the most effective option because they lead to the agency having little political “clout”. Experiences in Swaziland indicate that this is the case.
2. Public participation in EIA faces particularly daunting constraints. Relevant literature notes that single-party governments are less likely to embrace participation in decision making. Swaziland is a non-democratic Kingdom ruled by a single party, and has human rights limitations that are likely to affect EIA, including limits on freedom of assembly and freedom of expression. This also decreases the chances of people being willing to risk appearing in opposition to government developments. Other factors that are likely to reduce the participation of many people in Swaziland are poverty and rurality. Cultural factors also limit many rural people’s participation, because of traditional norms of conflict avoidance, xenophobia, and other cultural motivators. There is also some question regarding the degree to which traditional representatives such as Chiefs can adequately represent the interests of their subjects.
3. Late integration of EIA may be a problem, as it has proved to be in many other countries with similar conditions, and because in Swaziland proponents are only guided to incorporate environmental considerations into project planning once they have applied for a license or permit, which will often be too late. Relevant literature illustrates that this reduces the planning utility of EIA by limiting its influence on project design, makes EIA more of a rationalization tool for projects that are already fully planned, and increases delays and costs in project implementation.
4. Other problems that are likely to constrain the effectiveness of EIA in Swaziland were identified. In Swaziland, environmental data are often unavailable, due to both the ecological diversity of Swaziland and limited research capacities within the country. There is also a shortage of people trained in EIA in Swaziland. Although there are follow-up requirements made by the regulations that direct the compliance of EIA during the construction and operation phases of the project cycle, these requirements lack certain details that are fundamental to their effectiveness.

### **6.3 Summary of Recommendations**

Several recommendations were made to improve the effectiveness of Swazi EIA. These concerned institutional rearrangements, legislative improvements, education and training initiatives, and the adoption of a particular proposed method for encouraging the participation of rural communities.

It was suggested that the Swaziland Environment Authority be moved from the Ministry of Tourism to the Ministry of Economic Planning and Development. This is appropriate because EIA concerns planning and development more than it does tourism. Also, the Ministry of Economic Planning and Development is a more politically influential ministry, which would increase the operational effectiveness of the Swaziland Environment Authority. This move would be likely to increase the amount of development aid money available to Swaziland by the many international donors that require EIAs to be conducted for projects they fund.

Changes in the EIA Regulations were recommended. It was suggested that Comprehensive Mitigation Plans include justifications for confidence in the choice of proposed mitigation measures and the inclusion of more fundamental details describing proposed project monitoring. As well, it was recommended proponents include in EIAs a means to establish that their scoping activities, which help define the EIA terms of reference and therefore the issues addressed by EIAs, are adequately representative of parties likely to be interested or affected by the proposed project.

Recommendations were also made regarding the training and education of various groups involved in EIA. Groups that should receive further EIA training and education include:

- EIA practitioners and reviewers, to enable more people to practice and to raise quality levels;
- likely proponents, to raise awareness of both the legal requirements of EIA and the many ways that EIA can be beneficial to them, to encourage the integration of EIAs early in the project cycle;
- government authorizing agents, to increase their motivation and capacity to conducting their screening duties conscientiously. They should attend both general environmental education courses and workshops that describe EIA theory but focus on practical screening exercises;
- traditional leaders, to increase their awareness and support of EIA. These should focus on the role of EIA in maintaining quality of life in rural areas while supporting development, and the need for public participation, particularly in scoping; and,

- organizations that are experienced in conducting rural education initiatives, to emphasize the ways that EIA supports their organizational goals and the role and need for public participation in EIA.

The establishment of a system of Swazi national counterparts when foreign consultants are used was also recommended as a means of transferring skills and fast-tracking nationalization of EIA capacity.

Finally, a method was proposed to increase the effectiveness of public participation, by using the existing political hierarchy to increase the participation of rural Swazis through indigenous traditional institutions of government.

#### **6.4 Additional Points**

These recommendations describe only some of the ways that the effectiveness of EIA might be increased in Swaziland. Some of the constraints that were described were not within the scope of EIA to address, such as the overall political conditions of the country. As well, the recommendations only focused on selected opportunities. Some of the identified constraints that could be reduced were not addressed. Additional constraints that were not described here may also reduce EIA effectiveness.

The fact that many of the recommendations were not directed at fundamental parts of the EIA process is indirectly indicative of its general quality. It is only because many of the fundamentals of the EIA process, such as screening, scoping, mitigation and monitoring are already incorporated that it is reasonable in some cases to recommend more detailed interventions, such as post-project analysis and special participation methods for rural communities. This is to the credit of those responsible for the drafting of the EIA Regulations.

A fundamental question that has arisen in relation to the adaptive application of the EIA techniques evolved in Western developed countries to developing countries is: "Should Third-World countries 'round the peg or square the hole?'" (Appiah-Opoku, 1994a:14). It is noteworthy that the recommendations made above involved the changing of the EIA process to adapt it to surrounding conditions in some cases, such as the suggested inclusion of extra validation of scoping methods in EIAs, and the changing of surrounding conditions to adapt them to the EIA process in other cases, such as increasing proponent's awareness of EIA benefits, or the relocation of the Swaziland Environmental Authority. The recommendations made in this study indicate that EIA in developing countries might be made more effective by a combination of both "rounding the peg" and "squaring the hole".

MacDonald (1994) has asserted that most of the problems encountered in environmental assessment in developing countries are different not in their nature but in their degree from those encountered in industrialized countries. The results of this project appear to support this idea, but also to reduce its significance. The areas of EIA that are constrained in Swaziland are similar in quality to EIA constraints that exist or have existed in developed countries, such as data limitations and late initiation of EIAs. However, the difference in degree should not be trivialized, because it poses a much more significant risk to overall EIA effectiveness. This degree is greater because many of the constraints are caused by conditions that are different between developing countries and industrialized ones. While many (but not all) of the problems are similar, the degree of their severity appears to be much greater because of differences in their causes.

### **6.5 The Future**

A possible future direction that may facilitate environmental assessment in Swaziland that is worth investigating is the adoption of scaled-down techniques for cases where a full EIA is overkill, but an Initial Environmental Evaluation (the cursory level of assessment that is used to determine the need for EIAs in proposed developments that have been screened in to Category 2) is insufficient. For example, one assessment technique known as the Environmental Overview, described by Brown (1997), has been shown to achieve many of EIA's objectives while being more applicable to the conditions of the developing world. The Environmental Overview briefly studies baseline conditions, and potential impacts and opportunities, design options and operational strategies. Although it is less rigorous and comprehensive than EIA, the environmental overview requires fewer resources, less expertise, and less time than EIA. While it is not a replacement for EIA, this and other techniques for different levels of environmental assessment may have a place in Swaziland's assessment system, and merit future investigation.

Over time, it is reasonable to believe that the EIA situation in Swaziland will change. Swaziland is in a politically dynamic period right now, which may lead to a more participatory democracy, improving the potential for effective public participation in EIA. Conversely, if tensions between progressive and conservative forces result in open conflict, the resulting disorder would not be conducive to EIA, because issues of short-term priority can be expected to take a much greater importance than will careful planning for the future.

Another change that will affect EIA is the increasing population of Swaziland, which will result in both more pressure on resources and an increase in the need for their wise use and consideration during development. Increasing population density in rural areas will increase the probability of people being adversely

affected by major developments. This increasing need for EIA will require its ever more scrupulous application, under conditions that may be increasingly difficult. Another change the future may hold is in the level of traditionality that is maintained in the lifestyles of people in rural communities, as the pressures of modernity and foreign influences grow over time.

The ongoing practice of EIA will also result in changes to some of the conditions that currently constrain it. If it is effective, EIA reviewers and proponents will gain useful experience in managing and conducting EIAs, other groups with roles in EIA such as NGOs and screening agents will gain experience in making their contributions to EIA, and proponents will more widely recognize the benefits that EIA can bring. If Swaziland does become more developed with few undesirable side-effects, it will eventually face progressively fewer of the constraints that limit EIA effectiveness in less developed countries because it will be more developed. Ideally, the development that EIA makes possible at an acceptable cost should cause poverty to decrease, better access to rural communities, and increased health, education and literacy, all of which make EIA more effective. Swazi EIA is currently is challenged by the absence of the benefits of considerable practical experience, and the absence of the greater levels of beneficial development that EIA can make possible, but these factors may change over time.

Legislative changes, institutional rearrangement, EIA education and training, and new approaches to rural community participation would improve the effectiveness of EIA in Swaziland. Effective EIA would help Swaziland to realize the goal of ecologically sustainable economic development, and to avoid the cycle of environmental degradation and poverty, along with the accompanying human suffering and ecological devastation. Wise decisions that lead to the benefits of economic development in combination with a healthy natural environment are essential to the long-term survival of the Swazi nation.

## 7. References

- Adger, Neil W. and Solomon Chigume, 1992. Zimbabwe's evolving environmental assessment framework. *Third World Planning Review*. 14(3): 283-295.
- Africa Information Afrique. 1997. Swaziland: Corruption reports spread. Internet resource. <http://www.africaindex.africainfo.no>. Oct. 28.
- Amnesty International. 1997. *AI Report 1997: Swaziland*. Amnesty International Publications. Internet resource. <http://www.oil.ca/amnesty/ailib/aireport/ar97>. Dec 2.
- Appiah-Opoku, Seth. 1994a. Applying Canada's environmental impact assessment model to the Third World. *Plan Canada*. March 1994: 14-17.
- Appiah-Opoku, Seth. 1994b. Theoretical orientations of environmental assessment in Canada: Application to the Third World. *Environments*. 22(3): 103-110.
- Aw, Oumar. 1996. Integration of EIA in development projects: The ADB Experience. *Impact Assessment*. 14: 133-153.
- Ayittey, G.B.N. 1991. *Indigenous African Institutions*. New York: Transnational Publishers. as cited by Appiah-Opoku, 1994(b).
- Beanlands, Gordon E. and Peter N. Duinker, 1983. *An Ecological Framework for Environmental Impact Assessment in Canada*. Halifax: Institute for Resource and Environmental Studies, Dalhousie University and Federal Environmental Assessment Review Office.
- Bisset, Ron. 1992. Devising an effective environmental impact assessment system for a developing country: the case of the Turks and Caicos Islands. in Biswas and Agarwala, 1992: pp. 214-234.
- Biswas, Asit K. and S.B.C. Agarwala, eds. 1992. *Environmental Impact Assessment for Developing Countries*. Worcester: Billings and Son..
- Biswas, Asit K. 1992. Summary and Recommendations. in Biswas and Agarwala, 1992. pp. 237-245.

- Biswas, Asit K. and Qu Geping. 1987. Guidelines for Environmental Impact Assessment in Developing Countries. in *Environmental Impact Assessment for Developing Countries*. Asit K. Biswas and Qu Geping, eds. London: Tycooly International, 1987.
- Booth, Alan R. 1983. *Swaziland: Tradition and Change in a Southern African Kingdom*. Boulder: Westview Press.
- Brown, A.L. 1997. The environmental overview in development project formulation. *Impact Assessment*. 15(1): 73-88.
- Brundtland, H. 1987. *Our Common Future*. for the World Commission on Environment and Development. Oxford University Press.
- Cook, Cynthia C. and Paula Donnelly-Roark. 1994. Public Participation in Environmental Assessments in Africa. in Goodland and Edmundson, 1994, pp.84-100.
- CPC Medialab. 1995. *Swaziland: An Introduction*. Hull: Canadian International Development Agency.
- Diamond, Jared. 1992. *The Third Chimpanzee: The Evolution and Future of the Human Animal*. New York: HarperCollins Publishers.
- Dlamini, John V.S. 1997. The great Swazi trek begins. *Swaziland Economist*. 3(1):6-7.
- Ebisemiju, Fola S. 1993. Environmental impact assessment: Making it work in developing countries. *Journal of Environmental Management*. 38: 247-273.
- Ehrlich, Alan J. 1996. *Environmental Impact Assessment: Swazi Cultural Village Project, Mantenga Reserve*. Swaziland National Trust Commission. Mbabane: Webster's Publishing.
- Ehrlich, Alan. 1997. *Opportunities to Improve EIA Legislation in Swaziland: An Advisory Review of the Environmental Audit, Assessment and Review Regulations of 1996*. Swaziland National Trust Commission. Mbabane: Webster's Publishing.
- Federal Environmental Assessment Review Office. 1988. *Manual on Public Involvement in Environmental Assessment*. Hull. as cited in Ortolano and Shepherd, 1995.

- Foreman, Paul B. 1971. The Theory of Case Studies. in *Research Methods: Issues and Insights*. Billy J. Franklin and Harold W. Osborne, eds. California: Wadsworth Publishing Company Inc.
- Formby, J. 1990. The politics of environmental impact assessment. *Impact Assessment Bulletin* 8(1,2): 191-196. as cited in Ortolano and Shepherd, 1995.
- Fransman, Martin J. 1978. *The State and Development in Swaziland*. Ph. D. dissertation. University of Sussex. as cited in Booth, 1983.
- Friedland, R., F.F. Piven and R.R. Alford. 1977. Political conflict, urban structure, and the fiscal crisis. *International Journal of Urban and Regional Research* 1(3): 447-471. as cited in Rickson et al., 1990.
- Gibson, R.B. 1990. *Basic Requirements for Environmental Assessment Processes: A Framework for Evaluating Existing and Proposed Legislation*. Unpublished Paper, Environment and Resource Studies, Faculty of Environmental Studies, University of Waterloo. as cited by Appiah-Opoku, 1994(b).
- Goodland, Robert and Valerie Edmundson, eds. 1994. *Environmental Assessment and Development*. Washington, D.C.: World Bank.
- Government of Swaziland. 1996. *The Environmental Audit, Assessment and Review Regulation, 1996*. Mbabane.
- Harris, Philip R. and Robert T. Moran. 1991. *Managing Cultural Differences: High Performance Strategies for a New World of Business*. 3rd ed. Houston: Gulf Publishing Company.
- Henry, Reg. 1990. Implementing social impact assessment in developing countries: A comparative approach to the structural problems. *Environmental Impact Assessment Review*. 10: 91-101.
- Hirji, Rafik and Leonard Ortolano. 1991. Strategies for managing uncertainties by environmental impact assessment: Analysis of a Kenyan river development authority. *Environmental Impact Assessment Review*. 11: 203-230.
- Ibarra, A.B. 1987. Reflections on the incorporation of an environmental dimension into the institutional framework and operations of the public sector in Latin America and the Caribbean. in *Conference on the Environment*, pp. 55-76. Washington, D.C.: Inter-American Development Bank. as cited by Ebisemiju, 1993.

- IUCN. 1993. *Environmental Synopsis: Swaziland*. World Conservation Union. Report to the Commission of the European Communities.
- IUCN. 1990. *Caring for the Earth*. International Union for the Conservation of Nature. Gland, Switzerland.
- Jiggins, Janice. 1995. Development impact assessment: Impact assessment of aid projects in nonwestern countries. *Impact Assessment*. 13: 47-69.
- Kakonge, John O. 1997. EIA in Lesotho: Prospects and challenges. *Environmental Impact Assessment Review*. 17: 109-121.
- Kakonge, John O. 1996. Problems with public participation in EIA process: Examples from sub-Saharan Africa. *Impact Assessment*. 14: 309-320.
- Kakonge, John O. 1995. Dilemmas in the design and implementation of agricultural projects in various African countries: The role of environmental impact assessment. *Environmental Impact Assessment Review*. 15: 275-285.
- Kakonge, John O. and Anthony M. Imevbore. 1993. Constraints on implementing environmental impact assessments in Africa. *Environmental Impact Assessment Review*. 13: 299-308.
- Kennedy, Alan J. and William A. Ross, 1992. An approach to integrate impact scoping with environmental impact assessment. *Environmental Management*. 16(4): 475-484.
- Kuper, Hilda. 1963. *The Swazi: A South African Kingdom*. New York: Holt, Rinehart and Winston.
- Lim, Gill-Chin. 1985. Theory and practice of EIA implementation: A comparative study of three developing countries. *Environmental Impact Assessment Review*. 5: 133-153.
- Lemons, Kenneth E. and Alan L. Porter. 1991. A comparative study of impact assessment methods in developed and developing countries. *Impact Assessment Bulletin*. 10(3): 57-65.
- MacDonald, Mary. 1994. What's the Difference: A Comparison of EA in Industrial and Developing Countries. in Goodland and Edmundson, 1994, pp. 29-34.

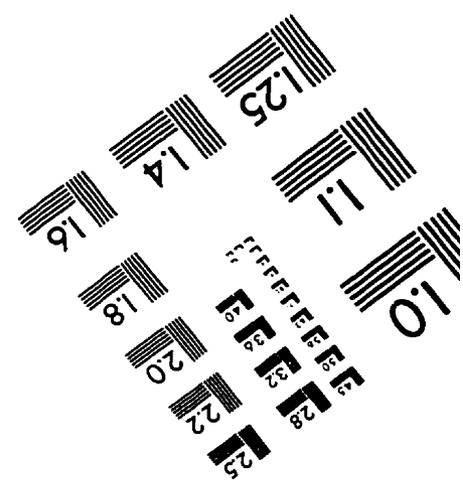
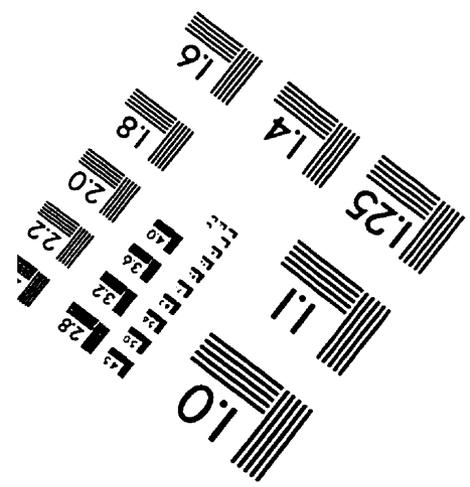
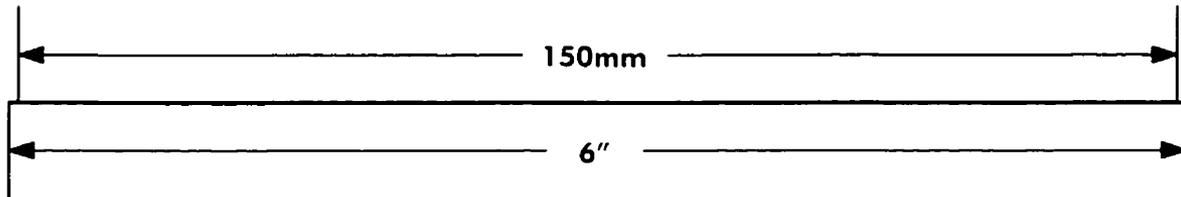
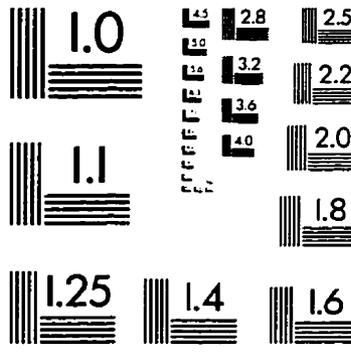
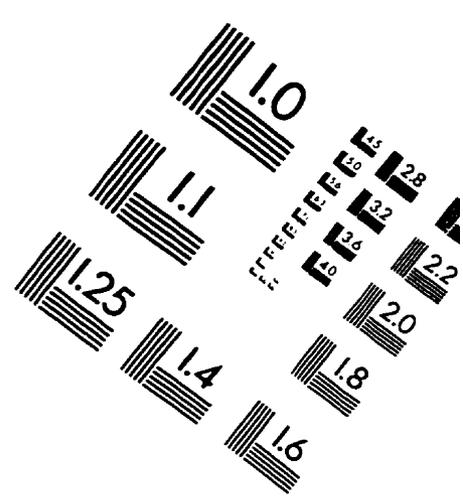
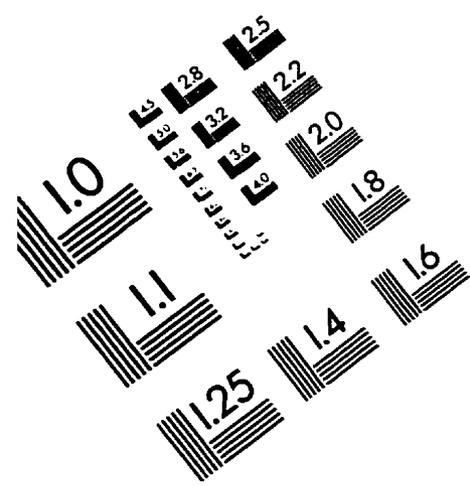
- Matsebula, Mike. 1997. There is hope for recovery. *Swaziland Economist*. 3(1): 16-17.
- McElroy, Ann and Patricia K. Townsend. 1989. *Medical Anthropology in Ecological Perspective*. Boulder: Westview Press.
- Meredith, Thomas C. 1992. Environmental impact assessment, cultural diversity, and sustainable rural development. *Environmental Impact Assessment Review*. 12: 125-138.
- Munn, R.E. (ed.). 1979. *Environmental Impact Assessment: Principles and Procedures*. Chichester: J. Wiley and Sons. as cited in Ebisemiju, 1993.
- Murphy, Tim. 1982. E.I.A. and developing countries. *Planning Outlook*. 24(3): 109-112.
- Nardini, Andrea, Hernan Blanco and Carmen Senior. 1997. Why didn't EIA work in the Chilean project Canal Laja-Diguillin? *Environmental Impact Assessment Review*. 17: 53-63.
- Nor, Yama M. 1991. Problems and perspectives in Malaysia. *Environmental Impact Assessment Review*. 11: 129-142.
- Ortolano, Leonard, and Anne Shepherd. 1995. Environmental Impact Assessment. in *Environmental and Social Impact Assessment*. F. Vanclay and D.A. Bronstein eds. John Wiley and Sons, 1995. pp 3-30.
- Ortolano, Leonard, Bryan Jenkins and Ramon P. Abracosa. 1987. Speculations on when and why EIA is effective. *Environmental Impact Assessment Review*. 7: 285-292.
- Paul, Samuel. 1987. *Community Participation in Development Projects: The World Bank Experience*. World Bank Discussion Paper 6. Washington, D.C.: World Bank. as cited in Cook and Donnelly-Roark, 1994.
- Rickson, Roy E., Rabel J. Burdge, Tor Hundloe and Geoffrey T. MacDonald. 1990. Institutional constraints of social impact assessment as a decision-making and planning tool. *Environmental Impact Assessment Review*. 10: 233-243.
- Roe, Dilys, Barry Dalal-Clayton and Ross Hughes. 1995. *A Directory of Impact Assessment Guidelines*. London: Environmental Planning Group, International Institute for Environment and Development.

- Ross, 1987. Evaluating environmental impact statements. *Journal of Environmental Management*. 25: 137-147.
- Ross, W.A. 1994. Environmental impact assessment in the Philippines: Progress, problems, and directions for the future. *Environmental Impact Assessment Review*. 14: 217-232.
- Ross, William A. 1995. Professor, Environmental Science, Faculty of Environmental Design, University of Calgary, Calgary, lecture in Environmental Impact Assessment Course EVDS 649.
- Ross, William A. and Linda Jones, 1994. *Towards Excellence in Environmental Impact Assessment for the Middle East*. Report for the Environmental Impact Assessment Mission. Government of Canada.
- Sadler, Barry. 1996. *Environmental Assessment in a Changing World: Evaluating Practice to Improve Performance*. Final Report of the International Study of the Effectiveness of Environmental Assessment. Canadian Environmental Assessment Agency and International Association for Impact Assessment.
- Scholten, Jules J. 1992. Contribution of environmental assessment to decision-making: experiences from the Netherlands. in Biswas and Agarwala, 1992: pp. 163-167.
- Schroll, Henning. 1995. Bangladesh and the environment. *Impact Assessment*. 13: 317-325.
- Swaziland Environment Authority. 1995a. *Environment Management Manual*. Ministry of Natural Resources and Energy. Mbabane.
- Swaziland Environment Authority. 1995b. *National Guidelines for Environmental Audit, Assessment and Review of Projects*. Ministry of Natural Resources and Energy. Mbabane.
- Szekely, F. 1987. Strategies to strengthen environmental quality in the IDB development project cycle. in *Conference on the Environment*, pp. 77-102. Washington, D.C.: Inter-American Development Bank. as cited in Ebisemiju, 1993.
- Tanh, N.C. and D.M. Tam. 1992. Environmental protection and development: how to achieve a balance?. in Biswas and Agarwala, 1992. pp 3-15.
- Times of Swaziland. 1996a. Board stops construction of hotel, village. July 5.

- Times of Swaziland. 1996b. Ezulwini Town Board did not stop cultural village. July 9.
- Times of Swaziland. 1997. SFTU stay away starts on Oct. 13. Oct. 6.
- Tremblay, M.A. 1982. The key informant technique: A non-ethnographic application. in Robert G. Burgess (Ed.), *Field Research: A Sourcebook and Field Manual*. London: Allen and Unwin. pp. 98-104.
- United Nations. 1990. *Post-Project Analysis in Environmental Impact Assessment*. United Nations Task Force on Environmental Impact Assessment Auditing. New York.
- United Nations, 1992. *Further Substantive Follow-up of General Assembly Resolutions 42/186 and 42/187 by Governments and Organizations of the United Nations System: Report of the Secretary General*. ECOSOC, New York, A/47/121/E/1992/18. as cited in Kakonge and Imevbore, 1993.
- United Nations Environment Program. 1987. *Goals and Principles of Environmental Impact Assessment*. Decision 14/25 of the Governing Council of the United Nations Environment Program.
- van de Gronden, E.D. 1994. *Use and Effectiveness of Environmental Impact Assessments in Decision Making*. Report of a pilot study by BCR Consultants, Rotterdam, the Netherlands (25 May 1994). as cited in Ortolano and Shepherd (1995).
- Wandesforde-Smith, Geoffrey, Richard A. Carpenter and John Horberry. 1985. EIA in developing countries: An introduction. *Environmental Impact Assessment Review*. 5:210-206.
- Wathern, P. 1988. The EIA Directive of the European Community. in *Environmental Impact Assessment: Theory and Practice*. Peter Wathern, ed. London: Allen and Unwin.
- Watts, C.C. 1922. *Dawn in Swaziland*. The Society for the Propagation of Gospel in Foreign Parts. Aberdeen: The University Press.
- Werner, G. 1992. Environmental impact assessment in Asia: Lessons from the past decade. in Biswas and Agarwala, 1992: pp. 16-21.
- World Bank. 1991a. *Environmental Assessment Sourcebook: Volume I- Policies, Procedures, and Cross-Sectoral Issues*. Technical Paper 139. Washington, D.C.: The World Bank.

- World Bank. 1991b. *The World Bank and the Environment 1991 Progress Report*. Washington, D.C. as cited in Kakonge and Imevbore, 1993.
- World University Service of Canada. 1994. *WUSC Handbook: Swaziland*. Ottawa.
- Wramner, Per. 1992. Environmental impact assessment of development projects: experience from Nordic Aid. in Biswas and Agarwala, 1992: pp. 168-177.
- Ypma, Peiter. 1997. Recent EIA developments in Swaziland. *EIA Newsletter* 13. Manchester: University of Manchester EIA Centre, Dept. of Planning and Landscape

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