REVIEW THE EFFECTIVENESS AND EFFICIENCY OF THE ENVIRONMENTAL IMPACT ASSESSMENT (EIA) SYSTEM IN SOUTH AFRICA

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In association with:
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Executive summary

1. Introduction

This year marks the tenth year of formalised Environmental Impact Assessment (EIA) in South Africa. It is therefore appropriate at this point in time to review the effectiveness and efficiency of this important instrument.

The Department of Environmental Affairs and Tourism initiated this study in 2007 to assess the effectiveness and efficiency of regulated EIA since its implementation in 1997. The findings of the study, together with other initiatives such as the Law Reform process and the Capacity Audit & Needs Analysis survey will inform the development of the Environmental Impact Management strategy and action plan in South Africa.

2. Methodology

In order to measure the effectiveness and efficiency of EIA, the study comprised of the evaluation of a selection of case files; the utilisation of a general questionnaire to solicit the views of a wide range of stakeholders; the evaluation of existing statistical information held by the authorities and evaluation of other environmental management instruments. Finally, South Africa's EIA system has been compared with that of other countries where similar effectiveness review exercises have been undertaken.

For the purposes of this study, "effectiveness" is measured through assessing the ability of EIA to serve its purpose and meet the objectives set for it. "Efficiency" will be measured considering the time implications of the EIA system.

The primary purpose of EIA in South Africa is to serve as a key implementing instrument in ensuring sustainable development. In order to achieve this, the objective of EIA is to anticipate and avoid, minimise or mitigate (including offset) significant negative impacts on the environment.

To enable informed decision-making by government officials (at the end of the EIA process) and applicants (during the course of the EIA process) the procedure followed and the content of the reports produced should meet or exceed the legal requirements.

The time the EIA process takes is the most important aspect of efficiency as it is under constant scrutiny and attack from applicants. The monetary cost of EIA is also important.

2.1 The evaluation of case files

The criteria used to evaluate the efficiency and effectiveness of EIA processes as contained in the selected case files were based on:

- The purpose of EIA to ensure that development is sustainable as defined in NEMA and the EIA Regulations;
- the legal requirements for EIA in South Africa;
- examples of international effectiveness and efficiency reviews, especially the Sadler and Lee & Coley approaches; and
- the aspects that are reasonably measurable in the files.

The criteria were divided into three main categories (similar to the Sadler approach) with several sub-categories to which criteria with a rating system was assigned. The categories and criteria are:

- Category 1: Substantive (outcomes) criteria:
    - Extent to which negative impacts were avoided or minimised;
    - extent to which positive impacts were maximised;
    - extent of contribution to sustainable development;
    - extent of contribution to environmental policy objectives.
- Category 2: Procedural (processes and products) criteria:
    - Extent to which legal procedures were followed correctly;
    - quality of the EIA report;
    - quality of the authority evaluation;
    - quality of decision-making and setting of conditions;
    - extent of compliance monitoring and enforcement;
- Category 3: Execution (efficient use of time[1]) criteria:

[1] There was also an attempt to use cost criteria but it was not possible to get access to reliable information about the cost of EIAs and due to the extreme fluctuations in estimates from different sources. In one instance, the consultant indicated that the fee for a large EIA was less that 1.5 million rands, the applicant however suggested that the EIA cost would amount to almost 30 million rands. Although not as drastic as the example above these kinds of discrepancies occurred throughout and thus have not been included.

- Time it takes to produce EIA applications and documents; and
- time it takes to evaluate EIA applications and documents.

A total number of 502 case files were evaluated. It was also decided by the project management committee to interview the different participants in a selection of the cases in order to establish possible different perceptions about the same case. The following questionnaires were developed for this purpose:

- An officials questionnaire;
- a practitioners questionnaire;
- an applicants questionnaire; and
- a stakeholders questionnaire.

Due to the fact that many of the persons that were involved in the cases evaluated no longer work for the organisations they were employed with at the time of the assessments of the cases, very few responses were received. It therefore failed to produce the desired result of providing a basis for comparative assessment of views and interpretations of different participants for the same cases. However, especially in terms of the NEMA EIA which is only in place since 2006, this turn-over of case officers in itself reveals a significant challenge in the EIA system that contributes to effectiveness and efficiency challenges.

2.2 The general questionnaire

The general questionnaire was compiled to address issues that are discussed/ asked about EIA in South Africa. It did not serve to measure effectiveness and efficiency per say but rather to solicit views from a wide range of stakeholders in the EIA process that could be used to ascertain the perceptions of these stakeholders around EIA in general and its effectives and efficiency in particular. Fifty five responses from individuals and organisation were received and these responses generated over 250 pages of comments and suggestions.

2.3 Evaluation of existing information on authorities

DEAT in collaboration with the provincial authorities keeps various records on applications and staff. This information was used to evaluate relative efficiency of authorities and to determine where potential problems may continue to exist after recent actions by DEAT to improve the functionality of the system. Apart from reflecting some statistical information on numbers of applications received and the

current situation in terms of human resource capacity, the results of this evaluation are not included in the report as it still needs to be verified with provincial authorities.

2.4 Evaluation of other instruments

Several other instruments were evaluated with the view to indicate their potential use in an extended environmental impact management system and to consider how these instruments could:

- Provide a better context within which EIA can function;
- provide additional EIM instruments that may be more effective and efficient in certain circumstances than EIA; and
- be used within, or in addition to EIA in order to make it more effective and efficient.

3. Findings

3.1 Case evaluations

The results of the case evaluations have been subdivided into the following categories:

- The quality of EIA documents.
- The quality of the authority review of applications and documents.
- The effectiveness (based on the selected criteria) of EIA as an assessment instrument.
- The relative performance of EIA for selected categories of activities.
- The relative performance of specific instruments used in EIA; and
- The time efficiency of the EIA process.

(i) The results of the review of the quality of EIA documents are summarised in Table 1 below.

Table 1: Quality of the assessment documents submitted

Criteria (A full description of the criteria is provided in Appendix B of the report)	Good (G), Average (A), Poor (P)	NEMA (354 cases)	ECA (148 cases)
Consideration of alternatives	G	34%	23%
	A	29%	30%
	P	15%	26%
Assessment of direct impacts	G	54%	47%
	A	33%	39%
	P	11%	14%
Assessment of indirect impacts	G	33%	26%
	A	44%	40%
	P	22%	34%
Assessment of cumulative impacts	G	20%	5%
	A	24%	11%
	P	44%	66%
Consider policies, plans, guidelines	G	29%	24%
	A	47%	41%
	P	22%	34%
Avoidance of impacts	G	38%	34%
	A	42%	37%
	P	19%	28%
Minimization of impacts	G	45%	32%
	A	42%	49%
	P	12%	19%
Maximization of positive impacts	G	31%	15%
	A	36%	42%
	P	31%	42%
Meeting basic legal requirements	G	58%	47%
	A	32%	43%
	P	9%	8%
Independence of practitioner	G	68%	66%
	A	25%	28%
	P	5%	4%
General quality of work	G	58%	39%
	A	32%	51%
	P	8%	9%
Public participation	G	69%	39%
	A	22%	34%
	P	7%	24%
Advertising	G	70%	47%
	A	21%	24%
	P	7%	26%
Comments and responses	G	50%	29%
	A	23%	20%
	P	19%	47%
Role of comments in formulating alternatives	G	44%	25%
	A	19%	22%
	P	28%	47%

(ii) The results of the evaluation of the quality of the authority review of applications and documents are summarised in Table 2 below.

Table 2: Authority evaluation of EIA documents

Criteria	Good (G), Average (A), Poor (P)	NEMA (354 cases)	ECA (148 cases)
Taking account of the information in the EIA documentation	G	66%	53%
	A	31%	34%
	P	3%	11%
Taking account of policies affected by the application	G	52%	41%
	A	37%	32%
	P	4%	11%
Taking account of the quality of the EIA documentation	G	53%	35%
	A	38%	53%
	P	8%	9%
Making an informed decision	G	65%	53%
	A	32%	41%
	P	3%	5%
Setting conditions	G	68%	61%
	A	29%	32%
	P	3%	5%
Monitoring and enforcement of conditions	G	13%	14%
	A	12%	14%
	P	74%	71%

(iii) The results of the review of the effectiveness (based on the selected criteria) of EIA as an assessment instrument are summarised in the table below.

Table 3: Effectiveness of EIA as an assessment instrument

Criteria	Very effective (VE), Effective (E), unsure /marginal (M), Not effective (N), Very ineffective (VI)	NEMA (354 cases)	ECA (148 cases)
Impacts were avoided to the extent possible	VE	10%	6%
	E	42%	38%
	M	34%	32%
	N	9%	11%
	VI	4%	7%
Impacts were mitigated to the extent possible	VE	14%	9%
	E	47%	37%
	M	29%	36%
	N	6%	7%
	VI	3%	5%
The benefits from positive impacts were maximized	VE	6%	1%
	E	30%	25%
	M	43%	41%
	N	10%	15%
	VI	3%	7%
Contribution to the success of	VE	3%	1%

Criteria	Very effective (VE), Effective (E), unsure /marginal (M), Not effective (N), Very ineffective (VI)	NEMA (354 cases)	ECA (148 cases)
implementing or promoting relevant policies, plans and guidelines	E	33%	27%
	M	46%	43%
	N	10%	15%
	VI	4%	6%
Based on above, the estimated effectiveness of EIA	Low	46%	36%
	High	65%	55%

Based on the above survey results it is estimated that NEMA cases on average are effective in achieving the selected criteria for effectiveness between 46% and 65% of the time and ECA cases between 36% and 55% of the time.

(iv) The results of the review of the relative performance of EIA for selected categories of activities are summarised in Table 4, Table 5 and Table 6 below.

Table 4: Quality of the assessment documents submitted for the selected categories of activities

Criteria	Good (G), Average (A), Poor (P)	Electricity generation (8 cases)	Water provision (12 cases)	Residential development (73 cases)	Roads (41 cases)	Telecom masts (38 cases)
Consideration of alternatives	G	13%	55%	33%	39%	32%
	A	38%	14%	37%	17%	37%
	P	50%	9%	15%	7%	11%
Assessment of direct impacts	G	25%	59%	63%	63%	53%
	A	63%	32%	32%	24%	37%
	P	13%	9%	5%	10%	8%
Assessment of indirect impacts	G	0%	27%	34%	51%	26%
	A	38%	55%	49%	32%	50%
	P	63%	18%	16%	15%	21%
Assessment of cumulative impacts	G	0%	5%	16%	22%	13%
	A	13%	27%	32%	12%	21%
	P	87%	32%	41%	44%	45%
Consider policies, plans, guidelines	G	13%	41%	34%	41%	26%
	A	50%	36%	49%	46%	45%
	P	37%	23%	15%	12%	26%
Avoidance of impacts	G	12%	55%	27%	51%	34%
	A	50%	23%	55%	39%	39%
	P	38%	22%	18%	10%	21%
Minimization of impacts	G	25%	59%	38%	59%	37%
	A	13%	36%	51%	34%	42%
	P	62%	5%	11%	7%	18%

Criteria	Good (G), Average (A), Poor (P)	Electricity generation (8 cases)	Water provision (12 cases)	Residential development (73 cases)	Roads (41 cases)	Telecom masts (38 cases)
Maximization of positive impacts	G	13%	27%	21%	51%	16%
	A	25%	36%	48%	27%	37%
	P	62%	36%	32%	22%	39%
Meeting basic legal requirements	G	38%	45%	68%	76%	53%
	A	49%	50%	27%	20%	37%
	P	13%	5%	4%	5%	8%
Independence of practitioner	G	38%	64%	73%	85%	71%
	A	62%	36%	18%	15%	18%
	P	0%	0%	4%	0%	8%
General quality of work	G	50%	41%	63%	78%	50%
	A	13%	59%	34%	17%	37%
	P	37%	0%	3%	2%	11%
Public participation	G	38%	45%	78%	71%	61%
	A	38%	50%	16%	12%	24%
	P	24%	5%	5%	17%	13%
Advertising	G	25%	50%	74%	63%	58%
	A	50%	45%	19%	17%	24%
	P	25%	5%	7%	20%	16%
Comments and responses	G	38%	41%	51%	61%	26%
	A	25%	50%	19%	7%	24%
	P	37%	9%	23%	29%	32%
Role of comments in formulating alternatives	G	13%	32%	45%	61%	18%
	A	38%	32%	18%	7%	21%
	P	49%	36%	27%	29%	39%

Table 5: Authority evaluation of EIA documents for the selected categories of activities

Criteria (Please refer to Appendix B for the full description of the criteria)	Good (G), Average (A), Poor (P)	Electricity generation (8 cases)	Water provision (22 cases)	Residential development (73 cases)	Roads (41 cases)	Telecom masts (38 cases)
Taking account of the information in the EIA documentation	G	50%	55%	62%	83%	61%
	A	38%	45%	37%	17%	29%
	P	13%	0%	1%	0%	8%
Taking account of policies affected by the application	G	0%	45%	51%	68%	55%
	A	63%	45%	38%	22%	34%
	P	13%	5%	11%	10%	8%
Taking account of the quality of the EIA documentation	G	38%	36%	47%	76%	45%
	A	38%	59%	47%	22%	45%
	P	25%	5%	6%	2%	8%
Making an informed decision	G	38%	59%	63%	88%	61%
	A	63%	41%	36%	12%	29%
	P	0%	0%	1%	0%	8%
Setting conditions	G	63%	59%	63%	90%	66%
	A	38%	42%	36%	10%	24%
	P	0%	0%	1%	0%	8%
Monitoring and enforcement of conditions	G	13%	5%	14%	15%	11%
	A	25%	5%	14%	2%	21%
	P	62%	90%	73%	82%	68%

Table 6: Effectiveness of EIA as an assessment instrument from the selected categories of activities

Criteria	Very effective (VE), Effective (E), unsure /marginal (M), Not effective (N), Very ineffective (VI)	Electricity generation (8 cases)	Water provision (22 cases)	Residential development (73 cases)	Roads (41 cases)	Telecom masts (38 cases)
Impacts were avoided to the extent possible	VE	0%	5%	11%	10%	16%
	E	13%	59%	40%	49%	34%
	M	63%	18%	36%	32%	39%
	N	13%	9%	11%	5%	5%
	VI	13%	5%	1%	2%	0%
Impacts were mitigated to the extent possible	VE	0%	9%	14%	17%	5%
	E	25%	68%	41%	49%	45%
	M	25%	14%	38%	29%	39%
	N	50%	9%	5%	2%	5%
	VI	0%	0%	1%	0%	0%
The benefits from positive impacts were maximized	VE	0%	9%	4%	5%	3%
	E	13%	36%	25%	59%	13%
	M	38%	32%	49%	27%	61%
	N	38%	9%	3%	5%	5%
	VI	13%	0%	4%	0%	0%
Contribution to the success of implementing or promoting relevant policies, plans and guidelines	VE	0%	0%	7%	5%	0%
	E	25%	50%	42%	41%	37%
	M	50%	27%	41%	44%	45%
	N	13%	14%	5%	7%	13%
	VI	13%	5%	3%	0%	3%
Based on above, the estimated effectiveness of EIA across categories	Low	19%	59%	33%	42%	23%
	High	41%	70%	53%	59%	46%

(v) The results of the review of the relative performance of specific instruments used in EIA are summarised in Tables 7, Table 8 and Table 9 below.

Table 7: Quality of the assessment documents submitted in respect of different types of assessment

Criteria (Please refer to Appendix B for the full description of the criteria)	Good (G), Average (A), Poor (P)	Basic Assessment (257 cases)	Full EIA, NEMA and ECA (131 cases)	ECA Scoping (74 cases)
Consideration of alternatives	G	32%	40%	20%
	A	39%	35%	31%
	P	13%	21%	34%
Assessment of direct impacts	G	52%	62%	45%
	A	33%	34%	41%
	P	13%	5%	14%
Assessment of indirect impacts	G	31%	37%	16%
	A	44%	41%	45%
	P	23%	21%	38%
Assessment of cumulative impacts	G	21%	15%	3%
	A	24%	23%	12%
	P	44%	52%	72%
Consider policies, plans, guidelines	G	31%	25%	16%
	A	47%	50%	46%
	P	21%	24%	36%
Avoidance of impacts	G	37%	43%	26%
	A	42%	40%	39%
	P	20%	17%	32%
Minimization of impacts	G	42%	48%	28%
	A	45%	41%	50%
	P	12%	11%	20%
Maximization of positive impacts	G	30%	30%	7%
	A	37%	39%	47%
	P	32%	32%	43%
Meeting basic legal requirements	G	59%	55%	49%
	A	33%	38%	41%
	P	7%	7%	11%
Independence of practitioner	G	68%	73%	62%
	A	25%	24%	31%
	P	4%	3%	3%
General quality of work	G	58%	56%	34%
	A	33%	38%	55%
	P	7%	6%	11%
Public participation	G	69%	66%	39%
	A	24%	24%	36%
	P	6%	8%	36%
Advertising	G	69%	66%	39%
	A	24%	24%	36%
	P	6%	8%	23%
Comments and responses	G	50%	51%	20%
	A	21%	27%	22%
	P	20%	18%	53%
Role of comments in formulating alternatives	G	44%	44%	19%
	A	17%	27%	22%
	P	29%	24%	53%

Table 8: Authority evaluation of EIA documents submitted in respect of different types of assessment

Criteria (Please refer to Appendix B for the full description of the criteria)	Good (G), Average (A), Poor (P)	Basic Assessment (257 cases)	Full EIA, NEMA and ECA (131 cases)	ECA Scoping (74 cases)
Taking account of the information in the EIA documentation	G	56%	44%	24%
	A	35%	51%	61%
	P	8%	5%	11%
Taking account of policies affected by the application	G	56%	37%	42%
	A	33%	44%	34%
	P	3%	9%	14%
Taking account of the quality of the EIA documentation	G	56%	44%	24%
	A	35%	51%	61%
	P	8%	5%	11%
Making an informed decision	G	67%	56%	50%
	A	30%	42%	43%
	P	3%	2%	4%
Setting conditions	G	69%	61%	65%
	A	28%	36%	26%
	P	2%	3%	4%
Monitoring and enforcement of conditions	G	12%	18%	11%
	A	11%	17%	14%
	P	77%	65%	76%

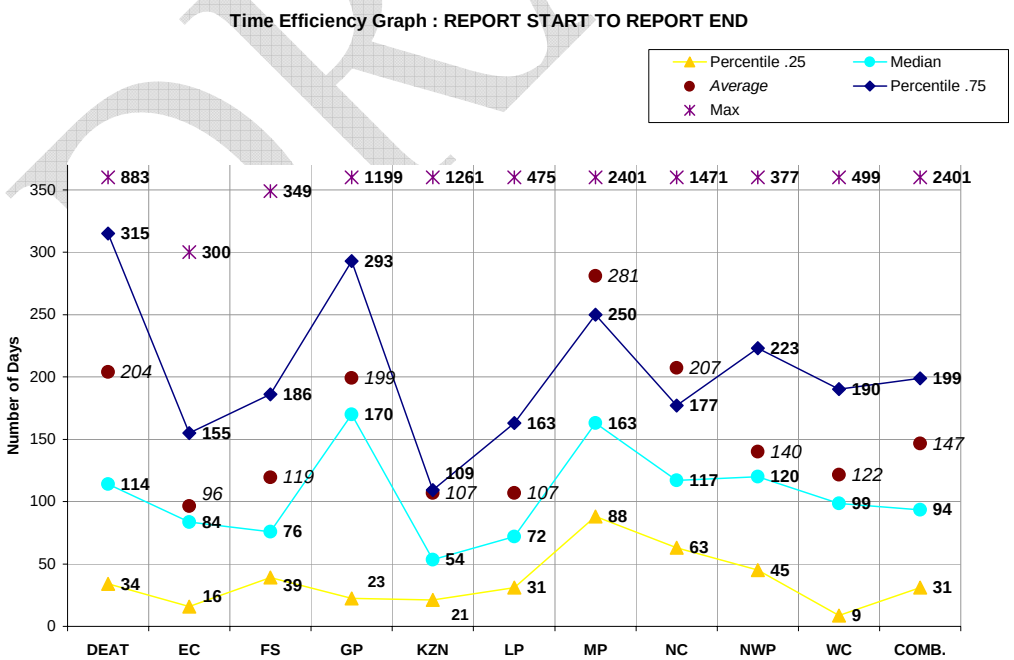
Table 9: Effectiveness of EIA documents submitted in respect of different types of assessment

Criteria (Please refer to Appendix B for the full description of the criteria)	Very effective (VE), Effective (E), unsure /marginal (M), Not effective (N), Very ineffective (VI)	Basic Assessment (257 cases)	Full EIA, NEMA and ECA (131 cases)	ECA Scoping (74 cases)
Impacts were avoided to the extent possible	VE	11%	9%	3%
	E	40%	44%	38%
	M	35%	34%	32%
	N	9%	10%	15%
	VI	4%	2%	8%
Impacts were mitigated to the extent possible	VE	12%	20%	4%
	E	47%	41%	41%
	M	32%	31%	32%
	N	6%	5%	12%
	VI	3%	2%	7%
The benefits from positive impacts	VE	5%	6%	1%

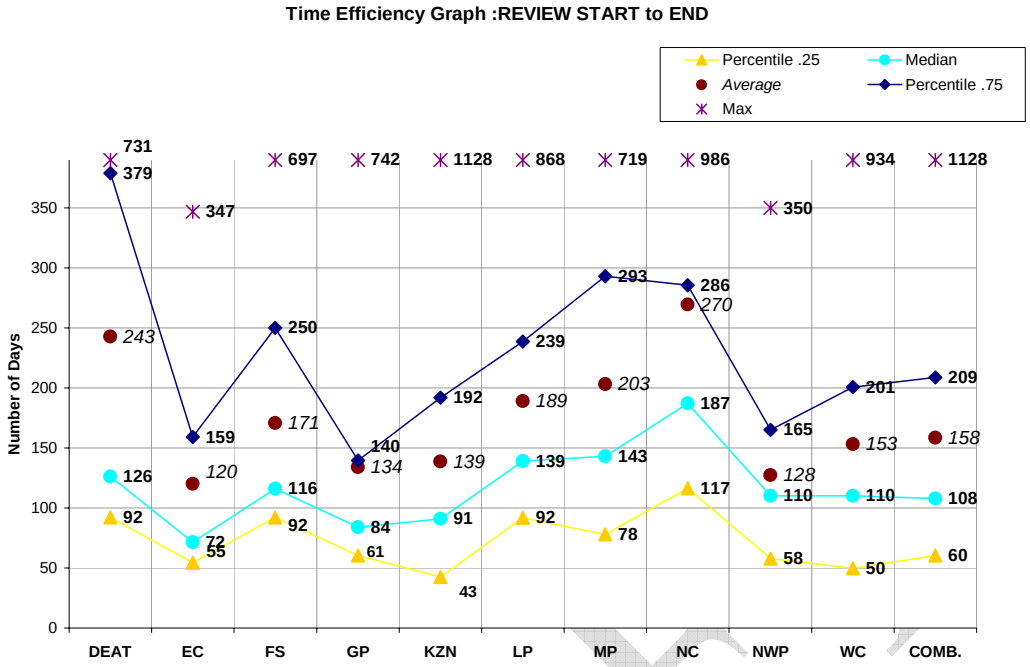
Criteria (Please refer to Appendix B for the full description of the criteria)	Very effective (VE), Effective (E), unsure /marginal (M), Not effective (N), Very ineffective (VI)	Basic Assessment (257 cases)	Full EIA, NEMA and ECA (131 cases)	ECA Scoping (74 cases)
Were maximized	E	30%	31%	19%
	M	44%	41%	46%
	N	8%	12%	22%
	VI	3%	4%	8%
Contribution to the success of implementing or promoting relevant policies, plans and guidelines	VE	3%	3%	1%
	E	36%	28%	16%
	M	45%	50%	47%
	N	11%	9%	18%
	VI	3%	4%	7%
Based on above, the estimated effectiveness of EIA across categories	Low	46%	46%	31%
	High	66%	66%	51%

(vi) The results of the review of the time efficiency of the EIA process is summarised in the graphs below.

The time it took to complete the EIA documentation by the EAP



The time it took to evaluate and make the decision by the competent authority.



The average time it took to complete an EIA process from start to finish was 284 days. The average time it took to compile an EIA document and application was 147 days. On average authorities took 158 days to evaluate the EIA documents and to reach a decision. The longest a process took was 2744 days and the longest it took to compile an EIA document and application was 2401 days, while the longest it took to evaluate and decide on an application was 1128 days.

The trends are heavily influenced by a minority of applications that take much longer than the rest.

3.2 General views that were expressed

A collation of prominent views from various sources, including communications with the department, submissions to the Portfolio Committee in Parliament, newspaper articles, publications, speeches, submissions to the project and personal communications have been compiled. These views are important as they represent an accumulation of thoughts over a long period of time and in itself represent a finding on the current state of thought that dominate the effectiveness and efficiency debate in South Africa.

As long as these views are not addressed appropriately and comprehensively, and common ground found, scepticism over the EIA process in South Africa is likely to remain. It is therefore necessary to be cognisant of these views, and to debate and

discuss it in future processes to be followed in the further development and implementation of the EIM system in South Africa. This will not be an easy task as there are significant contradictions between some of the views. Iterative discussions that involve all the interest groups will accordingly be required to resolve some of the lingering issues, and to find common ground.

The views expressed correspond to a very large degree with the views that were collated in the general questionnaire. Most of the views also refer to issues that relate to the broader EIM system and not to effectiveness and efficiency of EIA as an instrument specifically. The views are included in the report and are focused around the following themes:

- The importance of adequate resources and capacity in government to improve effectiveness and ensure efficiency in the EIA system
- Concerns regarding political interference with EIA administration and the perceived lack of political will and commitment in terms of environmental management
- Making the EIA system more effective, including views and suggestions around:
    - Governance and co-operative government
    - Utilisation of other instruments in combination with or in stead of EIA
    - Utilisation of strategic instruments and spatial planning to establish the context for EIA
    - Appropriateness of the current system for a developing country
    - The bureaucracy of EIA
    - Scope of EIA and mandates of environmental authorities
    - Cumulative impacts
    - Alternatives
- Sustainable development, biodiversity considerations and the NEMA principles
- Making the EIA system more efficient
- The cost implications of EIA; and
- Conditions of authorisation, compliance monitoring and enforcement.

3.3 Responses received through the general questionnaire

From responses received through the general questionnaire, perceptions, views and recommendations regarding the effectiveness and efficiency of EIA and current trends in EIA have been collated and analysed. The analyses revealed areas of consensus around these three concepts.

Effectiveness

There is a large degree of consensus amongst those that responded to the general questionnaires that the following would make EIA more effective:

(a) In terms of the purpose and objectives of EIA:

- The purpose and objectives of EIA should be clarified and stated in clearer terms to ensure that there is only one national interpretation of what it means;
- the establishment of the desirability of an activity in terms of its scale and nature within its broader locality context is important in the EIA process and activities should go through early screening processes to ensure compatibility with plans, standards and guidelines, prior to the identification and assessment of impacts and alternatives;

(b) In terms of the scope of environmental impact assessment processes:

- the comprehensiveness of the EIA (scope) should be determined by the sensitivity of environment and not necessarily by the nature of the activity, although it may also play a part[2];
- EIA processes for activities that are small in scope and that occur in environments that are not sensitive should be limited to completing forms or questionnaires, supported by specialist information where needed;
- alternatives should consider and be appropriate to the broader context of the activity;

(c) In terms of the identification and consideration of alternatives:

[2] The DEAT is concerned that this is an approach biased to the "green" considerations in environmental management. The "brown" issues, such as potential to generate waste, or pollution of air, water or land are more related to the nature of the activity than the "sensitivity" of the environment. The focus should be on both and therefore the approach taken in NEMA in this regard.

- the identification and assessment of feasible and reasonable alternatives should be a mandatory part of the process and should not only be required in instances where significant impacts are identified or anticipated;
- the assessment of alternatives should be targeted towards improving proposals to the maximum extent possible and should not be limited to static comparative assessments of a preferred alternative to bogus unpractical options;
- neither the competent authority, the independent practitioner or the applicant should be allowed the discretion to identify alternatives on their own;

(d) In terms of cumulative impacts[3]:

- every EIA process must address cumulative impacts as it is important for sustainable development and the assessment of cumulative impacts should not be limited to indirect impacts of activities on off-site environmental/service resources that can be measured;
- the concept of cumulative impacts should be better integrated into the EIA process;

(e) In terms of preventing significant impacts and environmental degradation:

- less activities that have significant unmitigated residual impacts should be authorised;
- more inspections should be done to check that conditions of authorisation are met;

(f) In terms of governance, capacity and quality:

- the EIA process should be integrated more closely with other licensing or authorisation processes;
- EIA processes should focus more on ensuring sustainable development than on administration;

[3] The assessment of cumulative impacts remains problematic and the extent to which this can be done beyond assessing impacts (direct or indirect) of the proposed activity on the existing base line in an EIA process is limited. The importance of supplementing EIA with strategic instruments that will not only establish the baseline but also levels of acceptable change must be emphasized.

- the capacity in terms of qualifications, experience and numbers of staff of competent authorities should be improved;
- the capacity in terms of qualification and experience of environmental practitioners should be improved;
- inappropriate recycling (cut and paste) of work of practitioners should be rooted out; and
- interference by applicant/proponents in the assessment process often undermine the independence of practitioners and prevent the objective evaluation of EIA by officials, and must be prevented.

The overall perception is however that EIA is marginally effective and that it should not be discarded as an instrument as there is currently nothing better to take its place.

Efficiency:

There is general consensus that the following would make EIA more efficient:

- The increase of the staff numbers across all authorities and the prevention of high staff turnovers through better compensation;
- the current application format is efficient and should remain as it provided consistency and certainty in respect to the requirements of the competent authority;
- authorities, other than competent authorities, to which applications are referred to for comment must be forced to provide their comments and inputs within certain time periods to prevent unreasonable delays;
- practitioners should involve authorities that will be required to provide inputs early in the EIA process to ensure that delays are avoided in the authority evalution process;
- other government processes, and the DFA process in particular, undermine and conflict with the EIA process and should be addressed at the appropriate level; and
- professional registration of professionals working in the EIA field will greatly increase the quality of EIA's.

Trends:

The following trends are perceived to be prevalent in South Africa:

- EIA processes generally serve to motivate activities rather than assess whether or not activities should be permitted;
- EIA processes tend to generate mitigation measures rather than asses whether or not activities should be permitted; and
- competent authorities are relatively consistent in making decisions.

Concerns:

The following serious concerns have been expressed:

- There is a degree of corruption that seems to occur within certain competent authorities;
- undue influence of politicians by applicants/proponents occurs too often; and
- Undue influence of junior to middle management officials by NGO's occurs too often.

3.4 The contextual problem of EIA in South Africa

This finding was collated from all the findings in the case file survey and also based on views received in response to the general questionnaire as well as other views expressed.

Despite a plethora of policies, guidelines and information documents across authorities in the environmental and development fields, the biggest single issue that affects the effectiveness of EIA negatively in South Africa is that it is often executed without taking sufficient account of the broader context within which the application occurs. This means that while EIA processes may meet the quality criteria (get all the boxes ticked), it often fails to make a real contribution to the quality of the decision that is made in the context of the specific area or sector within which it is made.

3.5 The contribution of EIA to sustainable development as defined in NEMA

Very few participants in the questionnaire indicated that the purpose of EIA is to ensure or promote sustainable development. This is indicative of the general ignorance amongst both officials and practitioners in respect to the sustainable development purpose of EIA and while it may be at the back of our minds it is seldom reflected deliberately and comprehensively in EIA documents or decision documents, except by mentioning it in passing.

The biodiversity conservation imperative that is set by NEMA as a cornerstone of sustainable development is also usually not adequately reflected in EIA processes, especially in respect to how the local site specific issues impacts on the broader biodiversity context.

3.6 Consideration of case law

The case specific questionnaires that were completed by officials indicate that case law is rarely considered in making decisions. The sample size was however too small to make a definitive finding. This aspect should be explored further.

3.7 Other instruments

The following instruments have been identified as potential instruments that can be used to strengthen or build on EIM in South Africa:

- Environmental Impact Assessment (EIA):
    - Traditional EIA;
    - Basic Assessment; and
    - Activity/environment screening checklists;
- Strategic Environmental Assessment (SEA);
- Cost Benefit Analysis (CBA), including Environmental Cost Benefit Analysis (ECBA);
- Cost Efficiency Analysis (CEA);
- Environmental Management Framework (EMF);
- Identified Geographical Areas and Specified Activities (IGASA), also referred to as “environment/activity matrixes”, as provided for in sections 24(2)(b) and (c) of NEMA;
- Environmental Management Programme (EMP);
- Sector Specific Strategic Environmental Plan (SSSEP);
- Risk Assessment (RA);
- Spatial Development Framework (SDF);
- Standards:
    - Code of Practice, also referred to as “norms” (based on normative criteria); and

- Product Standard (based on quantifiable quality criteria).

- Policy Guidelines which may include:
  - Spatial Sensitivity Classification (for a specific type of activity);
  - Spatial Sensitivity Classification (in general);
  - Spatial Environmental Control Zoning;
  - Bioregional Assessment and Plan;
  - Air Quality Management Plan; and
  - Development Guidelines/Policies.

The current use of EIA is determined by lists of activities. The introduction of other instruments will necessitate a re-think as the effective use of most of the instruments will depend on a number of factors including:

- The nature and type of activities;
- the sensitivity of the environment; and
- the spatial and policy context of the areas in which the activities occur and the policy context of the activity itself.

The key to using the various instruments effectively is to use them in combination and in support of each other in a logical manner that is based on the strengths of each instrument as indicated. This should be informed by the objectives to be set for an environmental impact management system through the development of the strategy and action plan.

4. Recommendations

The findings of the study have been utilized to inform the following recommendations regarding the development of an effective and efficient EIM system.

4.1 Requirements to ensure sustainable development

While sustainable development may be achieved in an ad hoc way in a significant number of cases subjected to EIA, the lack of focus on sustainable development in the EIA process has to be changed. Where the nature of EIA limits its ability to address sustainability issues, it must in a comprehensive EIM system be complimented by instruments that are more appropriate for this purpose. It is recommended that this focus be strengthened by:

- A stronger emphasis on indirect and cumulative impacts in Environmental Impact Management. Whilst case specific EIAs should improve in their attention to these considerations, it is important that the context is set through strategic instruments such as environmental management frameworks, SEAs, policies, etc.;
- a focus on informing policies, programmes and plans for the areas within which EIAs are undertaken; and
- a stronger emphasis on the elements that underpins sustainable development as contained in the principles of NEMA.

4.2 Strategic approach

At the moment activities for which EIAs are being undertaken are more or less regarded on the same level. Nuclear power stations for example follow the same process as small housing developments irrespective of their relative strategic importance to the country. In order to establish a better perspective of relative strategic importance of projects and environmental aspects it is recommended that:

- Activities be categorised in terms of their strategic importance (including the inevitability of certain projects in terms of providing the infrastructure needs in South Africa);
- environments be categorised through the extensive use of the identification of geographical areas in terms of sections 24(2)(a) and (b) of NEMA and the formulation of EMFs in local areas that are under specific and severe pressure of development;
- specific appropriate approaches be developed for specific circumstances to ensure effective and efficient environmental impact management (e.g. tailor made BA proforma reports for certain types of activities or in certain types of environments that does not require unnecessary information/assessment);
- the formulation of specific policies, targets or thresholds for specified development activities in certain areas that are sensitive to the specific activities; and
- setting institutional requirements to ensure that strategic approaches are implemented in the most efficient manner by officials.

4.3 Package of instruments

The improvement of the effectiveness and efficiency of case specific EIAs will largely depend on the ability of government to create the context within which the EIAs are undertaken and evaluated. This obligation goes much further than the competent authorities and should focus on the mainstreaming of environmental objectives and targets in the policies of all government departments.

The use of SEA as an instrument to create the required context should be explored. It is however important that the products to result from SEA exercises should be specified in detail to ensure that they result in practical outcomes.

It is recommended that a hierarchy of instruments be developed and agreed to. These instruments should compliment and supplement each other in a comprehensive system and logical and efficient pathways for specific activities or activities in identified sensitive areas should be created.

4.4 A better screening mechanism

Further development of the EIM system should put an emphasis on the development of a better screening mechanism that places a stronger focus on activities with potential significant impacts on the environment and on sensitive environments. As a start the provisions of sections 24(2)(a) and (b) of NEMA should be implemented across the country as a matter of priority. Other matrix based screening mechanisms that focus on establishing proper relationships between the nature of activities and the sensitivity of the environment should also be investigated. An early “check” of sites for sensitive elements by specialists, before any assessments are done should also be considered in at least some circumstances.

4.5 A holistic approach

Despite the problems of responsibilities allocated to the different spheres of government in South Africa, there should be a new drive to formulate a holistic approach that cater for EIM from strategic and policy level to project level in a manner that is sensible to the strategic needs of South Africa. This will however require the commitment of government as a whole.

4.6 Enhance the role of Strategic Environmental Assessment (SEA) in the development of Spatial Development Frameworks (SDF)

SDFs, especially LSDFs (local), are the most ideal spatial planning instruments into which environmental concerns should be integrated. The SEA processes that are currently required for SDFs are unfortunately mostly insufficient. With better SEAs or EMFs underpinning SDFs these spatial planning instruments can play a very important role in the avoidance of unnecessary impacts at especially local level as they should discourage applications in areas that are not suitable for such applications. This is however on the assumption that SDFs are implemented and adhered to when decisions are taken on development applications by all authorities.

4.7 Compliance monitoring and enforcement

Compliance monitoring and enforcement of EMPs and conditions of authorisation require urgent attention. This is the one area where current EIA is not effective or efficient. It is recommended that compliance monitoring and enforcement be specifically addressed in the EIM strategy.

4.8 Delegation of decision-making

One of the key reasons for delays in decision-making is that the top management of most of the competent authorities is overloaded with the large number of applications that they have to consider. In many instances, especially where there are EMFs or other guidelines in place it should be possible to delegate the authorisation of smaller activities to middle management without much risk.

4.9 Human resource development

The high turnover in personnel of departments and even in consultancies and the corporate sector is very disruptive to the development of capacity of both organisations and individuals and contributes significantly to both ineffectiveness and inefficiency. A concerted effort that involves all role players is required to create a sustainable flow of environmental managers in a way that creates capacity at all levels and also ensure career paths for employees. The EIM strategy would fail to address efficiency and effectiveness adequately if an actionable plan in this regard does not form part thereof.

5. Concluding remarks

5.1 Effectiveness of EIA in South Africa

The overall effectiveness of EIA in South Africa in meeting the requirements in terms of NEMA, is marginal at best. While the criteria are being met relatively well in some areas of jurisdiction, it is hardly the case for other instances. The interpretation of the regulations also varies significantly from authority to authority and it is doubtful that the "one size fits all" approach to EIA that has generally been adopted in South Africa can ever be implemented effectively across all authorities.

EIA is also not equally effective for all types of applications and consideration should be given to the use of other instruments, as indicated in the relevant chapter of the report.

EIA is currently however the only mechanism that considers the impact of activities on the environment specifically and as such fulfils an important role despite its shortcomings. The immeasurable role that the existence of EIA Regulations play in the choices people make in respect to activities should also not be underestimated.

5.2 Efficiency of EIA in South Africa

The EIA process in South Africa is implemented relatively efficiently if one considers the average time it takes to produce and evaluate EIAs. A relatively small number of EIA's however take much longer than the average and skews the graphs above the average.

The performance time frames indicated in the EIA Regulations are optimistic and not attainable across the board. This is mostly due to the high number of applications that has to be considered rather than the time required to assess an individual matter. It is accordingly important to eliminate activities from the EIA process that can be equally well managed through other instruments.

Consideration should also be given to the circumstances of each authority and the factors that may place constraints on meeting deadlines.

In general the cost of EIA is not regarded as a major issue for large scale developments or activities undertaken by big corporates or government institutions. Poor persons, small businesses, entrepreneurs and communities however often cannot afford the EIA process and consider it as a hurdle to their ability to enter the development market or to become economically active. This issue must be addressed and ways to render assistance to these smaller players must be explored.

Abbreviations

BA	Basic Assessment
BAR	Basic Assessment Report
BUSA	Business unity South Africa
CBA	Cost Benefit Analysis
CEA	Cost Efficiency Analysis
CEAA	Canadian Environmental Assessment Agency
CENN	Caucacus Environmental NGO Network
DEAT	Department of Environmental Affairs and Tourism
EA	Environmental Assessment
ECA	Environmental Conservation Act
EIA	Environmental Impact Assessment
EIAR	Environmental Impact Assessment Report
EIM	Environmental Impact Management
EIS	Environmental Impact Statement
EIR	Environmental Impact Report
ELASA	Environmental Law Association of South Africa
EMF	Environmental Management Framework
IAIA	International Association of Impact Assessment
IAIAsa	International Association of Impact Assessment SA Chapter
ICB	Interim Certification Board
IEM	Integrated Environmental Management
IGASA	Identified Geographical Areas and Specified Activities
LSDF	Local Spatial Development Framework

NEMA	National Environmental Management Act, 1998 (Act 107 of 1998)
SDF	Spatial Development Framework
SDP	Spatial Development Plan
SEA	Strategic Environmental Assessment
SSSEP	Sector Specific Strategic Environmental Plan
WESSA	Wildlife and Environmental Society of South Africa

Chapter A: Introduction

1. Background to the study

Regulations regulating environmental impact assessments were passed in 1997 in terms of the Environment Conservation Act, 1989. The 1997 regulations were implemented by both the provincial and national spheres of government. These regulations were implemented with the following objectives as stipulated in the EIA Guideline document of 1998:

- To ensure that the environmental effects of activities are taken into consideration before decisions in this regard are taken;
- To promote sustainable development, thereby achieving and maintaining an environment which is not harmful to people's health or well being;
- To ensure that identified activities which are undertaken do not have a substantial detrimental effect on the environment; and
- To prohibit those activities that will;
- To regulate the process and reports required to enable the Minister or his designated competent authority to make informed decisions on activities.

At the time when the regulations came into effect, neither sphere of government had much experience or capacity for implementing the regulations. Notwithstanding the substantial capacity that has been developed in the last few years, (albeit in an uneven manner), there has been a concomitant increase in the number of applications received by the departments. The experience gained in the implementation of the 1997 regulations within this context has highlighted several deficiencies and/or challenges.

The National Environmental Management Act of 1998 (as amended) made provision for the development of Regulations to replace the 1997 EIA Regulations. During 2000 DEAT and relevant authorities commenced with a process that resulted in the final draft of the new EIA Regulations that was approved by the Minister of Environmental Affairs and Tourism in 2005. The Regulations came into effect in July 2006.

A conceptual approach to the new EIA regulations was underpinned by the following criteria -

- streamlining of the process by, *inter alia,* reducing the number of steps and/or interactions between the applicant and the authority to key interventions or provision of information;
- reduction of the number of formal decisions required by officials to facilitate less interruption in the process through potential appeals;
- securing the provision of sufficient and adequate information by the applicant prior to decision-making to reduce additional input required by officials;
- creating flexibility regarding the entry point in the process and undertaking of the process to ensure that officials are able to request only the information required for decision-making and avoid unnecessary steps and/or processes; and
- reduction of the administrative burden and potential delays through the submission of inferior reports by the applicant.

Despite all these objectives and the strides made towards an improved efficient and effective EIA system, there are severe criticism and perceptions of inadequacy about the success of South Africa's EIA system as a tool for environmental impact management.

Concerns relate to both the ***efficiency*** and the ***effectiveness*** of the system.

In terms of ***efficiency*** concerns have been raised in terms of time frames and costs (direct and indirect) related to conducting studies and processes associated with the EIA process and inefficiencies in administrative and decision-making processes by authorities.

In a Draft Discussion Document (December 2006): Review of Effectiveness and Efficiency of current Impact Assessment System submission prepared jointly by

International Association for Impact Assessment of South Africa (IAIAsa) and Environmental Lawyers Association of South Africa (ELAsa), a number of perceived issues and concerns related to the efficiency of the system have been highlighted including cost and time.

In terms of ***effectiveness*** the major question remain whether EIA has succeeded in South Africa to meet the objectives set for it. In other words, does the process add value? In the IAIASa and ELASa Draft Discussion Document referred to above, the perception that EIA is not adding value and that it fails to address critical sustainable development issues, is clearly conveyed. This document also alludes to the following ***effectiveness*** related concerns:

- **The real purpose of public participation** – this process is perceived to be too extensive and complicated, adding time and costs without really adding value.
- **Process problems** - EIA is perceived as being a very tedious and frustrating process for managing environmental impacts.
- **Quality of decision-making** – environmental authorities are perceived to lack sufficient competent, well-informed officials who understand EIA process, are flexible decision-makers and interpreters of the EIA laws and regulations.
- **Competent practitioners** – the varying quality of EIA applications affects good decision-making. Scientific information provided by the practitioners in the application is often inconclusive.

It is against this background that the Department of Environmental Affairs & Tourism (DEAT) has decided to, on the 10th anniversary of formalized EIA in South Africa, commission this study to review the efficiency and effectiveness of EIA as a tool for environmental management in South Africa.

2. Project management

After a tender process as prescribed through the Public Finances Management Act was followed, Mosakong Management cc in association with Environomics cc, Savannah Pty Ltd. and environmental counsel were appointed to conduct the study and report on the findings.

The project team (service providers) were responsible for implementing their proposal and adhering to the project specifications set for the project, whilst a project management team consisting of DEAT officials were responsible for managing the consultants to ensure delivery.

In addition to these teams, a project steering committee (PSC) was established to review draft reports and other documents and to guide and direct the process. The PSC included representatives of both national and provincial EIA authorities, ELASa and IAIASa.

(a) The project team consisted of the following persons:

- Hilda Mthimunye - overall project manager, client and stakeholder liaison;
- Paul Claassen - conceptualisation of products, data capture and analysis;
- Jenny Hall - environmental management, legal support and guidance;
- Karen Jodas - EIA/EIM comparative studies and EIA best practices, data capture and analysis;
- Jo-anne Thomas - instruments, data capture and analysis;
- Is'haaq Akoon - data capture and analysis;
- Theo Claassen - data base management and logging of sequences in case files;
- Vanessa Harmse - logging of sequences in case files;
- Phetogo Dimpe: project administration, meeting coordination and minute writing.

(b) The project Management team was constituted of DEAT represented by Wynand Fourie (chairperson) and Chantal Matthys (DEAT was responsible for the provision of strategic guidance and project support) and the project team represented by Hilda Mthimunye from Mosakong Management (project manager) and Paul Claassen from Environomics (report on project progress).

(c) The following people formed the project steering committee:

Mosakong Management – represented by Hilda Mthimunye

Environomics – represented by Paul Claassen;

DEAT – represented by Wynand Fourie and Chantal Matthys;

Western Cape – represented by Paul Hardcastle

Limpopo – represented by Victor Monwe

Mpumalanga – represented by Selby Hlatswayo

Northern Cape – represented by Sibonelo Mbanjwa

North West – represented by Lerato Mokgwatlheng

Gauteng – represented by Boniswa Belott

IAIA – represented by Jenny Mitchell

ELASA – represented by Andrew Muir

3. Project implementation

The project was implemented in phases, and conducted in two main parallel parts namely:

- Investigating the effectiveness and efficiency of EIAs by reviewing historic EIA processes against set criteria and comparing it to other processes; and
- assessing the views of stakeholders involved in the EIA process.

The project has been divided into the following phases:

Phase 1: Inception phase which includes:

- The development of an application evaluation checklist (AEC);
- the development of application specific questionnaires (ASQ) for authorities, applicants, practitioners and stakeholders to extract case specific view on selected EIAs;
- the development of a general questionnaire for NGO's, industry representatives, government departments and other stakeholders to extract broad general views on EIA;
- the development of a background information document (this document) to serve as an introduction and explanation of the project; and

- the definition of authority performance criteria that are measurable in terms of available statistics in respect of applications, personnel and finance.

Phase 2 Evaluation of EIAs:

- The evaluation of a large number of EIA files across all the authorities;
- the completion of an AEC for each selected file;
- the completion of as many as possible ASQs for authorities, applicants, practitioners and randomly selected stakeholders;
- advertise the project in national newspapers;
- make the BID available to respondents and to stakeholders that are already known and invite them to register as participants;
- send out the general questionnaire to all registered participants for completion and record responses received;
- determine and record any relevant indicators, policies, guidelines and performance measures in place at the different competent authorities to be used as basis for evaluating the effectiveness of achieving government policies, aims and objectives; and
- assess the performance of each competent authority in terms of the selected criteria.

Phase 3 Comparisons:

- Select relevant countries that have conducted effectiveness assessments that are readily available and compare their findings with that of this project.

Phase 4 Investigation of alternative instruments and key process issues:

- Investigate and assess instruments that could replace or be used instead of EIA;
- investigate and assess instruments that can be incorporated into EIA to make it more effective;
- investigate and assess instruments that can be used in addition to EIA; and

- determine process and procedural problems that impact on the effectiveness and efficiency of the EIA processes.

Phase 5 Assessment of results:

- Assess the results and present it in a draft report;
- give feedback to the competent authorities and others who participated; and
- receive comments and feedback.

Phase 6 Action plan recommendations to DEAT:

- Finalise the project report with recommendations to DEAT.

4. Development of EIA in South Africa

Whilst the study focused on the 10 years of regulated EIA, it is important to contextualise this study within the evolution of the instrument in the South African legal and policy context.

A broad outline of key events in the development of EIA in South Africa includes[1]:

1976 **South African Council for the Environment Report**: The report proposed methods and procedures for environmental evaluation in South Africa.

1979 **Symposium 'Shaping our Environment'**: Emphasized the value of EIA as an aid to the management of environmental change to incorporating principles of EIA into guidelines for use by professional planners.

1980 **White Paper on a National Policy Regarding Environmental Conservation**: Aimed to formulate a national policy on environmental conservation and proposed that the environment (both natural and man-made) should become a normal consideration in the planning and development cycle of projects.

[1] Adapted from Kidd, M and Retief, F (2008). *Environmental Assessment*. Fuggle, R. and Rabie. M (eds) *Environmental Management in South Africa*, Juta, Cape Town.

Environmental Planning Professions Inter-disciplinary Committee: Proposed guidelines to assist planning professionals in taking environmental aspects into account.

1982 **Environment Conservation Act (100 of 1982)**: Provided for the establishment of a statutory Council for the Environment, which together with the officials of the department played a significant role in the development of EIA thinking.

1983 **Council for the Environment** and a **subcommittee for EIA**: The EIA Committee initiated research, workshops and consultation on EIA to develop a mechanism that would suit the South African context.

1984 **President's Council**: Published two reports that requested compulsory introduction of EIA for development projects outside Guide Plan areas.

1985 **National Workshop** on the significance and necessity of EIA. Government officials, professionals and academics indicated unanimous support for the introduction of EIA as part of a 'comprehensive holistic planning procedure'.

1987 **Working Group** (consisting of the EIA Committee and members of the Council for the Environment): Was appointed to develop the philosophy on environmental assessment for South Africa.

1989 **Environment Conservation Act (73 of 1989)**: Made provision for an environmental policy (Section 2) and EIA (Sections 22, 23 and 26).

Integrated Environmental Management (IEM) report of the Council for the Environment: Set out the principles and a procedure for the evaluation of policy, programmes and projects.

1992 **IEM Guideline Series reports** published by the department: Served as guidance on the implementation of IEM.

1996 **The Constitution:**

- Introducing through Section 24 the right to live in an environment that is not harmful to human health and wellbeing; for the environment to be protected for the benefit of current and future generations and for the above to be effected through appropriate legal and policy instruments as a basic human right.
- Designate environmental management as a concurrent function between national and provincial government,

1997 **EIA Regulations**: Promulgated in terms of Sections 21, 22 and 26 of the Environment Conservation Act (73 of 1989) for listed project level actions only.

1998 **White Paper on an Environmental Management Policy for South Africa**: Laid the foundation for NEMA.

IEM Discussion Document: Aimed to clarify IEM for environmental authorities and the private sector before it became legislated. Its recommendations were not included in NEMA and it marked the end of the era of IEM thinking.

National Environmental Management Act – NEMA (108 of 1998): Makes provision for EIA under Chapter 5.

2005 **Amendments to NEMA:** Improves provision for EIA Regulations and for Integrated Environmental Management in general.

2006 **New EIA Regulations**: Provides new EIA Regulation in terms of section 24 of NEMA.

5. Lingering issues

As a result of the historical development of EIA in South Africa, a number of divergent positions/philosophies developed over time, which to some extent keeps on resulting in the polarisation of positions of different interest groups. Whenever there is a policy or legislative process these underlying differences

surface. Thus far no process has succeeded in formulating a single position or even a degree of convergence and same arguments carry on and on over time. Some of the key positions are indicated below.

(a) Conflicting views commonly held regarding the relationship between EIA and other processes include:

(a) That EIA should be incorporated into the planning process, versus that the planning process itself has a significant impact on the environment;

(b) that EIA should be the "deal maker" between environmental and development needs, versus the view that EIA must focus on protection of the environment and biodiversity in particular.

(b) Conflicting views commonly held regarding governance aspects of EIA include:

- That there is a need for independent oversight, versus the view that authorities should be able to use their discretion in terms of their legislated and political mandates;
- that EIA should be centralised in a national department to ensure consistency and efficiency, versus the views that EIA should be executed at provincial level in order to take account of varying provincial priorities (supported by the Constitution), and that EIA should be delegated to local authorities and be integrated with land use planning (at least in certain cases);
- that EIM should be mainstreamed throughout all government departments and the view that departments should be able to have control over all aspects of their mandates including the management of the environment as far as it affects their mandates versus the view that departments should not be players and referees (conflict of interests where departments mandates conflict with environmental protection imperatives.

(c) Conflicting views commonly held regarding the scope of EIAs include:

- That EIA should be principle based, versus the view that EIM should be the main implementation mechanism for sustainable development with a strong bias towards ecological sustainability;

- that policies, plans and programmes (especially that of government) should be subjected to SEA, versus the view that policies, plans and programmes are political instruments that cannot be subjected to the technicalities of SEA as that may undermine the responsibility of elected officials to fulfil their political mandates.

The envisaged development of a national strategy and action plan for Environmental Impact Management poses an ideal opportunity for government and all stakeholders to engage on these issues and derive at solutions or at least some level of common understanding.

Chapter B: Approach and Methodology

1. Defining EIA

1.1 Purpose and objectives of EIA in terms of current legislation

Section 24 of the Bill of Rights [chapter 2 of the Constitution of the Republic of South Africa, 1996 (Act 108 of 1996)] states: "*Everyone has the right – (a) to an environment that is not harmful to their health or wellbeing; and (b) to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that – (i) prevent pollution and ecological degradation; (ii) promote conservation; and (iii) secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.*" known as the "environmental right" of South Africans.

The National Environmental Management Act, 1998 (Act 107 of 1998), as amended (NEMA), that gives effect to the "environmental right" does not provide an explicit definition of EIA. The National Environmental Management Principles (NEMP) in NEMA however states that "*Development must be socially, environmentally and economically sustainable*". This has the implication that EIA, together with other measures, has the primary purpose to ensure that development is sustainable[2]. In addition there are several other requirements (objectives) for EIA that stem from the NEMP, including, but not limited to:

- The distribution of environmental impacts may not discriminate against any person;
- all aspects of the environment must be regarded as linked and interrelated;
- decisions must take account of all effects on the environment and all people by pursuing the best practicable environmental option; and
- decisions must take the interests, needs and values of all interested and affected parties into account.

[2] Sustainable development is discussed later in this chapter.

The Environmental Impact Assessment Regulations, 2006, as amended (EIA Regulations), defines EIA in relation to the application as *"…the process of collecting, organizing, analyzing, interpreting and communicating information that is relevant to the consideration of that application*". It also provides definitions for Scoping, Scoping Report (SR), Basic Assessment (BA), Basic Assessment Report (BAR) and EIA Report (EIAR). These processes and reports all form part of what should collectively be understood as legislated EIA in South Africa (excluding the requirements for mining which is not dealt with in any detail in this report) and includes the following basic requirements:

- Public participation in a prescribed format;
- description of the proposed activity;
- description of the property and its location;
- description of the environment that may be affected by the proposed activity;
- indication and taking into account all legislation and guidelines that have been considered;
- the description of the need and desirability of the proposed activity;
- the identification and consideration of alternatives to the proposed activity that are feasible and reasonable;
- description and assessment of the significance of identified environmental impacts, including cumulative impacts;
- environmental management and mitigation measures; and
- specialist inputs where necessary.

1.2 Key concepts

(a) Sustainable development

Sustainable development is the key concept that underpins environmental management in South Africa. NEMA defines it as *"Sustainable development means the integration of social, economic and environmental factors into planning, implementation and decision-making so as to ensure that development*

serves present and future generations." According to the NEMP *"Sustainable development requires the consideration of all relevant factors including the following:*

(i) That the disturbance of ecosystems and loss of biological diversity are avoided, or where they cannot be altogether avoided, are minimized and remedied;

(ii) that pollution and degradation of the environment are avoided, or, where they cannot be altogether avoided, are minimized and remedied;

(iii) that the disturbance of landscapes and sites that constitute the nation's cultural heritage is avoided, or where it cannot be altogether avoided, is minimized and remedied;

(iv) that waste is avoided, or where it cannot be altogether avoided, minimized and reused or recycled where possible and otherwise disposed of in a responsible manner;

(v) that the use and exploitation of non-renewable natural resources is responsible and equitable, and takes into account the consequences of the depletion of the resource;

(vi) that the development, use and exploitation of renewable resources and the ecosystems of which they are part do not exceed the level beyond which their integrity is jeopardised;

(vii) that a risk-averse and cautious approach is applied, which takes into account the limits of current knowledge about the consequences of decisions and actions; and

(viii) that negative impacts on the environment and on people's environmental rights be anticipated and prevented, and where they cannot be altogether prevented, are minimized and remedied."

Environmental Impact Assessment is one of the key environmental management instruments that are to ensure sustainable development. It is however not the only instrument and is supported by *inter alia* Specific Environmental Management Acts such as the National Environmental Management: Biodiversity Act; National Environmental Management: Protected Areas Act; National

Environmental Management: Air Quality Act and other legal instruments such as the waste management provisions of ECA and the National Water Act. The NEMP are also binding on all organs of state that exercise functions that may impact on the environment.

The role of and expectations for EIA with regard to sustainable development must accordingly be viewed within the limitations of the instrument. It is not the sole implementing agent for sustainable development but promotion of sustainable development is one of its key objectives.

In a recent paper "*A Mechanism for Responsible Decision-making*"[3] the authors states that *"… NEMA first and foremost promotes environmental protection and ecologically sustainable development."* and that *"This is confirmed by the definition of the environment, which gives pre-eminence to ecological issues and almost as an afterthought makes allowance for aesthetic and cultural properties and conditions."*

(b) The term significance in EIA

The evaluation of the significance of environmental impacts is a critical but poorly understood component of EIA theory and practice.

In South Africa the screening process has been replaced by lists of activities that require EIA. NEMA, in section 24(2)(b) and (c) makes provision for the identification of geographical areas and the specification of activities. This enables the different competent authorities to "streamline" the national lists by allowing them to exclude activities on the national list from assessment that will take place in areas that are deemed not to be sensitive to those activities and to include additional activities in areas that are deemed to be sensitive to those activities. This in effect creates a matrix system for deciding which activities require EIA in which environments, which to a large extent makes significance a potential determinant factor in the screening phase of EIA in South Africa. Apart from the sensitive area identification processes currently underway in Gauteng; the Western Cape and on National level and the current development of various environmental management frameworks in all nine provinces, these sections of the NEMA have however not been implemented to the desired extent to date.

[3] Thornhill, M. & Bulman, R. 2008. A Mechanism for Responsible Decision-making. Paper presented at the annual conference of the IAIAsa held on 13 August 2008, Bela-Bela, Limpopo, South Africa.

The EIA regulations require *"… an assessment of each identified potential significant impact including:*

- *cumulative impacts;*
- *the nature of the impact;*
- *the extent and duration of the impact;*
- *the probability of the impact occurring;*
- *the degree to which the impact can be reversed;*
- *the degree to which the impact may cause irreplaceable loss of resources; and*
- *the degree to which the impact can be mitigated."*

The way in which significance should be determined is prescribed in the EIA Regulations for EIARs as well as in the prescribed format for BARs. Significance is not addressed in the scoping requirements of the EIA Regulations as the SR is reduced to a precursor of the EIAR with a specific limited function.

1.3 Understanding of term environmental impact assessment (EIA)

In terms of current legislation in South Africa, as indicated in paragraph 1.1, EIA means the process of collecting, organizing, analyzing, interpreting and communicating information that is relevant to the consideration of project specific applications for environmental authorisation. This is also the definition adopted for EIA for the purposes of the study

2. Defining effectiveness and efficiency

2.1 Definitions

The following is a selection of pertinent definitions that were taken into account as a starting point to define effectiveness and efficiency:

- **Effectiveness** means the ability to achieve stated goals or objectives, judged in terms of both output and impact (Ref 1[4]).
- **Effectiveness** means the achievement of targeted results and the ability to raise targets (Ref 2[5]).

[4] Ref 1: United States Environmental Protection Agency definition.

- **Effectiveness** means the speed, accuracy and completeness with which particular tasks are performed in particular circumstances (Ref 3[6]).
- **Efficiency** means the degree to which outputs are achieved in terms of productivity and input (resources allocated). Efficiency is a measure of performance in terms of which management may set objectives and plan schedules and for which staff members may be held accountable (Ref 1).
- **Efficiency** means producing results with little waste of effort (Ref 4[7]).
- **Efficiency Assessment** means an evaluative study that answers questions about programme costs in comparison to either the monetary value of their benefits or their effectiveness in terms of the changes they bring about in the social conditions they address (Ref 1).
- **Efficacy means** producing the desired result (Ref 4).
- Barry Sadler equates effectiveness to successful performance and states: "*The real test of successful performance is the extent to which EA has made a difference, whether better decisions follow and environmental objectives are realised."*[8]

The above definitions indicate that the concept of effectiveness and efficiency should in the first instance address the purpose and objectives of EIA (stated goals or objectives; targeted results; desired result; realisation of environmental objectives, etc.). Secondly it should address the productivity (time and/or cost) of EIA processes.

From the previous section it is clear that the primary purpose of EIA in South Africa is to serve as a key implementing instrument in ensuring sustainable development. In order to achieve this, the objective of EIA is to anticipate and avoid, minimize or mitigate (including offset) significant negative impacts on the environment.

To enable informed decision-making by government officials (at the end of the EIA process) and applicants (during the course of the EIA process) the

[5] Ref 2: A common definition used in business management.
[6] Ref 3: The Design Council of the United Kingdom.
[7] Ref 4: The Oxford Paperback Dictionary.
[8] Sadler, B., 1996. *International Study of the Effectiveness of Environmental Assessment, Final Report – Environmental Assessment in a Changing World: Evaluating Practice to Improve Performance*. Canadian Environmental Assessment Agency and the International Association for Impact Assessment. Minister of Supply and Services, Canada.

procedure followed and the content of the reports produced should meet or exceed the legal requirements.

The time the EIA process takes is the most important aspect of efficiency as it is under constant scrutiny and attack form applicants. The monetary cost of EIA is also important.

2.2 Consideration of existing international approaches to define effectiveness

Existing approaches to the assessment of the effectiveness of EIA were considered in or to inform the approach to be adopted for this study. Many of these studies however looked at Environmental Assessment in a broader context than EIA as an instrument for activity specific assessment. These approaches were also used to formulate the criteria that were used in this study, where appropriate.

(a) The Barry Sadler approach

The Sadler approach was initiated to resolve the question of whether EA can remain a relevant and effective tool into the 21st century, responding to the demands of a changing world with the theme "evaluating practice to improve performance" as a joint initiative of the Canadian Environmental Assessment Agency (CEAA) and the International Association for Impact Assessment (IAIA).

The study sought to take stock of the status of EA practice after 25 years, identify major strengths and limitations and recommend measures for strengthening the practice and administration of EA which focused on four categories of themes:

- Foundations of EA, focussing on guiding values and principles, new dimensions in EA, the application of sustainability concepts, strategic environmental assessment, and cumulative and large-scale effects;
- Process strengthening, focussing on the relationship of EA to decision-making; and
- Capacity building, with particular reference to needs of developing countries.

This approach identified four necessary components for effective application of EA, namely:

- Appropriate timing in initiating the assessment so that the proposal is reviewed early enough to scope for reasonable alternatives;
- clear, specific directions in the form of terms of reference or guidelines covering priority issues, timelines, and opportunities for information and input at key decision-making stages;
- quality information and products fostered by compliance with procedural guidelines and use of "good practice", and;
- receptivity of decision makers and proponents to the results of the EA, founded on good communication and accountability.

The objectives, to review effectiveness of EA are:

- Review current issues, emerging trends, and future directions of EA;
- examine the contribution of EA to decision making;
- document what works well with existing approaches; and
- recommend cost-effective measures for improving EA, with specific reference to the challenge of sustainable development.

A phased approach is used to meet these specific objectives. Phase 1 comprised a feasibility stage to test concepts, develop frameworks, consult with I&APs, and prepare background and discussion documents. Phase 2 was directed by an international steering committee. The phases are simplified by a 4-step process to examine the effectiveness of environmental assessment:

- Step 1: Policy Analysis of Leading Trends and Issues;
- Step 2: Contribution of EA to Development Decision making examples and comparisons;
- Step 3: Operational Excellence in Application of EA methods, procedures, and components; and
- Step 4: Conclusions and Guidelines for Sound Practice;

(b) The Caucasus Environmental NGO Network (CENN) approach

The CENN approach has been used to study the effectiveness of EIA system in Armenia, Azerbaijan and Georgia which represents one ecological region with a

number of common problems. It was therefore more relevant to study the whole region instead of the separate countries.

The CENN uses a three pronged approach:

- The first stage being: the collection of the basic data through a review of the existing literature and legislative framework of the EIA system under review.
- The second stage involves: the collection of up-to-date information about the EIA system, practice, institutional capacity and current basic needs of the sector through interviews in each country.
- The final stage was designed as a round table discussion of the information collected at the previous stages. A draft report was provided to the various stakeholders involved in the EIA process for comments, review and suggestions.

It should be noted that as part of the study the engagement of "experts" in the region was the primary information source. The study is mainly based on the analysis of the outcomes of conversations, questioning, meetings, etc.

The analysis of this was used to draw a picture on the effectiveness of the EIA system covering its legal framework, practice, drawbacks and gaps as well as the enforcement mechanisms.

(c) The Lee and Colley Review Package

The Lee and Colley Review Package has been prepared primarily to assist in assessing the quality of environmental statements submitted in response to UK planning regulations which require that environmental assessments (EAs) are undertaken in accordance with UK legislation.

The package was designed to be used by a wide range of people involved in the environmental assessment sector. It was designed to be self-contained with the following components:

- advice for reviewers (i.e. necessary background information and guidance on the use of review criteria);
- a list of criteria (called Review Topics) to be used in each ES review;

- a collation sheet on which to record the findings from using the criteria.

The criteria to be used must as far as possible satisfy the following requirements:

- Each should be well defined and unambiguous;
- each should be capable of reasonably consistent and objective application;
- each should serve a distinct purpose different from the purposes of other criteria;
- each should be considered sufficiently important to merit influencing the ultimate assessment of ES quality;
- the number of criteria should be as few as possible, consistent with covering all topics identified as essential and to good internationally recognized EIA practice;
- they should be usable by reviewers who may not possess specialist environmental expertise but who are familiar with the relevant EIA regulations, have a basic, non-specialist understanding of EIA methodologies and current ideas on good practice in EIA, and have a broad knowledge of environmental concerns.

The review criteria are structured in a hierarchical format and should be applied in the following way: “The reviewer will commence the review at the lowest level, i.e. the base of the pyramid, which contains simple criteria relating to specific tasks and procedures. Then, drawing upon these assessments, he/she progressively moves upwards from one level to another in the pyramid applying more complex criteria to broader tasks and procedures in the process until the overall assessment of the ES has been completed.”

The Review Package includes a list of Review Topics. These are arranged in a hierarchy with three levels as described above and include:

- ***Review Areas*****:** These are the four major areas of EA activity.
- ***Review Categories:*** These are the categories of EA activity which must be undertaken within each Review Area.

- ***Review Subcategories*:** These comprise the detailed Review Subcategories within each Review Category.

The Lee and Colley's hierarchical model includes in total, 4 review areas, 17 review categories and 52 review sub-categories.

The four review areas include:

- Description of the development, the local environment and the baseline conditions;
- identification and evaluation of key impacts;
- alternatives and mitigation of impacts; and
- communication of results.

A full list and description of the categories and sub-category criteria can be found in Section B.2 of Lee et al., 1999.

The Review Package also includes a collation sheet as part of the review package to record the result of each of the criterion that is applied by the reviewer. A standard list of assessment symbols is used to grade the review.

(d) The North West University Review Package (adaptation of Lee and Colley)

This is a subsequent adaptation of Lee and Colley environmental impact report (EIR) quality review package, after the original had been generically modified for EIR quality in South Africa by Sandham and Pretorius in 2007.

This specific adaptation was done after the recognition that the generic package needed to be adapted to review EIR quality in specific sectors such as water management, and more specifically wetlands. (Sandham et al., 2008).

The South African wetlands review package (SAWRP) as developed by Sandham et al., 2008, consists of multiple criteria arranged in a four-level hierarchical structure. This hierarchy consists of overall report grade, review areas, categories and sub-categories. These areas all form part of the assessment method used to determine the quality of the EIR. SAWRP uses 81 sub-categories which feed through 15 review categories and 4 review areas leading to a final overall score/grade.

The review system involves the evaluation of how reliable a number of assessment tasks (sub-categories, categories and areas) have been performed. The review begins at the lower levels where simple criteria relating to specific tasks and procedures are applied. These assessments are then re-evaluated using more complex criteria to evaluate broader tasks and procedures in the process until an overall assessment of the EIR has been completed. Sandham et al., 2008 have also devised a specified scoring scale from A – F including Not applicable (A being the best and F the worst). To record each criterion in the assessment a collection sheet was produced.

The four broad review categories are:

- Description of development, local environment and base line studies;
- identification and evaluation of impacts;
- alternatives and mitigation of impacts; and
- communication of results.

These are then broken down as described above into review categories and review sub-categories.

(e) The EIA Centre, University of Manchester comparative evaluation approach (B. Ahmad and C.Wood, 2002)

This approach was developed to review and compare the performance of environmental impact assessment (EIA) systems in three jurisdictions in the Middle East and North Africa region i.e. Egypt, Turkey and Tunisia.

The development of specific analytical criteria to compare and evaluate the effectiveness of the EIA systems in the three countries was necessary in this study. The approach applied the evaluation criteria proposed by Wood (1995, 1999) and quality control criteria used by Ortolano et al. (1987) and Leu et al. (1996, 1997). These criteria are classified under the two categories used by Fuller (1999), namely “systematic measures” and “foundation measures”.

The criteria developed for the purpose of this study are mostly descriptive and are based on formal requirements for EIA as well as on elements of its practice. This allows the legal and administrative contexts of each of the EIA systems to be taken into consideration. The criteria used in this study provide a

comprehensive framework against which the three EIA systems can be evaluated and reviewed. This framework allows for detailed comparison and also takes into account the following attributes of the EIA system:

- Legislation and administrative procedures of the EIA system;
- aspects of EIA such as screening, scoping, EIA report review, mitigation, etc.; and
- measures undertaken to improve the effectiveness of the EIA system.

2.3 Considering views and expectations expressed by stakeholders

As is illustrated by the background to the study and the "lingering issues" discussed in Chapter A, different stakeholder groupings have different expectations of the study and of EIA in general. Role-players are of the view that their respective roles and mandates are not understood or respected by other parties in the process.

Because of this situation, it was decided to attempt to address as many views as possible in addition to the formal case reviews and questionnaire responses in the latter chapters of this report.

3. The approach that was adopted for the project

3.1 Facts and perceptions

While it plays a part, the project never intended to be an empirical review of facts subtracted from the case files and other data of the authorities. The evaluation and review included both facts obtained from the case files and views expressed either through the questionnaires or via other means in respect of the effectiveness and efficiency of EIA.

At the start of the project it was immediately clear that, irrespective of what is contained in the legislation, there are a variety of different perceptions of what is effective and efficient, based on the particular context and frame of reference of the person. This largely stems from a general lack of a uniform understanding of the purpose and objective of EIA, the definition of sustainable development, the role of significance, etc. In order to establish an idea of the extent of this

variation in perception it was decided early on in the project (rightly or wrongly[9]) not to define the purpose of EIA and criteria for effectiveness and efficiency up front in the general questionnaire. The questionnaire was meant as a conduit for persons to provide their inputs in an unrestricted way.

The criterion that was used for the evaluation of the case files were however developed early in the process. In addition, case specific questionnaires were developed for officials, practitioners, applicants and public participants with the purpose to get an idea of the variation of perceptions amongst the different groups in respect to the same case.

3.2 Criteria and indicators selected for measuring effectiveness and efficiency of case files

The criteria used to evaluate the efficiency and effectiveness of EIA processes for the selected cases were based on:

- The purpose of EIA in ensuring that development is sustainable (as defined in NEMA and the EIA Regulations);
- the legal requirements for EIA in South Africa;
- examples of effectiveness and efficiency reviews especially the Sadler and Lee & Coley approaches; and
- the aspects that are reasonably measurable in the files. (A test run was done on a number files).

The criteria were divided into three main categories (similar to the Sadler approach) with several sub-categories to which criteria with a rating system was assigned. The categories and criteria are:

- Category 1: Substantive (outcomes) criteria:
    - Extent to which negative impacts were avoided or minimized;
    - extent to which positive impacts were minimized;
    - extent of contribution to sustainable development;
    - extent of contribution to environmental policy objectives.

[9] With hindsight and in the light of the criticism of this approach by various stakeholders a different approach may have been decided on if the choice could be made again.

- Category 2: Procedural (processes and products) criteria:
    - Extent to which legal procedures were followed correctly;
    - quality of the EIA report;
    - quality of the authority evaluation;
    - quality of decision-making and setting of conditions;
    - extent of compliance monitoring and enforcement;
- Category 3: Execution (efficient use of time[10]) criteria:
    - Time it takes to produce EIA applications and documents; and
    - time it takes to evaluate EIA applications and documents.

These categories, criteria as well as the ratings used are reflected in the table below.

Table A1: Categories, criteria, sub-criteria and ratings used for the evaluation of case files

Criterion category	Criterion	Sub criterion	Rating
Substantive	Extent to which negative impacts were avoided, minimized or mitigated or the extent to which positive impacts have been maximized	Avoidance[11] of impacts	For a rating of good there must be a clear indication that the potential impacts that have been identified have been avoided to the extent possible. For a rating of average there must be at least an indication that some of the more significant impacts that have been identified have been avoided. For a rating of "Poor" there is no or little indication that there was any attempt to avoid impacts.
		Minimization of impacts	For a rating of "Good" there must be a clear indication that the magnitude and significance of the impacts that could not be avoided have been minimized to the extent possible. For a rating of "Average" there must at least be an indication that some of the more significant impacts that could not have been avoided, have been minimized to some extent. For a rating of "Poor" there is no or little indication there was any attempt to minimize impacts.

[10] There was also an attempt to use cost criteria but it was not possible to get access to reliable information about the cost of EIAs and due to the extreme fluctuations in estimates from different sources. In one instance, the consultant indicated that the fee for a large EIA was less that 1.5 million rands, the applicant however suggested that the EIA cost would amount to almost 30 million rands. Although not as drastic as the example above these kinds of discrepancies occurred throughout and thus have not been included.

11 Determining whether impacts have been avoided are often best identified by comparing maps and plans that indicate sensitive environments with activity layout plans or in the comparative assessment of alternatives.

		Extent to which the impacts were minimized	For a rating of "Good" there must be clear indication that positive impacts have been minimized to the extent possible. For a rating of "Average" there must at least be some mention of the positive impacts and how these have been minimized to the extent possible. For a rating of "Poor" there is no or little indication that the positive impacts were addressed.
	Extent to which the appropriate and accurate identification of impacts will lead to better protection of the environment	Assessment of direct impacts	For a rating of "Good": - There should at least be a methodology that indicates the source (origin or cause) of each impact, the nature of the impact, the magnitude of the impact, the significance of the impact and affected stakeholders. - Impacts should be considered for all environmental elements on or surrounding the affected site(s), including at least physical, biological, historical and social elements. - The activity should be described in enough detail to identify potentially impacting aspects. - The environment should be described in enough detail to identify negative effects. For a rating of "Average": - Impacts should be considered for all environmental elements on or surrounding the affected site(s), including at least physical, biological, historical and social elements. - The activity should be described in enough detail to identify potentially impacting aspects. - The environment should be described in enough detail to identify negative effects. For a rating of "Poor" if any one of the following have not been covered adequately: - Impacts should be considered for all environmental elements on or surrounding the affected site(s), including at least physical, biological, historical and social elements. - The activity should be described in enough detail to identify potentially impacting aspects. - The environment should be described in enough detail to identify negative effects.

		Assessment of indirect impact	For a rating of "Good" the potential for indirect impacts (or not) should be : - Assessed or summarised clearly in a separate section. - A methodology that indicates the source (origin or cause) of each impact, the nature of the impact, the magnitude of the impact, the significance of the impact and affected stakeholders. - Impacts should be considered for all environmental elements that will not directly be affected on the site(s), especially environmental resources that provide services to the activity. - The activity should be described in enough detail to identify potentially impacting aspects. - The environment should be described in enough detail to identify negative effects. For a rating of "Average" the potential for indirect impacts (or not): - Should be assessed. - Impacts should be considered for all environmental elements that will not directly be affected on the site(s), especially environmental resources that provide services to the activity. - The activity should be described in enough detail to identify potentially impacting aspects. - The environment should be described in enough detail to identify negative effects. For a rating of "Poor" the following have not been adequately covered: - Impacts have not been considered for all environmental elements that will not directly be affected on the site(s), especially environmental resources that provide services to the activity. - The activity has not been described in enough detail to identify potentially impacting aspects. - The environment has not been described in enough detail to identify negative effects.
	Extent of contribution to sustainable development	Assessment of alternatives[12]	For a rating of "Good" there should at least be a clear comparative assessment between two or more alternatives (excluding the no-go option). For a rating of "Average" there should at least be an assessment of two or more alternatives (excluding the no-go option). For a rating of "Poor" there should at least be a mention of two or more alternatives (excluding the no-go option). For a rating of "Not Applicable" there will be no mention of alternatives.
		Role of comments[13] and responses in identifying impacts and formulating alternatives	For a rating of "Good" there must be a clear indication in the documentation of how specific inputs from I&APs have contributed to the identification of impacts and formulation of alternatives. For a rating of "Average" there must be some indication that inputs from I&APs have contributed to the identification of impacts and formulation of alternatives. For a rating of "Poor" there will be no or little indication that inputs from I&APs have contributed to the identification of impacts and formulation of alternatives.

12 The relevance of the assessment of alternatives is different for the different types of assessment that are reviewed. During the assessment phase this relevance will be considered for each of the different types of assessment.

13 The issues raised by I&APs should be compared to the list of identified impacts and the proposed alternatives in the EIA documentation

		Assessment of cumulative impacts	For a rating of "Good" the potential for cumulative impacts (or not) should be : - Assessed or summarised clearly in a separate section. - A methodology that indicates the source (origin or cause) of each impact, the nature of the impact, the magnitude of the impact, the significance of the impact and affected stakeholders. - Impacts should be considered for all environmental elements that might be affected especially environmental resources that accumulate emissions, effluent or discharges and that act as aesthetic or sense of place determinants. - The activity should be described in enough detail to identify potentially impacting aspects. - The environment should be described in enough detail to identify negative effects. For a rating of "Average" the potential for cumulative impacts (or not): - Should be assessed. - Impacts should be considered for all environmental elements that might be affected especially environmental resources that accumulate emissions, effluent or discharges and that act as aesthetic or sense of place determinants. - The activity should be described in enough detail to identify potentially impacting aspects. - The environment should be described in enough detail to identify negative effects. For a rating of "Poor" the following have not been adequately covered: - Impacts have not been considered for all environmental elements that will not directly be affected on the site(s), especially environmental resources that provide services to the activity. - The activity has not been described in enough detail to identify potentially impacting aspects. - The environment has not been described in enough detail to identify negative effects. A rating of "Not Applicable" or "Unknown" should be applied when it is clear that due to the type of application in its local context it would be unlikely that cumulative impacts can occur..
	Extent of contribution to environmental policy objectives	Assessment of implications for policies, plans and guidelines	For a rating of "Good" the assessment must consider and clearly indicate the policies, plans and guidelines in respect to the management of the environment that have been taken into account. For a rating of "Average" the assessment must consider the policies, plans and guidelines in respect to the management of the environment that have been taken into account. For a rating of "Poor" the policies, plans and guidelines in respect to the management of the environment have not been consciously addressed in the assessment.
Procedural	Extent to which legal requirements were met	Meeting the requirements of EIA legislation[14]	For a rating of "Good" the process and product requirements of the relevant EIA legislation have clearly been met. For a rating of "Average" it is unclear whether all the processes and product requirements of the relevant EIA legislation have been met. For a rating of "Poor" it cannot be determined from the documentation whether the process and product requirements of the relevant EIA legislation have been met.

14 The rating for this criterion can only be based on the information and documentation provided in the files.

		Did the assessment succeed in implementing/promoting relevant policies, plans and guidelines[15]	Very Effective Effective Unsure/Marginal Not Effective Very Ineffective In rating this, the criterion of Assessment of implications for policies, plans and guidelines and Meeting the requirements of EIA legislation needs to be applied in you judgment.
	Extent to which the legal requirements of EIA pertaining to Public Participation were met	Meeting and fulfilling the requirements of EIA legislation	For a rating of "Good" the relevant legal requirements have been met and presented in a clear and structured manner. For a rating of "Average" the relevant legal requirements have been met as far as can be ascertained from the documentation presented. For a rating of "Poor" it is not clear whether the relevant legal requirements have been met based on the documentation presented.
		Meeting and fulfilling the requirement of Advertisements	For a rating of "Good" the advertisement was conducted in a manner that encouraged participation of I&APs. For a rating of "Average" the advertisement was conducted in a manner that met the minimum legal requirements. For a rating of "Poor" the advertisement was conducted in a manner that did not meet the minimum legal requirements.
		Extent to which comments of I&APs have been recorded, responded to and considered in the assessment	For a rating of "Good" the documentation should at least contain a comments and responses report or section as well as an indication of how it was considered in the assessment process and a clear indication of all participants including their contact details. For a rating of "Average" the documentation should as a minimum contain a comments and responses and a clear indication of all participants including their contact details. For a rating of "Poor" the comments and responses are absent and incomplete or the information and contact details of the I&APs were not recorded or incomplete.
	Quality of the EIA documentation	General quality of work presented	For a rating of "Good" the report(s) submitted should be: - Clear in their purpose. - Complete and well structured. - Easily readable and decipherable. For a rating of "Average" the reports(s) submitted should be: -Complete and structured. For a rating of "Poor" the report(s) submitted is incomplete or unstructured to the extent that it makes the effective and efficient evaluation thereof almost impossible.

15.

		Independence of the practitioner	For a rating of "Good" the reports that were submitted illustrated that: - The applicant did not intervene in the assessment of impacts. - As far as can be ascertained there are no omissions in the description of the activity that may influence the identification of potential impacts. - As far as can be ascertained there are no omissions in the description of the environment that may influence the identification of potential impacts. - The EIA and especially the description of the activity is unbiased and does not market or motivate the activity in a manner that is clearly biased. For a rating of "Average" the reports that were submitted illustrated that: - The applicant did not intervene in the assessment of impacts. - The EIA and especially the description of the activity is unbiased and does not market or motivate the activity in a manner that is clearly biased. For a rating of "Poor" where the report submitted illustrated that: - The applicant did intervene in the assessment of impacts. OR - The EIA and especially the description of the activity is biased and does market or motivate the activity in a manner that is clearly biased.
		Confidence in the methodology of the assessment of impacts	High, Medium or Low In rating this, the assessor should take account of the requirements in the EIA Regulations and determine whether the methodology used in the particular instance adequately address the requirements in a way that is clear and provides and understanding of the degree of certainty of the prediction.
	Quality of the authority evaluation	Taking account of information in the EIA	For a rating of "Good" the decision and/or record of decision should clearly indicate how it took account of the results of the assessment as well as the issues raised by I&APs. For a rating of "Average" the decision and/or record of decision should at least indicate that the results of assessment and the issues raised by I&APs have been considered. For a rating of "Poor" the decision and/or record of decision does not present a clear indication of considerations of the results of the assessment or the issues raised by I&APs.
		Taking account of policies affected by the application	For a rating of "Good" the decision and/or record of decision must support all environmental policies that are in place to protect the environment against negative impacts. For a rating of "Average" the decision and/or record of decision must at least consider all environmental policies that are in place to protect the environment against negative impacts. For a rating of "Poor" there is no clear indication that environmental policies that are in place to protect the environment against negative impacts have been considered.
		Taking account of quality of assessment	For a rating of "Good" there must be a clear indication in the decision and/or record of decision about the quality of assessment and how it was considered in the decision. For a rating of "Average" there must be some indication in the decision and/or record of decision that the quality of assessment was considered in the decision. For a rating of "Poor" there is no clear indication that the decision and/or record of decision have considered the quality of assessment in the decision.

	Quality of decision –making and setting of conditions	Making an informed decision	For a rating of "Good" the decision and/or record of decision must clearly indicate how the results of assessment informed the decision. For a rating of "Average" the decision and/or record of decision must indicate that the results of assessment informed the decision to at least some extent. For a rating of "Poor" the decision and/or record of decision shows no or little indication that the results of assessment informed the decision.
		Setting conditions	For a rating of "Good" the authorisation and/or record of decision must clearly provide conditions of authorisation that at least take account of: - The phases of the authorised activity. - Waste, effluent and emissions that will be produced by the authorised activity. - Monitoring and enforcement of the decision and conditions. For a rating of "Average" the authorisation and/or record of decision must at least provide clear conditions of the authorisation. For a rating of "Poor" the authorisation and/or record of decision does not provide clear conditions of authorisation.
	Extent of compliance monitoring and enforcement	Monitoring and enforcement of conditions	For a rating of "Good" there must be an indication of how monitoring and enforcement of conditions are to be performed in the authorisation and/or record of decision as well as evidence in the file that the monitoring and enforcement by the authority has commenced. For a rating of "Average" there must be an indication of how monitoring and enforcement of conditions are to be performed in the authorisation and/or record of decision. For a rating of "Poor" there is no indication that monitoring and enforcement has been considered in the decision and/or record of decision.
Execution	The time it takes to produce EIA applications and documents	To be calculated form the dates recorded from the files.	
	The time it takes to evaluate EIA applications and documents	To be calculated from the dates recorded from the files.	

	External Influences on the EIA process	To be noted on a case by case basis if it occurred.

The above criteria were compiled in an evaluation checklist that was used to evaluate the case files. To enable efficient evaluation of the files, the order of the criteria in the list was adjusted to match the general sequence of the events in the files as closely as possible. The checklists are attached as Appendix B to this report.

3.3 Questions that were selected in case specific questionnaires

It was decided by the project management committee to also test the different participants in the process in respect to a selection of cases that were evaluated in order to establish the extent of possible different perceptions about the same case. The following questionnaires were developed for this purpose:

- An officials questionnaire;
- a practitioners questionnaire;
- an applicants questionnaire; and
- a stakeholders questionnaire.

Due to the fact that many of the persons that were involved in the cases evaluated no longer work for the organisations they were employed with at the time of the assessments of the cases, very few responses were received. It therefore failed to produce the desired result of providing a basis for comparative assessment of views and interpretations of different participants for the same cases. However, especially in terms of the NEMA EIA which is only in place since 2006, this turn-over of case officers in itself reveals a significant challenge in the EIA system that contributes to effectiveness and efficiency challenges

The responses that were received did however contribute to the general understanding of certain important issues and were incorporated with the results of the general questionnaire. The questionnaires are attached in Appendix C.

3.4 Questions selected for the general questionnaire

The general questionnaire was compiled to address issues that are generally discussed/ asked about EIA in South Africa. Its purpose was not to measure effectiveness and efficiency per say but rather to solicit views from people working in the field that could be used to interpret perceptions. The questionnaire, with the assistance of a questionnaire expert and the University of Cape Town also provide ample opportunity for participants to provide their views on any aspect. It should therefore be regarded as a mechanism to provide persons with the opportunity to express their views about EIA. The questionnaire is attached in Appendix D.

4. Evaluation Framework

4.1 Evaluation of cases and capturing case specific views

A two-pronged approach was followed insofar the evaluation of case files is concerned. Firstly files were evaluated in the nine provinces as well as in DEAT. A total number of 502 case files were evaluated, using the criteria and rating system indicated in Table A1.The numbers of files for the different authorities is reflected in Table A2 below. Secondly a number of evaluated case files were selected for which questionnaires were sent out to the officials, practitioners, applicants and randomly selected stakeholders that participated in the specific cases.

Table A2: Number of case files evaluated

Authority	Total Acquired	Total evaluated	Incomplete files	ECA	NEMA
Gauteng	**95**	91	4	20	71
KwaZulu-Natal	**70**	68	2	20	48
Limpopo	**69**	69	0	23	46
Mpumalanga	**29**	29	0	10	19
Eastern Cape	**40**	40	0	10	30
Northern Cape	**15**	15	0	9	6
Western Cape	**96**	96	0	29	67
North-West	**51**	49	2	14	35
Free State	**25**	25	0	10	15
DEAT	**21**	20	1	3	17
Totals	**511**	**502**	**9**	**148**[16]	**354**[17]

4.2 Capturing general perceptions and views

The general questionnaire (see Box 2) was developed with the input from Steering Committee members to reflect general questions that are known and to present it in a general questionnaire to facilitate obtaining comments and views from a broad spectrum of persons involved with EIA in South Africa. This list was sent out using the DEAT contact list which included:

- National departments;
- provincial departments;
- academic institutions;
- civic associations;
- local government;
- NGO's;
- business;
- industry;
- research institutions; and

[16] Out of a total population of 49 796. The initial aim of 1% was not possible due to the unavailability of enough ECA case files.
[17] Out of a total population of 7 457 (this was the total population when the review took place in June 2008 – the number s have subsequently grown).

- individuals.

Fifty five completed forms were received back and include:

- 23 officials;
- 18 practitioners;
- 6 applicants; and
- 8 from other categories of participants including submissions from organised groups.

A sample of the views in respect to a selection of the questions asked is provided in Appendix E. The full record of response is recorded unedited in a register that is available on request as a separate volume.

Expressed views have been recorded and several meetings were also held with a number of prominent persons and groups who expressed an interest to meet with the project team. Their views were captured and are reflected in Chapter D of this report.

4.3 Evaluation of existing information on authorities

DEAT in collaboration with the provincial authorities keeps various records on application and staff. This information was used to evaluate relative efficiency of authorities and to determine where potential problems may continue to exist after recent actions by DEAT to improve the functionality of the system.

The results of this evaluation have not been included in this report as it has to be verified in detail with each authority. Once that has been done by DEAT, the results can supplement the findings of this report in informing the EIM Strategy.

Although evaluation results are not included in the report, the following factual statistics on the volumes of applications and human resources capacity are important as it provides insight into the reasons behind some of the constraints placed on efficient administration of the EIA process:

(i) The number of applications received in terms of the ECA EIA Regulations by all 10 authorities totalled 49 795 with the most applications received by Gauteng (13001); followed by the Western Cape (7 632). DEAT received the

lowest number of applications (673). At the end of September 2008 644 ECA applications were still pending.

(ii) The number of applications received in terms of the NEMA EIA Regulations by all 10 authorities totalled 8 943 at the end of September 2008. Western Cape has received the most applications (1 621), followed by Gauteng (1528). It is significant to note that DEAT received 602 applications (almost the same amount that was received for the 9 years of implementing the ECA EIA Regulations)

(iii) The combined number of EIA officials (on various levels) provided for in the organisational establishments of the 10 authorities is 448. Vacancies against these positions were at 44% at the end of March 2008, 44% at the end of June 2008 and at 43% at the end of September 2008.

(iv) Less than 50% of EIA officials currently employed by the 10 authorities are in their current position for more than 2 years.

4.4 Evaluation of other instruments

Several other instruments were evaluated with the view to indicate their potential use in an extended environmental impact management system and to consider how these instruments could:

- Provide a better context within which EIA can function;
- provide additional EIM instruments that may be more effective and efficient in certain circumstances than EIA; and
- be used within, or in addition to EIA in order to make it more effective and efficient.