STATUS OF STRATEGIC ENVIRONMENTAL ASSESSMENT (SEA) PRACTICE IN SOUTH AFRICA

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Abstract:

South Africa is regarded as a leading developing country in terms of SEA practice, but little research has been conducted to analyse and highlight experience. This paper presents insights into SEA practice in South Africa in terms of tiers, types and geographic scales. The findings were based on the first extensive SEA survey for the country conducted during 2003. It confirmed that SEA practice is well established and on the increase. Moreover the extent of practice compares well with, and the variety in terms of tiers, types and scales even exceeds, that of most international SEA systems. The research showed that apart from the traditional integration of SEA with policy, plan or programme (PPP) tiers of decision making, it was also uniquely implemented as a substitute where strategic level decision making processes were weak or absent. The case studies reflected 'comprehensive' and a variety of 'sectoral' SEA types implemented at national, provincial, sub-regional and local geographic scales. The findings support the notion that South Africa provides a rich variety of SEA practice that could provide solutions to the challenge of tailoring SEA for developing country contexts.

Introduction

The importance of tailoring environmental assessment tools to serve the requirements of a specific context have been highlighted (Sadler, 1996, Sadler and Verheem, 1996, Marsden, 1998, Partidario and Clark, 2000, Fischer, 2002a, Wood, 2003), and in recent times special consideration was given to the application of environmental assessment in developing country contexts (Lee and George, 2000, Annandale, 2001, Dalal-Clayton and Sadler, 2003). South Africa, specifically, is expected to broaden understanding of SEA within a developing country context (Dalal-Clayton and Sadler, 2003) due to the fact that it has gained significant experience in SEA since 1996, all be it on a voluntary, and often '*ad hoc*' basis. In order to identify best practice from past experience and facilitate continual improvement,

experience needs to be reviewed. From anecdotal evidence it seemed as if more SEAs have been conducted than initially anticipated by leading authorities in the field, and so prompted the need to research the extent of SEA practice in South Africa. This paper presents a profile of the number, tiers, types and geographic scales at which SEAs have been conducted, based on a survey in 2003. A total of 50 SEAs, initiated between 1996 and 2003 were identified. The outcome of the survey provides a platform for further, more detailed, follow-up phases of research into quality and effectiveness of SEA practice in South Africa.

The voluntary and 'ad hoc' nature of SEA presented various methodological challenges for the research. The primary challenge related to the lack of an administrative system to determine the exact number of SEAs conducted. To overcome this, the methodology had to be as robust as possible relying on multiple sources of evidence, which included a survey questionnaire, interviews and literature reviews. The key role players who contributed to the research included the nine provincial environmental authorities, as well as selected national state departments, local municipalities and consultancies. It is important to emphasise that this paper does not claim to have identified all the SEAs which have been conducted, because within the existing system this would be impossible to verify. It does, however, claim to have identified a representative sample of SEA case studies from which certain trends can be identified. In order to allow for comparisons, a context specific typology and classification was developed in terms of tiers, types and scales of SEA, summarised in Figure 5.

Number of SEAs conducted in South Africa

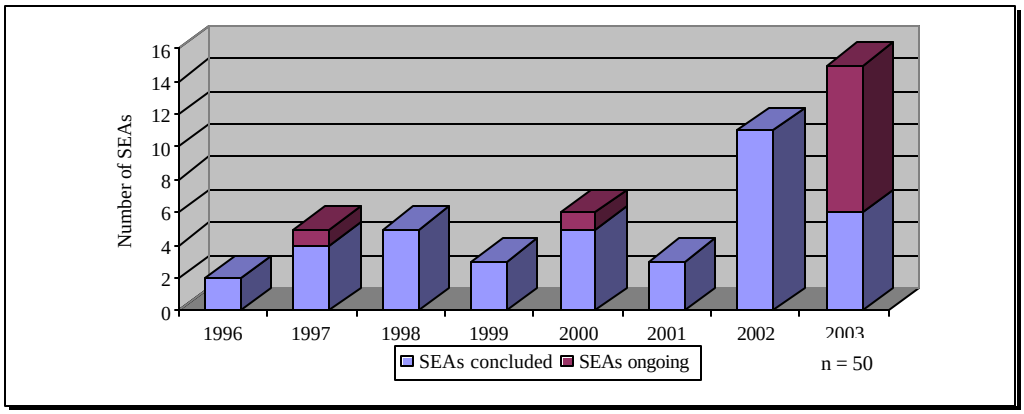
The survey set out to determine the total number of SEAs conducted in South Africa to identify evolutionary trends. From the outset it was evident that an often confusing plethora of definitions, understandings and approaches to strategic level environmental assessment existed which gave rise to so-called 'para-SEAs'[1]. As far as possible these para-SEAs were excluded and only case studies specifically entitled 'strategic environmental assessments' (SEAs) were considered, to focus the survey and avoid confusion[2]. This again highlighted the need expressed (Verheem and Tonk, 2000) to standardise the terminology and understanding of SEA, to enable refinement of the concept, and also to explain it to non-SEA specialists such as politicians and the public. The lack of a clear understanding of SEA and the problems it create is not unique to South Africa (Noble, 2000, Fischer and Seaton, 2002) but the lack of legislative requirements as well as the confusion surrounding the IEM philosophy (Du Plessis and Nel, 2003), probably contributed to this exceptional variety.

[1] 'para-SEA' is a term used for processes that do not meet the formal specifications for SEA (as defined legally or in certain legal or policy instruments) but have some of their characteristics and elements of SEA instruments (Dalal-Clayton and Sadler 2003, p15).

[2] In exceptional cases some case studies with different descriptions were included where the difference in contents was negligible and significant SEA characteristics could be verified. They represent one percent of the sample (five case studies) and included a strategic appraisal (SA), environmental action plan, regional environmental and social assessment (RESA) and two strategic development plans (SDPs).

Figure 1 indicates that the first SEAs were conducted in 1996, and after an initial period of gradual escalation the number of SEAs increased more rapidly after 2000, to reach a total of 50[3]. The number of SEAs compares well with other countries and could even be regarded as exceptional, especially in view of the voluntary nature of SEA in South Africa. To put it in perspective it is useful to briefly reflect on practice in other countries. In terms of developed countries, the number of programmatic environmental impact statements (EISs) in the USA totalled around 35 per annum between 1979 and 1987 (Sigal and Webb, 1989), and around 10 per annum towards the late 1990s (Wood, 2003). The Netherlands conducted around 40 strategic environmental impact assessments (SEIAs) between 1987 and 2000 (Verheem and Tonk, 2000), while Australia had only seven environmental impact statements (EISs) produced that related obviously to PPPs between 1974 and 2000 (Wood, 2003). Information on the exact extent of SEA practice in other developing countries is limited but initial findings of a recent extensive research project by the International Institute for Environment and Development (IIED), suggests that South Africa conducted substantially more SEAs than most other developing countries (Dalal-Clayton and Sadler, 2003).

Figure 1: Number of SEAs conducted in South Africa, 1996 - 2003



It can be concluded that SEA is well established in South Africa and that there is no reason to believe that SEA practice will decrease in future. On the contrary, although it is difficult to predict the exact extent of future practice, it can be expected that it would dramatically increase due to the promulgation of SEA legislation and guidance. As an example, the provisions of the Land Use Bill (2002) could facilitate the requirement of 303 SEAs every five years as part of the preparation of spatial development frameworks (SDFs) for provinces (9), metros (6), district (47) and local municipalities (241). Moreover, if SEA is adopted by the Department of Water Affairs and Forestry (DWAF) as a decision support tool to comply with the provisions of the National Water Act (36 of 1998), it could imply SEAs for each of the 19 water management areas (WMA) and many more, should SEA also be

[3] The sample reflects SEA case studies, which have been concluded as well as those that are still ongoing. The case studies initiated in 2003 are all scheduled for completion in 2004. The case study initiated in 1997 refers to the SEA for water use in South Africa (DWAF, 1999), which forms part of a wider SEA initiative still underway. The SEA initiated in 2000 refers to the SEA approach adopted by Eskom as a permanent decision support component of their environmental management system (EMS).

applied to strategic level decision making for catchments. This potential for a dramatic increase in SEA practice, in the wake of legislative reforms, raises the need for effective environmental assessment tools, that are well defined and understood, and which do not place an unreasonable burden on the administrative system in terms of time and resources. Efficiency has always been expressed as a pre-requisites for the South African context (Fuggle, 1989, Sowman, et al., 1995, Fuggle and Rabie, 1999).

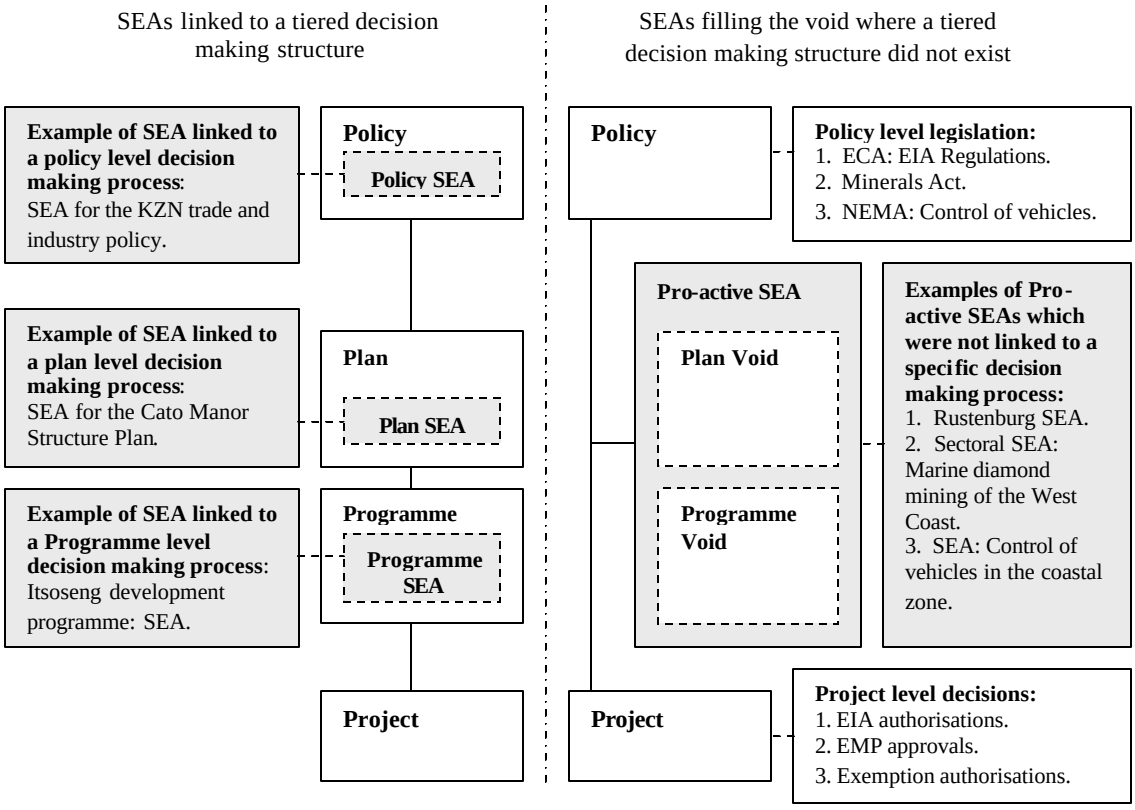
Classification of tiers of SEA in South Africa

Traditionally, it was agreed that SEA involved the environmental assessment of policies, plans and programmes (PPPs) and that these were sequentially linked to form different tiers (Lee and Wood, 1972, Lee and Walsh, 1992, Therivel, et al., 1992). When two environmental assessments are linked to tiered decisions they are referred to as being 'tiered' (Partidario, 1996, Nooteboom, 2000). It would have been ideal if there could have been an internationally common definition of PPPs but Sadler and Verheem (1996) argued early on, that this was not possible because each environmental assessment system has its own approach to SEA, and operates in an unique decision making context influenced by political and institutional realities. There is also not one form of SEA that could be applied at all levels (Partidario, 2000), in particular policy level SEAs have tended to develop separately (DEAT, 2000, Nitz and Brown, 2001). The relation of SEA to the decision making process is a key issue (Nilsson and Dalkman, 2001) and has been described in terms of three models namely: the 'consent related' model, which only informs the decision making process at a late stage; the 'integrated' model, which integrates the SEA throughout the decision making process; and the 'objectives-led' model, which facilitates the integration of 'sustainability objectives' with the decision making process (Therivel and Partidario, 1996, CSIR, 2002). The theoretical argument supports the notion that the extent and success of integration of SEA with PPPs will determine the eventual effectiveness of the SEA (Therivel and Brown, 1999). Indeed, international SEA systems (especially in developed countries) has shown that initially, established strategic decision making processes relating to areas such as transport or planning were identified, and then SEA was expected to integrate with and so inform these processes (Wood, 1995, 2003). This has also led to recent research to better understand the integration of SEA with PPP in different SEA systems in a developed country context (Fischer, 2000, 2002b).

In the South African context a tiered approach to SEA was proposed from the early emergence of SEA (CSIR, 1996), and attempts have been made to define PPPs both in the 1989 Integrated Environmental Management (IEM) document (CE, 1989), and in the 2000 non-statutory SEA Guideline Document (DEAT, 2000). It is interesting to note that the initial thinking on strategic level assessment referred to *"policies and programmes"* (CE, 1989), then changed to *"policies and plans"* (DEA, 1992), and finally to *"policies, plans and programmes"* (DEAT, 2000). Ultimately, the 2000 SEA Guideline Document only applied to plans and programmes for which a stand alone SEA process was proposed that needed to be adapted for integration to different processes and tiers. Moreover, it reflected an unique interpretation of the 'sustainability approach' to SEA (Therivel, et al., 1992, Glasson, et al.,

1994) focussing on *"the effect of the environment on development rather that the impact of development on the environment"* (DEAT, 2000, p10, Rossouw, et al., 2000, p217). The survey determined how the different tiers of SEA in South Africa were represented in practice. Two distinct features became apparent, illustrated by Figure 2 (the extent of which are presented in Figures 3 and 5).

Figure 2: Tiered classification of SEA in South Africa



The first feature was that only 64% of the case studies (32) could be classified in the traditional manner as being policy, plan or programme SEAs, on the basis of being integrated with, or linked to, PPPs. Of these, the large majority were plan SEAs (27) with only four programme and one policy SEA (examples of which are presented in Figure 2). It is significant that very few SEAs were formally integrated with these decision making processes. Rather they were implemented in parallel, and only informed decision making late on in the process. No examples of formal tiering arrangements between different strategic levels of decision making were found. However, SEA guidance for water use in catchments is being developed specifically to facilitate tiering between water management strategies and plans for secondary catchments and water management areas (WMAs), the refinement of which is still in progress (DWAF, 2001). The need for similar guidance for biodiversity management has also been expressed (Wynberg, 2002). Finally, the intent to tier strategic level decisions with project level EIA was common among the case studies, and served as one of the primary motivating factors for conducting the SEAs.

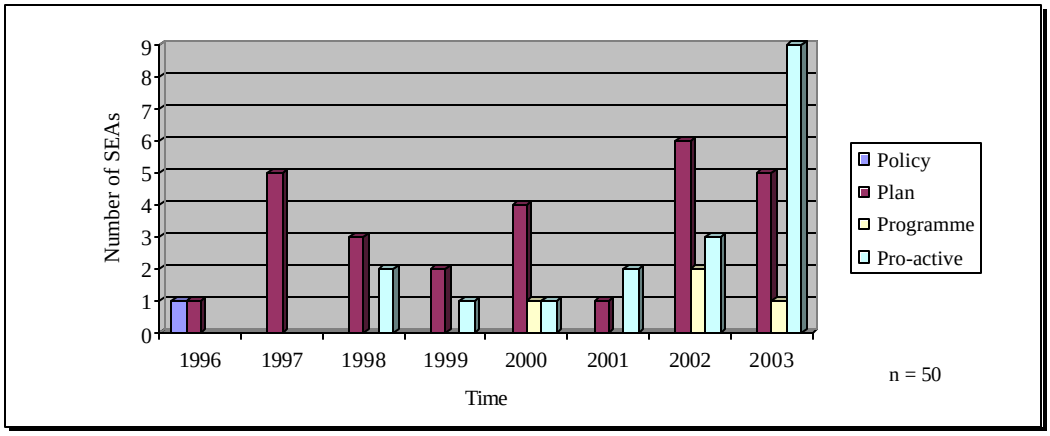
The second feature that arose was that the remaining 36% of the case studies (18) were not integrated or linked to PPP processes at all. It became apparent that these SEAs filled a void between policy requirements and its project level decision making implications (see Figure 2). They had to provide the strategic basis for project level decision making and so the SEA changed from an assessment tool for plan or programme proposals to an assessment tool that assessed the capacity and status of the resource base. In many cases the SEAs provided a sustainability framework (including opportunities and constraints, thresholds, carrying capacity, limits of acceptable change, etc.) at a specific geographic scale. The best examples of this phenomenon related to EIA and the mining and resource management sectors. For these sectors, policy (enforced by legislation) required project level decision making without provision for strategic decision making tools. It became clear that SEA filled the void where strategic level decision aiding structures and processes were not in place. Due to the lack of a better definition they were, for the purpose of this paper, classified as 'pro-active SEAs'. The following three SEA case studies served as typical examples (see Figure 2):

- The Environment Conservation Act (ECA), (73 of 1989) was the product of the White Paper on a National Policy Regarding Environmental Conservation in South Africa, and made provision for the control of activities which may have a detrimental effect on the environment. This gave rise to the 1997 EIA Regulations only applicable to project level activities. The provincial environmental authorities were assigned to implement the regulations and administer and assess EIA applications. The case of Rustenburg represents a town located within a sensitive biophysical environment, experiencing high levels of development pressure. It soon became apparent that strategic level information was required to effectively evaluate EIA applications for the area. Hence, the Rustenburg SEA was initiated by the provincial environmental authority to provide a strategic framework that could be used to evaluate EIAs in accordance with the regulations (EA, 2003).
- The Minerals Act, (50 of 1991), administered by the Department of Minerals and Energy (DME) requires that any new mining project needs to submit an environmental management programme (EMP) for approval. The west coast of South Africa is well known for its diamond mining industry. The mining sector realised that they could assist the project level decision making responsibilities of DME, related to EMPs by identifying the key strategic environmental issues relevant to their operations within the specific geographical area. Hence, they conducted a SEA to flag key strategic issues and develop a generic EMP for their operations in South African waters (Lane and Carter, 1999). DME could then use the strategic information to evaluate the EMPs for each new mining operation.
- Regulations to control vehicles in the coastal zone promulgated under the National Environmental Management Act (NEMA), (107 of 1998), enforced a ban on any form of beach driving in South Africa. This had a tremendous impact in certain areas, especially those relying on access to the coastal zone for recreational tourism related activities. The Act did however make provision for exemption from the provisions of the regulations. It was realised that exemption applications needed to be considered within a strategic framework and thus an

SEA was commissioned to guide exemption decisions by the National Department of Environmental Affairs and Tourism (DEAT, 2003).

Figure 3 provides a timeline of the number of SEAs conducted per tier in South Africa from 1996 until 2003. It shows that examples of practice exist at all tiers, but with only one case study on policy level assessment, conducted in 1996. Since then both the theory and practice on policy level assessment in South Africa seemed to have stagnated. The fact that the South African SEA guidance also explicitly excludes policy level SEA probably contributed to this (DEAT, 2000). The first programme SEAs were conducted in 2000, the extent of which still remains limited. Plan SEA practice fluctuated but can be considered well established. Pro-active SEAs were initiated in 1998 and have since escalated. They were primarily triggered by the need to inform project level EIA authorisations after the promulgation of the EIA Regulations in 1997.

Figure 3: Number of SEAs conducted by tier in South Africa, 1996 - 2003

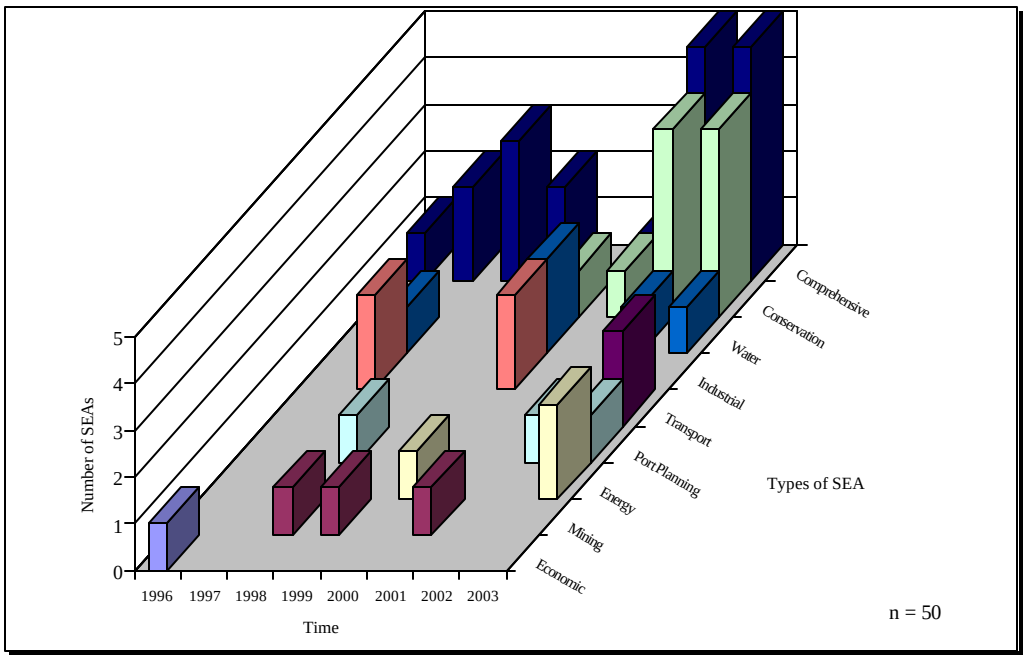


Types of SEA conducted in South Africa

The classification of SEA 'types' used in the survey and presented in Figures 4 and 5 was adapted from Therivel *et al* (1996) and Annandale *et al* (2001). Using only two broad categories, namely 'sectoral' and 'comprehensive' (see Figure 5 for definitions), simplified the often difficult task of assigning a particular SEA case study to a particular 'type'. The sectoral case studies were further classified into eight sub-sectoral types based on the primary focus of the SEA. The analysis of the different SEA 'types' provided information on the range of strategic areas that required assistance with strategic level decision making in South Africa. Moreover it indicated the decision making contexts, processes and institutional arrangements, where the application of SEA has been explored and experience gained. Figure 4 presents the types of SEA conducted in South Africa from 1996 until 2003, with sectoral type case studies constituting 62%, of which 32% were related to the sub-sector conservation and biodiversity management, and 16% to water management. Although measured over a relatively short time period to identify a definite trend, the conservation sub-sector does seem to have escalated since 2000. The remainder of sub-sectoral case studies was divided between six development related sub-

sectors, namely: industrial, transport, port planning, energy, mining and economic policy. They were spread over time, not suggesting any definite trend. However, economic policy SEAs have not reappeared since 1996, while transport and energy types emerged quite recently. The comprehensive type constituted 38% of the total sample and is well established, the majority of which related to planning processes.

Figure 4: Types of SEA conducted in South Africa, 1996 - 2003



The analysis confirmed the emergence of enabling conditions for the expansion of SEA on a wide front. Table 1 presents a summary of these enabling conditions, identified per SEA type. It is evident that enabling provisions in the form of legislation, policy, strategies, systems and corporate responsibility do exist for the majority of SEA types, which could facilitate the further expansion of SEA practice. This overview of enabling conditions is especially important in a time when efforts are being made to legislate SEA. New legislative provisions need to take cognisance of these enabling conditions in order to support and strengthen them, while at the same time formalise SEA as a decision making tool at strategic level.

Table 1: Enabling conditions facilitating the expansion of SEA practice per type

Type of SEA	Enabling conditions facilitating the expansion of SEA
Comprehensive	**National Environmental Management Act (NEMA), (107 of 1998): Second Amendment Bill (2003),** serves as framework legislation and makes provision for the promulgation of regulations, laying down procedures and institutional arrangements for SEA. The **Land Use Bill, 2003** requires that provincial and municipal spatial development frameworks (SDFs) should reflect a strategic assessment of environmental impacts.

Sectoral	Various opportunities for the expansion of SEA relating to the sub-sectoral types exist.
Conservation and biodiversity management	**Biodiversity Bill, 2003** allows for the formulation of a national biodiversity framework, bioregional plans and a biodiversity management plan. The act also states that these plans should be aligned with the SDFs (prepared as part of the Integrated Development Planning (IDP) process). SEA could thus be used as a tool to inform these plans directly or via the SDFs.
Water management	The requirements of the **National Water Act (36 of 1998)**, already prompted DWAF to develop SEA as a decision support tool for the management of water uses in catchments. Draft guidance (DWAF, 2001) has already been developed and the intention is that SEA should inform the national water resource strategy and be applied widely to inform catchment management strategies.
Industrial sector	A combination of **corporate environmental responsibility** and the need to ensure **legal compliance** to environmental legislation led to the '*ad hoc*' application of SEA to strategic level decision making in the industrial sector.
Transport sector	The **Road Infrastructure Strategic Framework for South Africa, 2002** prepared by the National Department of Transport (NDT) did indicate that SEA should be developed as a tool to assist with incorporating environmental concerns into road planning and management processes (NDT, 2002).
Port development	The **Draft White Paper on a National Commercial Ports Policy, 2001** recommends that SEA should be used for the proactive integration of environmental issues with social and economic issues at the policy and planning level. Moreover, it states that SEA should ensure close alignment with the IDP process (NDT, 2001).
Energy sector	**Eskom's Integrated Strategic Electricity Planning (ISEP) process** forms part of its environmental management system (EMS) and applies an SEA approach to integrate environmental issues on a continuous basis.
Mining sector	Similar to the industrial sector a combination of **corporate environmental responsibility** and the need to ensure **legal compliance** to environmental legislation led to the '*ad hoc*' application of SEA to strategic level decision making in the industrial sector.

Geographic scale of SEAs conducted in South Africa

A distinct characteristic of SEA is that it deals with a wider, less detailed, scale than project level EIA (Lee and Walsh, 1992, DEAT, 2000, Wood, 2003). Geographic scale and location are important aspects for SEA because they determine the political decision making context and jurisdictions, as well as the level of data and information that will be required to effectively inform a particular level of decision making. Furthermore, scale directly effects the relative significance of particular environmental issues (Antunes, et al., 2001, Joao, 2002). The SEA case studies were classified according to generic geographic scales from national, provincial, sub-regional to local levels. Figure 5 indicates that SEA practice in South Africa spans all these different scales. However, many examples of so-called 'cross border SEAs' were identified where the SEA rather focussed on resource boundaries than political or administrative boundaries (examples of which are presented in Table 2). For this reason the SEA scales could not always be directly linked to corresponding political decision making levels. The lack of alignment between political and resource boundaries presents a specific challenge for the implementation of SEA, and highlighted the shortcomings of existing decision making arrangements.

Tabel 2: Examples of SEAs that considered resource boundaries

Type of SEA	Examples of SEAs that considered resource boundaries
Comprehensive	**Rustenburg SEA**: The boundaries of the SEA were primarily drawn to include areas of intense development pressure on the environmental attributes of the Magaliesburg Protected Natural Environment (MPNE) (EA, 2003).
Sectoral	
Water management	**SEAs for the Mhlathuze catchment and Usutu-Mhlathuze WMA**: The extent of water catchments was used to define the extent of the SEAs. This ranged between primary catchment scale and so-called water management areas (WMAs) scale (Steyl, et al., 2000, Pienaar, 2003).
Conservation and biodiversity management	**SEA for the Greater Addo National Park**: The scale of the SEA reflected the boundaries of the proposed new national park based on the biophysical attributes of the different biomes to be protected (Kerley and Boshoff, 1997, CES, 2001).
	Cape Action Plan for the Environment (CAPE). The CAPE sought to develop a long term strategy and action plan to conserve the biodiversity of the Cape Florisitc Region (CFR) which spanned across three provinces and involved various levels of government as well as non-governmental institutions (Lochner, et al., 2003).

SEA also faces a distinct challenge to provide relevant data to decision makers at the appropriate scale and level of detail. It was thus not surprising that tools for spatial presentation and manipulation of information (such as GIS), were widely used and considered critical to provide a functional decision aiding tool, which is informative and easy to interpret. The IEM philosophy has long since proposed the use of so-called environmental management frameworks (EMFs) for this purpose in South Africa (DEAT, 1998) and subsequently it was significant to note that EMFs did form an integral component of many of the SEA case studies. Certain SEAs also attempted to adapt the national state of the environment (SOE) indicators (DEAT, 2002), to different spatial scales. It can be concluded that in most cases, data were available but at different scales and formats, which made its integration extremely difficult.

Conclusion

From an international perspective, South Africa has emerged as a leading country in the development of SEA, especially among developing countries. Its voluntary nature (not being confined by prescriptive legislative requirements) combined with a commitment from decision makers to ensure more environmentally responsible decision making, has led to innovative and imaginative forms of SEA. This again supported the understanding that SEA is a family of tools and not a single approach to be applied to all contexts. The extent of practice presented a varied profile, including a range of scales, types and tiers, as reflected by Figure 5. The preceding analysis on the status and extent of SEA practice in South Africa highlight the following key aspects:

- The case studies showed that SEA practice is well established and on the increase. This expansion of SEA practice has been largely voluntary which suggests that it must be adding some value to decision making. However, SEA has only been implemented for eight years and can hardly claim to have stood the test of time, although the initial indications are undeniably promising.

- Identifying linkages of SEA to different tiers of decision making are not always as straight forward as it might seem. In addition to the common understanding of the integration of SEA with PPP tiers, practice has shown that SEA can be applied to fill a void created by the absence of strategic level decision making processes, in order to link policy requirements with project level decision making.
- The different types of SEA indicate that the concept has been explored on a wide front. This was facilitated by enabling conditions primarily in the form of emerging legislation and policy, which proves that SEA is adaptable to different decision making contexts.
- The different scales of SEA highlighted the fact that administrative boundaries do not always correspond with resource boundaries. This has significant implications for decision making structures and assignment of responsibility for the implementation of SEA.

The analysis also highlighted two key challenges for SEA, namely:

- How to absorb the anticipated expansion of SEA within the existing institutional capacity and resource constraints. It is questioned if SEA should be adopted across the board as is implicated by emerging legislation. Rather it should be facilitated by a strong screening mechanism to ensure selective and focussed application.
- How to purposefully analyse the performance of this relatively large number of SEAs conducted in South Africa. This requires a review methodology to gauge the quality and effectiveness of the SEA practice in a systematic and comprehensive way in order to identify best practice and ensure continual improvement.

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Figure 5: Profile of SEA practice in South Africa

Geographic Scale	Tiers and Types of SEA							
	Policy SEA		Plan SEA		Programme SEA		Pro-active SEA	
	Sectoral	Comprehensive	Sectoral	Comprehensive	Sectoral	Comprehensive	Sectoral	Comprehensive
National			Water (2) Energy (1)		Energy (1)		Conservation (3) Mining (2)	(1)
Provincial	Economic (1)		Conservation (1) Energy (1)	(3)			Conservation (1)	
Sub-regional			Water (2) Industrial (1) Conservation (1)	(1)			Conservation (4) Transport (2) Mining (1)	
Local			Industrial (3) Port Planning (3)	(8)	Water (1)	(2)		(4)

( ) indicates number of SEAs

Scale	Description
National	Included SEAs that had a national level focus, which also included cross border SEA between South Africa and neighbouring countries as well as between provinces.
Provincial	Included SEAs that were conduct ed on a provincial scale, which included cross border SEAs between district municipalities.
Sub-regional	Included SEAs conducted on a district municipalityscale, which included cross border SEAs between local municipalities.
Local	Included SEAs conducted on a local municipality scale, which included metro councils.

Tier	Description
Policy	SEA was integrated with, or informed, a specific policy level decision-making process.
Plan	SEA was integrated with, or informed, a specific plan level decision-making process.
Programme	SEA was integrated with, or informed, a specific programme level decision-making process.
Pro-active	SEA was not integrated with or linked to PPP processes, but filled the void between policy level decisions and project level implementation.
Type	**Description**
Sectoral	Where SEA had a specific focus or primary theme. In this paper eight sub-sectoral types were identified namely water management, conservation, mining, industrial, transport, energy, economic and port planning.
Comprehensive	Where SEA considered all activities in a specific area without focussing on the impact thereof on a primary theme or specific sector.