

Contributing to sustainability as an environmental impact assessment practitioner

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Environmental impact assessment (EIA) is the pre-eminent regulatory tool used worldwide in the name of sustainable development. Whilst it may not be perfect for this purpose, and recognising that project-based EIA has been soundly criticised for its perceived failings, it remains the preferred and most widely used tool for project-level assessment and the key (if not only) sustainable development-oriented tool in many countries. Drawing on examples and experience from Southern Africa and Australia, we urge practitioners to raise the bar on day-to-day EIA activities that will push the vectors of sustainability. We can all achieve positive gains for the environmental, social and economic parameters of development proposals through informed professionalism and the pursuit of best practice. Given that EIA is well enshrined in legislation worldwide, it is our responsibility as practitioners to use this important tool to maximise opportunities for sustainability.

Keywords: environmental impact assessment, sustainability, sustainable development, Southern Africa, Australia, best practice

THE PURPOSE OF THIS paper is to outline how environmental impact assessment (EIA) practitioners¹ can contribute positively to sustainability. Our intent is to inspire and empower, focusing on the practical and meaningful changes we can effect in the course of our practice. We believe that the role of the individual practitioner should not be underestimated, since sometimes only a ‘small push’ is needed to transform practice from simple adherence to due process and ‘business as usual’ to something that can make an important difference.

Much has been written in recent years about the perceived limitations of project-based EIA (e.g. Pope *et al*, 2004; Cashmore *et al*, 2004; Alshuwaikhat, 2004) and many practitioners, the authors

among them, have begun to turn away from this level of impact assessment towards other tools, such as strategic environmental assessment (SEA) or sustainability assessment, that we hope might be more influential in guiding development and decision-making towards a more sustainable future. We are aware of the frustrations commonly experienced by EIA practitioners, who wonder at times whether their efforts and hard work are making any difference at all, and of a number of studies aimed at evaluating the effectiveness of EIA as a tool for mainstreaming environmental concerns into decision-making.²

This paper offers a change of voice. Rather than contribute further to the debate and critique of EIA, we suggest it is timely to reflect upon what EIA, as it is commonly practised, *can* achieve in the name of sustainability. EIA is currently established in more than 100 countries and is required by many funding agencies (Petts, 1999). It has been described as one of the more successful policy innovations of the twentieth century (Bartlett, 1988). EIA may not be perfect, but it is what we have to work with. Its

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limitations also need to be recognised. As practitioners our challenge is to use EIA to its full potential, and here we aim to point to a few ways in which we practitioners might use EIA to take steps in the right direction towards a more sustainable future. We draw upon examples from Southern Africa and Western Australia to illustrate our suggestions and to provide inspiration; both of these areas have growing EIA communities of practice and are experiencing large-scale development linked largely to the global upturn in demand for commodities (in particular, minerals).

Sustainability

Sustainability, or sustainable development,³ is a notoriously ‘fuzzy’ concept that arguably has different meanings at different levels of application and in different contexts. For the purposes of this paper, we will base our discussion and examples on the common and simple conceptualisation of sustainability as three overlapping circles representing environmental, social and economic considerations, where the aim is the simultaneous achievement of sustainability goals in all three spheres (Mebratu, 1998; Hoadley *et al*, 2002; Government of Western Australia, 2003); this is depicted in Figure 1. We recognise that there are other useful conceptualisations of sustainability, such as the ‘nested model’ where environmental, social and economic aspects are shown as nested concentric circles.

We also acknowledge that the emphasis is different between ‘developed’ countries, where environmental protection is often the primary concern, and ‘developing’ countries where economic growth and social stability are at the forefront of the sustainability discourse. This in fact reflects the very divide that the notion of sustainable development sought to overcome (WCED, 1987), and is immediately apparent in a comparison of the three Southern African Development Community (SADC) goals for sustainable development and the corresponding principles as articulated in Western Australia; see Table 1.

However, it is not our intent to review the sustainable development literature at this point, or to explore

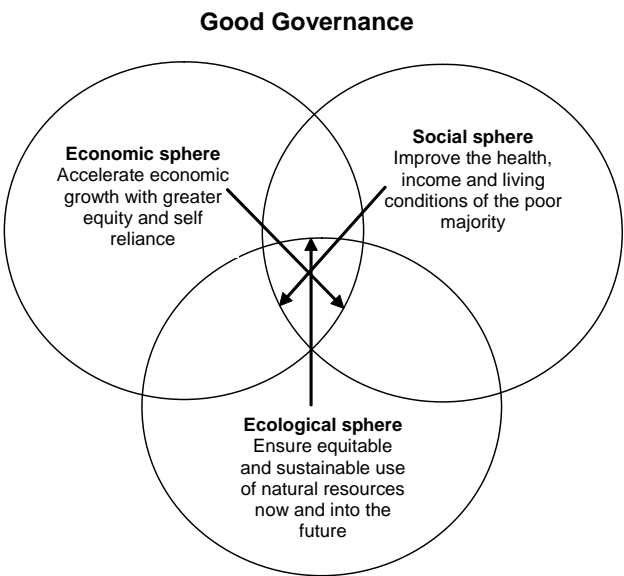


Figure 1. Moving towards the goal of sustainability within the overall context of good governance
Source: Adapted from SADC (1996)

the nuances in interpretation. Instead, we suggest ways in which positive sustainability outcomes in one or more spheres might be achieved through the application of EIA. Many of our examples will also be relevant to other forms of impact assessment.

Pushing sustainability vectors through EIA

While the original goal of project EIA was interpreted by practitioners as being to minimise the negative environmental impacts of development, minimisation can at best limit ‘unsustainability’ and does not necessarily facilitate a shift towards sustainability (Pope *et al*, 2004). With the rise of the sustainability agenda, there has been increasing emphasis on the potential for developments to deliver positive outcomes in the three spheres of sustainability or, in other words, to ‘push the vectors’ towards sustainability goals.⁴

‘Pushing the vectors’ is reflected in the current thinking for SEA in South Africa, which advocates an objectives-led approach (Govender *et al*, 2007). It resonates strongly with the notion of ‘corporate

Table 1. Comparison of sustainability goals of Southern Africa and Western Australia

Sphere	Southern African goal (SADC, 1996)	Western Australian goal (Government of Western Australia, 2003)
Social	Improve the health, income and living conditions of the poor majority.	Equity and human rights. Sustainability recognises that an environment needs to be created where all people can express their full potential and lead productive lives and that significant gaps in sufficiency, safety and opportunity endanger the earth.
Environmental	Ensure equitable and sustainable use of natural resources now and into the future.	Biodiversity and ecological integrity. Sustainability recognises that all life has intrinsic value and is interconnected and that biodiversity and ecological integrity are part of the irreplaceable life support systems upon which the earth depends.
Economic	Accelerate economic growth with greater equity and self reliance.	Long-term economic health. Sustainability recognises the needs of current and future generations for long-term economic health, innovation, diversity and productivity of the earth.

social responsibility', whereby organisations (often multinational resource companies) seek to deliver positive sustainability outcomes, particularly in the local context in which they operate, as an essential part of maintaining their 'licence to operate'.

In some instances, there may be a mandated requirement to promote positive outcomes through development. In Western Australia, the Environmental Protection Authority's position statement on environmental offsets (EPA, 2006) requires that proponents demonstrate both direct offsets, which seek to compensate for detrimental environmental impacts associated with the development in a like-for-like fashion (for example, the rehabilitation of a similar ecosystem), and additional 'contributing' offsets, meaning a positive contribution to the overall environmental good (examples include land acquisition for conservation, conducting new research or contributing to an environmental education facility).

In an EIA context, 'pushing the vectors', means translating sustainability principles and goals into the specific context of the decision at hand and asking 'what can be done here?'. The critical sustainability issues and imperatives are likely to vary between different jurisdictions and locations, as we have already discussed, and the aim should always be to make a difference where it is needed most. For example, the availability of clean water in a nearby community may be a critical issue deserving of the most attention, or perhaps the greatest need might be to protect an endangered ecosystem.

Many of the more progressive development proponents have developed their own sustainable development goals which reflect the context of their operations. One example is Pilbara Iron (2004) in Western Australia, whose sustainable development goals include:

- environment — reduce water use, reduce net land disturbance, reduce net emissions;
- social — improve equal employment opportunities, improve contribution to community capacity building, reduce impact on heritage; and
- economic — optimise long-term economic value.

EIA practitioners can often contribute to the process of developing such a sustainability framework that guides the decision-making process. In the following section, we provide some examples highlighting cases in which EIA practitioners have been able to contribute to more sustainable operations and outcomes in this way.

Pushing the vectors: inspiring examples from recent EIA practice

EIA processes can transform local organisations from being opponents of a project to being actively involved in supporting and monitoring the project. An example comes from a large-scale mixed urban

development called 'Century City' in Cape Town. Initially the proponents had not considered as part of their development proposal the value of a wetland lying in the centre of the undeveloped site, and this led to strong public outcry. Through the EIA process, the wetland was enhanced and protected as an integral part of the development, and those who were opponents to the development ten years ago now form the core of the environmental monitoring committee which keeps a watching brief on this wetland (Intaka, 2007).

The concept of 'environmental offsets' mentioned earlier provides an ideal framework within which EIA practitioners can push the environmental vector. Environmental offsets can take many forms: for example, the restoration of an ecosystem or habitat, the development of an environmental education facility or a contribution to a research and development programme. The concept need not be linked only to environmental assets but can be extended into the social and economic domains too.

It is important to emphasise, however, that the primary aim of offsets should not be to compensate or to 'buy off', but rather to seek synergistic opportunities to meet the proponent's goals while also delivering broader benefits to the community and the natural environment. For example, large-scale developments located in remote areas require many of the infrastructure and facilities that local communities also desire, such as roads, water, communications networks, energy, medical and recreational facilities. There is vast scope for proponents, with a gentle nudge from EIA practitioners working with them, to provide some 'enduring value' from developments in this way.

The concept of providing enduring value is a useful way of thinking about pushing the vectors. From Argyle Diamonds (2006) in Western Australia, an organisation that has adopted this term to frame its corporate sustainability thinking, comes an example of providing enduring value through employment and skills development programmes for local people in relation to recent changes made to their diamond mining operations. During the EIA process for a major shift in operations from open-cut to underground mining, Argyle Diamonds explicitly sought to make

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a difference to the health and livelihood of the traditional aboriginal owners on whose land they operate, to the local indigenous population more generally, and to the development of the local economy.

The company struck a 'participation agreement' with traditional aboriginal owners in 2005. At the heart of this agreement is the establishment of trusts to deliver short-term ('money for now') and long-term ('money for kids and grandkids') benefits. The trustees and the mining company separately identified a range of projects aimed at creating enduring assets in the Kimberley region, which will outlive the mining operation and deliver a range of education, training, employment and enterprise outcomes. In essence, this approach is intended to ensure that indigenous communities share the mining company's profits to promote economic and self sufficiency.

To put some of the immediate benefits of this approach in perspective, in 2006 some 24% of the company's employees were from the local indigenous workforce, compared with just 5% in 2000; over the same period, the proportion of the overall workforce living in the local East Kimberley region rose from 11% in 2000 to 55% in 2006. Through creating opportunities for local people, Argyle Diamonds (2006) have stated that they aim to "leave a lasting legacy" in the East Kimberley region where they operate. They also estimate that their annual procurement of local goods and services returns in the order of AU\$60 million to the region. EIA practitioners can be at the forefront of similar initiatives to ensure that local project benefits are optimised, no matter what type of project they are involved with.

An effective EIA can push the social (which includes human health) vector and support the enhancement of benefits to local communities, as shown by the Mozal aluminium smelter outside the city of Maputo in Mozambique. Construction of the smelter commenced in the late 1990s following a comprehensive EIA process, leading to first production in 2001. The EIA identified management actions to enhance the socio-economic benefits of the project for the local community. These recommendations have been incorporated into the company's Corporate Social Investment programme and the activities of the Mozal Community Development Trust (Mozal, 2006). Two key success stories are:

- Contribution to reduction in malaria in the local area around the smelter through supporting spraying programmes, providing mosquito nets and conducting awareness programmes. This has led to a reduction in the incidence of malaria cases from 80% (in 2001) to 8% (in 2006).
- Contribution to local schooling, leading to the first secondary school in the local area and several new primary schools.

Pushing the vectors requires a focus on the sustainability goal, and usually calls for practitioners to 'think outside the square' to find innovative ways of

contributing to those goals. The Water Corporation of Western Australia has demonstrated the potential for 'thinking outside the square' when it comes to delivering real environmental benefits through projects. The Water Corporation's Busselton Wastewater Treatment Plant was upgraded in 1999. In its response to the EIA the environmental regulator, the Western Australian Environmental Protection Authority (EPA), expressed concern about the impact of the additional nutrient load discharging into a sensitive marine environment. It argued that the Water Corporation should deliver zero discharge by installing a woodlot for disposal of treated wastewater, at an estimated cost of \$4 million.

The Water Corporation pointed out that 97% of the nutrient load in the receiving environment in fact came from agricultural run-off from the surrounding areas, and therefore the environmental objective of minimising nutrient load could be better and more cost-effectively achieved by investing some of the cost of the proposed woodlot in supporting the rural community, particularly dairy farmers, to control their nutrient discharges. The Corporation, in conjunction with the EPA, developed a collaborative nutrient reduction plan named the Busselton Environmental Improvement Initiative, whereby a \$1 million programme of funding and technical assistance was provided to assist rural landowners to voluntarily implement projects on their properties to reduce the discharge of nutrients and other contaminants into surface and groundwater sources. Between 1999 and 2004, 44 projects were completed and total nitrogen loads had been reduced by 73.5 tonnes per year while phosphorous had been reduced by 18 tonnes, compared with the 29 tonnes of nitrogen and 4 tonnes of phosphorous that would have been removed by the proposed woodlot (Water Corporation of Western Australia, 2007).

Towards better governance: expanding the zone of influence of EIA

Sometimes the sustainability benefits that can be generated through an EIA are delivered through better governance, and are therefore less tangible and less direct than in the examples we have given so far. We explore the 'better governance' idea further in this section by considering opportunities for improving outcomes through better process, as well as improvements that may be delivered beyond the development consent decision and over the longer term — both prior to the EIA process by means of screening, and after the EIA process through influencing the policy context and downstream monitoring.

Improving process

Traditional project EIA is lowest on the spectrum of impact assessment approaches in terms of contribution to sustainability (Morrison-Saunders and

Therivel, 2006). Experienced and sustainability-minded practitioners will realise that the greatest potential for innovation and positive change comes when EIA is applied as a proactive tool that is integrated into the project planning process from the early stages, rather than as a reactive regulatory tool. Practitioners who have established their *bona fides* in a particular area of environmental assessment are well-placed to influence proponents to include environmental considerations early in the planning process and thereby to inform the conceptual design and high-level consideration of project alternatives.

Including environmental considerations early in project planning In South Africa, this has occurred through 'environmental and social screening' studies, which are being used increasingly by proponents of large-scale projects to provide an early understanding of the significant environmental and social implications of the project and to aid site selection to ensure the best social, environmental and economic outcomes. These studies are usually undertaken during the pre-feasibility stage of the project and tend to be done at the discretion of the project proponent prior to the potential commencement of a legislated EIA process. The main objective of the screening studies is to incorporate environmental and social considerations into the conceptual planning and design, a phase usually dominated by technical and financial criteria.

A screening study is largely qualitative and is based on a coarse level of project-related information and associated uncertainties. It usually includes some form of opportunities and constraints identification, environmental assessment, and fatal flaws analysis (Lochner *et al.*, 2007). An example is found in the proposed development of the first liquefied natural gas (LNG) terminal and combined-cycle gas power station in South Africa: a screening study was conducted for alternative port locations around the coast of South Africa, leading to a preferred port being identified; thereafter, a second level of screening was done at the preferred port to review alternative design and layout options, before continuing to a detailed EIA.

A recent example of a similar use of screening comes from Western Australia, where a site selection process was initiated by mining company BHP-Billiton for an LNG Plant on the Pilbara coast. Rather than choose a site based on cost and engineering considerations alone, the company undertook a comprehensive evaluation of alternative locations at the feasibility stages of project planning along several hundred kilometres of the coastline, using carefully defined and applied social, environmental and economic criteria (LeProvost *et al.*, 2005). Only once the preferred site had been chosen from this sustainability-based process was costing undertaken. This proactive approach won BHP-Billiton an international 'Company of the Year Award' at the UK Business in the Community Awards in 2005 (LeProvost *et al.*, 2005).

Building knowledge

In developing countries there is often a shortage of baseline environmental information and of funding to source such information. Fieldwork from EIA studies can therefore make a valuable contribution to the general development of knowledge of environmental, social and economic systems, and the broader dissemination of this information. Such knowledge may be extremely useful in guiding future decision-making towards sustainability. In Western Australia, for example, the extensive and complex hydro-geological model that was developed as part of the EIA for a major groundwater extraction proposal (Strategen, 2006) is now providing the basis for the development of a sustainable water allocation plan for the south-west of the state.

In an example from Africa, a consortium of oil companies led by Chevron is planning to build an LNG plant at Soyo on the south bank of the Congo River mouth. The information available on the environment in the area was both general in nature and outdated — the most recent data were from 1974. Consequently, the EIA required a field information-gathering exercise to enable the assessment of potential impacts of the LNG plant (CSIR, 2005). Studies included: mapping of the vegetation, particularly mangroves, using satellite imagery and ground-truthing; a water quality and hydrodynamics study of the Baia Diogo Cao; and a reconnaissance survey of the fauna. The fauna study was unfortunately limited by the presence of uncleared land mines. In addition, a groundwater hydrology study was conducted. These studies constitute the only scientific work undertaken in the area for more than three decades and demonstrate that EIAs can contribute to developing a body of good scientific knowledge, particularly in information-poor areas.

In Western Australia which, like South Africa's Cape Floristic Kingdom (WWF-SA, 2000), is a biodiversity hotspot, a significant amount of what we know about biodiversity and particularly local endemism comes from information generated during project EIAs undertaken on behalf of mining companies. Baseline studies as part of EIAs in which

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specialist consultants (botanists, zoologists, ecologists) are engaged for the work have discovered previously unrecorded species as well as expanded knowledge on the range and distribution of known species. In a period of seemingly declining government funding for independent research organisations who might otherwise undertake these kinds of investigations, the opportunity provided by EIA proponents can make an important contribution to our knowledge of the natural world.

As practitioners, we need relevant knowledge to support informed decision-making and effective environmental management. We, along with our clients and the authorities, can play an important role by demanding, designing and implementing robust baseline studies funded through the EIA process. This knowledge can subsequently be made available for further use via the public EIA process and other channels.

Influencing the policy context

While the policy and institutional context within which EIA is undertaken can be a constant source of frustration to EIA practitioners, we concur with other commentators that that context itself can evolve, as a direct or indirect result of EIA (see, e.g., O’Riordan and Sewell, 1981; Sabatier, 1988; Owens, 2004; Pope and Grace, 2006). For example, one of the great strengths of project EIA is its ability to highlight policy inconsistencies or gaps — where there is a policy problem, EIA is sure to find it!

A recent case in point comes from the Gorgon gas project in Western Australia, whereby a gas processing plant was proposed (and eventually approved) in a nature conservation reserve. The requirement of government that this project should demonstrate ‘net conservation benefits’ precipitated development of the environment offsets policy mentioned previously (EPA, 2006), thus formalising the requirement for proponents to push the environmental vector.

In South Africa, limitations of applying project EIA approaches in the absence of a “broader strategic framework for sustainable regional development” was recognised in the early 1990s — for example, in the application for permission to mine mineral sands on the Eastern Shores of Lake St Lucia (CSIR Environmental Services, 1993; see Box 1). This influenced the initiation of an extensive research programme on the use of higher-level tools such as SEA and, later, integrated development planning tools, together with their related policies and guidelines (DEAT, 2007).

Promoting learning and knowledge-sharing

Sometimes policy changes may result directly from a complex EIA (as in the Gorgon gas example discussed earlier), or over time as a result of a number of cases all highlighting the same deficiency. However, rather than waiting for policy-makers to

wake up and take the initiative, practitioners can take a more active role in changing the status quo and steering it in a more sustainable direction. A positive initiative that has occurred in Western Australia recently was the signing of a *Partnering Agreement* between the Environmental Consultants Association and the Environmental Protection Authority Service Unit (the section of the Department of Environment and Conservation with the responsibility for administering the EIA process in Western Australia).

The purpose of this entirely voluntary agreement is to encourage improved environmental management practice and performance and to facilitate timely and effective assessment. It is intended “to increase cooperation, shared understanding, consistency, effectiveness and efficiency in the delivery of environmental services” under the legislation providing for EIA in Western Australia. Activities undertaken in the spirit of the partnering agreement to date include joint seminars and workshops, an EIA training course, and funded research based on practitioner surveys and interviews to identify problems with existing EIA practices and ways to resolve them.

The point to be realised here is that we do not have to wait for legislative reform in order to improve EIA practices. Through communication and cooperation, practitioners can collaborate with regulators to improve the effectiveness of EIA; this can occur at both the individual practitioner level as well as through professional bodies such as the Environmental Consultants Association of Western Australia. The International Association for Impact Assessment (IAIA) provides an important network of practitioners seeking to improve practice globally as well as regionally through its branches and affiliates.

Enabling stakeholder involvement in monitoring

There is usually a shortage of government resources to effectively monitor the implementation of projects

Box 1. Extract from St Lucia EIA (CSIR, 1993: 16.5)

Many representations have been received arguing that neither the mining nor the ecotourism proposal should be evaluated on its own merits. Rather, both should be examined within a strategic framework for sustainable regional development. This comment is well in line with current international trends in environmental appraisal. There is increasing appreciation that the implementation of sustainable development strategies will require the use of environmental assessment procedures and methods in the formulation of policies, plans and programmes for the principal sectors of national economies (Lee and Walsh, 1992). Many of the issues which emerged in the latter stages of the EIA were as a result of the lack of a higher level of environmental appraisal. Richards Bay Minerals (the proponent) had to fund urgently required research in areas beyond what should normally be required for a project level EIA. It is recommended that the South African authorities urgently look into the introduction of Strategic Environmental Assessments in this country.

after the EIA stage. In South Africa, environmental monitoring committees (EMCs) that include representatives of the project proponent, government, environmental organisations and local communities are increasingly being established as participatory forums for ongoing monitoring. Examples include the Coega EMC for an Industrial Development Zone near Port Elizabeth, the EMC for the Berg River Project that involves a new dam and water supply scheme for Cape Town, and the Century City EMC mentioned earlier (Intaka, 2007). The primary purpose of these bodies is to ensure that environmental conditions of authorisation for the project are being satisfied, both in terms of minimising negative impacts and in terms of maximising benefits. The EMCs often emerge as a result of the public involvement programme from the EIA, which sets the foundation for trust and cooperation.

Summary and conclusions

In this paper, we suggest that there are many opportunities for practitioners to influence decision-making towards delivering more sustainable outcomes from individual developments. It is important that we remind ourselves of the tangible differences that can be made even at the small, local scale, lest we become despondent at the enormous challenges facing global society. We also believe that EIA can, over time, contribute to sustainability by

facilitating learning and continual improvement which can ultimately lead to more sustainable decision-making. Over time, the cumulative EIA experience may drive changes in the context within which EIA is conducted, including the policy settings that guide development. As Bob Gibson reminded us in the concluding words of his book on sustainability assessment, it is about “making the world better, one undertaking at a time” (Gibson *et al*, 2005). In summary, Table 2 provides some simple prompts, based on the discussion in this paper, to aid EIA practitioners in getting their creative juices flowing!

EIA practitioners, whether regulators, proponents or consultants, are environmental professionals and have an implicit responsibility to work towards a sustainable future. In a busy practice and with the demands of procedural and financial imperatives, it can become easy to slip into a ‘box ticking’ approach to EIA. Vigilance is needed. Individuals can and do make a difference. By pushing the sustainability vectors on every EIA an individual practitioner works on, each assessment can be made unique and challenging, building constructively upon experience and progress attained in practice to date. This ensures that practitioners will be making the best use of the remarkable EIA tool and, perhaps most importantly of all, be making a positive contribution to sustainability. Our closing advice is: “ask not what EIA can do for you, but what you can do with EIA”.

Table 2. What EIA practitioners can do to advance sustainable development

Vector (see Figure 1)	What EIA practitioners can do
Environment	<ul style="list-style-type: none">• Ask whether there is a better, more creative way to achieve an environmental objective (beyond ‘end-of-pipe’ solutions)• Prevent the exhaustion of non-renewable resources (e.g. through identifying opportunities for product recycling, waste minimisation and the search for alternative raw materials)• Contribute to community environment awareness and education by involving the community in impact studies• Find opportunities for rehabilitation of degraded landscapes and creation of habitats• Seek opportunities for waste minimisation and reuse — could your waste be someone else’s valuable raw material?
Social	<ul style="list-style-type: none">• Explore possibilities to install infrastructure to benefit the local community as well as the development — such as roads, water and energy supplies, waste management systems, telephone systems, health services, sporting facilities• Identify employment and skills development opportunities for local people (e.g. cleaning and catering businesses)• Ensure alternative livelihoods are sought for dispossessed communities• Instigate health education programmes for community and workforce (e.g. fighting HIV/AIDS)• Ensure that opportunities to conserve and develop cultural heritage are realised (e.g. museum for artefacts found on site)
Economic	<ul style="list-style-type: none">• Explore the possibility of reinvesting a share of the profits from resource development in the local community• Seek opportunities to add to the value chain of products associated with the proposed development (e.g. carpentry industry near sawmill, aluminium foil manufacturing near aluminium smelter)• Stimulate and enhance local entrepreneurship where local benefits are maximised (e.g. starting local nurseries to supply trees for rehabilitation programmes)• Encourage local procurement practices
Governance	<ul style="list-style-type: none">• Be sensitive to any local governance structures and actively contribute to processes and structures that support good governance (e.g. existing EMCs)• Promote EIA as a planning and site selection tool (environmental screening)• Make EIA studies available to the community and decision-makers to contribute to their knowledge base• Participate in initiatives aimed at strengthening regional cooperation• Lead by example — operate your own business along sustainability lines

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Notes

1. For the purposes of this paper we use the Environmental Assessment Practitioners of South Africa's definition of an EIA practitioner as "... someone who co-ordinates, manages and integrates the various components of environmental assessment throughout the planning process" (EAPSA, 2002).
2. For example, the South African Department for Environment and Tourism has recently called for tenders to undertake a study entitled "Review of Effectiveness and Efficiency of the Environmental Impact Assessment system in South Africa and the formulation of an Environmental Impact Management Strategy Action Plan for a period of three (3) years".
3. In this paper the terms 'sustainability' and 'sustainable development' are used interchangeably.
4. For example, one of the Western Australian sustainability principles is entitled 'Net benefit from development' and states that "Sustainability means that all development, and particularly development involving extraction of non-renewable resources, should strive to provide net environmental, social and economic benefit for future generations" (Government of Western Australia, 2003).

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