PART 4

INSTITUTIONAL ARRANGEMENTS AND EXPERIENCE IN DEVELOPING COUNTRIES

[THIS PART TO BE DEVELOPED]

Chapter 12

EXPERIENCE IN AFRICA

12.1 Southern Africa

12.1.1 Southern African views on sustainable development and approaches to sustainability appraisal

The Council for Scientific and Industrial Research (CSIR) and the Southern African Institute for Environmental Assessment (SAIEA) have been considering what approaches to sustainability appraisal/assessment would be suitable within Southern Africa, and what kind of framework would be best to guide and test sustainable development. In this connection, in collaboration with IIED, workshops to take stock of experience to date of contributing approaches and to consider future directions were organised in Johannesburg in March 2004 (one for government officials and practitioners; another for the mining sector). There was strong consensus that any framework for SA should not be positioned as a new and separate tool but should build on and inter-link with previous work on appraisal/assessment techniques (such as SEA and EIA), and existing experience of integrated planning/decision-making approaches in Southern Africa. In the following sub-sections, we provide some examples of relevant experience and initiatives in the region, with particular reference to South Africa.

Participants were of the view that any framework for sustainability appraisal suitable for Southern Africa must take account of the dichotomy that some see in the fundamental principles upon which the rationale for sustainability and sustainable development makes sense in the developed and developing worlds (Box 12.1). Debate underscored the strongly held view that the main development priorities in the region were combating poverty, facing and responding to the challenges of HIV/AIDS, and securing economic growth and jobs.

Box 12.1: Sustainable development: A South African perspective
By Mike Burns, CSIR, Stellenbosch (pers.comm.)

"Africa cannot eliminate poverty by halting material growth and accepting anything near the *status quo* as being a desired equilibrium state for its economies and social systems. More helpful, however, are the directives for sustainable development expressed in *Our common future* (WCED 1987), which demonstrate an understanding of Africa's current reality - the imperative for development, through inter-substitution of natural capital with human capital in order to address the severe inequities affecting the current generation.

In developed countries, high levels of organization and technical and economic efficiency can reduce current dependencies on untransformed natural capital – hence the viability of a restrictive, *Limits to growth* conceptualization of sustainable development. This contrasts with the situation in developing countries, where the options for improving quality of life are, inevitably, highly dependent on more free transformation of natural capital, with maximum retention of derived benefits (product value chains, etc.) within country economies. As development brings about improved quality of life in Africa, there will be a reduced dependency on untransformed natural capital to sustain this. Only in this situation will a single, globally relevant conceptualization of sustainable development emerge".

Workshop participants expressed various views on how integration might be achieved. Representatives of the mining community in South Africa saw value, opportunities (eg for

efficiency) and benefits in integrating environmental, social and economic (ESE) concerns in mine planning. Sustainability appraisal would work best if it is made an integrating aspect of routine core mine project life cycles. Some participants were of the view that step-by-step, mechanistic, methodological integration will not work; neither will substantive integration through indicators and checklists, etc. Rather, a process-based approach is seen to be required for businesses in which planning and decision-making processes are 'mapped' to determine where ESE concerns can be integrated. Other participants felt that a 'middle road' approach was needed – between process- and outcomes-based approaches (eg finding where sustainability dimensions can be taking on board in integrated development planning processes). The view was expressed that sustainability appraisal must be outcome-based and avoid checklist thinking.

There was consensus that SA needs to be a cyclical, iterative, approach that should be based on improving existing tools, and that tools need to be appropriate to the level of decision-making (policy-programme-project), and to the spatial and institutional context – so that they assist decision-making and are cost-effective. For projects, a good EIA (following best practice and addressing ESE issues) would go a long way to satisfying the requirements of SA.

One problem appears to be lack of good 'generalists' who can apply SA thinking. Another is the perception that that expertise in certain key areas is limited (eg resource economics). Debate highlighted the need for a framework for sustainability appraisal to provide guidance. This should incorporate a number of key elements, for example: a vision for sustainable development, sustainability criteria (eg to legitimise trade-offs), standards (bearing in mind that lower standards than those applied internationally might be acceptable in Africa, given the imperative to fight poverty and generate jobs), and agreed limits of acceptable change. But all participants were concerned that such a framework should not undermine the application of scientific rigour in appraisal/assessment or ignore/marginalise environmental 'bottom lines'. To promote an SA framework, a sound 'business case' would need to be made and leaders identified to champion the approach.

12.1.2 Integrated environmental management and integrated planning

In South Africa, the term environment" has been interpreted broadly for more than 15 years to include both social and economic dimensions. This sustainability focus was embodied in Integrated Environmental Management (IEM) approach introduced in the late 1980s (Council of the Environment, 1989). The term IEM was used to indicate an approach that integrates environmental considerations into all stages of the planning and development cycle for policies, programmes, plans and projects (Sowman *et al.*, 1995). Rossouw and Wiseman (2004) note that the following decade of practical experience in applying IEM led to the publication of several IEM guideline documents by the Department of Environmental Affairs and Tourism (DEAT) in 1992. These formed the basis of several hundred voluntary EIA (Avis 1994) usually focused on unique or controversial project proposals. Formal EIA requirements were introduced in 1997 giving DEAT a mandate for the EIA process. But DEAT has no mandate for environmental assessment for plans and the integrated focus of EIA was lost. A major problem is that there remain separate procedures and statutory requirements for land use planning and EIA (Wiseman 2000) (Box 12.2), resulting in the duplication of many requirements, networks and staffing systems within local and provincial government

Box 12.2: Integrated environmental management and planning: separate systems

In principle, IEM included application to policies and plans. It was originally intended that IEM and planning be integrated. However, after the establishment of the first democratic government in 1994, two separate processes and decision-making procedures were developed for planning and IEM. Most of the new provincial planning legislation included provision for EIA. EIA regulations promulgated under the old Environmental Conservation Act (No. 73 of 1989) came into effect on 1 September 1997. These regulations only made provision for EIA and not monitoring, auditing and environmental management planning. The regulations also did not apply to policies and plans. The IEM philosophy (of integrating environmental issues into all stages of policy, planning and the project cycle) was therefore lost. However, the National Environmental Management Act (NEMA) of 1998, re-introduced the IEM philosophy and principles. NEMA requires that any activities (defined as policies, plans, programmes and project), which, may significantly effect the environment must be considered, investigated and assessed. The minimum requirements for assessing impacts including cumulative effects, are outlined in the Act. The EIA regulations are still currently in force. However, amendments to the NEMA chapter on IEM were approved by the South African parliament in March 2004 providing for the use of additional tools for IEM and for the identification of activities that have an impact on the environment

'Integration' is a central theme in the reorganisation of South Africa's planning systems, particularly at local levels. For example, under the Municipal Systems Act (2000), the development by municipalities of negotiated five-year Integrated Development Plans (IDPs) is now a statutory requirement (Box 12.3).

Box 12.3: Integrated development plans, South Africa

In South Africa, the Directorate of Land Development Facilitation in the Department of Land Affairs is responsible for guiding the implementation of the 1995 Development Facilitation Act (DFA). This Act consists of a number of different elements for which the responsibility is shared between all three spheres of government. The most important element is the setting of Land Development Objectives (LDOs) which provided a negotiated five-year development plan for all local authorities and District Councils.

The Municipal Systems Act (MSA), 2000, addresses the new roles of local government in promoting socio-economic development. Local authorities are expected to take on an enabling role as well as undertake service delivery. They are also expected to assume a strategic orientation. Chapter Five of the MSA deals exclusively with integrated development planning, requiring that each municipality must, within a "prescribed period after the start of its elected term", adopt a "single, inclusive and strategic plan for the development of the municipality.

Such a plan must reflect:

- The Council's vision for the long term development of the municipality, with special emphasis on the most critical development and internal transformation needs;
- An assessment of existing levels of development, and an identification of communities which do not have access to basic municipal services;
- The Council's development priorities and objectives;
- The Council's development strategies, which must be aligned with any national or provincial sectoral plans;
- A spatial development framework, to guide land use management;
- The Council's operational strategies;

- A financial plan;
- Key performance indicators and performance targets.

The performance of the municipality will be monitored and evaluated against the objectives set in the IDP.

Chapter Four of the MSA deals with "community participation" in local government. It prescribes that municipalities must develop "a culture of municipal governance that complements formal representative government with a system of participatory government". Municipalities must "encourage, and create conditions for, the local community to participate in the affairs of the municipality" – including the drafting of the IDP. Communities must participate in the establishment of a Performance Management System, performance monitoring, the preparation of budgets, and strategic decisions relating to the provision of municipal services. Municipalities must also contribute to "building the capacity of the local community to enable it to participate in the affairs of the municipality, and of councillors and staff to foster community participation".

Source: Khanya-mrc, (2000, 2001).

Similarly, Part 7 of the National Land Transport Transition Act (No.22 of 2000) requires local transport authorities or, in their absence, designated municipalities to prepare integrated transport plans (ITPs). Wilkinson (2002) explores travel needs and land use activity patterns and the relationships between IDPs and ITPs and concludes that significant shifts in current approaches to planning and associated practices if a more coherently integrated planning system is to evolve.

12.1.3 Socio-economic Empowerment Charter for the South African Mining Industry

The Mineral and Petroleum Resources Development Act, 2002, called for the development of Socio-economic Empowerment Charter for the South African Mining Industry to empower disadvantaged South Africans in the mining and minerals industry by redressing historical social and economic inequalities. Following a process of consultation initiated by the South African Minister of Minerals and Energy, the Charter was formally signed on 11th October 2002 by the Department of Minerals and Energy, the Chamber of Mines, the South African Mining Development Association and the National Union of Mineworkers.

The Charter does not address environmental issues but is more focused than the National Environmental Management Act. A scorecard (Table 12.1) gives effect to the provisions in the Charter and is designed to facilitate its application to convert "old order rights" into new rights within a five-year conversion window period, whilst recognising a full 10-year period. Progress by stakeholders in achieving the aims of the Charter is measured against two sets of targets: specific targets set in the Charter; and those set by companies.

Table 12.1: Scorecard for the broad-based Socio-economic Empowerment Charter for the South African Mining Industry (Source:@ www.bullion.org.za)

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Notes	DESCRIPTION	5 YEAR TARGET		10 YEAR TARGET
	Human Resources Development			
1	• Has the company offered every employee the opportunity to be functionally literate and numerate by the year 2005 and are employees being trained?	Yes	No	
	• Has the company implemented career paths for HDSA employees including skills development plans?	Yes	No	
2	• Has the company developed systems through which empowerment groups can be mentored?	Yes	No	
	Employment Equity			
	• Has the company published its employment equity plan and reported on its annual progress in meeting the plan?	Yes	No	
3	• Has the company established a plan to achieve a target for HDSA (Historically Disadvantaged South Africans) participation in management of 40% within five years and is implementing the plan?	Yes	No	
	• Has the company identified a talent pool and is it fast tracking it?	Yes	No	
4	• Has the company established a plan to achieve the target for women participation in mining of 10% within the five years and is implementing the plan?	Yes	No	
	Migrant labour			
5	• Has the company subscribed to government and industry agreements to ensure non-discrimination against foreign migrant labour?	Yes	No	
	Mine community and rural development			
	• Has the company cooperated in the formulation of integrated development plans and is the company cooperating with government in the implementation of these plans for communities where mining takes place and for major labour sending areas? Has there been effort on the side of the company to engage the local mine community and major labour sending area communities? *(Companies will be required to cite a pattern of consultation, indicate money expenditures and show a plan)*	Yes	No	
	Housing and living conditions			
6	• For company-provided housing, has the mine, in consultation with stakeholders, established measures for improving the standard of housing, including the upgrading of the hostels, conversion of hostels to family units and promoted home ownership options for mine employees?	Yes	No	
7	• For company-provided nutrition, has the mine established measures for improving the nutrition of mine employees?	Yes	No	
	Procurement			
	• Has the company given HDSA's preferred supplier status?	Yes	No	
	• Has the company identified the current level of procurement from HDSA companies in terms of capital goods, consumables and services?	Yes	No	
8	• Has the company indicated a commitment to a progression of procurement from HDSA companies over a 3-5 year time frame in terms of capital goods, consumables and services and to what extent has the commitment been implemented	Yes	No	
	Ownership and joint ventures			
9	• Has the company achieved HDSA participation in terms of ownership for equity or attributable units of production of 15% of HDSA hands within 5 years, and 26% in 10 years?	Yes	No	Yes/No
	Benefication			
	• Has the company identified its current level of benefication?	Yes	No	
10	• Has the company established its base level of benefication and indicated the extent that this will have to be grown in order to qualify for an offset?	Yes	No	
	Reporting			
	• Has the company reported on an annual basis its progress towards achieving its commitments in its annual report?	Yes	No	

Notes

1. The commitment of the mining companies is to have offered each employee the opportunity to become functionally literate and numerate. The critical test is if a human resource dsevelopment system has been established and resourced so that people are being trained

2. The mentoring of empowerment groups refers to that mining company's HDSA (Historically Disadvantaged South Africans) employees and HDSA-linked partners at the levels of ownership and procurement. It does not preclude companies being involved in mentoring programmes outside of its own operations.
3. The aspirational target for HDSA participation in management is a 5-year target. If companies want to convert licenses within a much shorter time frame, then a phase-in approach will be adopted with the companies committing to 40% by the fifth year. The key decision point here is whether the company has established a plan to achieve the target and is implementing the plan,
4. The aspirational target for women participation in mining is a 5-year target and the phase-in approach will be used. The key decision point here is whether a company has established aa plan to achieve the target and is implementing the plan.
5. The commitment of stakeholders to ensure non-discrimination against foreign migrant labour can be approached from the perspective that each company subscribes to industry and government agreements on the matter.
6. A company will be required to indicate what it has done to improve housing and show a plan to progress the issue over time and that it is implementing the plan.
7. A company will be required to indicate what it has done to improve nutrition and show a plan to progress the issue over time, and that it is implementing the plan.
8. A company should commit to an increase of procurement from HDSA companies over the 3-5 year time frame and agree to a monitoring system.
9. The Scorecard represents the 5-year targets and it has been agreed that within 10 years the level of HDSA participation will rise to 26%.
10. The key issue is to capture the actual benefication activities of a company and to convert it to the same unit of measurement of ownership (eg attributable units of production or % measure of value as the case may be) and offset accordingly. The attributable ounces that are beneficiated above the base state may be offset against HDSA ownership targets (59 different minerals are mined in South Africa, and detailed discussions are still being conducted on the base state for each mineral).

12.1.4 National Environmental Management Act (NEMA 1998)

South Africa's National Environmental Management Act (NEMA), 1998, is a framework law that repealed many old legislative provisions for environmental management. It provides overarching principles for sustainable development (Table 12.2) that apply to all activities of the state. It also provides for cooperative governance structures and networks (a National Environmental Advisory Forum – not yet established; and a Committee for Environmental Coordination – in which there is only limited participation by local government and civil society), as well as Integrated Environmental Management (IEM) and EIA procedures. NEMA has been amended twice - in 2002 and again in 2004 to provide additional tools for integrated environmental management and identifying activities impacting on the environment, and to remove ambiguity regarding the process of authorising developments.

Official EIA regulations were introduced in 1997 before NEMA was enacted. As a consequence, the EIA system is driven by administrative needs rather than principles for sustainable development set out in NEMA.

Roussouw and Wiseman (2004) observe that in reality the NEMA principles present many challenges and represent a 'Rolls Royce' model of participative democracy that has been difficult to achieve in practice. For example, the integration of social, economic and environmental impacts in EIA processes requires a strong emphasis on institutional cooperation if EIAs are to be effective. But, as Rossouw and Wiseman note, in practice, the national Department of Environmental Affairs and Tourism (DEAT) and the Department of Transport agreed that the economic impacts of toll roads would be omitted from the EIA assessment and decision-making process, and this has resulted in a number of conflicts and appeals over decisions.

Table 12.2: National policy principles for environmental management, South Africa
(Source: RSA 1998)

THEMES	PRINCIPLES
Sustainable development	• Development must be socially, environmentally and economically sustainable; • The use and exploitation of non-renewable natural resources is responsible.
Decision-making and co-operative government	• Decisions must take into account the interests, needs and values of all interested and affected parties; • There must be intergovernmental coordination and harmonistaion of policies relating to the environment; • A risk averse and cautious approach is applied, which takes into account the limits of current knowledge; • Recognises all forms of knowledge, including traditional knowledge; • Decisions must be taken in an open and transparent manner.
Environmental assessment and management	• Environmental management must place people and their needs at the forefront of its concern; • *The social, economic and environmental impacts 9disadvantages and benefits) of activities must be assessed, prevented or minimised and remedied*; • *Environmental management must be integrated, acknowledging that all elements of the environment are linked*; • Disturbance of ecosystems and loss of biological diversity are avoided or minimised and remedied; • Pollution and degradation are avoided or minimised and remedied; • Sensitive ecosystems require specific attention in management and planning procedures; • Waste is avoided, or minimised and re-used or recycled or otherwise disposed of in a responsible manner; • The cost of pollution must be paid by those responsible for harming the environment.
Environmental justice	• Environmental justice must be pursued so that no persons are unfairly discriminated against; • Equitable access to environmental resources to meet basic human needs; • Responsibility for the environmental health and safety consequences of a policy, programme, project, product, process, service or activity exists throughout its life cycle; • The right of workers to refuse work that is harmful to human health or the environment.
Stakeholder engagement	• Participation of all interested and affected parties in environmental governance; • All people must have the opportunity to develop the understanding and capacity necessary to achieve effective participation; • Participation by vulnerable and disadvantaged persons must be ensured.

Taken together, the scorecard for the Socio-economic Empowerment Charter for mining and NEMA are instruments that represent a good entry point for developing a framework for sustainability appraisal suitable for the country .

12.1.5 Sustainable development reporting by mining companies

A small number of mining and metals companies have produced reports that can be used to assess their progress towards sustainable development. Limpitlaw and Hoadley (2003) assessed published reports of three diversified global mining companies operating in South Africa (Anglo American, BHP Billiton and Rio Tinto). They conclude that "when mines are run efficiently with effective environmental management programmes and in partnership with the affected communities, the wealth created may more than offset the cost associated with negative impacts. In such cases, the mining operations may be regarded as contributing to sustainable development through weak sustainability"

12.1.6 Cape Action Plan for the Environment

The Cape Action Plan for the Environment (CAPE) sought to develop a long-term strategy and action plan to conserve biodiversity in the Cape Floral Region (CFR) – the smallest of the world's six floral kingdoms (Box 12.4). This called for an innovative and adaptive approach to ensure the functional alignment of a wide variety of stakeholders and processes. A range of supporting tools was used including SEA and the Theory of Constraints, and the approach included several key elements required for effective sustainability appraisal: setting a vision, goals and objectives; assessments and analyses (environmental, legal, socio-economic and institutional), and stakeholder participation.

Box 12.4: Development of the Cape Action Plan for the Environment

CAPE project

The Cape Action Plan for the Environment (CAPE) project (1998-2000) was funded by the Global Environment Facility and coordinated by the World Wide Fund for Nature South Africa in partnership with government, communities and the private sector. It aimed to:

- Identify conservation priorities, based on assessments of biodiversity and threats;
- Develop a long-term strategy and vision for biodiversity conservation in the Cape Floral Kingdom;
- Draft a 5-year action plan and investment programme to address conservation priorities;
- Identify potential sources of funding for these activities.

Situation analyses

A technical team of professional consultants (with broad ranging expertise) and representatives of implementing agencies designed the approach to strategy formulation. The consultants undertook a preparatory situation analyses covering the biophysical and human environment (the latter including assessment of legal and policy issues, socio-economic drivers, and institutional and financial implications); and were charged with ensuring all role-layers were adequately involved in strategy development and implementation.

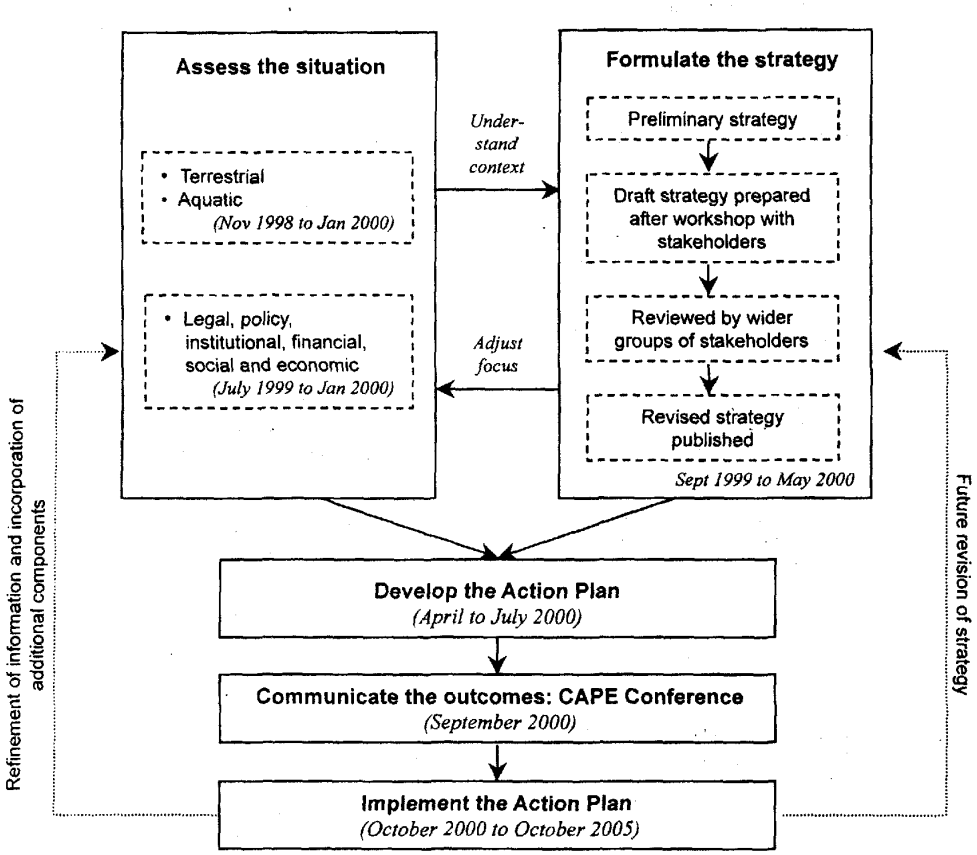
Participation

Consensus (on overall strategic directions) and ownership was built through a participation process involving interviews, questionnaires, engagement with stakeholder groups and implementation agencies (government bodies and NGOs – initially engaged via a cross-sectoral steering committee), and focus group meetings on special interest issues (eg tourism and agriculture).

SEA process

An SEA process was used to ensure rigour and transparency based on a framework provided by DEAT (2000). Elements of the approach included: development of a vision; a situation assessment to describe the status quo; and development of an implementation plan describing how the selected programme is to be deployed. The process combined unicentric and polycentric approaches to policy formulation (Figure 11.1) – in which there is an iterative relationship between the situation assessment and the strategy development phase, with both informing the implementation programme.

Figure 12.2: Approach to the Cape Action Plan for the Environment (CAPE) Project
(Source: Lochner *et al*. 2003)



Overall process of strategy development

The overall process focused around a 3-day workshop of 60 key role-players (representing stakeholder groups and implementing agencies) who were provided with preparatory material: the situation assessment (including a summary of its findings and evaluation of opportunities and constraints affecting biodiversity conservation in CFR); and a preliminary version of the strategy developed by the team using the Theory of Constraints methodology (based on a rigorous cause-effect logic). Participants scrutinised and revised the preliminary draft to produce a detailed version with eight strategic components within three broader themes: conserving biodiversity in priority areas; sustainable use of resources; and strengthening institutions and governance. Theme strategies were further developed through stakeholder meetings. The draft strategy was circulated to participants and a wider network of 1500 stakeholders before further revision and completion. The CAPE process emphasised identifying constraints as a mechanism for developing objectives and the consequent strategy.

Six steps

Strategy development involved six steps:

1. Developing a common vision for the CFR – an important step in identifying a common purpose, and a compass to steer participants:
   " We, the people of South Africa, are proud to be the custodians of our unique Cape Floral Region, and share its fulle cological, social and economic benefits now and in the future"

2. Developing a goal- describing the new reality to be achieved by the strategy:
   "By the year 2020, the natural environment and biodiversity of the CFR are effectively conserved, restored where appropriate, and delivering significant benefits to the people of the region, in a way that is embraced by local communities, endorsed by government and recognised internationally"

3. Identification of obstacles (in accordance with the Theory of Constraints) that were preventing the realisation of the goal (drawing from the situation assessment and personal insights and practical experience)

4. Converting obstacles into intermediate objectives – rewording identified obstacles into positive statements by envisaging the future state to be achieved should the obstacle be overcome. These intermediate objectives represented the conditions necessaryt, or the strategy required, for the overall CAPE strategy to reach its goal

5. Development of a strategy map – logical linkages of the intermediate objectives – by considering cause and effect relationships between the objectives. Questions were then asked to test 'necessity' (eg "to have A , must we have B, C or D? or will B and C suffice?" (necessity); and 'sufficiency' (eg "if we have B.C.and D, will this be sufficient to attain A?"). The strategy map both identified the set of objectives and the sequence in which they needed to be undertaken to reach the goal, providing the basis for prioritisation

6. Conversion of maps into strategy. Because of the wide scope of the strategy, and large number of ideas generated, the strategy mapping was structured into eight broad components. Separate draft detailed strategies developed for each component (each with a goal and series of objectives) and then reviewed in collaboration with key stakeholders prior to finalisation

Ground-truthing
To ensure the strategy could be realistically implemented, a focused interactive survey involving local implementing agencies and community organisations was conducted in the Agulhas Plain sub-region (individual interviews and a workshop to test the relevance of the strategy for the sub-region).

Impacts
The CAPE strategy was only completed in May 2000, but has already started to have a positive impact. Stakeholders have agreed on conservation priorities for the CFR, and its has given direction to individual government departments and organisations responsible for different aspects of biodiversity conservation. Stakeholders are now pooling resources and inter-departmental collaboration has increased. Other regions are looking at using/adapting the CAPE approach for eco-regional planning.

Source: Lochner *et al*. (2003); WWF-SA (2000); and www.panda.org.za/projects

12.1.7 Human settlement policy framework

In order to help it develop a human settlement policy framework, the South African Department of Housing engaged the CSIR (Council for Scientific and Industrial Research) Building and Construction Technology (Boutek) to investigate the sustainability of human settlements in South Africa (www.csir.co.za/akani/2002/nov/09.html). Boutek used a methodology based on the Driver-Pressure-State-Impact-Response model (DPSIR) developed by the OECD, but also used an additional set of factors – based on the characteristics of a sustainable settlement as measured by certain indicators. These factors included:

- The quality of life provided by the settlement;
- Its relationship with its biophysical environment;
- Its institutional functioning.

To capture the range of differences between settlement types, a broad-brush analysis was made of seven different case study areas representing different provinces, spatial and locational combinations. In each case study, to the extent possible, data was captured for a series of indicators for each of the above factors and then analysed and reported in narrative form in the report (du Plessis and Landman 2002). No attempt at integration between the three factors was attempted.

Specific aspects and issues to be addressed include:

- *Concepts and definition*: What is understood by the term sustainability appraisal and equivalent terms internationally;
- *Trends and developments:* What is the experience to date with the application of sustainability appraisal in EIA, SEA, planning and policy-making?
- *Procedure and methodology:* What arrangements and tools are used to carry out sustainability appraisal?
- *Guidance and case studies:* Specifically, what lessons and examples of good practice can be identified?
- *Future directions:* How might the process and practice of sustainability appraisal be improved?

Possibl;e cases to add from Jburg workshop

- Richards Bay Minerals (Ted Avis requested - agreed)
- Zambian Copperbelt Environmental-Social Action Plan (Peter Coombes, Anglo, requested – no reply yet)
- Anglo Plats Debrokken mine – environmental management programme report (Peter Coombes, Anglo, requested – no reply yet)
- CSIR Cameroon work (Mike Burns, CSIR, requested – probably too soon)
- Maybe Coega SEA (see Raimondo et al in IAIA SA Procs – need to see if available on internet) – set pollution limits, coastal revetments, provided guidelines for limits for change use in EIAs.
- Capricorn Park (Cape Town) major development – set limits of acceptable change. Provided framework for EA of new projects (Raimondo)
- SADC Water protocol on shared water resources – appraisals of river systems (eg Okovango). Zambezi completed. (ask Peter Tarr)

  In Southern Africa, the Water Sector Coordinating Unit of Southern Africa Development Community (SADC-WSCU), was established in 1996 with a vision to attain sustainable, integrated planning, development, utilisation and management of water resources. The unit assumed responsibility for the Zambezi River Basin Action Plan (ZACPLAN), produced in 1997 to promote integrated, sound and environmentally sustainable management and development of the water resources of the basin. In 2000, a State of the Environment in the Zambezi Basin was published (Chenje, 2000) - a regional ecosystem assessment, looking at shared natural resources and examining ecological, social and economic issues.

12.1.8 Rössing uranium mine sustainability assessment, Namibia

Box 12.5: Rössing uranium mine sustainability assessment

Rössing Uranium Limited (RUL) has been mining at Arandis in the Erongo Region of Namibia since 1976. Over the past 12 years the company has conducted seven EIAs on the mine and component parts of the mining process. These have all contributed to the development and continuous upgrading of its Environmental Management Plan, which includes a closure plan. The key biophysical issues relating to the mine include water use, groundwater pollution from the tailings, air quality and biodiversity loss as a result of physical disturbance to the environment. Socio-economic issues include direct and indirect employment, skills development and significant contributions to the local and national economy.

RUL is currently considering expanding the mine and thus extending its life for approximately 15 years beyond the expected closure in about 2008. In addition to technical and financial feasibility investigations, the company has taken into account the environmental, social and economic implications of mine life extension. Towards this end, RUL commissioned a sustainability assessment (SA), rather than simply doing more EIAs for the extension components. The SA was guided by a multi-stakeholder steering committee, which included government agencies, NGOs, labour and RUL management, but was conducted by external consultants and Rio Tinto Zinc (RTZ) experts.

The Sustainability Assessment (SA) was conducted in two parts for two scenarios:

i. An initial comparative environmental assessment of the potential impacts of the expansion of the life of the mine within its footprint area, against the environmental performance of the base case (i.e. operation of the mine to closure in 2008);
ii. A comparative SA of the broader implications of the base case operation against the proposed expansion of the life of the mine, including implications for the town of Arandis and the Erongo Region as well as the broader Namibian economy.

To guide the SA, the first step was the formulation of RUL's vision for sustainable development through discussions with key stakeholders and mine management: *"During its continued operation as well as following closure, RUL activities will have made a positive contribution to the ability of current and future generations in Namibia and more specifically, in Arandis and the Erongo Region, to improve their quality of life"*. This vision is also consistent with, and served to translate for local conditions, RTZ's Group Policy for Sustainable Development: *"To ensure that our businesses, operations and products contribute to the global transition to sustainable development."* (Rio Tinto SD Working Group, Nov 2000).

The project team used a cumulative environmental assessment approach to identify sustainability indicators. This included the consideration of compounding (synergies) of several effects, the crowding (additive effects) of potential impacts in the local area surrounding the mine, the Erongo Region and Namibia, the potential for time lags in the manifesting of impacts, rather than looking only at immediate or short-term effects. In this way, all indirect downstream effects of the two mine development scenarios were analysed for their contribution to achieving, or reducing the ability to achieve, sustainability. The rationale for this approach was that the higher the incidence of, or significance of, cumulative negative impacts, the lower the potential for sustainability. Conversely, the higher the potential for positive cumulative effects, the higher the potential for sustainability.

Both of the two alternative development scenarios was evaluated for its sustainability performance against the agreed sustainability criteria, using the selected sustainability indicators.

The overall aim of the SA was to create awareness amongst decision-makers about the impacts on sustainable development of the two scenarios to help them establish which scenario will contribute more to maintaining or improving natural, social and economic systems rather than to only minimise environmental impacts.

The SA showed that extension of mine operations will enable RUL to significantly improve its positive legacy through, *inter alia*, more focused social development programmes, re-skilling the workforce and assisting people in finding alternative employment following mine closure, improving the management

of mine tailings and downstream water quality monitoring, and finding ways to diversify the economic base of Arandis town.

In March 2004, a final decision on extending the mine had not been taken.

Source: Peter Tarr, pers.com

12.2 Ethiopia

In 1994, the University of Berne undertook undertook a ***sustainable development appraisal*** inside and around the Simen Mountains National Park, involving participatory planning procedures (Box 12.6).

Box 12.6: A sustainability development appraisal in Ethiopia

In 1994, a trans-disciplinary approach was used in the Simen Mountains National Park, Ethiopia, to provide basic information on nature and human use of the area, and to develop ideas for sustainable development in a detailed assessment of the park and the 30 villages in the area. Fieldwork was undertaken in 1994 by 29 collaborators with multi-disciplinary scientific backgrounds and expertise (18 Ethiopian, 11 Swiss), assisted by 29 others. The work involved four components:

- An assessment of the *current situation* in the study area, focusing particularly on natural resources and human factors – both local land users and external stakeholders;
- Identification of *changes in the natural and human systems* of the area (eg threats to wolves and ibex, land degradation, population growth);
- Development of different *stakeholders' visions* of sustainable development in the area, and identifying their felt needs for improving their livelihoods and fulfilling development tasks. Views were expressed in participatory assessments in groups, and with individuals during field work, and are reflected in an appraisal of development options and constraints;
- Presentation of results in '*development profiles*' at local (village) and regional levels, with recommendations for external support. The local provide a comprehensive view and assessment of the status, dynamics and development options for each village.

Source: www.cde.unibe.ch/programmes/africa/pdf/afr22_summary.pdf