



Technical Report:

The Role Integrated Environmental Management (IEM) concepts and tools play in promoting sustainability in the Southern African Development Community (SADC)

Gloria Magombo – Energy Advisor

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TABLE OF CONTENTS

| | |
|---|----|
| 1. Introduction | 3 |
| 2. Part A: Literature review | 4 |
| 2.1 Sustainability and Sustainable Development..... | 4 |
| 2.2 Environmental Impact Assessments..... | 6 |
| 2.3 Strategic Environmental Impact Assessments..... | 7 |
| 2.4 Integrated Environmental Management..... | 9 |
| 2.5 Other Integrated Environmental Management Tools | 9 |
| 2.6 Triple Bottom Line | 10 |
| 2.7 Integrated Appraisal | 11 |
| 2.7 Sustainability Appraisal..... | 12 |
| 2.8 Skills Requirements for Environmental Scientists..... | 12 |
| 3. PART B: The role of IEM tools and concepts in promoting sustainability in the SADC region | 13 |
| 3.1 Background | 13 |
| 3.2 SADC Institutions | 14 |
| 3.3 Multilateral Environmental Agreements (MEAs) | 15 |
| 3.4 Harmonization of National Policies and Legal Frameworks..... | 16 |
| 3.5 Mainstreaming of environmental Issues | 17 |
| 4. Conclusion and Recommendations | 20 |
| Bibliography | 22 |

1. Introduction

The concept of the environment became topical in the late sixties and the United States enacted the first National Environmental Policy Act (NEPA) of 1970 which resulted in the birth of environmental impact assessment (EIA) process. The EIA was developed as a tool to support decision making in identifying environmental impacts arising from proposed developmental activities. The emphasis was to protect and conserve the environment.

Twenty years later, in the late eighties sustainable development emerged as a global concept and agenda through two main global initiatives which were:

- The publication of Our Common Future (WCED, 1987) which highlighted the need for political intervention to avert continued rapid deterioration of the environment which was threatening the life on earth; and,
- The holding of the United Nations Conference on Environment and Development in Rio, 1992 (UNCED, 1992).

These two events were seeking to raise awareness of the undesirable effects of unsustainable development on the future of human well being in both developed and developing countries.

It is important to note that according to the Millennium Ecosystem Assessment Review Report (2003) despite the efforts to achieve sustainable development, the reality is that humans have changed ecosystems more rapidly and extensively in the past 50 years than in any other period, and that this trend is continuing especially in developing countries. Poor communities are demanding more services from the ecosystems, such as food and clean water, but at the same time, we are reducing its ability to provide these services.

The world can reverse the negative impacts through the implementation of sound environmental policies and environmental management interventions based on credible information and knowledge base. Other reports like the Southern African Environmental Outlook (SADC et al, 2005) indicate that there much effort which is being made in different countries, within the Southern African Development Community (SADC), to improve the environmental management, however more still needs to be done.

What roles should intergovernmental organizations like the Southern African Development Community (SADC) and European Union (EU) play to improve the response to the environmental challenges? Internationally the World Summit on Sustainable Development (WSSD) held in Johannesburg, South Africa in 2002, through the publication of Key Outcomes and Commitments, gave the formal recognition of the role of the environment impact assessments in driving sustainable development.

This paper looks into the role various environmental management tools and process in promoting sustainability in the SADC region.

2. Part A: Literature review

Perhaps the most challenging lesson of the decade since the Rio Earth Summit has been that sustainable development has no blueprint: it cannot be deconstructed and replicated at will, a reality that has confounded governments, market forces and academia alike. Instead, it always involves newness: a new way of pulling things together, new ways of mobilizing resources, building legitimacy, engendering collective action, stimulating economic activity or adapting technology. In short, it involves entrepreneurship, or to be more exact civic entrepreneurship.¹

2.1 Sustainability and Sustainable Development

The various literature on sustainable development have converged in the fact that it is evolving and new tools and concepts develop globally as the environmental challenges become complex.

Sustainable development is defined by the Brundtland Commission (World Commission on Environment and Development) report *Our Common Future* (1987), as “*development that meets the needs of the present without compromising the ability of future generations to meet their own needs*” (quoted in Pezzoli 1996, p.1).

Some countries in the region have adopted this and defined it within their legislation. In South Africa, the concept was included in the Constitution through the Environmental Right in the constitution Act No. 6 of 1996 which states that:

“Everyone has the right -

- (a) to an environment that is not harmful to their health or well-being; and*
- (b) to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that-*
 - (i) prevent pollution and ecological degradation;*
 - (ii) promote conservation; and*
 - (iii) secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.”*

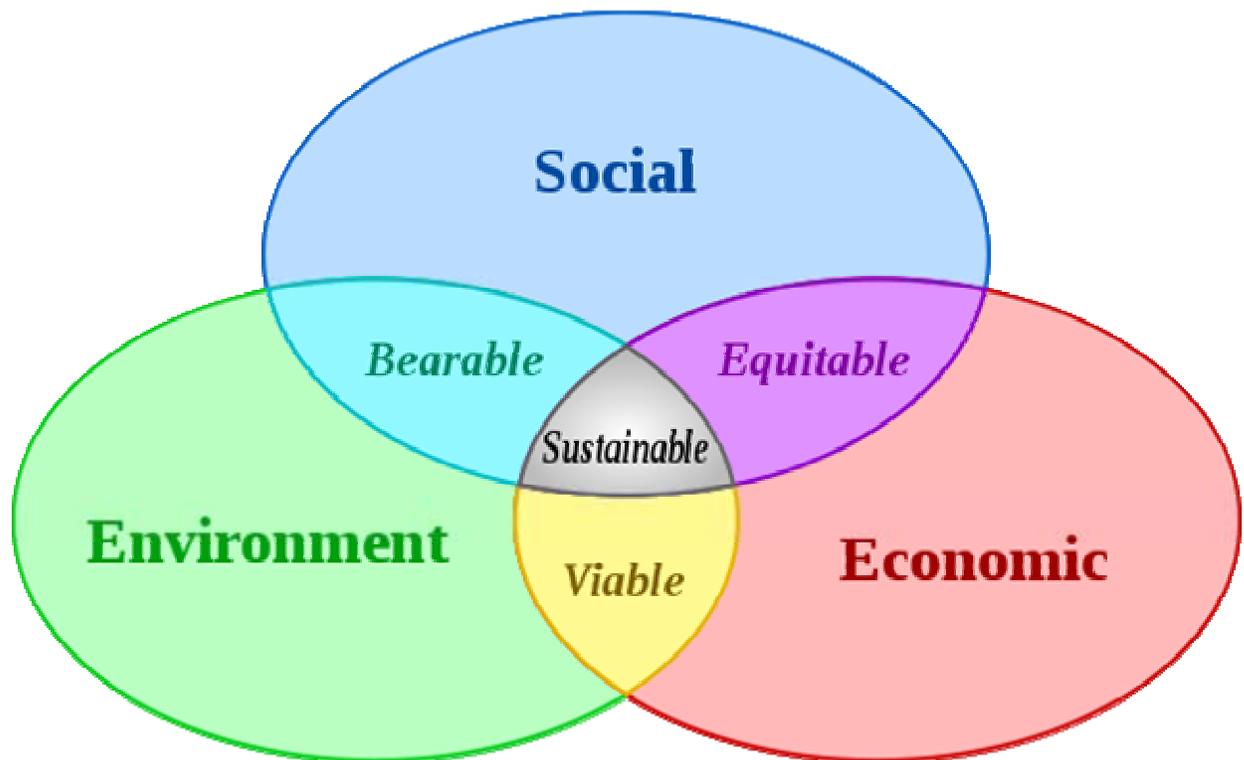
Two years later, South Africa went on to promulgate the National Environmental Management Act 107 of 1998 which defines “sustainable development” as – *“the integration of social, economic and environmental factors into planning, implementation and decision-making so as to ensure that development serves*

¹ Banuri, Najam & Spanger- Siegfried (2003)

present and future generations”.

Sustainability, in a broad sense, is the capacity to endure. It can be defined as the ability of an ecosystem to **maintain** ecological processes, functions, biodiversity and productivity into the future. The dimensions of sustainability are often taken to be: environmental, social and economic, known as the "three pillars as illustrated in the diagram below²

Figure 1: Dimensions of Sustainability



The above definitions indicate that the concepts of sustainable development and sustainability are still evolving as multi-dimensional, inter-disciplinary complex and contested political concepts. Apart from a few negative views that define the concepts as a passing fad fraught with contradictions, some positive views associate the new development paradigm with the quest for peace, increased social justice, satisfaction of basic human needs and the protection of the planet's fragile ecosystems. It is against this background and understanding of sustainability concepts that the SADC Council of Ministers in 1994 approved the SADC Policy and Strategy for environment and sustainable development: *Towards equity led growth and sustainable development in Southern Africa.*

² Source Wikipedia (2009)

2.2 Environmental Impact Assessments

The environmental impact assessments (EIA) have been adopted internationally as the main tool for supporting sustainability and sustainable development. It emerged in the early seventies as a tool to support decision making in the identification of environmental impacts arising from specific project activities. The aim of the EIAs is to ensure that the negative impacts on the biophysical environment are assessed and integrated into the planning and decision making process. In South Africa, this is defined as “*A public process that is used to identify, predict and assess the potential environmental impacts of a proposed project on the environment. The EIA is used to inform decision-making*” (DEAT, 2004b, p.10).

It is important to note that EIA aid decision making in approval of projects which are key to development activities and development planning. Project approval decisions relate to the nature, technology, sitting, social and economic impact in a given place and time.

The EIAs theories are seen by Lawrence D.P. (2000) to have limited and sporadic interaction with planning theories and have failed to benefit from the planning theory insights and lessons. The EIA processes are often rational in approach autocratic and technically biased. Over the years, the EIA processes have become pragmatic through streamlining, harmonisation, and procedural integration and scoping. EIAs apply some principles of political economic mobilisation especially in projects where there is a need for community consent. The principles of collaboration and communication are applied in EIAs processes involving public education and shared decision making. When planning theories are applied to EIAs due to the complex nature of modern times, they should not be viewed as mutually exclusive but as complementary processes using the middle ground.

The critical lesson from the article by Lawrence is that there are a lot of things EIA can learn from the various planning theories which need to be incorporated into present reviews of legislation and information series produced at the national and regional level.

Cashmore (2004) highlights the fact that scientists remain divided on the role of science within EIAs. Modern research defines EIAs as both applied science and civic science due to the nature of its processes and procedures.

As an applied science, EIA processes are based on scientific principles and procedures as its design can be interpreted as a research problem which involves modeling and analysis. This requires that due attention is given to sampling, statistical design, and analysis and publishing of results, therefore it can be referred to as an analytical science model. The option is that environmental

scientists should be educated in planning and engineering so they develop methodologies that can be used by architects and engineers in their design cycles. These are currently part of the broader planning process. As a civic science, EIA is defined as a tool to influence decisions through the application of civic science. It is recognized as an information provision model. EIAs are limited by time and resource constraints together with political and public controversies in developing options. Participation is crucial and allows for consideration of social values through stakeholder involvement. These involve use of social science techniques such as negotiated scoping, committees, planning cells, etc. EIA are also viewed as decision tools used in environmental governance to empower stakeholders and to promote a wider interpretation of sustainable development. EIAs provide a framework for negotiations and trade offs. While the various arguments are based on process and procedure, EIA research agenda needs to evolve into a decision tool in order to meet the sustainable development objectives.

The role of science in EIA can also be viewed from the fact that EIA have evolved overtime and tend to involve other specialist development studies to assist in decision making processes. These can be pure social impact studies or high technical technology assessment studies which will aid the environmental scientist to draw relevant options. The environmental scientists do not need to be a 'jack of all trades', but they can draw on other disciplines to assist through specialist studies which are annexed to the EIA.

2.3 Strategic Environmental Impact Assessments

The restrictiveness of the EIA to specific project scope, timelines, constrained financial resources, and at times developer and political interest, lead to the development of a complementary tool for impact assessments, the Strategic Environmental Assessment (SEA) often referred to as 'the big brother of EIA'. SEA was developed around 1995 after the Rio Earth Summit to overcome some of the shortcomings of the EIA. It was introduced as a proactive instrument for addressing environmental consequences before practical action is taken.

Among the various definitions of SEA, the most important one defines strategic environmental assessment as a process of integrating a concept of sustainability into strategic decision making (DEAT and CSIR, 2000). SEA is complementary to EIA and is scoped as a decision support mechanism or instrument for formulation of sustainable policies, plans and programmes aiming to ensure an appropriate consideration of the of the environment (Fischer, 2002).

Fisher (2003) argues that strategic environment assessment (SEA) should be flexible and more adaptable than the EIAs from which they are procedurally formulated. As a tool to evaluate potential impacts of policy, programs and projects on the wider environment, SEA improves decision making and development planning process.

Fisher highlights the characteristics of a post modernist paradigm which focus on conversation led planning where policy, plan and programs (PPP) should develop in an environment of conversation among equals with absence of power. Participation is seen as a way to regulate power relations but might not be useful for sustainable development (SD). Fisher concludes that systematic planning procedures still hold great prominence at strategic levels of decision making, thus leading to planning for sustainable development. Although SEA application in PPP may have shortcomings depending on how it is applied, it is acknowledged that SEA helps to ensure that global environment issues like climate change are considered in PPP at different administrative levels.

Systematic and objective approaches to SEA are critical in solving social dilemmas where “not in my back yard” (NIMBY) attitudes tend to be in conflict with sustainable development principles. SEA application helps reconcile differing goals and objectives through integration providing a platform for suggestion on how to achieve SD and regional integration.

The EIA and SEA have different focus and assessment outputs which are summarised in the table below:

Table 1 - Comparison of SEA and EIA

| Issues | SEA | EIA |
|------------------------|--|--|
| 1. Development | Proactive | Reactive |
| 2. Assessment level | Policy, plans and programs | Project |
| 3. Focus | Effects of environment on development needs and opportunities | Effects of development on environment |
| 4. Impact analysis | Assesses cumulative impacts And implications of issues for sustainable development | Direct benefits and impacts of project |
| 5. Outputs | Strategic planning framework | Environmental Management plan |
| 6. Frequency of review | Continuous review process | Time bound – linked to project |

Although SEA remains a good tool for assessment of plans and policies, it is also affected by the complexities of the decision making process due to the diverse interest of stakeholders. The major constraint in conducting SEA for most national and local government is the lack of adequate financial resources. This is further complicated by lack of institutional capacity at various levels of government and regional institutions. The solution to these challenges is for institutions to seek partners and use linkages through multilateral agreements to fund some processes and capacity building activities which can include relevant experts during the assessments.

SEA and EIA are complementary processes which are accepted as critical tools used to promote sustainability. Today, they form part of a larger system which is

the integrated environmental management system.

2.4 *Integrated Environmental Management*

In South Africa, the concept of Integrated Environmental Management (IEM) evolved from a mechanism for cooperation among different government departments involved in project or policy development for a forward looking tool with a defined set of principles. In 2004, DEAT published the overview of IEM which described the concepts, principles and tools of IEM. The IEM was defined as a system that provides a holistic framework that can be embraced by all sectors of society for the assessment and management of environmental impacts and aspects associated with an activity for each stage of activity life cycle, taking into considering a broad definition of environment and with the overall aim of promoting sustainable development (DEAT 2004).

IEM was developed on the basis of the principles that it would foster accountability at all levels while it remains adaptive to the realities and changes in the issues. Community empowerment is critical and alternative options should always be considered. Other principles of environmental justice, equity and holistic decision making are also considered.

2.5 *Other Integrated Environmental Management Tools*

A whole range of complementary tools form part of the IEM, and these can be used to support complementary policy and planning processes. The tools are selected and combined in parallel or in sequence based on the needs expressed by the stakeholders and decision makers, the hierarchy of activity being taken and the stage of the activity life cycle. Science improves and enhances the performance of IEM processes to prevent a series of significant failures (e.g. fragmentation). The EIA and SEA remain some of the key tools but these are complemented by the following:

- Environmental auditing and accounting – a process where the organization's performance is tested against known policies and programs whilst environmental accounting to identify and allocate environmental costs to operations.
- Technology assessment – a process which evaluates the impact of introduction of new technology or modifications on society especially the unintended ones.
- Cumulative effects assessments – a systematic process to evaluate the impact of multiple actions representing potential causes of impacts.
- Cost benefit assessments – a tool used by decision makers to rank projects and accept or reject them.
- Social impact assessments – a process which evaluates the impact of projects activities and processes on human life and well being.

- Screening – determines whether or not a development proposal requires an environmental assessment, and if so, what type and level of assessment is appropriate.
- Stakeholder engagement – a process of engagement with key stakeholders during the planning, assessment, implementation and/or management of proposals or activities.
- Life cycle assessments – a tool for systematic analysis and evaluation of environmental aspects of a product or service through all stages of its life cycle.
- Risk assessment – includes, as a minimum, the definition of probability and severity of an undesired effect, expressed in the context of uncertainties.
- Sustainability analysis and reporting - an organization's public account of economic, environmental and social performance.
- Eco-labeling – a term used to describe an officially sanctioned scheme in which a product may be awarded an ecological label based on the acceptable level of environmental impact and responsible management.
- Ecological and environmental foot printing – provides a measure of how much bio productive area (land, water or air) a population requires to sustainably produce all resources it consumes and to absorb the waste it generates using available technology.
- Scenario analysis – an assessment of the future implications of current environmental problems or future emergence of new problems.
- Environmental management plans – specifies how an activity needs to be managed to minimize potential impacts on the environment and maximize the benefits during its life cycle.
- Environmental policy – the policy details an organization's aims and principles of action with respect to the environment including compliance with relevant regulations.
- Environmental management system - provides guidance on how to manage the environmental impacts of activities, services and goods.

2.6 Triple Bottom Line

The Triple Bottom Line (TBL) is a relatively new concept and tool for achieving sustainable development (SD). The TBL has various definitions, but they all encompass the social, economic and environmental sustainability (Vanclay 2004). It is meant to be a way of focusing corporations on social and environmental values rather than only on the economic value. Governments and NGOs have also adopted it.

Over time, the EIAs have been able to incorporate social impact assessments (SIA) and cost benefit analysis (CBA) which are all part of TBL mainly applicable to assess project reliability or feasibility. The new trends are that impact assessments are moving upstream to policy level through development of SEA. Although SEA is seen as advancement in the field of impact assessments, it is

still debatable if it provides better insights than at project level, particularly to the extent of its involvement in social and biophysical impacts.

The various forms of impact assessment have been developed to augment the shortcomings of other tools like SIA and health impact assessment (HIA) to cater for narrow or specific interests. The message in the article is that there are multiple bottom lines as economic, social and environmental or ecological issues have wider impacts. Time brings into consideration the issue of integration and broadening definitions. The environmental management systems are used by enterprises to manage the impacts of activities on the environment and legal responsibilities with ISO 1400 being used as a standard. The author agrees with Vanclay in that the TBL is more concerned with indicators than what really counts. It also offers nothing new in the field of impact assessments. The critical lesson is that there is need to translate a sustainable development concept at a business level which should then move up to the government, regional and international level. It is the bottom up approach to sustainable development.

2.7 *Integrated Appraisal*

Integrated appraisal is now accepted as a tool for promoting sustainable development and good governance. The purpose of the appraisal according to authors, Kidd S. and Fischer T. B. (2007), is to bring together environmental, social and economic considerations and the balancing of different concerns into a single assessment. The EU (CEC, 2003) and United Nations Environmental Programme (UNEP), as supranational organisations, have encouraged the use of the integrated approach in the review of their activities. This would work for institutions like SADC at a regional level. International focus is now on the holistic approach to assessments. Smith and Sheath (2001) define integrated appraisal as 'the systematic identification and evaluation of a policy, plan program or project in order that its performance in relation to sustainable development may be improved'.

The integrated approach to assessment is viewed as a way to reduce the need for frequent data requests and information for various impact assessments which is often seen as duplicative and disruptive (Milner, et al 2003). At the EU (CEC, 2001) level, the European strategy for sustainable development stresses the need for integrated impacts in order to improve the quality and coherence of its own activities.

The scope of the integrated appraisal includes the four dimensions of technical, participatory, qualitative and quantitative which are not mutually exclusive. Integrated appraisals were used for some West African trans-boundary energy projects, however emphasis was mainly on the technical and quantitative analysis.

Participation in decision making is currently a major requirement to this effect

globally. Agenda 21 (United Nation 1992) focuses on ways in which different sections of the community can contribute to sustainable development.

The integrated assessments have their roots in EIAs and SEA and promote sustainable development by drawing together economic, social and environmental issues. Their effectiveness relies on the design of the toolkit which is guided by clarity of purpose. Too much emphasis on flexibility may compromise the value of appraisal. Some case studies have shown that over emphasis on governance can also result in less vigour of integrated appraisal and loss of focus on sustainability issues, especially the environment.

2.7 Sustainability Appraisal

An “assessment of activities, projects, programmes, plans and/or policies which applies social and economic sustainability criteria as well as environmental ones and considers the integration and reconciliation of different criteria” (Levett 1997). This is a concept not too different from an integrated appraisal.

2.8 Skills Requirements for Environmental Scientists

The region has identified a lack of capacity as one of the major constraints in the implementation of sustainability goals and policy analysis. The question is what are these skills? The article in the International Journal for Higher Education, (Runhaar Hens, et al 2006) highlights the critical knowledge required to perform policy analysis effectively.

Government policy makers often work in multi-actor policy context which organizes public administration into distinct policy domains. This implies that sustainable development (SD) strategies depend on both state and non-state stakeholders’ participation in the formulation and implementation of public policy. A policy analyst for SD requires competence in the following methods which form the toolkit for environmental sciences:

1. Reconstruction of policy theory;
2. Stakeholder analysis;
3. Impact assessment;
4. Cost benefit analysis; and,
5. Discourse analysis.

These analytical skills can be applied in defining policy content, process organization and effects. The reconstruction of policy theory may be used to answer some questions like:

- To what extent is the SADC policy aimed at promoting biodiversity supported by scientific knowledge?
- How emissions’ trading is expected to result in reduction of CO₂ emissions in a cost efficient manner?

The advantage is that it allows analysts to gain an understanding of complex issues but can overlook stakeholder participation (other than political administrative elite).

Stakeholder analysis focuses on aspects such as interests of stakeholders, and their perception of problems, positions and relationships with other actors, improves program legitimacy and quality although interpretation of problems or issues.

Impact assessments cover a wide range of methods for determining the effects of policy programs. Policy impact is measured through evaluation of the situation before and after policy intervention on using indicators. A major problem is that policy effects are usually long term, and therefore sustainability is unknown.

Cost benefit analysis (CBA) evaluates the effects of proposed policy programs in economic terms calculating a value for each activity, benefit and impact. It can be used to find out if policies have been worthwhile and to answer questions like which allocation of development and various possible projects will result in the highest benefits in terms of improved quality of life?

CBA allows policy analysts to evaluate both tangible and non tangible effects by translating them to monetary terms. CBA is data intensive and lack of credible data limits its applicability. It is complex for non-economists and over emphasizes the importance of policy output as compared to process making (Fisher, 1997). Monetisation can be subjective for non tangible assets, e.g. life. Cost effectiveness analysis (CEA) can be used as an alternative to CBA. CEA calculates which policy option produces or produced the desired beneficial effects, e.g. reduction of CO₂ emission at the lowest costs. And only costs are monetized.

Discourse analysis focuses on the way which actors or stakeholders give meaning to particular policy programs or causes policy problems, and analyses problems and reconstructs visions and context on how they emerge. Discourse analysis answers questions on how the policy has evolved and why. The process lacks standardization and has dangers of subjectivity. The discourse analysis is recommended for a multi-actor policy environment. The toolkit for environmental scientists has to be integrated into the education program and competences are best taught through practical experience, "learning by doing". This is true in all disciplines as experts learn by doing, thus reinforcing why positive and relevant experience is critical in evaluation of professionals in accreditation processes.

3. PART B: The role of IEM tools and concepts in promoting sustainability in the SADC region

3.1 Background

SADC is a grouping of Southern African States which was formed initially as a Development Coordination Conference whose main objective was to achieve independence, regional solidarity and to fight against apartheid. It was later converted to a Southern Development community with the main goal being to pursue a common regional integration agenda premised on political, economic and trade interests. The SADC Treaty, as amended, puts achievement of sustainable utilization of natural resources and effective protection of the environment as one of its objectives. In response to the on going environmental challenges SADC has implemented the following:

1. Development of a regional integrated strategic development plan (RISDP) which highlights its programs and projects;
2. Establishment of protected areas and implementing cross boundary natural resources management initiatives and programs;
3. As commitment to sustainable development (SD), the SADC council of ministers in 1994 approved the SADC policy for environment and sustainable development;
4. Currently developing regional instruments and legally binding protocols; and,
5. Signing a ratifying international conventions.

The SADC secretariat through its vision and mission views itself as enabler and a catalyst of regional integration and sustainable development. To this effect it has developed policy interventions for the Environment and sustainable development as agreed by the SADC Member States and contained in the RISDP. These interventions focus on the following areas:

1. Legal instruments for regional corporation in environment and natural resources;
2. Environmental standards and guidelines;
3. State of the environment reporting for member states every 5 years;
4. Developed SADC action plan for implementation of the Johannesburg plan of action (2002 WSSD);
5. Integration of principles of sustainable development into country policies and programs and reverse the loss of environmental resources by 2015;
6. Adoption of the environment responsiveness planning and implementation processes, regular environment and sustainable development capacity – building and training programs; and,
7. Finalization of the strategy and programme for the brown environment.

3.2 SADC Institutions

The SADC secretariat was restructured in 2001 as a way to increase efficiency, effectiveness and coordination of regional policies and programs from 21 sector coordinating units to four clusters, namely:

- Trade, Industry, Finance and Investment;
- Social and Human Development and Special Programs;
- Infrastructure and Services; and,

- Food, Agriculture and Natural Resources.

The regional structure is complemented by National Committees at each country level which are responsible for the implementation and monitoring of programmes and insuring broad and inclusive stakeholder consultations. This is the level where environmental programs interface with the Governments of Member States. The reality on the ground is that only a few National committees are actually functioning. The Integrated Committee of Ministers (ICM) approves and monitors the implementation of the SADC programmes in the RISDP on behalf of the Council of Ministers.

Weak links

The RISDP as a strategy recognizes that whilst promoting deeper integration, there is need for flexibility due to the diversity among the Member States, especially in the environmental sector related to both social and economic environments and also due to the different natural resource base of the Member States.

The weakest link in coordination of programs remains the fact that most SADC sector level policies, strategies and programs were designed before the restructuring into four clusters. As a result, the sector approaches were uncoordinated, with poor coherence and weak inter-sectoral linkages. The RISDP was adopted as a strategy to identify and strengthen the linkages, programs and policies of the various sectors to improve service delivery and efficiency.

3.3 Multilateral Environmental Agreements (MEAs)

Multilateral Environmental Agreements (MEAs) are recognized as the primary instruments for the states' commitment to the pursuit of sustainable development (UNEP/SIDA 1996). The various SADC Members' States are party to a number of MEAs both at the regional and global level covering the following areas:

- New and additional resources for environmental programs;
- Technological transfer;
- Mechanisms for addressing vital matters such as the loss of biological diversity and poverty alleviation; and,
- Institutional frameworks for dealing with the environment and development concerns.

Some MEAs which are relevant to the region in which more than 75% of the SADC Member States are signatory to, including:

- Convention on the International Trade in Endangered Species of Wild Fauna and Flora (CITES) and its subsequent amendments;
- Vienna Convention;
- Montreal Protocol and amendments;

- Basel Convention;
- Convention on Biodiversity (CBD); and,
- United Nations Framework Convention on Climate Change (UNFCCC).

The regional MEAs are few and these include:

- the Inkomati Treaty between South Africa and Swaziland; and,
- Treaty on Joint Water Commission (IJW 1 and 2).

The benefits from these MEAs have not been fully realized due to various country specific constraints whilst the implementation of sub-regional protocols has also not been possible due to lack of adequate and sustainable financial and human resources. SADC Ministers agreed at a meeting in 2005 to promote the development of a common voice when attending meetings of MEAs and the strategy was successfully adopted and implemented at the Convention on Biodiversity in 2006.

It is important to note that the MEAs have implications on issues of trade and obligations under the World Trade Organization (WTO). These include some of the following areas:

1. Phytosanitary issues;
2. Under CITES trade in species under appendix II; and,
3. Restrictions in harvesting of species over multi-country ecosystems.

To this effect, various donors including the United States Agency for International Development (USAID) are working with SADC Member States and Secretariat to ensure coherence and beneficial position on issues relating to the following:

- Sanitary and Phytosanitary (SPS) Agreement of WTO and Draft Annex to the SADC Protocol on Trade;
- The Technical Barriers to trade agreement; and,
- Implementation of the Biosafety (Cardena) Protocol.

All this support is with the view of achieving sustainable development through trade facilitation processes.

3.4 Harmonization of National Policies and Legal Frameworks.

All SADC Member States have national environmental and sustainable development policies and legal frameworks. SADC has a critical role to play in the harmonization of these policies to the MEAs which the members are party to. SADC in its strategic development plan is working on developing a Protocol on Environment. It is important to highlight that some of the legal frameworks are currently outdated and tend to focus more on natural resource conservation and not on the need of the communities to benefit sustainably from the resources especially in protected areas.

3.5 Mainstreaming of environmental Issues

The SADC Secretariat has achieved some progress in developing guidelines, protocols and other instruments and working on integrating these into broad policy areas. Further work needs to be done to move towards comprehensive sustainable development solutions. Some of the critical steps proposed by the SADC Environmental Analysis for Regional Strategy Paper are outlined below.

3.5.1 Establishment of criteria which defines environmental quality goals

Goal definition should be accompanied by a guiding principle to define sustainable use and management.

3.5.2 The State of the environment institutionalized and integrated into the planning cycle

State of the Environment (SOE) is a tool for monitoring and assessing changes and establishing trends in the environment. The list of environmental indicators was developed in 2006 and is available (SARDC, 2006). This should be linked to the RISDP target to ensure reporting on the SOE every five years.

3.5.3 EIA protocols and guidelines

EIAs have always been a useful tool for incorporating environmental concerns into the project planning and decision making process. A significant number of Member States have adopted EIA legislation in the past decade. However a few countries implement the legislation effectively due to the following constraints:

- Lack of financial resources allocated to the activity;
- Insufficient skills to perform quality evaluations; and,
- Political interference in some cases – decisions are taken prior to the EIA being undertaken and the assessment is used to legitimize it.

The EIAs remain a tool for promoting sustainable development and the need to be complemented by other assessments which will include specialist reports, depending on the type of project being reviewed, social impact analysis, cost benefit analysis, etc. The region has to establish some form of EIA quality criteria.

Since SADC deals primarily with policy, plans and programs, it will be important to carry out a Strategic Environmental Assessment (SEA) as a way for integration of sustainability issues during the formulation and review of policies, plans and programs. This will result in the development of SADC Strategic Development Framework which will guide various Member States on the critical environmental considerations at all levels of development planning. The need for developing a quality criteria for SEA is also critical at the regional level.

3.5.4 Professional Knowledge and Competence

To achieve quality EIA standards it requires knowledge, competence and commitment of environment scientists. These require solid policy analytical skills which are mainly taught by doing and require financial resources to facilitate capacity building.

There is also a need to develop guidelines, rules and best practice models for use by the Member States. In some countries issues of accreditation of environmental practitioners are currently under consideration and depending on their success in improving quality of EIA and other assessment tools, they can be recommended for adoption in other Member States. It is however important to ensure that accreditation does not become a tool for exclusion.

The SADC institutions of higher learning should develop or enhance education programs which will ensure they produce well rounded environmental scientists who will be able to guide the region towards integrated and harmonized environmental management policies.

3.5.5 Selecting and implementing environmental safeguards

The safeguards are linked to mainstreaming activities and some of the key ones are presented below:

- Selection of focal points – these are chosen on their ability to reverse negative environmental impacts and include;
 - Improving economic climate and job creation
 - Increasing food production and security in the region
 - Encouraging use of alternative energy and use of new, cleaner technologies
 - Supporting inventories and monitoring of the region's natural resources
- Compulsory EIA;
 - EIAs should be compulsory for all major development projects including social impact assessments and cost benefit analysis.
- Support for Regional early warning system (REWs);
 - Continue to strengthen the REWs and ensure continued research in area of impact of climate change on food security.
- Enforcement;
 - Strengthening of the legal framework and capacity to develop rules and protocols for handling EIAs, hazardous waste, pollution etc.
- Implementation of state of the environment reporting (SOER);
 - To ensure information is available to make informed decisions and will be used for monitor effectiveness of policies, plans and programs.
- Signing of environmental agreements;
 - Ratification of regional agreement is necessary to ensure political

commitment to environmental issues and some MEA have funding available for use by members to mitigate environmental impacts.

- Establishment of sustainable funding sources for environmental mitigation and adaptation projects;
 - Efforts to continue to seek funding for environmental mitigation and adaptation programs need to be intensified.
- Awareness, education and communication;
 - Programs to increase environmental awareness should be developed and implemented to ensure buy in from all critical stakeholders through training workshops and information bulletins. SEA should help to increase awareness as they require stakeholder engagement at policy development level.

3.6 Environmental Indicators

SADC has a set of indicators which were developed in 2006 (SARDC, 2006) and are grouped according to the SADC key themes and environmental focus areas.

3.6.1 Land use and management;

- Deforestation – e.g. timber production, and
- Agricultural expansion - e.g. per capita per cereal production.

3.6.2 Atmosphere and climate;

- Climate change – e.g. mean annual rainfall, and
- Increased greenhouse gas emission – carbon dioxide emissions per area per annum.

3.6.3 Freshwater;

- Freshwater quality – incidents of waterborne diseases.

3.6.4 Marine resources;

- Increase in coastal erosion – sea levels and fish catches.

3.6.5 Biodiversity;

- Spread of invasive species – area invaded.

3.6.6 Human Settlements;

- Population increase – total population, and
- Rural migration – rural/urban population levels.

3.6.7 Biosafety and biotechnology;

- Increased use of genetically modified organisms (GMO) – importation of GMO food aid and genetic restriction technologies.

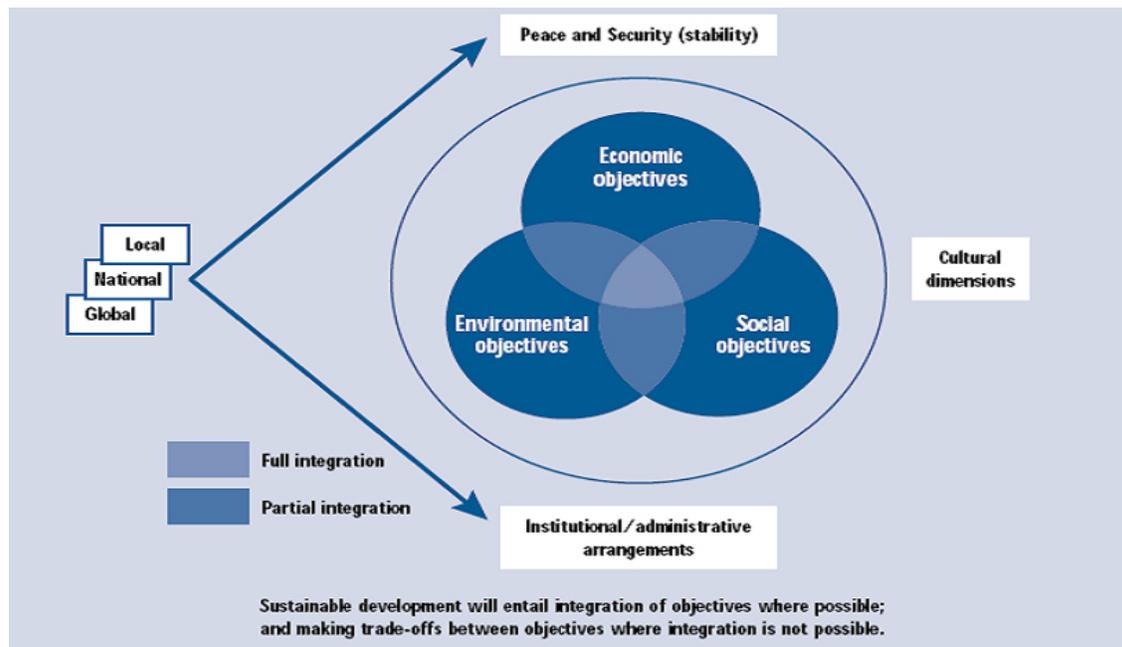
For each key theme, an issue and an example of an indicator are highlighted.

3.7 Monitoring and Evaluation

Monitoring and evaluation of effectiveness of tools and policies require clear definition of indicators which can be used to track progress.

4. Conclusion and Recommendations

The importance of sustainable development is fully recognized by SADC at the secretariat level. As a developmental tool, sustainable development aims to integrate environmental, economic and social objectives into policy plans and programs at different levels to ensure world peace and stability. These plans are achieved through multiple stakeholder engagement, negotiations and trade offs. This integration role as currently played by SADC Secretariat is illustrated by the diagram below taken from Dalal – Clayton *et al.* (1994).



However, the effectiveness of the achieving sustainable integration is hampered by various challenges which include:

1. Lack of capacity, currently understaffed;
2. Lack of experience;
3. Lack of financial resources to fund the program implementation; and,
4. Lack of sufficient policy tools and instruments.

It is important to note that various international cooperating partners are looking into ways of funding and building capacity of SADC to allow it to integrate its policies and programs.

Currently, SADC is developing a consultancy terms of reference to carry out the

SADC Regional Environmental Mainstreaming Instrument and the Development Regional Biodiversity Action Plan.

The Environmental mainstreaming instrument will help to ensure that environmental decisions are integrated into development decision making process within and across Member States. In the terms of reference of the proposed mainstreaming instrument, it is highlighted that this instrument shall fulfill a number of roles and add value to the environment and sustainable development agenda of SADC. Among such roles and values, the following merit special mention:

- Enhance mainstreaming of the environment and sustainable development elements within all sectors of the economies of the region;
- Facilitate harmonization of policy and legal framework;
- Create cohesion to the many commitments as well as open possibilities for closing existing commitments and policy gaps;
- Create an opportunity to consolidate and create synergies between the various commitments on environment;
- Set a benchmark for environmental management standards that the region must adhere to;
- Facilitate information exchange and collaboration on data collection on matters of common interest;
- Act as a beacon of regional commitment to the principles of sound environmental management and sustainable development;
- Integrate other cross cutting issues such as climate change, water, HIV/AIDS, gender, education and energy into the trade and environmental management agenda;
- Support capacity building in research on international development agendas and trade rules;
- Boost the importance of valuing natural resources – which could generate sustainable trade in goods and services they provide; and,
- Promoting a pan-governmental approach to trade and environment through tapping into the experience and resources of relevant departments, as well as ensuring coherence in environment, trade and development policy using the Inter-Departmental Development Committee as a forum.

To develop the environmental mainstreaming instrument, the consultant will need to conduct an integrated appraisal which is a comprehensive tool for promoting sustainable development and good governance. As an EIA based process it will require the use of various tools of integrated environmental management which include but not limited to the following:

- Stakeholder engagement;
- Screening; and
- Social impact assessments
- Scenario analysis.

Bibliography

1. Cashmore, M. (2004) The role of science in environmental impact assessment: process and procedure versus purpose in the development of theory, in: **Environmental Impact Assessment Review**, vol. 24, no. 4, pp.403-426.
2. Claassen, P.E. (2004) **Environmental analysis in relation to development planning and environmental management**. Unpublished class-notes, document no. 2, School of Public Management and Planning, University of Stellenbosch.
3. DEAT. (2004a) **Overview of Integrated Environmental Management, Integrated Environmental Management, Information Series 0**. Department of Environmental Affairs and Tourism (DEAT), Pretoria. (ISBN 0-9-584728-1-5)
4. DEAT. (2004b) **Scoping, Integrated Environmental Management, Information Series 2**. Department of Environmental Affairs and Tourism (DEAT), Pretoria. (ISBN 0797039767)
5. DEAT. (2004c) **Strategic Environmental Assessment, Integrated Environmental Management, Information Series 10**. Department of Environmental Affairs and Tourism (DEAT), Pretoria. (ISBN 0958472866)
6. DEAT. (2006) **South Africa Environment Outlook. A report on the state of the environment**. Executive summary and key findings. Pretoria: Department of Environmental Affairs and Tourism [Internet]. Available from: <<http://www.deat.gov.za>> [Accessed 25 August 2007].
7. DEAT & CSIR. (2000) **Guideline Document: Strategic Environmental Assessment in South Africa**. Department of Environmental Affairs and Tourism (DEAT) together with the Council for Science and Industrial Research (CSIR), Pretoria. (ISBN 0621299251)
8. Environment Analysis for Regional Strategy Paper.: **Background briefing paper for the SADC-EC 10th European Development Fund Region Strategy Paper (RSP)**(July 2006)
9. Fischer, T.B. (2003) Strategic environmental assessment in post-modern times, in: **Environmental Impact Assessment Review**, vol. 23, no. 2, pp.155-170.
10. Innes, J. & Booher, D.E. (2000) Indicators for Sustainable Communities: A Strategy Building on Complexity Theory and Distributed Intelligence, in: **Planning Theory and Practice**, vol. 1, no. 2, pp.173-186.

11. Kidd, S. & Fischer, T.B. (2007) Towards sustainability: is integrated appraisal a step in the right direction?, in: **Environment and Planning C: Government and Policy**, vol. 25, pp.233-249.
12. Lawrence, D.P. (2000) Planning theories and environmental impact assessment, in: **Environmental Impact Assessment Review**, vol. 20, no. 6, pp.607-625.
13. Morrison-Saunders, A. & Fischer, T.B. (2006) What is Wrong with EIA and SEA Anyway? A Sceptic's Perspective on Sustainability Assessment, in: **Journal of Environmental Assessment Policy and Management**, vol. 8, no. 1, March 2006, pp.19-39.
14. Muller, A. (2006) Sustainability and Sustainable Development as the Making of Connections: Lessons for Integrated Development Planning in South Africa. Paper presented at the **SAPI Planning Africa 2006 Conference**, March 2006, pp.1027-1079.
15. UNCED (1992) Agenda 21: Chapter 10 – Integrated Approach to the Planning and Management of Land Resources. United Nations Department of Economic and Social Affairs, United Nations Conference on Environment and Development, [Internet].
16. Vanclay, F. (2004) The Triple Bottom Line and Impact Assessment: How do TBL, EIA, SIA, SEA and EMS relate to each other?, in: **Journal of Environmental Assessment Policy and Management**, vol. 6, no. 3, September, p.265-288.