



What Works For Us

A South African Country Report on
Tactics, Tools and Methods for
Integrating Environment and Development



Development Bank of Southern Africa
in partnership with more than 100 South Africans and the
International Institute for Environment and Development





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The South African country case study forms part of an international initiative to produce a user guide to *Effective Approaches, Tools and Tactics for Integrating Environment and Development*. The international study is conducted by the International Institute for Environment and Development (IIED) with the support of an International Stakeholders Panel comprising members from a variety of countries. The international initiative is also funded by DFID.

Disclaimer

All the omissions and inaccuracies in this document are the fault of the compiler at DBSA. The views expressed do not necessarily represent those of the institutions involved, nor do they represent the South African Government, DBSA or any organisations policies.

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This Study is dedicated to the 50 million people living in South Africa today and all future generations who depend so heavily on the actions we take now in order to protect their future.

The study attempts to capture some of the combined wisdom of over 100 South African development change agents and development practitioners. The declining environmental situation is critical and in need of strategic and comprehensive interventions at all levels of society. Time is against us.

May we all rapidly learn to protect, and care for nature and more justly share in her goods and services. We need to rethink our particular roles and responsibilities and use our scarce resources far more wisely. May these pages help in some small way to bridge divides and highlight the role that knowledge, relationships and tools and tactics can play to build a better life for all.



Executive Summary



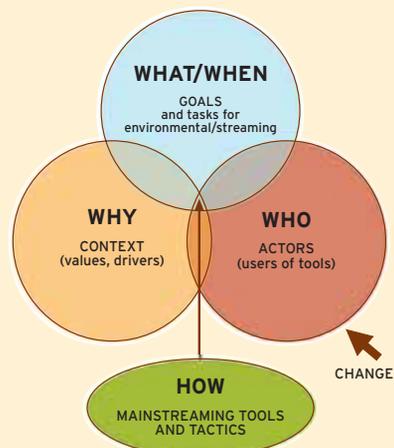
BACKGROUND AND PURPOSE OF THE STUDY

- This country study was facilitated by the DBSA with support from the IIED. It involved over one hundred South Africans. The study acknowledges, that South Africa's environmental crisis is deepening - South Africa is not meeting all its targets in terms of the Millennium Development Goals and it is questionable how sustainable current development initiatives are. Environmental resources are rapidly declining in both quality and quantity. The realities of climate change, peak oil and food security are confusingly acknowledged in policy and planning (Department of Economic Affairs Environment and Tourism 2006). The study aimed to take a snap shot in time of environmental mainstreaming approaches, tools and tactics used in practice - their successes and failures and the perceptions of people as to their general effectiveness. The study covered approaches, tools and tactics at a range of levels (e.g. national, district, community) and by a range of users and summarised lessons learnt to guide environmental mainstreaming in the future.
- The study, together with other country studies, forms part of an IIED facilitated global initiative which aims to assist poorer nations to facilitate mainstreaming the environment into development decisions. The first phase of the initiative will produce a 'User Guide for Environmental

mainstreaming'. The IIED's contention is that environmental mainstreaming capacity will be much stronger if stakeholders are able to select appropriate approaches, tools and methods.

METHODOLOGY

- The methodology involved user workshops, literature reviews, personal interviews, group discussions, questionnaires and case studies. The analysis of findings was summarised according to the model developed by the IIED together with the International Stakeholder Panel (Bass, cited in Dalal-Clayton 2008). This model looked at the relationships between the context, the users, the tools and the goals of environmental mainstreaming.



FINDINGS AND KEY THEMES

THE GOALS FOR MAINSTREAMING ENVIRONMENT INTO DECISION MAKING IN SOUTH AFRICA

- South Africa has highly sophisticated human rights and sustainable development policies embedded in its constitution and laws. These however are largely not implemented in practice. The actual effectiveness of existing approaches, tools and tactics in addressing the needs for environmental justice is debatable. The environmental crisis continues to escalate and, despite South Africa being a leader in the development of a number of environmental mainstreaming approaches, environmental considerations are still not adequately considered in development decisions.
- South Africa's national development goals can appear contradictory and these contradictions need to be addressed. There are approaches and tools that can help achieve this.
- There are also major divergences amongst South Africans on world views, values and therefore goals. Examples of two sets of divergent views are as follows:
 - Short term economic growth/job creation must have overarching and all powerful priority over environmental management, if past inequalities are to be addressed and if poverty is to be eradicated. This view prevailed amongst many people interviewed.
 - The opposing view upheld that social, environmental and economic aspects of development could not be separated nor one aspect prioritised over another. Social justice and building a healthy society was strongly dependent on holistic, systems thinking¹ and applying sustainable development principles *in practice*. This view underpinned the Constitution.
- There are divergent views related to whether sustainable development is still a viable goal or whether the environmental crisis has reached a threshold which demanded more radical goals of actually reversing development and shutting down globally threatening activities. The need is to ensure that future generations are not deprived of essential ecosystems services as a result of current unsustainable developments.

- For any tool, tactic or approach to be successfully applied, it must be able to demonstrate a strong link with national priorities such as job creation, poverty alleviation and HIV/AIDS.
- Developing appropriate goals and *measures of success* are important. South Africa needs clarity on what exactly it is trying to achieve. There is a big difference between pursuing goals of 6% economic growth and pursuing goals of sustainable development. Each requires a different set of objectives and measures and each will lead to a different emphasis in development decisions and outputs.
- The use of tools, tactics and approaches for environmental mainstreaming is often affected by power relations (economic or political); who is benefiting under the current scenario and what they have to gain or lose in the process of change. Working on these issues is where the battlefields have always been and still remain.

THE SOUTH AFRICAN CONTEXT

- It is critical to see tools, tactics and methods as part of an integrated approach to sustainable development and not as stand alone items that work as separate entities from one another and from wider social, economic and political forces.
- The background context of development is changing rapidly - we cannot look back anymore because the future is so different to the path we left behind.
- The planet is in ecological debt and tools need to be redesigned to deal with and respond to this reality. Mainstreaming environmental influences must be a key consideration in all planning and development decisions. This needs to be done forcibly and purposely (for example tools such as *environmental impact assessments* need to evolve to become *environmental contribution assessments*). This means that development proposals have to ensure they add value to the biophysical environment.

Key drivers for mainstreaming environment into decision making (as ranked by participants)

- National legislation and regulations
- The values of organisations
- Stakeholder demands

¹ Systems thinking is a framework that is based on the belief that the component parts of a system will act differently when the systems relationships are removed and they are viewed in isolation. The only way to fully understand why a problem or element occurs and persists is to understand the part in relation to the whole... Systems thinking concerns an understanding of a system by examining the linkages and interactions between the elements that comprise the entirety of the system. Systems thinking attempts to illustrate that events are separated by distance and time and that small catalytic events can cause large changes in complex systems. (Wikipedia 2008).

- Loan/Grant conditions
- Additional drivers that were mentioned by some people included personal values, desire to address rising poverty and inequality, increasing disasters of all kinds relating to the environment, the need to protect ecosystems and stem environmental degradation.

Key constraints preventing mainstreaming environment into decision making (as ranked by participants)

- Lack of human resources, skills and political will were the top ranking constraints to integrating environment into decision making at a policy, planning and project level. The lack of monitoring and enforcement was another recurring theme as to why tools failed in practice.
- Some interviewees believed that if people understood the nature of the environmental problem, then their values would change and many other constraints would fall away. Others believed that people did in fact understand the issues at stake but there were other interests and agendas at work. Others believed there was a two-way (dialectical) relationship between people's values and their material living conditions. For this group structural change was an essential route to changing values.
- Understanding how power worked in society is essential to understanding why high impact tools were never applied, and or abused or undermined in practice. A liberal view of power will assume if people are provided an opportunity to participate then that should suffice. A more progressive view believes people are often victims of dominant 'hegemonies' (or brainwashing), and have been subtly programmed not to critically question what is happening and to believe certain situations are beyond their control. *'It is Gods will, or it is a natural disaster, or if I want a job I will only get one if I go with this person, plan or development scheme'* etc. It is important that approaches and tools empower people not only to share their views but also to become more critical of how society is structured, and how decisions are made and develop the means to influence them.

THE USERS

- Tools are not as important as the world view/paradigm of the user who puts the tools to use.
- Tools cannot replace the need for knowledge, understanding, and building positive relationships

and they are only as effective as the user is sensitive to the requirements and needs of the people and the environment that the tools are intended to ultimately serve.

- The relationship between the use of tools and increasing budgetary expenditure on tools and on the impact this has on mainstreaming is not directly proportional
- People need to be held accountable. Professional standards and certification of practitioners will help prevent abuse of tools in practice.

'There is NO substitute for professional competence in the fields in which tools are used. Knowing how to use a tool doesn't make one competent in the matter the tool is being applied to. On reflection, one can learn some things about a matter through using a tool on it, but we appear to be in a paradigm where being able to use a tool is mistaken for competence in the arenas where the tool is put to use. This is a lethal deception'.

Nic Scarr



THE TOOLS, TACTICS AND METHODS

- There is a role for a variety of tools: for precision/technocratic tools and for more holistic/fuzzy (softer) logic/philosophical and systems thinking approaches; for both top-down and for bottom-up approaches. Change agents need to span the range at the opportune time and at the right level of decision making.

Most valued tools, tactics and methods in mainstreaming the environment into development decisions

- The *visioning tools and approaches* especially those drawn from a sustainability framework, seemed to be the most appropriate for contexts where there was a wide range of world views and widely differing value systems.
- The *participatory/capacity building and empowerment tools, tactics and methods* were repeatedly emphasised by all groups.
- *Legal tools* were often identified as the only tools that currently had much impact - even though they were hardly effective and even though most agreed sustainable development could never be achieved through making more and more laws alone.
- Government institutions mentioned the *budget process and meetings* as being key instruments for environmental mainstreaming.
- *Adaptive management* was viewed as an essential tool for dealing with complex and dynamic development scenarios especially with the impacts of climate change, and rapidly changing population characteristics.
- Innovative and experimental approaches were identified as having strategic impacts - for example initiatives such as the *public works programme approaches* (such as Working for Water, Working for Wetlands and Working for Fire), *fine-scaled bioregional planning, screening of large impact projects, and community based natural resource management* programmes.
- *Opportunistic tactics and strategies* played a key role where there was an absence of skills, capacity, resources and political will and also where there were power struggles and vested interests that limited the use and value of more conventional mainstreaming tools.
- *Grassroot approaches* that work with science and local knowledge were meeting with various degrees of success. These included for example, approaches such as livelihood approaches, human

rights based approaches and participatory approaches.

The least useful tools, tactics and methods - identifying the gaps

- Most, if not all, tools were identified as being of value. The problem with many tools was that they were either incorrectly utilised for purposes they were never designed for or they were poorly applied in practice. One of the most abused and poorly understood tools was the Environmental Impact Assessment.
- Some participants cautioned that many tools were inherently technocratic and unable to deliver on a scale and depth required - they were part of the problem and using them perpetuated the problem.

CONCLUSION

South Africa was a leader in the field of designing, adapting and applying many sustainable development tools in practice. In the final analysis approaches, tools and tactics played a small but rapidly growing critical role in addressing the environmental crisis that South Africa faces.

A snap shot of over 100 South African perceptions revealed that there was a strong feeling that the country needed to focus less on the tools themselves and more on the **users** of the tools especially their world views, values and knowledge base. Respondents stressed the importance of understanding the context in which people used tools and the need to **build a collective common vision** based on the rights established in the Constitution and on the principles of sustainable development as entrenched in law. South Africans needed to measure and monitor progress to make changes happen at the pace and scale required to prevent formidable environmental damage and an unthinkable humanitarian crisis.

Not to acknowledge this was similar to producing more and more fishing boats when indeed there were less and less fish left in the seas.



Chapter

Introduction



There is an increasing realisation that economic development is not bringing about a positive change in human wellbeing or addressing major inequities between the haves and the have-nots – we need to start thinking of ‘development’ differently. If we are to truly solve the problem of mainstreaming environment in policy and decision making processes maybe we should take the risk of thinking completely out of the tool box.

Sandy Heather

The challenge to integrate environment into development has never been more urgent. Infrastructure, housing, industry and agriculture must be climate-proofed. Development must be energy and water efficient. Poor people’s environmental deprivations and environmental rights must be tackled in development activity and political decision making. Institutions need to build environmental management capacity as too many treat the environment as an externality. Change will continue

to be slow without adequate stakeholder pressure and developing strong linkages to learning from experience of ‘what works’ for environmental mainstreaming. To date there has been little sharing of experience on conducting ‘environmental mainstreaming’ tasks in advocacy, analysis, planning, investment, management, and monitoring. In contrast, there is too much untested guidance on how to go about the tasks’ (Dalal-Clayton 2007).

This study, together with other country studies, forms part of a wider IIED facilitated global initiative, which aims to produce a ‘User Guide for Tools for Environmental Mainstreaming’ that is sensitive to the needs of the world’s poorer countries. The User Guide is a first phase of IIED support to poorer countries in their efforts to mainstream environmental issues into development decisions. The initiative is steered by an International Stakeholders Panel. *“The IIED’s contention is that environmental mainstreaming capacity will be much stronger if stakeholders are*

able to select appropriate approaches and tools. Such approaches/tools might be applied at a range of levels (e.g. national, district, community) and by a range of users (government, non-governmental and community-based organisations and private sector). Too many approaches/tools are being 'pushed' by outside interests, and too few locally developed. There is not enough 'demand-pull' information from potential users. Neither is there enough information available that helps countries to select the right tools themselves - as opposed to taking what others want, suggest or promote" (Dalal-Clayton 2007).

The DBSA, with funding from the IIED, has undertaken a survey in South Africa to secure on-the-ground user feedback about the challenges users face, their needs related to integrating environmental tools/tactics/ approaches, and user perspectives of which ones are found to be useful or not. This report documents the findings of the survey, which involved a collaborative process undertaken by over 100 South Africans (A list of participants is provided in Appendix 1).

The study covers opinions of grassroots leaders, politicians from various political parties, traditional leaders, officials at national, provincial and local levels, businesses of various descriptions, consultants, NGOs, activists, quasi government institutions and academics involved directly or indirectly in the field of sustainable development. Some were beginners, some had attained international recognition for being

leaders in the field. Every interview was both revealing and intriguing and the entire exercise inspiring – collectively these interviews painted a picture of the status quo of South African efforts to mainstream environment into decision making. Participants helped unpack the vast array of the most popular or most unique approaches and tools and the myriad of ways these were being used and often abused.

Participants of the study tried to debate whether some tools were inherently doomed for failure or whether it all depended on the users and the context. Participants highlighted the innovative and successful work happening in deepest rural areas, in the largest of corporations and bureaucracies, the podiums of churches and the frontiers of academia. They helped highlight what people needed. It is difficult to do all their contributions and insights justice in just a few pages. The study revealed there is an exploding awareness of the scale of environmental challenges we face and the need to work with a range of appropriate approaches and tools.

There are people in Atlantis, living 10kms from the sea, who have never seen the sea.

Wilfred Williams



Chapter 2

The Methodology



The global approach for this study was designed by the IIED following consultations with the Poverty Environment Partnership,² with donor agencies and following a Project Working Group meeting involving participants from about 20 poorer countries in the early months of 2007. A generic survey questionnaire was developed by the IIED in consultation with the country survey partners. Three countries from three different continents agreed to pioneer country surveys - Chile, India and South Africa. The South African survey began in August 2007 and completed in 2008. There are now several other countries undertaking similar surveys.

This report is based on the findings of more than one hundred interviews (approximately 60% personal and 40% questionnaires. The questionnaires can be accessed on www.iied.org). The interviews were conducted by a team of eight people from various

professions and experiences, coordinated through the DBSA. The personal interviews were aimed primarily at those who did not have access to email, did not speak English as a first language, or who likely had extensive knowledge to share over and above what the questionnaires could on their own address. Efforts were made to cover a wide variety of professions, experiences and world views although emphasis was also given to change agents who had a large amount of experience to share.

In addition to the above processes other opportunities for inputs were pursued over a three month period. Opportunities to share the survey with a variety of user groups included a Johannesburg banking forum event, an Eastern Cape Provincial Legislature 3 day environmental management course and an International Association for Impact Assessment (IAIA) conference in the Western Cape on

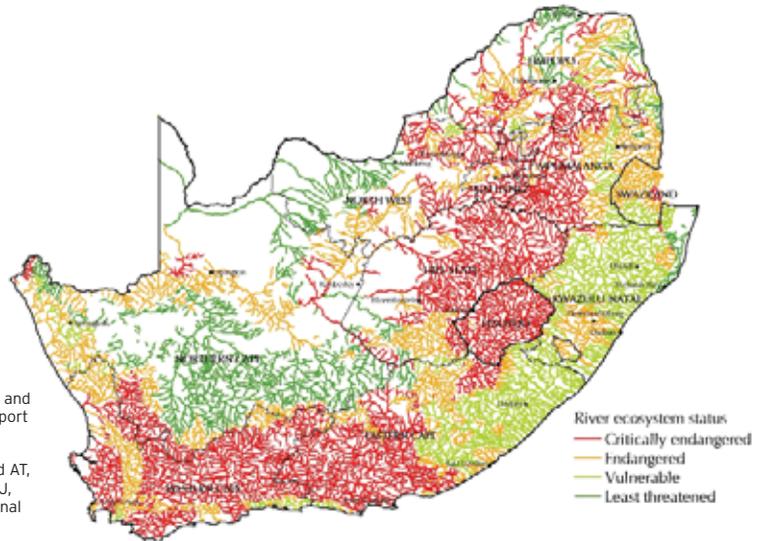
² World Bank initiative comprising an informal network of donor agencies, development banks, and NGOs. The main common interest among its participants is enhanced environmental management in the context of poverty reduction. Founded in 2001.

'Managing Resources for Sustainable Development through Impact Assessment'. Efforts were also made to identify other initiatives in the country that could be of value to this study and vice versa. In October a dedicated workshop on the subject was hosted by the DBSA in Johannesburg and a final national workshop was hosted by the Council for Scientific and Industrial Research (CSIR) in Stellenbosch in November 2007.

Due to the holistic nature of sustainable development the South African Country team placed emphasis on

an issue-based case study approach rather than depending too heavily on the questionnaires and interviews. The case studies were selected to cover a wide range of urban and rural issues and demonstrate a variety of approaches. Together the interviews, meetings, case studies and literature searches conducted in this study, all helped to illustrate what South Africans were using to mainstream environmental issues into development decisions.

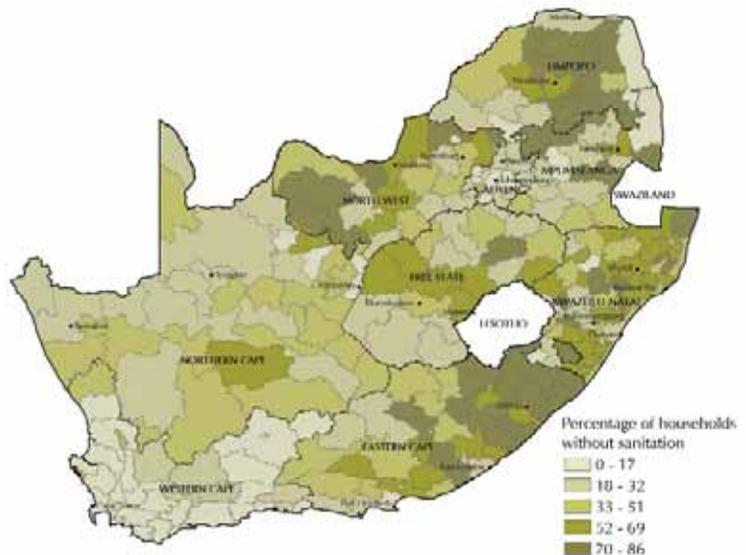
River ecosystems



Source: Cited in Department of Environmental Affairs and Tourism; South African Environmental Outlook - A Report on the State of the Environment - page 11, 2006

Original source: Driver M, Maze K, Rouget M, Lombard AT, Turpie JK, Cowling RM, Desmet P, Goodman P, Harris J, Jonas Z, Reyers B, Sink K and Strauss T (2005) National Spatial Biodiversity Assessment 2004: Priorities for biodiversity conservation in South Africa. Strelitzia 17, SANBI Pretoria

Households with access to sanitation



Source: Cited in Department of Environmental Affairs and Tourism; South African Environmental Outlook - A Report on the State of the Environment - page 8, 2006.

Original Source: Statistics South Africa (2001) Census 2001 Primary Tables South Africa: Census 1996 and 2001 Compared. Report No.) 3-02-04. Statistics South Africa, Pretoria

Chapter 3

Platform for Environmental Mainstreaming



The findings of the country studies highlighted the challenges faced in reflecting the generic complexities of mainstreaming environmental issues into development decisions (i.e. multi-issue, multi-layer, context-specific nature).

The South African case study illustrated the importance of focussing less on tools and approaches and more on the context, the types of users and their values. With these and other country preliminary findings as a point of departure, the International Stakeholder Panel (Dalal-Clayton 2008) developed a framework for orientating country reports, shaping case studies, and ultimately providing different 'entry points' to the User Guide.

This report structure follows this framework as outlined in Figure 1.

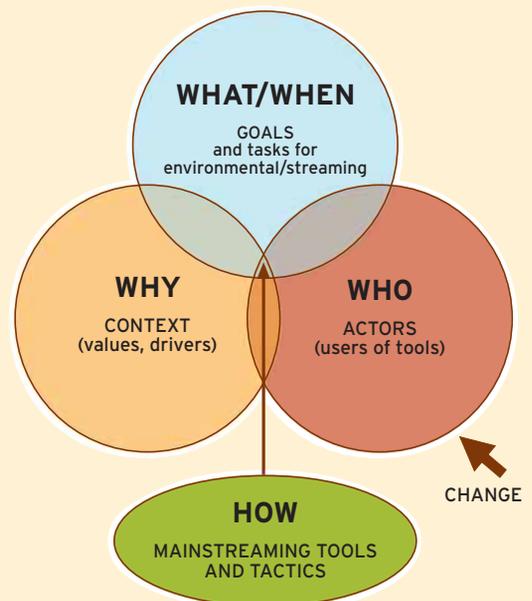
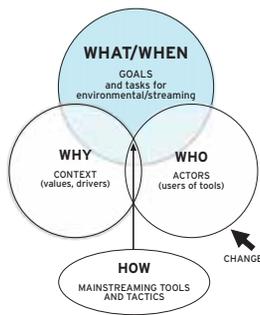


Figure 1: Platform for environmental mainstreaming (Bass cited in Dalal-Clayton 2008).

GOALS FOR MAINSTREAMING THE ENVIRONMENT



South Africa's constitution, Act no 108 of 1996, ensures everyone *has a right to* an environment that is not harmful to an individual's health and well-being. The constitution is the result of the culmination of a grassroots struggle to secure a fledgling democracy which came into being in 1994. The constitution overrides any rights that may have been conferred in terms of any other Act. Following on from the constitution the country's key goals and development direction focus on efforts to:

- Meet *commitments and recommendations from international sustainable development initiatives* such as the 1992 United Nations Conference on Environment and Development (UNCED), and Agenda 21 (formulated at UNCED), the Millennium Development Goals and the Johannesburg Implementation Plan produced at the World Summit on Sustainable Development (WSSD) in 2002.



- *Correct past racial and other inequalities associated with colonialism, apartheid and various forms of 'capitalism'.* Over the last decades national policies have focussed on pursuing economic growth on the assumption that it would help address poverty and simultaneously enable the redistribution of wealth and productive assets. Since early 2006, economic development was primarily guided by the governments '*Accelerated and Shared Growth Initiative for South Africa*' (ASGISA) which represented the government's official response to its commitment to halve poverty and unemployment by 2014.

The government's vision of the country's development path is a "*vigorous and inclusive economy where products and services are diverse, more value is added to products and services, costs of production and distribution are reduced, labour is readily absorbed into sustainable employment, and new businesses proliferate and expand*" (ASGISA 2006). ASGISA aimed to build the basis for a national effort to achieve faster and shared economic growth. ASGISA did not expand on the importance of the natural environment. Instead it relied on the fact that South Africa had developed environmental management policies and legislation to ensure environmental issues were integrated into economic decisions (for example: The White Paper on Environmental Management Policy (DEAT 1997); the National Environmental Management Act (NEMA) 107 of 1998 and The Constitution of South Africa, Act no 108 of 1996).

The failure of ASGISA to deliver on its social goals was one of the causes of much political debate and changes in political leadership experienced during 2007 to 2008. The link between environmental and social goals however remained poor. The eThekweni case study (Chapter 5) deals with the challenges faced regarding building awareness around the interrelationship between economic development and environmental management.

- *Correct backlogs and shortfalls of resources and services to the majority of people.* Over the past 12 years there has been a focus by government departments to meet immediate basic needs such as access to resources rather than to focus on long term sustainability issues. For example, quantity issues (ensuring people have access to water) outweighed quality issues (ensuring long term supply of healthy clean water).

The situation of neglecting longer term quality issues over immediate access issues occurred despite well developed sustainable development policies. (For example the overall motto of the Department of Water Affairs is 'some for all for ever, rather than all for some for now'). The impact of neglecting longer term goals is becoming more apparent as the underground water supply and river health systems in the country continue to deteriorate and water resource management reaches crisis proportions (DEAT 2006). The case study on Climate Change Adaptations deals with short term and long term planning and goal setting. (Chapter 5).

- Address the *relationship between poverty and ecosystem health*. The inclusion of sustainable development goals and environmental management in the Constitution and in various national policies and legislation promulgated since 1994 highlights the national government's commitment to environmental mainstreaming. Sustainable development goals and policies have been articulated in detail in the National Environmental Management Act 107 of 1998 (NEMA), which provides an overall framework for general law reform in environmental management. NEMA is largely based on the principles and strategic goals and objectives contained within the White Paper on Environmental Management Policy for South Africa (1998), which is the outcome of an extensive public consultation process. It reflects the goals and objectives, concepts and principles of sustainable development of numerous international conventions and protocols including the Brundtland Report (World Commission on Environment and Development, 1987). NEMA places emphasis on co-operative governance and partnerships. More detail on this is captured in the case study on eThekweni and particularly in the section by Sowman on the challenges of integrating environment into development plans (Chapter 5).
- Address *integrated long term planning and strengthen monitoring, evaluation and enforcement systems*. South Africa's emerging national Sustainable Development Policy and Strategy, emphasised the need to plan for the longer term rather than satisfying only immediate needs.

The policy puts in place a framework to ensure that the nine national departments collaborate and make changes as necessary on a biannual basis.³ South Africa's monitoring, evaluation and enforcement systems are still in infancy. This issue is emphasised in the Case Studies (Chapter 5).

- *Build capacity in local government*. The Constitution and White Paper on Local Government (1998), delegates *key environmental responsibilities, including that of environmental stewardship, and adopting more sustainable approaches to planning and development* to local government. To date efforts to achieve sustainable development have been particularly weak and dangerously ineffective. The reasons behind this are that the environmental mandate of most municipalities remains poorly funded, there is a general lack of public and political will as well as a shortage of capacity and resources directed to environmental management (see sections below for more information on stakeholder perceptions and particularly refer to the case study on eThekweni for more details on local governance issues Chapter 5).

Despite all the above efforts to secure sustainable development goals there is still an overwhelming focus on generating short term jobs, growing the Gross Domestic Product (GDP), pursuing high economic growth rates, and generating profits - all of which are proving far from synonymous with building a socially just and sustainable society. As one respondent put it -'It is paying us to kill ourselves.'

This study tried to understand what approaches/tools and tactics could help to bridge the gap between policy and practice so as to meet goals of stemming and adapting to climate change, stemming natural resource/ecosystem destruction and sharing scarce resources more equitably, effectively and efficiently. South Africa needs to focus on approaches that can build common vision and popular support for more complex sustainable development targets. The following sections illustrate how new measures, benchmarks and ways of monitoring and measuring progress need to be established if the above efforts are to materialise.

³ Stellenbosch workshop respondent contribution to the report.

- Note the "Draft National Strategy for Sustainable Development" (DEAT 2006) stressed the need to focus on the concept of economic *development* rather than on economic *growth*; where development was seen as qualitative improvement, from infrastructure, to access to services, to improved education to intellectual capital, and as such is infinite. (Growth on the other hand was viewed as a physical increase in infrastructure, resource exploitation etc and as such is very finite and limited).
- The "Draft Environmental Fiscal Reform Policy Paper and Natural Resource Accounts" (Department of National Treasury 2006) also tried to address market failures that lead to environmental degradation. Again it is not clear as to the current status of this draft document.

It cannot be ASSUMED there are a bunch of people out there who recognise the need for change and that what is missing are the tools for the change. Well, that may be true amongst the converted, but the converted tend not to include the relevant decision-makers. We need to go back a step in this process, i.e. that the fundamental issue here is that current development/economic/political/social structures of 'western capitalism' (as the current dominant paradigm), built up over 100s of years simply don't allow for long-termism strategic planning. Many tools are designed to assist this system, not change/oppose it, because that has been what has been valued and rewarded. Until and if the majority of MEASURES (e.g. GDP) and reward systems are changed to reflect sustainability (e.g. World Bank loans not based on 'good economic growth, but improved social and environmental performance!') decision-makers will not change. Once the measures are changed, it will be a simple matter to develop the needed tools – but developing the tools without the measures will not change anything. And despite what we know about our current path, the measures are actually not just changing, but increasingly resisting the changes (witness the INCREASINGLY obscene payouts for top performing CEO's on ONLY financial returns, NOT on social and environmental measures – i.e. the biggest drivers of unsustainability are the highest rewarded! It is much the same as with governments). When change becomes apparent, those with the power who need to effect the changes, resist the changes because they have the most entrenched interests in the current system, precisely because their power comes from the current system! Dictators do not (voluntarily) give power to the people; otherwise they lose that power and all the privileges which go with it. Tools such as the Happy Planet Index (HPI) are helpful to rethink priorities and measure them. HPI is a new measure that shows ecological efficiency with which human wellbeing is delivered. It differs substantially from the central indicator most governments use called 'Gross National Product' and variations derived from it.

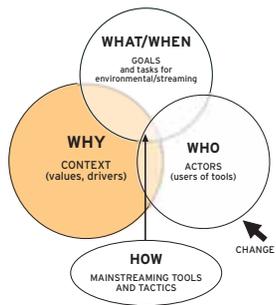
Nick King

Summary of key themes concerning South Africa's environmental mainstreaming goals

- South Africa has highly sophisticated human rights and sustainable development goals and principles embedded in its constitution and laws. These however are largely not implemented in practice. The actual effectiveness of existing approaches, tools and tactics in addressing the needs for environmental justice and equity issues is clearly debatable. The environmental crisis continues to escalate and environmental considerations still hardly feature in development decisions. Understanding the reasons for this and how power works in society is considered essential in addressing the goals of environmental mainstreaming.
- There are major divergences amongst South Africans interviewed around issues such as world views, values and the need for environmental mainstreaming. The dominant paradigm is that short term economic growth/job creation has overarching and all powerful priority over environmental considerations. There is a strong belief that eradicating poverty and environmental management are incompatible goals. This view prevails amongst many environmental practitioners in business, community and government. There is however an alternative view which believes it is not possible to separate environmental, social and economic aspects of development and it is dangerous to try to do so especially if it involves prioritising one aspect over the other. This view believes social justice and building a healthy society is strongly dependent on environmental mainstreaming/systems thinking and applying sustainable development principles in practice.
- There is a need to develop goals and measurements that give emphasis to creating an environment where people can more easily achieve happy and healthy lives within ecosystem limits, rather than developing goals and measurements around monetary issues such as economic growth rates and GDP - then development patterns will change direction.

SOUTH AFRICAN CONTEXT

The state of South Africa's environment



The state of the environment is documented in several key reports such as the South African Environment Outlook (DEAT 2006), The National Spatial Biodiversity Assessment (Driver et al 2004) and the Millennium Ecosystem Assessment (Greenfacts 2005). The above reports document the trends and the statistics concerning the general deterioration of South Africa's natural environment and conclude that a scenario of 'business as usual' will lead to the demise of the country's ecosystem services, the economy and the welfare of people and will cause the country to stumble on the path to achieving the Millennium Development Goals. Despite positive steps that have been taken to protect the country's natural resources, increasing population pressure and consequent land use change, over-exploitation, land degradation and climate change were posing major threats to ecosystems and their services.

The National Biodiversity Assessment (Driver 2006: XI-XIV) indicated that 34% of South Africa's 440 terrestrial ecosystems were threatened and of South Africa's 120 rivers, 82% were threatened with 44% being critically endangered and 65% of South Africa's ocean biozones were also threatened. There are eight times as many people in South Africa trying to survive on the same amount of natural capital—such as land, water and air, as there were a century ago. In addition the economy had grown steadily since 1994.

The large economy and the subsequent increase in resource demand resulted in unsustainable levels of consumption. According to the South African environment outlook (DEAT 2006). Whilst economic growth has achieved record highs over the last decade, and wealth for some has certainly flourished, there has been a continued trend of rising

unemployment, crime, domestic violence, food insecurity, slums, poverty, inequality and environmentally and socially related diseases and disasters, such as substance abuse, domestic violence, TB and HIV/AIDS. The legacies of the past continue to haunt South Africa in all spheres of society. The pursuit of economic growth for short term gains, the declining skills base and brain drain all continue to challenge sustainable development practices. Participants interviewed in the survey were concerned there was a dominant political paradigm that remained entrenched in promoting large scale high impact extractive industries (mining), pursuing large-scale industrial projects (for example energy-intensive smelters, toll roads), and large scale agro-industries especially those linked with genetically modified crops. These initiatives tended to favour the elite and growing a consumerist society. They were influenced by both racial complexities and corruption within and between business and politics. Protecting the environment was often seen by key decision makers as a 'nice to have' for the elite few, rather than as a necessity for the socio-economic survival of all people (DEAT 2006).

The environment is our only real home, yet those who lead in decision-making see it as a resource to be plundered. There is little evidence that policy-makers are exposed to information regarding the environmental damage and its effects on communities. Many have come through an education system that neglected to raise awareness of the sanctity and centrality of the environment in human wellness.

Moshe Swartz

South Africa has a lack of information, coordination and skills

Institutional capacity to manage the environment in South Africa is lagging behind policy advancements and this leads to poor environmental management practices and also to environmental legislation not being adequately enforced. The National Spatial Biodiversity Assessment (Driver et al 2004) stated that a key cross-cutting issue for sustainable development is the need to build the capacity of all spheres of government but especially local government, and to include environmental opportunities and constraints in all forms of development planning.

Lack of institutional capacity and lack of appropriate skills and holistic thinking makes it difficult to implement tools such as Strategic Environmental or Sustainability Assessments (SEAs) and Environmental Management Frameworks (EMFs), Spatial Development Frameworks, Bioregional Plans, Integrated Development Plans (IDPs), Land Use Management Plans (LUMPs) and Growth and Development Strategies. DEAT has developed guidelines to achieve a more integral approach to sustainability issues in these legislated planning tools. It has also updated its guideline for Strategic Environmental Assessment (DEAT 2007) indicating how SEA relates to typical South African planning tools such as IDPs and EMFs. Despite all the growth of tools, guidelines and funding committed to undertaking these planning procedures, there remains an absence of skilled personnel to apply these tools in practice.

The eThekweni case study also provided an insight into what needs to happen before the tool box is even opened. It deals with an approach to changing mindsets and motivating people to open the tool box using a single powerful tool - *resource economics*. Thereafter other tools that can be used as awareness and understanding grows - or so some assume - but the words of eThekweni's environmental municipal manager warn against making simplistic and optimistic assumptions (see the box below).

Municipalities do not have resources and skills – the few skilled and dedicated carry huge workloads –municipal managers in general do not have time to read guideline documents.

The municipalities have 3 focus areas:

- *Political agenda – politicians overrule*
- *Social – community concerns*
- *Economic development – the developers doorway – many developers come with an attitude of don't stand in their way – they use the argument of 'its for the poor' to justify anything they do – they either don't have environmental knowledge or its not a priority. Community engagement does not work unless the community have been empowered to meaningfully engage and if community capacity is not built, the community remains an add on with little power to change anything.*

Note - The environment does not feature in any of the above- its tagged on in a minimalist manner

The reality is crisis management. The win win scenario possibilities are foregone. The issues at stake are life and death issues. One has to get real with what is happening out there – there is no time to think about answers. With a hundred more staff the tools start getting valuable provided the new recruitments are well armed. The problem is there is now far too few staff and how do you instil passion in those that are there. Most managers do not have time to read reports, if people want something its quicker if they just hear it said in a meeting or briefly outside of one. Many decision makers just have to trust the initiator of the proposal that the rest of the detail is somewhere in a document they will never have time to read.

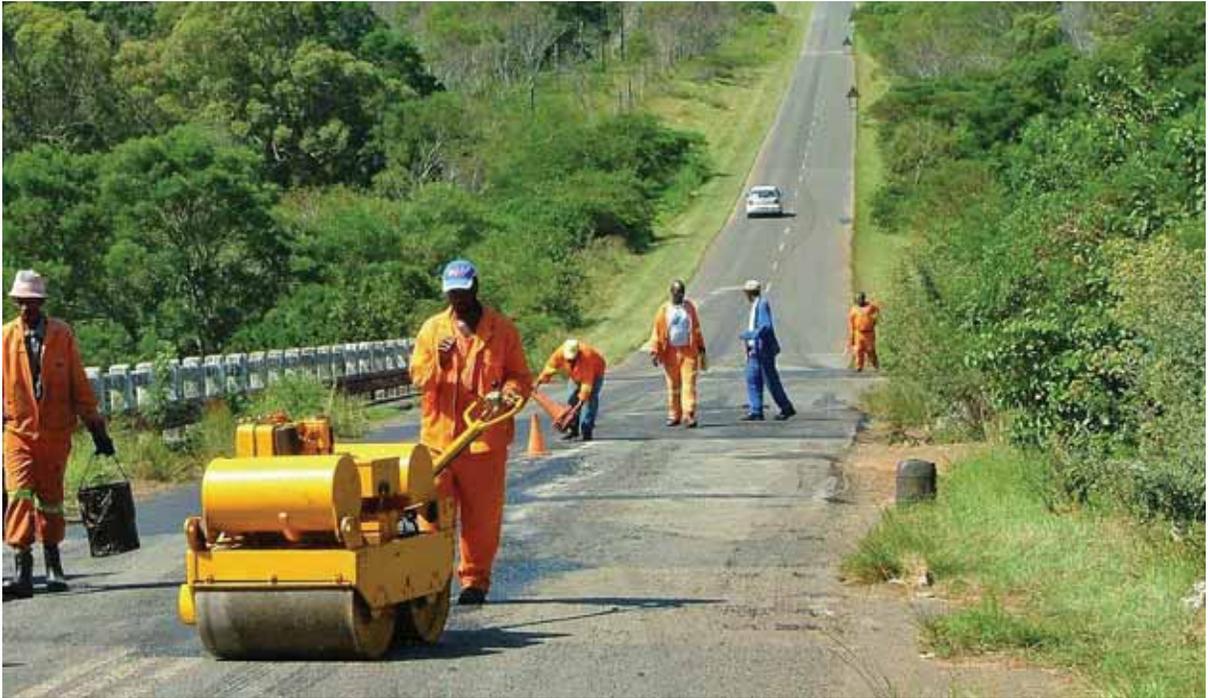
We need to build champions with passion. Generic guidelines do not touch base with this overwhelming priority in the real world context municipalities operate within.

We need to be opportunistic, inserting environmental understanding and influence where it will stick – this takes time and humility. The titanic has already sunk and people need to acknowledge it is just too late for the big strategic sustainable development approaches – these options have come and gone. It is now about life jackets and what to do with the survivors.

Debra Roberts

African states, including South Africa, are experiencing climate change impacts on increasingly devastating and unprecedented scales.

The Stellenbosch workshop participants indicated the drying up of water resources of South Africa and neighbouring states, such as Botswana, was a reality. South Africa is informally receiving increasing numbers of 'refugees' entering its borders. South Africa also has numerous towns and cities on the coastline that face significant environmental risks. Inland communities are also facing increased risks associated with altered climate patterns. Although climate change adaptations are occurring both informally and formally in pockets of the country



(case study summarised in Chapter 5) there is still a marked lack of public and political awareness and the country is still ill prepared for what is coming. Where there is awareness this is not followed up by debate, strategic planning and actual action.

There are breaks on conventional economic growth with opportunities for new sustainable economies emerging

The shortage of available and affordable energy, water and food supply, and the rising oil, interest and exchange rates are putting the **brakes on growth patterns that dominated the past decade**. The state of the nation address by President Thabo Mbeki (March 2008, Annexure 4) indicated that the country is entering into a new era of *'not business as usual'* - this realisation on the part of the public and the government provides an opportunity for environmental awareness to grow and development to become more targeted and appropriate to principles of sustainable development. *Small* may become more popular again. *Small* must however be rapidly multiplied because time is not on anyone's side.

Diversity in the South African Landscape

- The study highlighted different parts of the country had different experiences regarding the value arising from the use of tools. The poorer regions in the country were more sceptical and

disillusioned with tools in general and especially voiced concerns about the dwindling state of the environment and generally degrading quality of life of communities. These parts of the country were experiencing spirals of poverty and degradation and rampant unsustainable land use practices. Crime, corruption, poverty and greed made mainstreaming the environment into decision making an ever more distant dream. There was little meaning in tools except the law and even then only so far as it could be enforced. In most cases this was hardly ever. Even with law enforcement it did not really have an impact on behaviour. One respondent put it this way - *'A poor person has nothing to lose by breaking the law because there is nothing material the law can take away from such a person. A rich person could afford to budget for and lose whatever the law enforcers managed eventually to claim'*.

'If structural issues are not addressed tools become less meaningful. The time of resource scarcity is now – we are facing new realities'.

Tristen Taylor

- Small changes in the law had different levels of significance across the country. The Eastern Cape, unlike provinces such as Gauteng,

highlighted the huge challenges it faced when the national EIA legislation was weakened significantly by permitting bush clearance and development of areas less than 3 hectares. This led to an unprecedented development drive along the sensitive coastal belt in the absence of any other checking mechanism being put in place such as Environmental Management Frameworks.

Key drivers and constraints for mainstreaming environment (as ranked by participants)

Respondents to the survey identified the following as key drivers:

- National legislation and regulations
- The values of organisations
- Stakeholder demands/ donor conditions

Additional drivers that were mentioned by some people included personal values, desire to address rising poverty and inequality, desire to stem increasing disasters of all kinds relating to the degradation of the environment, climate change and the energy crisis, the need to morally protect ecosystems and their services and use them wisely, love of life and natural/cultural heritage, protecting

In a nutshell: natural capital has traditionally not been perceived as a costed, or limiting input into economic activity, or development. This view is increasingly being turned on its head as (1) the true costs of development are realised, including the externalities associated with any given activities (e.g. carbon emissions into the commons of the global atmosphere), (2) natural capital in some places has quite clearly been eroded and now limits development potential far more than developmental capital (e.g. global fisheries, which some estimates place at being 3x over-capitalised), and (3) paternalistic approaches to development that entrenched systems of dominance and safeguarded elites are increasingly under scrutiny as equity and developmental justice takes root in many forms globally (e.g. the resurgence of social democratic governments and movements in South America, and Africa, and similar international dialogue). The implication of this is that natural systems, services and products need to be taken far more seriously in the policy setting and development arenas'.

Quote from a participant - name unknown

reputational risk, risk management, business sustainability, the need to meet the demand for service delivery, good governance, meet international commitments such as WSSD and Agenda 21, food security, efficient land use planning and the need for creating healthy vibrant equitable communities and designing human scale built environments etc.

The key constraints were ranked by participants as follows:

- Lack of appropriate human resources
- Lack of appropriate skills
- Lack of political will to look to longer term needs and ensure environmental responsibility in decision making
- Some interviewees believed that if people understood the nature of the environmental problem, then their values would change and all the other constraints would fall away. Others believed people did understand the issues at stake but pursued their own short term interests as a higher priority. Others believed there was a two way (dialectical) relationship between people's values and their material living conditions. The quickest way to change people's values was to change the structural reality they lived in.

Examples of the richness and diversity of views expressed by participants

'Money drives decisions – capitalism and the environment are not compatible. Environment is viewed as an optional add on and not the foundation of our existence. Decision makers are not remembering the unwritten rules (culture) which do accommodate environmental concerns'.

Sheila Berry

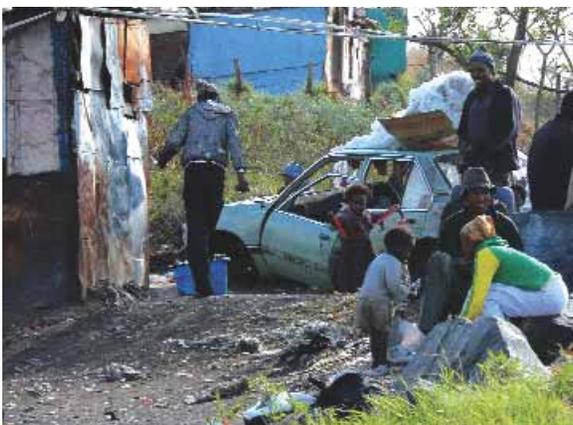
'Poverty and unemployment: there is high demand to deliver services to the people despite the pressure on the environment. Environment mainstreaming is considered secondary to delivery of services. Environment receives attention only when there is guarantee that it will bring about eco-tourism development. Politicians argue "we can not afford to look after butterflies and frogs while people are starving. In cases such as mining versus tourism for an example mining is

considered because it will bring quick physical delivery. The extent of poverty in rural areas makes it impossible to consider the environment - focus tends to be on job creation or development as opposed to environmental protection or mainstreaming. Lack of understanding of environmental systems is another problem, people tend to focus on the social context rather than the environmental context'.

Gabs Gabula

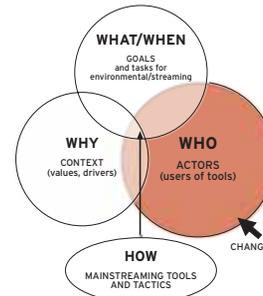
Summary of key themes concerning South African contextual issues

- It is critical to see tools as part of an integrated approach to sustainable development and not as stand alone items that work as separate entities from one another and from wider social, economic and political forces.
- Working with tools is fundamentally all about understanding and working in context - processes can be formalised but in reality there are multiple decision making points throughout the entire process and other external processes happening outside of the particular initiative - decision opportunities will be managed as well as key role players understand the context.
- The background context is changing so fast - we cannot look back anymore because the future is so different to the path we left behind.
- Accent on tools diverts attention from the real issues. It is like rearranging deck chairs on the Titanic.



SOUTH AFRICAN USERS, ACTORS AND INSTITUTIONS

A general overview of what users believe



The South African survey was based on user categories of government, Non Governmental Organisations (NGOs), business, etc. Efforts were made to capture a range of user responses, although emphasis was ultimately given to identifying the views of sustainable development or systems thinking change agents in all of the categories who could offer more insight and depth to the study based on their experiences. This should not detract from the importance of acknowledging more popular opinion in all sectors of society that uphold views such as:

- The EIA was the only tool many people were vaguely familiar with and many felt it was an undesirable tool because it slowed down development.
- Mainstreaming the environment was counter productive to addressing top national priorities such as reducing poverty, service delivery, job creation, economic growth, preventing crime and HIV/AIDs, and saving the energy crisis. It was acceptable to talk about sustainable development in policy but it should not be applied in situations where it could be perceived to slow down meeting immediate socio-economic needs of either the poor or the rich.
- Environmental issues were concerns of wealthy people who did not care for the needs of the poor. Only when everyone in society has secure jobs and wealth will there be justification in upholding values that address environmental mainstreaming. It is actually considered abhorrent to many people to consider environmental issues when people are jobless and hungry.

The above more populist views help highlight why the environmental management toolbox is, in many instances, not even opened. They also highlight the



need for preconditions, values and perceptions of users to be addressed before the **practical value** of many tools can be taken for granted. Finally they help illustrate why South Africans have rated both legal and capacity building approaches/tools and tactics as being of paramount importance. The Durban/eThekweni Case Study illustrated how one city initially approached environmental mainstreaming in a context where decision makers were antagonistic towards addressing environmental issues.

How different groups perceived environmental approaches and tools

- **Government personnel** ranged significantly from very little knowledge of technical tools and their application to highly informed specialists operating at all levels of government. Many key decision makers however indicated that they never use environmental mainstreaming tools, instead they used normal budgeting procedures, holding meetings and ensuring legal compliance.
- **Finance institutions** indicated they were primarily using environmental tools designed to cover their own corporate risks rather than doing it for other reasons. Stakeholder and shareholder demands were however on the increase and leading to changes in motivation.
- **Communities** voiced concerns that the use of tools often failed to empower them to participate and ended up alienating them from the decision

making process because of issues of how power worked in society, how control of the process was governed, how jargon was used and because consultants tended to develop and use tools for money making rather than for environmental and social justice. Politicians and communities struggled to name or understand any of the tools. They did however indicate a desire to be empowered to learn more about the environment and receive relevant information in a usable format.

One NGO change agent, Nirmala Nair, indicated that helpful approaches/tools could be categorised as those that fulfilled the following criteria:

- Working with the intelligence of nature;
- Connectedness to the context;
- Generative visioning;
- Zeri (systems thinking) and
- Blending (synergy) between traditional wisdom and innovative sciences (solutions)

'Communities lack environmental champions. Tools, methods, concepts lead to jargon and words misunderstood - people don't understand the basic concepts so everyone pulls in different ways. Its not funding we need - its information. Tools come and go - what happened to the MIFs, PIFs and NIF's - communities are left back at the start each time old tools are dropped and new ones invented?'

Mandla Mentoor

- **Change agents from all the above categories** all stressed that if users do not understand and appreciate the value of basic science and the actual context they are working in then the user of the tool will use the tool senselessly if not highly destructively. If a person has not deeply appreciated and understood the value of ecosystems and actually felt that deep connection - a love for that environment and the people the tool is supposed to be serving, then no matter how good the tool is and how skilled the user is at using the tool, it is unlikely the tool will be put to constructive use. Worse still environmental management tools can be used wittingly or unwittingly as invisible insidious weapons - justifying destroying the environment on a small

incremental basis with massive cumulative consequences. Tools could easily be another of societies sugar coated poisons. They become the smoke and mirror tactics used to make it too complicated for people to ever unravel fact from assumptions and fiction. They could consume people's scarce time and resources, taking them away from the real battlefields where they could perhaps have fought more direct battles and won more ground. Using tools may help to damage or poison things less quickly, and may help some sustain wealth for a little longer, but ultimately if causes of problems go unattended, the end result will be dwindling resources, large scale social conflict and ultimately the destruction of most forms of life.

Tools are not where it is at - there is a myriad of good and better tools for everything. The misconception lies in the role of information. There is a legion of information givers and tools for sale foisted on to decision makers. It is easy to get confused with what is real. It is not about what tools to use or how to use the tools – it is fundamentally about the knowledge of the subject matter you are applying the tools too.

To take an analogy – if you are skilled at using a tool to cut wood it will really not help you UNLESS YOU UNDERSTAND THE NATURE OF WOOD ITSELF. You can learn something from applying the tool- but it is likely you will mess the tool up and the wood up. Being good at using a tool is a nice gift but for success you really have to know your wood – If you want to build a boat a lot will hinge on knowing whether to go for teak or SA pine ...In the environmental domain, its more pronounced than this analogy reveals.. People in SA believe if they have done an EIA course then they are automatically environmentalists qualified in coastal management, air pollution, biodiversity - therefore focusing on tools can be delusional and diversionary.

Nic Scarr

Summary of key themes concerning users, actors and institutions

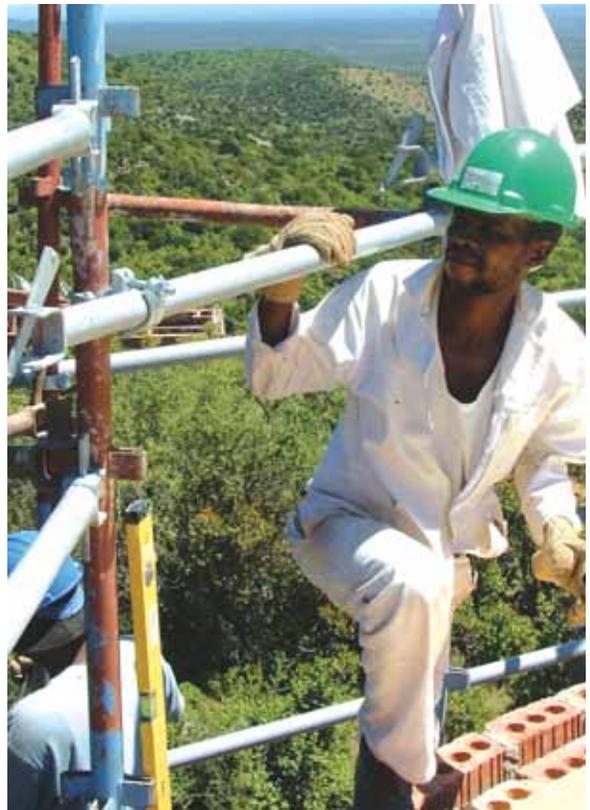
- Tools are not as important as the world view/paradigm of the user who puts the tools to use. *'The same tool was used by Michelangelo as by Jack the Ripper'*. (Paul Lochner).

'There are two types of administrators and consultants - those that see it as a job and those that feel it'.

(Alison Burger)

- *There is NO substitute for professional competence in the fields in which tools are used. Knowing how to use a tool doesn't make one competent in the matter the tool is being applied to. On reflection, one can learn some things about a matter through using a tool on it, but we appear to be in a paradigm where being able to use a tool is mistaken for competence in the arenas where the tool is put to use. This is a lethal deception' -*

(Nic Scarr)



SOUTH AFRICANS MOST FAVOURED TOOLS AND APPROACHES

South Africa's contributions to globally used tools



South Africans have had a fair role to play in helping with the **development of tools globally in general**. There is an old Chinese proverb that says “As long danger mounts so too will the powers that save”. Amongst some of the contributions South Africa has made of tools successfully applied in practice are:

- SEAs that include a holistic integrated approach to the development rather than just focus on the biophysical environment.
- *Integrated Environmental Management (IEM)* Approach to developing and using tools which has led into the exploration of new approaches (for example: that of sustainability science refer to Chapter 4).
- *Public Works programmes such as Working for Water or Fire* (refer to Chapter 4).
- *Adaptive management and action learning* (Chapter 4 and 5)
- *Community Based Natural Resource Management* (Chapter 4).
- *Bioregional Planning and Conservation Action Plans* (refer to chapter 4).



The Cape Action Plan for the Environment illustrates an approach that was based on holistic strategic thinking – not tool box thinking – approximating but not exactly a Strategic Environmental Assessment – we used a lot of different tools – taking ideas from all of them and using them in a unique way for each unique need.

The tool alone will not lead to sustainable outcomes. More emphasis is needed on the outcome (sustainability) we are trying to achieve. As the Zen saying goes - I pointed to the moon and all you saw was my finger – the fool just sees the tool (finger) and the wise see the whole (moon)...Another thought, the emphasis in the questionnaire was on "tools that integrate environment and development". In our experience, the real challenge is "how to integrate the tools?"

Paul Lochner and Michelle Audouin

It is important to note that approaches, tactics and tools can be placed on a continuum **with reductionism thinking on the one side and systems thinking on the other side**. There is a time and place for all - all having distinct advantages and disadvantages. The box below illustrates the range.

'It creates a problem if you define a tool as a concept. If an appendix needs removal you don't say to any one 'its somewhere around there just feel your way through this operation!' The definition of tools is all important. We all delight in fuzziness but tools demand discipline. We will not get to conclusions if we keep in the realms of philosophy – we need something that is defining. We need to identify what is working and give some clear direction to decision makers – going woolly and vague and expansive is our comfort zone but it will not help decision makers – it is easy to always make space for another philosophy and to be averse to prescriptions. That might be part of our problem. We seek comfort in the debate part and reject and expel and then redo another strategy – we are afraid to turn philosophies and processes into methods. People who apply tools must be qualified – we need standards. When things remain ill

defined they create opportunities for abuse – look at the issue of public involvement in the EIA process in South Africa’.

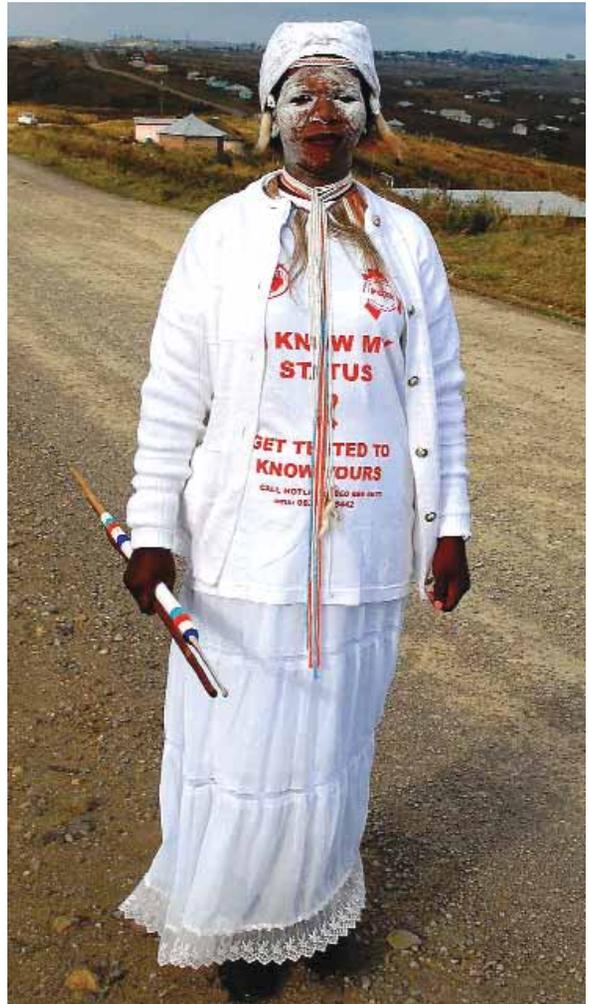
Sean O’Beirne

This kind of survey becomes difficult when talking to rural people who are steeped in their own culture. This is a western approach that presupposes that environment, society, health, economy, religion, etc are all nicely boxed up and are entities in themselves easily separated under their own definitions. To traditional Pondo culture this is completely alien – they do not separate themselves from their environment – they are it and it is them.

Why did western thinking ever separate it out and how can we re-assimilate it, was the message of some participants. Time and again I was told that people just don’t care. People just don’t understand that their life does depend on it. What tool do we use to make that happen? Another common thread in this group was the idea of holism and relationship – planning a process from beginning to end, following a process through from beginning to end, relating with all the relevant people from beginning to end. So much of the time it is not the tools that are at fault but the relationships and personalities.

After listening to all these people my recommendation would be to listen deeply to what traditional societies have to say, find out what methodologies can be borrowed and find a way to get governments who have lost touch with the people to start listening. Thereafter develop tools that work with the value systems of the people’.

Sandy Heather



The most valued approaches, tactics and tools for South African change agents

- There is a concept in Africa called Ubuntu - it has no direct translation but it means a reverence for life - a person is made a person through other people. It is about love, understanding and giving. The methodologies of putting concepts such as love and Ubuntu into practice are not easily describable. Yet if this is what works in practice perhaps change agents need to place more attention on understanding and working with such concepts than on working with tools as such. Efforts were made through out the study to try and identify the traditional approaches, tactics and tools that were sensitised to concepts of holism and humanity -this being a time to rekindle favoured African tools such as story telling. ‘The tool is the person and it is all about relationships’ Sinegugu Zukulu.

For me there are no top 5 tools - there are so many – I do not apply the integrating ones specifically – But I believe it is important to seek tools that make people understand one another’s mindsets - People think differently to you. We need to use methods that expose us to other peoples realities and beliefs – their thinking and their feelings – their whole being and existence.

Allison Burger

- The **visioning tools**, especially those drawn from a *sustainability framework*, seemed to be the most appropriate for contexts where there was a wide range of world views and widely differing value systems. Tools such as the *Happy Planet Index*, the *Natural Step*, *Visioning*, *5 capitals model*, *Theory of Constraints* were all identified as key to addressing the contextual problems and contradictory goals the country had to resolve and work to achieve.
- The **participatory and empowerment tools** were repeatedly emphasised by almost every participant - although some government officials voiced participatory fatigue. Most government, NGO, business and community players valued opportunities to learn through tools and methods such as meetings, precedents, case studies, dialogues, internet networks and other forms of networks, campaigns and forums. *Empowerment* of all sectors of society was a key need and this was certainly reflected in the emphasis placed on building capacity through the use of tools, tactics and methodologies.
- **Legal tools** were often identified as the only tools that currently had much impact - even though they were hardly effective and even though most agreed sustainable development could never be achieved through making more and more laws alone. Legal tools were often expensive and limited in scope and resulted in a focus on procedures rather than quality decisions. Enforcement of legal tools was in many situations extremely weak. Some officials and developers believed South Africa had too many laws relating to environmental management, but most believed it had far too few. Nearly all agreed South Africa needed to strengthen other approaches, beyond legal tools, to achieving public awareness and a sustainable economy.

Legislation is wonderful in a way, but people then restrict themselves to the boundaries of that legislation and opportunities for more creative thinking are lost – the consultant is “the grudge purpose” – the environmental practitioner is solving it only because it is a legal requirement and the client is asking for it to be done in the most cost effective, speediest manner possible. The administrators roles become to churn it out quickly – it is about quantity and not quality... Consultants are bound by market desires – shaped also by authorities and legislation on the one hand and market forces on the other. But opportunities do come and do enable you to be creative and to integrate and make a difference...

Its difficult to work in restrictive legislative systems such as South Africa – other African countries are less regulated. Its sometimes more meaningful to work for projects that are large and have large funding available to achieve higher standards and seek better quality than just what law demands. These larger projects can afford to employ quality professionals and they have serious critics overseeing the process and products which serve as excellent checking mechanisms. The Equator principles are thorough and rewarding. In South Africa often the only watchdog or reviewers are the authorities who either really don’t care or don’t have the capacity or resources to do anything.

Allison Burger





- The **budget process and meetings** remain the only tools most government departments and businesses use for environmental mainstreaming. If the budgets could reflect sustainability imperatives a significant and fairly rapid impact could be achieved.
- It is critical to mainstream environmental issues into **strategic plans** such as land use planning and management systems, local government Integrated Development Plans, Growth and Development Strategies and Spatial Development Plans, Zoning and other strategic sector and regional plans.
To date opportunities for environmental mainstreaming at strategic planning levels are markedly underutilised despite the adequacy of available tools and funding. **Integrated multi-scale land use planning and biodiversity planning** were also identified as key to addressing South Africa's land use planning issues (Appendix 4, Du Toit and Sowman readings).
- **Adaptive management and action learning** were essential tools for dealing with complex and dynamic development scenarios especially concerning climate change and global food security and peak oil.
- **Innovative approaches** such as the public works programmes (working for water and working for fire and working for wetlands etc) were proving successful in practice.
- **Opportunistic tactics and strategies** will continue to play a large role in South Africa's development agenda where there is an absence of skills,

capacity, resources and political will and also where there are power struggles and vested interests that limit the use of more conventional mainstreaming tools.

- There were a range of tools which help give a voice to the rural poor. **Community Based Natural Resource Management, Environmental Sustainability Assessment Tools** have become increasingly popular.
- **Demonstration projects** were effective as ice breakers and to redirect policy and budgets
- **Informal approaches such as Screening of projects** pre the application of legal tools such as EIA were valuable for directing projects in early planning stages.

Overleaf – South Africa's list of most efficient and effective tools were identified by all 100 participants throughout the survey process (Table 2) with a more refined priority list drawn up at a national workshop in Stellenbosch (Table 1 and Figure 2. November 2008). It was interesting to note the similarities (of which there were many) and divergences of three different breakaway groups: the Decision Makers, the NGO Challengers and the Consultant Practitioners. The Challenger group was highly tactical/reactive in their views, the Decision Maker group were focussing on fuzzy logic/soft tools and political strategies and the Practitioner group were more structured/technical in their analysis.

TABLE 1. The most important approaches tools and tactics for mainstreaming the environment into development decisions as viewed by change agents in the NGO and government sectors.

The views of the challengers group (primarily NGOs)	The views of the decision makers group (primarily government)
Common Vision building with dialogue - long term sustainable development frameworks with targets and measuring mechanisms in place	Visualise and develop the full potential of people and landscapes and then maintain them - Scenario Building - high integrity modelling (more science and less personal judgments and normatives).
Integrated multi scale land use planning	
	BEE (Black Economic Empowerment) needs to change to be SEE (Sustainable and Equitable Empowerment) need sustainable development activists as key leaders in political society - requires a revolution of sorts that takes us forward towards an equitable society
Legal challenges (noting it could backfire and is therefore risky)	Improve and grow legal instruments
Engage with and become an ally of the State	Develop informal organic relationships and networks
	Risk management norms and standards including improved risk appraisals and develop appropriate conditions for loans and grants
Develop early warning systems to combat and mobilise against unsustainable development proposals Understanding and preparing against counter tactics, such as sabotage, dishonesty, polarising tactics etc from protagonists of unsustainable development initiatives	Combination tactics including forming unholy and holy alliances Guerrilla warfare
Balanced public participation with an independent empowerment fund Build transparency and access to information	Empower people to take personal and collective action - People Action. Human Rights AND Responsibilities. People have a responsibility to comment and make changes and be watchdogs. Indigenous knowledge: methods that open the door to peoples knowledge/ concientisation (which recognises no one is superior - everyone has valuable knowledge and needs to share it). Develop community knowledge banks for addressing amongst other issues conservation of resources/ ecosystems. Use traditional structures leaderships and tactics and methods more intensively and build capacity in doing so - meetings, imbizos, story telling Use codes of practice
	Demonstration of alternative solutions and exposure to these - Demonstration projects need to be high profiled

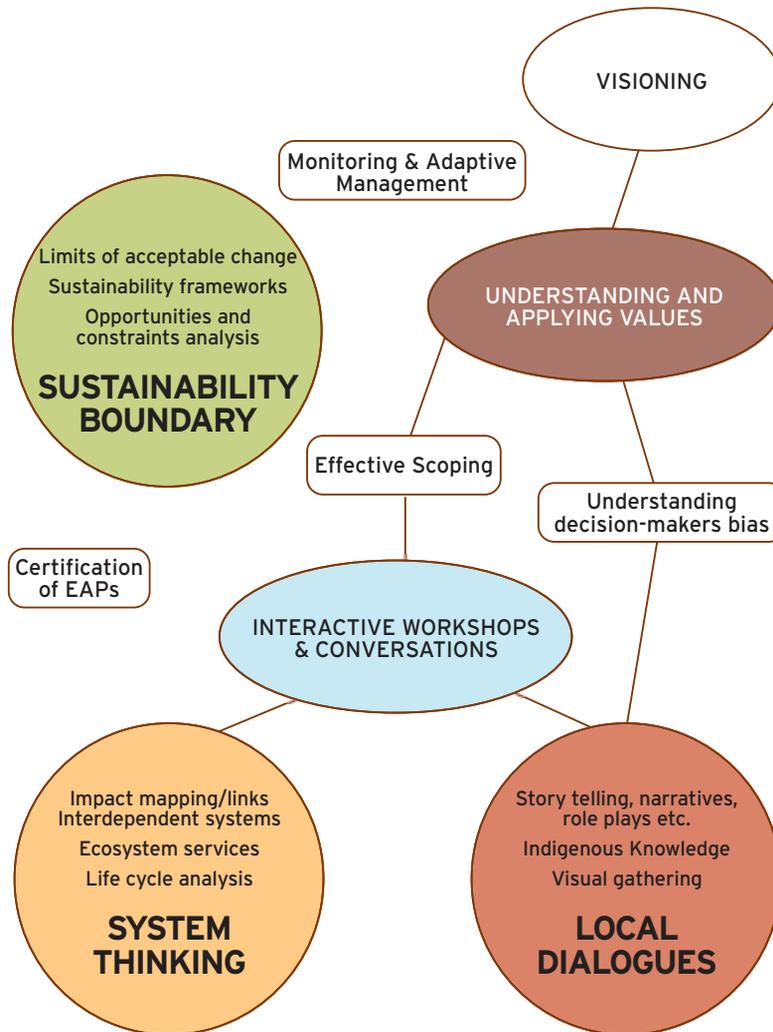


Figure 2. The views of the practitioners (consultants and research organisations) on the most useful approaches, tools and tactics for environmental mainstreaming into development decisions.

TABLE 2. South Africa's emerging most useful approaches, tools and tactics for environmental mainstreaming

TOOLS AND TACTICS
Sustainability frameworks such as The Natural Step, limits of acceptable change and the Five Capitals Model
Cradle to Cradle / life cycle analysis
Scenarios / Visioning /theory of constraints / common vision building with dialogue
Issues focus assessment /issues based approaches planning
Strategic Environmental Assessment (SEA) and all its other names such as Sustainability Assessments and Environmental Sustainability Assessment Tool (ESAT)
Screening and developing early warning systems to combat/mobilise against ill conceived development proposals
Community Based Natural Resource Management
Sustainable livelihoods approach
Rights based approach
Precedents and benchmarks
State of Environment Report (SOE)
Political and citizen action - mass mobilisation, campaigning, advocacy
Integrated Development Plans, Spatial Development Frameworks, Land Use Management Plans, zoning plans (IDP / SDF/LUMS/ LUMP), Integrated multi-scale land use planning
Mapping of biodiversity priorities, important ecosystem services, Environmental plans and sensitivity and conservation plans with explicit guidelines for land use
Norms and Standards
Legal regulatory guidelines, policy making and law making for example using Acts as tools such as the Promotion of Access Information Act (PAIA) and Tools associated with the National Environmental Management Act: such as the Environmental Impact Assessment (EIA) and others generally subsumed by it
Meaningful interactions/ engagement with stakeholders and interested and affected parties for example developing informal and or formal networks, forums and associations, trusts, working with traditional structures and methods, holding interactive workshops and conversations, conscientisation, participative approaches, gender responsive approaches etc
Competitions
Environmental Management Framework (EMF)
Converting BEE (Black Economic Empowerment) to SEE (Sustainable and equitable empowerment)
Environmental Management Plan (EMP)
Fiscal Policy - taxes, incentives, subsidies and other market related interventions
Project and Programme in house appraisals
Performance standards and loan or grant conditions (e.g. IFC Equator Principles)
Corporate Policy and sustainability reporting
Reserve Management Plans and zonation plans
Demonstration projects
Critical review and surveillance reporting
Public disclosure
Well being health happiness measurement
Charters and codes of practice
Environmental Management System (EMS)
Certification of Environmental Assessment Practitioners
Priority area management approach
Integrated Environmental Management (IEM)
Indicators including key performance indicators
Multiple Decision Criteria Analysis
Government budgeting processes
Government management cycles
Guerrilla warfare and combination tactics
Wilderness Leadership Experiences - taking leaders to have guided wilderness experiences

APPROACHES
Action Learning
Zero waste philosophy
Systems thinking
Subsidiarity of policy, plans and projects
Modern movement architectural design, ideologies and theories
Biodiversity and ecosystem services economy
Positivity- collective enthusiasm and hope
Organisational sense of self who we are and what we represent - A person is the tool
Empowerment approaches
Rights based approaches
Adaptive management and Strategic adaptive management
Sustainability Science
Strategic opportunistic approaches and tactics

Key Themes concerning South Africa's most relevant and valued tools

- There is a role for precision and technocratic tools and there is a role for more holistic, fuzzy logic/philosophical approaches. There is also a need for bottom up and top down tools - the need is to span the range and use approaches and tools at the right time and at the right level of decision making.
- The relationship between increasing budgetary expenditure on the use of environmental tools and on the impact this has on mainstreaming is not directly proportional. Financial resources play a key role but on their own are insufficient to ensure quality and effectiveness.
- There is a strong relationship between the failure of the application of tools in practice and the lack of monitoring and enforcement of social contracts and legislation.
- Tools, approaches and tactics work when they are used in an integral manner and when they are used as an integral part of problem solving. Focus needs to be placed on the relevance and applicability of a tool in a particular context - which aspects can a tool assist with and what cant a particular tool do. It is about using pieces of different tools to solve the issue. *'Emphasis on tools alone presupposes the approach to be adopted and prevents innovation and taking the right bits from various tools - emphasis should be more on the issues and not on the tools and solving the problem. Addressing the issue will demand a combination of tools and more especially NON tools. People need to understand epistemologies and hegemonies'*. (Michelle Audouin).
- All tools are of value if used in the right manner. There is a danger in throwing the baby out with the bath water.



The least useful or the most abused tools and tactics

The respondents indicated the following with regard to questions around the least effective tools:

- Approaches, tools and tactics are all of value provided they are used for the purposes they were designed for.
- When tools failed to achieve meaningful impacts it was usually due to the capacity of authorities, practitioners and communities to use tools appropriately and or it was due to the lack of monitoring and enforcement of the recommendations and decisions derived from using these tools.
- Technocratic tools that did not take into account how power worked in society would never have a real valued impact.
- There are a growing number of practitioners who felt it was too late for the successful application of many of the conventional sustainable development tools because the environmental crisis had reached a tipping point.
- Table 3 is a list of tools identified by the study participants as being easily abused, often poorly understood and or of little value. Note most of the tools listed were only listed by a few respondents.

TABLE 3. The least useful and or most abused tools for environmental mainstreaming into decision making

Leipolds matrice and checklist approaches
Significance ratings (High, medium, low by formula)
Anti Social tactics
SEA
SOE Report
EMP
Advertisements in newspapers
Long reports for communicating findings of studies
National Species Management plans
Bioregional plans
Structure Plan
Pushing for conservation without people
Restricting development because of one species (cost benefit analysis)
Land Use management systems
Any soft law plans - IDP SDF SDP
Archaic legislation and inadequate legislation
Listing of species and ecosystems
National Biodiversity Framework
Environmental Forums
Participation and citizen action (e.g. dialogues)
Conflict management (e.g. arbitration)
Political analysis and action (e.g. Commissions and hearings)
Meetings and workshops
Impact assessment (e.g. environmental/social impact assessment)
Certification and audits (Forest Stewardship Council system, eco-labelling)
Monitoring and evaluation (e.g. indicators, surveys)
Including interested parties
Cooperation Agreements based on volunteer actions
Reserve Management Plans and zonation plans
Supervision audits



4 Chapter

Voluntary, Informal, Indigenous and Experimental Approaches, Tools and Tactics



'Not consciously, cooperation and collective action is such a strong part of emerging South African national culture and environmental management experience that I am frequently surprised not to see similar practice elsewhere in the world. This is a special attribute of our work and we can recognise and treasure this more'.

Alison Burger

The South African survey identified a wide range of fascinating informal, experimental and indigenous approaches to mainstreaming the environment. A few of potential interest are highlighted:

CONSERVATION ACTION PLANNING AND BIOREGIONAL PLANNING

Task: Conserve biodiversity

Tool: Bioregional Planning and Action Plans

How and why used: The Cape Action Plan for the Environment (CAPE) was the first of many action plans for each of South Africa's biomes. This approach sought to develop a long term strategy and action plan to conserve biodiversity in the Cape Floristic Region. The region has complex and fragmented social, institutional, policy and management systems. The development of a coherent strategy was both innovative and adaptive in its efforts to align a host of processes and stakeholders (from local to global). The approach involved a two pronged nutcracker approach of top down and bottom up strategies. It covered a range of tools such as Strategic Environmental Assessment and Theory of Constraints. It gave emphasis to implementation of concepts and attempted to integrate the strategy with existing initiatives in the region. It ensured potential implementers were involved in developing the strategy and that case studies were run early in the process to ensure visible results. (Du Toit and Lochner et al 2007).

A tool extensively utilised in the CAPE was Biodiversity or Systematic Conservation Planning. This tool involved the mapping of ecosystem services, to identify a spectrum of potentially acceptable land uses that would be sustainable in a geographically defined area (usually municipal boundary or catchment area). The tool was used to enable land/resource uses to be matched to ability of the natural resource base to sustain those uses, and to avoid loss of irreplaceable or high priority biodiversity.

Systematic conservation planning is particularly strong in South Africa, but has certainly been developed and used elsewhere; perhaps the actual development of the tool in South Africa is fairly special, particularly with regard to 'fine-scale planning' which tried to address biodiversity patterns and process issues, as well as ecosystem services priorities.

CAPE and bioregional planning extensively acknowledged and drew on indigenous knowledge systems, community best practice approaches and cultural beliefs. This improved the ownership of the initiative and decision making process. Guideline documents and norms and standards for particular environmental and biodiversity planning have been produced and are based on traditional and modern approaches (cutting edge science).



SUSTAINABILITY SCIENCE

Task: Research to produce knowledge that is relevant to strategic decisions and policy development

Tool: Sustainability Science

How and Why Used: The Sustainability Sciences approach explored by the Council for Scientific and Industrial Research (CSIR) illustrates an approach to research. This work covers progressive approaches to sustainable development illustrating how tools are viewed as integral parts of a complex transdisciplinary approach to development that tries to solve the divisions that exist between knowledge producers and knowledge users giving emphasis to continual learning and adaptation.

The following are the defining features of sustainability science work in progress:

- Use- inspired basic research
- Location at the interface between human society and its sustaining natural environment
- Focus on the resilience of complex social-ecological systems
- Transdisciplinary approach to understanding system complexity and resilience
- Acknowledgement of the validity of multiple epistemologies, extending beyond the so called objectivity of science to include the subjectivity of alternative knowledge systems (Burns, Audouin and Weaver 2006).

MEDIUM-BASED GOOD GOVERNANCE

Task: Air quality management

Tool: Governance Cycle or management wheel

How and Why Used: South Africa experiences air pollution problems over and above those generally experienced by the more wealthy countries. For example there is a major concern with residential pollution from households reliance on cheap, poor quality coal and biofuels. To address such issues requires changes in the way low income houses are designed. To effect such simple changes is however a complicated cooperative governance matter requiring agreement between government departments such as the Department of Environmental Affairs and Tourism (DEAT), the Department of Mineral and Energy Affairs (DME), the Department of Local Government and Housing (DLGH), the Department of Finance (DOF) and the Department of Health (DOH).

Over the past decades during the period of the old Air Pollution Act, few decision makers and polluters cared much for the issue of air pollution because the

only motivation visible was that it was the right thing to do. DEAT officials realised that if there were to be significant changes on the ground, there was a need to justify addressing air pollution in terms of political priorities (poverty, job creation and the health profile of the nation). Without that it would never happen. The Department was effective in creating a new National Environmental Air Quality Act through illustrating to parliament how air pollution was a double burden on the poor and how air quality interventions would improve the lives of the poor - no more dirty coal burning activities meant better health and it also meant job creation through small and micro enterprises in the environmental service industry.

The air quality management programme became a presidential flagship project (one of 27). This was at a time when other provincial and national environmental initiatives were having budgets and staff compliments sliced. The programme developed a reiterative, holistic management cycle tool made up of multiple sub-tools. The management wheel allowed people to play key roles at different times and at different levels of expertise through the management cycle. For example when it came to the need for information, management scientists were bought on board, when strategies needed to be developed then generalists and strategists were involved. When enforcing laws, the lawyers (including bulldog lawyers), ex-police persons, and technicians (to collect information) etc were all included. The management cycle was a *medium* based tool, rather than an *issue* based tool, which allowed for form to follow function. The cycle created a form that reflected the DEAT Directorates: Policy, Norms and Standards, Air Quality Management and the Green Scorpions. Together these completed the network of matrix management.

The management wheel could generate new sub-tools over time - some formalised in laws and others more informal. For example DEAT explored cleaner production tools such as controlled emitters and controlled fuel tools which proved to be highly effective. Using the management cycle DEAT demonstrated government could control and ban the manufacture of bad fuels such as tyres in cement kilns. Addressing problems at the manufacturing stages proved more effective than dealing with the end of the pipe stages. Measurable reductions in motor car emissions could also be achieved by controlling sulphur in diesel production and then measuring and recording success. (Peter Lukey 2007)

NON LINEAR ISSUE BASED TOOLS

Task: Environmental Impact Assessment

Tool: Issues - based approach - part of the Integrated Environmental Management Approach to sustainable development.

How and why used: The government in South Africa has produced policy, legislation and guidelines that reinforce the need to use mainstreaming tools in conjunction with one another (using multiple tools at multiple points of intervention) rather than depending on one tool for one purpose in isolation of other influencing factors.

A private sector example of the application of these guidelines into practice at a project level was the ALUSAF Hillside Aluminium Smelter in Richards Bay. This case study illustrated the value of an issue based, non linear approach where it was critical to ask the right questions and draw out the key concerns and address them in a fully integrated manner using the creativity and intelligence of many differently skilled people.

The public engagement process at the start of the project helped to identify the key questions and issues. This was important - a never to be underestimated critical step in an Integrated Environmental Management process. The project depended heavily on someone who was skilled at drawing out critical questions and issues and who was able to feed them to the Environmental Impact Assessment team (EIA).

Once the impact assessment studies were over it was necessary to close the loop and go back to those who posed the original question or helped articulate the issue and ask them if they were adequately answered or responded to. Once the key interested and affected parties and the independent reviewer were satisfied then the EIA team used their approvals as the mandate of the public to take the information, now contained in a document, to the decision maker.

An example of how this worked at a practical level was the question posed by a certain Mrs Woods - a concerned public member potentially to be affected by the proposed Aluminium Hillside Smelter. Mrs Woods concerns were eventually paraphrased in the question: "how will the construction and operation of the plant affect the respiratory health of children in the area?" The public understood materials were

going into the smelter and substances were coming out in various forms and through various mediums - what they were and how they were going to affect the children's health were key concerns. Children were specifically chosen as they were more prone to respiratory health diseases. In order for the EIA team to answer the question, it first needed to understand the processes and products involved in smelting, their dispersion and spatial and temporal distribution and the implications and potential impacts thereof. An interdisciplinary team of differently skilled analysts were invited to help answer the question. For example the question needed inputs by a process engineer, an atmospheric modelling specialist, a GIS specialist to transfer information onto maps that tracked likely fluoride concentrations. It also needed a health specialist, an epidemiologist and a specialist in chemical mixing, a meteorological data specialist and a skilled mathematical modeller. Finally it needed someone with language skills to explain technical information to a non technical public (in this case to convert the levels of fluoride ingestion to an everyday equivalent such as fluoride tooth strengthening pills.

The information had to be clear to the lay person regarding comparisons with local and international accepted standards). The case study here illustrates that the issue raised by the public and dealt with by the EIA team could not be covered in separate specialist reports - an issue based approach was required which ensured integration from start to finish and which required technical specialists to step down from their knowledge pedestals and engage with the concerned public on their terms. (Alex Weaver, CSIR)

Another successful issue based case study worth highlighting is the Winelands District Council assessment of ecosystem services (land, soil air, water etc) which was integrated and placed under governance (refer to Winelands District Council Web Site). One environmental practitioner put it like this *"You need to be well read - and know what is available and mix, match, tweak, adjust - the point is there are many tools to use for impact assessment methodology. A situation calls for a certain mixture and you keep revising them and developing your own favourite sets for certain circumstances - note that one cant apply the same tools in social assessments as in biophysical sciences - both attain different types of spheres of complexity"*

STRATEGIC OPPORTUNISTIC APPROACHES

Task: Sustain natural resources and ecosystems

Tool/tactic: Any trick in the book that you can get away with

How and why used: For many practitioners and change agents the opportunity of successfully applying formal conventional tools barely existed or had become ineffective due to reasons such as political and financial vested interests, corruption and lack of capacity and resources in government departments, communities and businesses. Improvisations were the daily reality in which change agents worked. Many government champions indicated that they believed the time and place for formal environmental management tools and sustainable development strategies had passed by and new tactics such as guerrilla warfare, forming alliances (*'even unholy ones'*) were more appropriate given the circumstances they were operating in.

One government official indicated the most common tactic he used was to make up his mind regarding the development and then find the arguments to back his opinion. *"Information and science and knowledge is used to persuade people similar to the way two lawyers do it in court - take and repackage information, portray things the way you need them rather than being subservient to a so called expert. You need points of departure in your pocket, precedents that you can draw from that can kick in - that can serve as blocks to the opponents cards in their hand and then you timeously play your cards. Remember we are the authority operating in the interests of the environment and the public good - we must play our game according to carrying out our responsibilities - this is about strategy - this is not about tools".*

PROACTIVE STRATEGIC ADAPTIVE MANAGEMENT

Task: Planning and management for a desired state of dynamic flux

Tool: Strategic Adaptive Management

How and why used: A South African National Parks (SANParks) case study by Rogers (2008) demonstrated a unique tool developed in South Africa that addressed value systems, vision building and environmental mainstreaming into business plans. When managing for biodiversity all the evidence pointed towards requiring to maintain variability in space and flux over time.

The work originally pioneered by Wits University, Professor Kevin Rogers and others, has now been adopted by numerous countries involved in developing management plans in protected areas.

According to Rogers,⁴ *'Kruger Park went from a paradigm that was focussed on balance of nature, was steeped in bureaucracy with minimal learning opportunities, and was using management tools such as tick box checklists that were species orientated, especially charismatic species. Command and control management styles predominated and the process was largely ignorant of scale homogeneity. A new Strategic Adaptive Management model was applied to help guide the National Park management into a new paradigm that focussed on flux and variability (heterogeneity) and that was explicitly orientated and scaled around ecosystems and biodiversity.'*

The key approach was not to be too dogmatic and not to instil a management regime with uniformity or regularity in space in or time. For example with regard to fire management, instead of burning large areas uniformly every 4 years - the new approach advocated *mosaic burning* (allowing fires to occur at different times of the year and under different weather conditions and as a consequence burns of different size intensity and frequency were created all with different consequences). The tool was designed for structured decision making that pulled people away from poor assumptions and direction. It helped key stakeholders to define a future desired state and work towards that, rather than worrying about the problems of the day.

The planning tool is summarised in figure 3. It evolves around an objectives hierarchy beginning at the coarsest level with the organisation's "vision" for management. It provides a step-by-step process for decomposing the vision into a series of "objectives" of increasing focus, rigour and achievability. The finest level of the hierarchy is defined by achievable targets. Procedural tips are given in text boxes for each step. This protocol and procedure should ideally be implemented in a workshop environment with the assistance of a facilitator who is familiar with the protocol and procedure. After the planning stage is complete, the implementation phase takes over, which is based on the same principles of adaptive management phase, and includes critical review and action cycles.

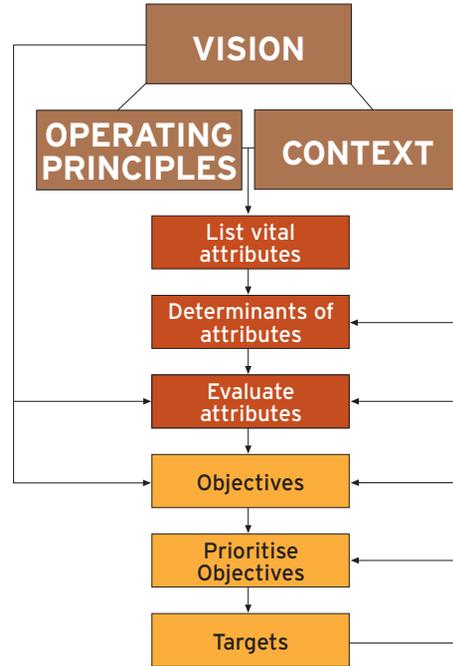


Figure 3: A strategic planning framework for translating vision into achievable objectives

PUBLIC WORKS PROGRAMMES

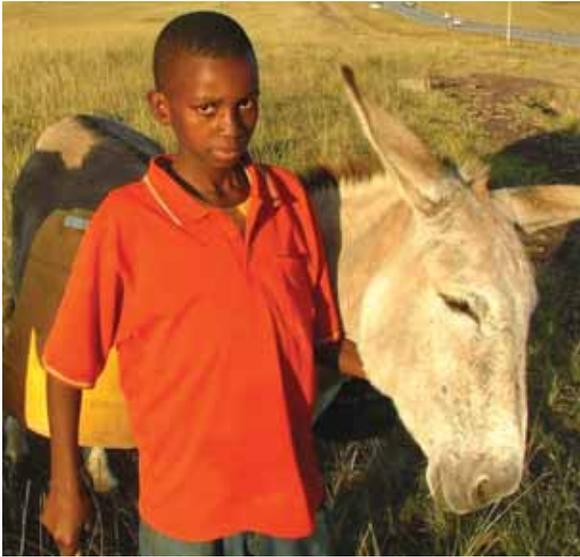
Task: Job creation through clearing alien invasive species

Tool: Working for Water

How and why used: *'Invasive alien plants (IAPs) are causing billions of Rands of damage to South Africa's economy every year, and are the single biggest threat to the country's biological biodiversity and also to water security, the ecological functioning of natural systems and the productive use of land. They intensify the impact of fires and floods and increase soil erosion. IAPs can divert enormous amounts of water from more productive uses and invasive aquatic plants, such as the water hyacinth, effect agriculture, fisheries, transport, recreation and water supply. Of the estimated 9000 plants introduced to this country, 198 are currently classified as being invasive. It is estimated that these plants cover about 10% of the country and the problem is growing at an exponential rate.'*

The fight against invasive alien plants is spearheaded by the Working for Water (WfW) programme, launched in 1995 and administered through the

⁴ Personal communication 2008



Department of Water Affairs and Forestry. This programme works in partnership with local communities, to whom it provides jobs, and also with Government departments including the Departments of Environmental Affairs and Tourism, Agriculture, and Trade and Industry, provincial departments of agriculture, conservation and environment, research foundations and private companies.

Since its inception in 1995, the programme has cleared more than one million hectares of invasive alien plants providing jobs and training to approximately 20 000 people from among the most marginalised sectors of society per annum. Of these, 52% are women. WfW currently runs over 300 projects in all nine of South Africa's provinces. Scientists and field workers use a range of methods to control invasive alien plants.

These include:

- Mechanical methods - felling, removing or burning invading alien plants.
- Chemical methods - using environmentally safe herbicides.
- Biological control - using species-specific insects and diseases from the alien plant's country of origin. To date 76 biocontrol agents have been released in South Africa against 40 weed species.
- Integrated control - combinations of the above three approaches. Often an integrated approach is required in order to prevent enormous impacts.

The programme is globally recognised as one of the most outstanding environmental conservation

initiatives on the continent. It enjoys sustained political support for its job creation efforts and the fight against poverty.

WfW considers the development of people as an essential element of environmental conservation. Short-term contract jobs created through the clearing activities are undertaken, with the emphasis on endeavouring to recruit women (the target is 60%), youth (20%) and disabled (5%). Creating an enabling environment for skills training, it is investing in the development of communities wherever it works. Implementing HIV and Aids projects and other socio- development initiatives are important objectives'.

Source Department of Water Affairs and Forestry Website www.dwaf.gov.za

SUSTAINABLE DEVELOPMENT FRAMEWORKS AND VISION BUILDING

Task: Move organisations toward sustainability and maximise short term profitability and long term flexibility

Tool: The Natural Step

How and why used: The Natural Step Framework is a methodology for successful planning to enable businesses and organisations to create optimal strategies for dealing with present-day situations by incorporating a perspective of a sustainable future. The framework helps organisations to proactively embrace sustainability as a strategic opportunity rather than an unknown liability. The benefits to the organisation stem from harnessing inevitable changes in raw material costs, energy costs, costs of waste, environmental legislation, differentiated taxation, insurance premiums and credit ratings, customer needs, employee needs and brand value drivers. Using the method assists organisations to save costs, improve quality of productivity and find new clients and markets that are more sustainable and avoid future liabilities.

INDIGENOUS GRASSROOT APPROACHES, TOOLS AND TACTICS

The South African case study highlighted numerous approaches and tools used to support rural communities in development decisions. A collection of these are mentioned below as expressed by interviewees and community change agents. Most of these have common principles involved such as anchoring tools in the local

practices. Many of these are not unique to South Africa but the way they are applied is unique to each community.

Task: knowledge sharing / management

Tools: indigenous practices and indigenous forms of knowledge sharing

How and why: There are numerous well documented reasons for appreciating the role and value of traditional knowledge such as ensuring plans and development initiatives carry the knowledge and wisdom of those who live there or who have gone before and ensuring those affected have been meaningfully engaged and support the proposed changes. Neglecting this kind of information and engagement sparks failure in the management of the initiatives planned and places additional risks on the natural resources involved.

There were numerous suggestions on how to go about working with local people and indigenous cultures and knowledge

- Writing up story boards according to traditional uses in different cultures
- Using language of easiest communication
- When undertaking training programmes using existing committed staff, e.g. cleaning staff to approach other cleaning staff and involve them with training as well
- Oral history to allow people to understand that many environmental impacts are new (due to industrialisation and associated pollution)
- Community Based Natural Resource approaches open up a vast family of participative tools such as participatory appraisals, for information gathering, designing projects and interventions, building sustainable communities, monitoring and auditing impacts
- *It is important to have regard for indigenous knowledge and have in the collective team, people who know the locals and local knowledge and can ensure they are empowered to meaningfully engage in the process (this does not cover the use of tools). Insight is critical as opposed to superficial public participation exercises carried out through tools which give impression its deep but serve as smoke and mirror stuff (Nick Scarr)*
- Rain-dance network - *'This tool is used for personal coaching and development interventions to draw from indigenous African approaches to human-nature relationships. Areas covered include diversity, change management processes,*

leadership development, sustainability, and facilitating innovative thinking'(rural NGO interviewee)

- Through the village headman - this is a 'tactic' for using the village headman as a means to communicate at a specific level. The headman will listen to inputs from everybody - the most humble of inputs will be listened to. It can go on for days as everyone is entitled to have their say. There are no guarantees as to how far different views will be respected and taken into account but if people's rights are involved then they do have a direct access to the decision maker in the form of the chief, who hears them out before making a ruling (interviewee).
- limbizo or gatherings at tribal authority / faith services / churches / music and drama / recreation leisure and sport / participative appraisals - these are all approaches that use the oral tradition that is still highly effective in connecting people
- Establish community-based environmental watch-groups, conservancies and organisations that could serve as '*friends of ...*'. This tactic involves investing in community groups through training and through using a system of real incentives such as setting up public reward events for households and individuals that revere the environment. Committees such as Conservancy Committees often have wide range of expertise that is drawn on as and when needed
- Making links to track key dependencies between people (livelihoods, health) and natural resources (biodiversity / ecosystem services) and deliberately thinking about resilience, implications of loss of natural capital (substitutes) etc
- Using local sayings and traditional customs and parable story telling. Local sayings speak volumes: For example the Pondo expression "*Be mindful of tomorrow*" goes deeper than the words themselves as they are deeply imbedded in the culture. Just the mere utterance of the saying and people absorb the depth of the message. There is, however, a need to be sensitive to the fact that different sayings have different relevance in different forums
- Customary Laws: When it comes to activities such as harvesting of grasses, digging of the soil, overgrazing, control of veld fires, indigenous forests protection there are usually existing customary laws controlling these activities. Using development approaches that build on and

demonstrate benefits of such laws encourages further buy in. The use of participatory techniques helps traditional authorities take responsibilities for the environment. *"Our customs exist for a reason even if we have been taught not to question the reason, that reason that is something that you (Westerners) do but not us. So I don't know the reason but I know that they protect thing ... like the mountain that you are not allowed to go to or even to point at - that is where the Wild Coast Casino now is. If they had listened to us the Casino would never be there and the mountain would still be protected!"* (Mzamo Dlamini)

- **Open Space Technology.** This tool involves a participation methodology that has been used in projects with relative success. This method was developed by an American, but is based on his observation of community participation in decision-making that he observed in rural villages in Africa, whilst he was working for the Peace Corps. Open Space Technology is based on a very open and flexible approach where participants themselves set the agenda. Anyone can convene a discussion on an issue about which he/she feels passionate, within the theme of the session / conference / workshop. Each participant can then decide in which discussion he/she wishes to be involved
- **Participlan®** is a participation technique, developed in South Africa, that involves the gathering and categorising of ideas. Participants at a workshop, record their ideas on cards, which are then stuck onto large wall sheets. The group decides how ideas should be categorised. Ideas can be prioritised or used as the basis for developing action plans
- **Freirian** models of people centred processes start with people's context, knowledge, aspirations. etc and build consensus of needs and what is possible within constraints to design products that 'fit' and are owned by people. Workshops, discussions, site visits, modelling are all the subtools. The tool or tactic used is called *Conscientisation* which is based on the philosophy that everyone is a specialist in their own right and everyone knowledge and personal experiences are of value. The method is in direct opposition to other tools which portray a group of outside experts who try and raise awareness of ignorant communities.

ENVIRONMENTAL INTEGRATION INTO PRACTICES OF THE FAITHS

Task: environmental responsibility in lifestyles pursued

Tool: Environmental Theology

How and Why used: *'New developments are taking place in theology today which impact very strongly on the environmental scene. Environmental integration must take into consideration the fact that the vast majority in the human communities of Africa have a religious connection of one sort or another. All humans are body, mind and spirit, living in the environment of communities. Millions of people - representing the vast majority - are part of religious communities, through whom motivation can be mounted.'*

To realise this we must disabuse our minds in two areas:

- *That religions are all separate and divisive. Not so. Some religious elements in all these belief systems are separate and divisive (e.g. ideas of God, worship, Holy Scriptures, structures, authority etc.) These are not our business. But there are also huge concerns in all these belief systems for economic, social and physical developments, which establish a common ground amongst all religions. These are factors on which ALL religions must be brought to be active together: Christian, Muslim, Hindu, Jewish, African Traditional, and other smaller groups. Agnostics share much of this, once you drop the religious bits.*
- *The other fallacy is that religions are only concerned with individuals going to heaven when they die. Not so. All belief systems are concerned about how communities operate on Earth.*

The methodology used is:

- *Materials in the form of books and visual aids on Environmental Theology need to be brought together, and much more needs to be written to impact on specific communities.*
- *Organisations active in this field either wholly or partly need to be identified and united, both in their teaching and in their activities.*
- *There is a need to mobilise these groups through activity in the media, in the main religious structures, and in such political groups as the ANC Commission for Religious Affairs'. (Cedric Mason).*

5 Chapter

Case Studies



The following four case studies were highlighted to demonstrate how tools worked in integration with other tools, within contexts and specific to the needs of communities affected. The material below comprise mainly of extracts from the detailed case studies (located on www.iied.org).

THE ROLE OF ENVIRONMENTAL AND SOCIAL SCREENING IN INFORMING THE CONCEPTUAL DESIGN AND PLANNING OF LARGE-SCALE PROJECTS IN THE PRE-FEASIBILITY STAGE *(Paul Lochner)*

Purpose

In South Africa, environmental and social screening studies are being used increasingly by proponents of large-scale projects in order to provide an early understanding of the significant environmental and social implications of the project. This case study collates experience and lessons learned from several recent screening studies for potential industrial and

infrastructure projects in South Africa. These studies are undertaken during the pre-feasibility stage of the project and tend to be done at the discretion of the project proponent prior to the potential commencement of a legislated EIA process. The main objective of these screening studies is to incorporate environmental and social considerations into the conceptual planning and design, a phase usually dominated by technical and financial criteria.

Key approaches/tactics/strategies/tools applied and how did they change in emphasis

The screening study is largely qualitative and is based on a coarse level of project-related information and associated uncertainties. It usually includes some form of opportunities and constraints identification, environmental assessment and fatal flaws analysis.

How did they increase consideration of environmental issues in decision making or fail to do so

This case study, which considers large industrial

projects, indicates that screening provides the opportunity for proponents to include environmental and social considerations in the pre-feasibility stage, when there is greater ability to influence the overall conceptualisation and design of the project. This approach enhances the potential for the project to be planned and designed to avoid and/or mitigate significant negative environmental and social impacts; and to enhance the positive benefits through innovative thinking. Consequently, there is reduced risk of “fatal flaws” emerging in the subsequent EIA phase and causing delays in the overall project schedule. Screening also provides opportunity for early identification of baseline studies that may be required in advance of the EIA process, and could otherwise have required an extended period for the EIA phase. In a developing country context such as South Africa, by reducing the risk of delays in the EIA process, screening studies can potentially ameliorate the perception that EIA is a “green handbrake” on development.

How could the tool be improved on - what other approaches and tools could relate

During the pre-feasibility stage of projects there is often inadequate consideration of environmental and social factors. The case studies above endeavoured to improve this situation in the following manner:

- They assisted the project proponent to do their “environmental and social homework” early in the project design process. Frequently project proponents initiate an EIA when it appears on the critical path for the development. They conduct their first assessment of the project in the public domain and if fatal flaws emerge at this stage, it is time consuming to rectify this situation. Furthermore, an ill-conceived project that has serious environmental or social impacts could lead to public outrage and lengthy delays in the overall project schedule. Screening provides an opportunity for an in-house “first cut” assessment and project refinement, before entering the public domain.
- They provided for an iterative assessment of impacts and project refinement, which correlated with the increasing level of project detail that developed through the design process. During pre-feasibility, when conceptual data are available, a *qualitative* screening assessment is done. As the design becomes more certain, the detailed EIA studies can be undertaken, where the authorities usually require a *quantitative* assessment with high levels of certainty.



- They provided for iterative consideration and refinement of alternatives. The EIA process specifically requires that alternatives be included. However, it would not be practical to develop all possible alternatives to a sufficient level of detail in order to enable a detailed quantitative assessment thereof in the EIA phase. Therefore the screening study provides a mechanism whereby alternatives (especially location alternatives) are assessed at a broad-scale. This assessment can then be reported in the subsequent EIA process and set the framework for the alternatives that are considered in the EIA. This approach can demonstrate that considerable thought has gone into the project design and could increase the credibility of the proponent in the eyes of the stakeholders.
- They provide an opportunity for early identification of baseline studies that may be required for a defensible EIA. Early identification of these studies will result in a time savings if initiated at the right time in the development cycle.
- They assist in an understanding of the mitigation and design measures which will be required to reduce environmental impacts at the early design stages of the development. This allows for the original designs and financial considerations to incorporate site specific impact mitigation considerations prior to EIA reporting;
- They significantly informed the requirements and approach for the Scoping and Assessment phases of the subsequent EIA studies. This included the range of environmental issues, and interested and affected parties. In addition, the consultation with key decision makers and experts during the screening studies significantly contributed to planning the details of the EIA process.

ADAPTATION TO CLIMATE CHANGE

(Penny Urquhart)

Purpose

The case study is an initial exploration into the mechanisms and tools that are being or could be used in South Africa to mainstream climate change considerations, with a focus on local-level tools more especially emerging adaptive strategies of poor rural communities and tools they are using to meet the challenges they face. The case study explores actual and potential tools for mainstreaming climate change adaptation at the grassroots level in two South African communities: the Suid Bokkeveld, Northern Cape Province, and the Vhembe District, Limpopo Province. While neither community project had a primary focus on development of tools, both are instructive in highlighting promising approaches and mechanisms. Drawing on these findings, key lessons regarding tools and tactics for integrating climate change adaptation considerations were synthesised.

Key approaches/tactics/strategies/tools applied and how did they change in emphasis

An increasing number of tools, manuals and methodologies are being developed globally to help scope, implement and assess practical grassroots interventions for adaptation to climate change. Many of these are directed at portfolio and programme screening, although frameworks for community engagement are also being developed. At the country level, widespread use of a range of tools for

integration of climate change considerations into development planning at different levels has not yet been achieved. In general, at this stage climate change concerns are scarcely integrated in decision making across or within sectors. South Africa has played a strong role internationally on pushing for uptake of adaptation issues, and there are signs of increasing political commitment to build on early strategies and plans. However, work on adaptation at national, provincial and municipal levels is focused on developing frameworks and strategies and has not yet progressed to the stage of developing actual tools for integration, apart from pioneering work by NGOs.

Given that successful adaptation essentially requires implementation of sound sustainable development policies and practices, albeit with an additional emphasis on incorporating predicted climate change, in many cases what is required is not necessarily something new in the toolbox, but rather a climate-aware and effective use of existing mainstreaming tools. Three key areas emerge from the case studies and literature review as being critical areas to explore successful tools for adaptation to climate change, in order to support sustainable livelihoods for poor and marginal people:

- Tools for integrating climate change considerations into development planning, with a focus on the local level
- Tools useful at a community / grassroots level for integrating climate change adaptation into livelihood strategies
- Tools for vulnerability assessment





At the local level in South Africa, the IDP should be the key mechanism for ensuring that climate change considerations are integrated into planning and development. In reality, however, most municipalities, especially those that encompass large rural tracts, are still in the early stages of a learning process towards more effective IDPs. The SEA that is required to underpin the municipal SDF, which is an integral part of the IDP, would be one key leverage point. A specific mechanism is required to ensure that climate change imperatives form part of the SDF. High quality and accessible climate information will be an essential input to this. Even with this mechanism in place, much will come down to the levels of understanding of how ecological, social and economic systems are interconnected. As indicated in particular by the Suid Bokkeveld case study, development based on a stronger ecological understanding at the outset and the more robust use of ecological knowledge linked to traditional practices is an important step to developing local adaptation strategies that are effective. Public participation is a key mechanism for integration of environmental concerns into the planning processes at all levels, and the case studies have indicated the importance of participatory processes at the community level in facilitating the development of effective local adaptation strategies. The Community-based Planning (CBP) methodology provides municipalities with the means to strengthen the participatory aspects of their IDP. Apart from

these specific information and deliberative tools, less formal tactics could be crucial, especially in the context of weak local institutions. The Suid Bokkeveld case study indicated the importance of ongoing proactive engagement with local government officials and councillors by development practitioners (and community members) engaged in action learning processes concerning adaptation to climate change.

Concerning grassroots-level tools, the case studies considered in this initial exploration indicate the importance, for adaptation, of a solid understanding of livelihoods, and in particular vulnerability. As the case studies also show, positive results are beginning to emerge from projects that encourage participatory development, value traditional and local knowledge, and take a holistic approach to addressing people's livelihood needs. What we are really talking about is sound development practice that respects local people and local realities. Evidence is growing that certain sustainable livelihoods (SL) measures operate as climate change adaptation options and that such measures, which have many co-benefits, should be integrated into the planning of national adaptation strategies. The case studies highlight the importance of empowering local people through increased awareness-raising on the impacts of climate change, by making scientific information more accessible and understandable, and by valuing and integrating local and traditional knowledge about appropriate skills

and practices. An action learning approach that promotes synergies between local knowledge and experiences and scientific knowledge can also provide unique solutions to climate change adaptation, and is thus a vitally important component that facilitates the development of effective and locally-owned adaptation strategies. Successful adaptation will also depend on the ability to close loops quickly and proactively. This means that increased emphasis will have to be placed on having monitoring and feedback mechanisms in place, and linking these to actions and decisions at different levels.

Climate change threatens to exacerbate existing vulnerabilities and create new ones for poor people. Thus vulnerability assessment is one of the most important emerging tools that serves as a critical basis for effective adaptation responses. Important work has been done by research organisations, but for rollout, vulnerability studies need to move out of the realms of academia. Municipal-level vulnerability assessment should be a required component of the IDP. For this to happen, we need to develop rapid assessment methodologies, and enhance capacity at the local level. As the Vhembe case study indicates, strategies employed by farmers to deal with stresses

they face are multi-dimensional and thus policy or support that focuses on climate stress alone will not reduce vulnerability.

How did they increase consideration of environmental issues in decision making or fail to do so

Adaptation to climate change is a broad landscape for which a range of tools are needed, too broad for the scope of this study. However, this initial exploration has revealed a number of areas of good practice from pilot projects. Three key areas for effective tools for integrating adaptation to climate change into local planning and development are particularly important:

- **Participatory methodologies for making better links between climate science and local knowledge and practices**, so that local communities have the information and resources they need to take effective action to protect their livelihoods and ecosystems from the effects of climate change.
- **Action learning approaches and the use of the sustainable livelihoods framework** are key elements for successful local adaptation strategies, and should underpin the more formal tools and methodologies for integration, of which



evolving vulnerability assessment methodologies are fundamentally important.

- **Monitoring and evaluation, and in particular participatory monitoring and evaluation involving local users**, which feeds back into an action learning approach at different levels, is essential for the kind of rapid responses and learning-by-doing that will be required to address climate change impacts in a proactive fashion.



How could it be improved on - what other approaches and tools could relate

- Development planning at all levels needs to take a longer-term view and to incorporate predicted climate change in order to minimise impacts. Specifically, simple mechanisms need to be found to integrate climate change and indeed sustainability issues in general into local-level planning, such as the IDP in South Africa.
- Adaptation measures undertaken by local communities should be encouraged and promoted through policies that acknowledge the need for flexibility and locally-specific solutions. Participatory action learning approaches and the sustainable livelihoods framework should form an essential component of the adaptation approach, and should receive policy support.
- A range of integrative tools that factor in complexity and flexibility need to be employed. Appropriate tools need to be simple yet effective, or they will not be used widely. Additional thought is needed on what the most effective tools are for different levels and how these need to be adapted and rolled out more widely.
- Vulnerability mapping and assessment is a critical step in up-scaling support to the evolving adaptation strategies of poor and marginalised people at the local level. Rapid methodologies and policy emphasis are needed to move this beyond the pilot project stage.

THE ENVIRONMENTAL SUSTAINABILITY ASSESSMENT TOOL (ESAT) FOR LAND REFORM PROJECTS

(Rachel Wynberg and Merle Sowman)

Purpose

The purpose of the case study was to explore new tools for mainstreaming environment into land reform programmes that are sensitive to the context and resources available to rural communities.

Key approaches/tactics/strategies/tools applied and how did they change in emphasis

The conceptual framework underpinning the ESAT is the Pressure-State-Response Framework, developed by the Organisation for Economic Co-operation and Development in the late 1980s (OECD, 1993). This framework lays out the basic relationships between the pressures human society puts on the environment; the resulting state or condition of the environment; and the response of society to these conditions to ease or prevent negative impacts resulting from the pressures (Figure 4). "Pressures",

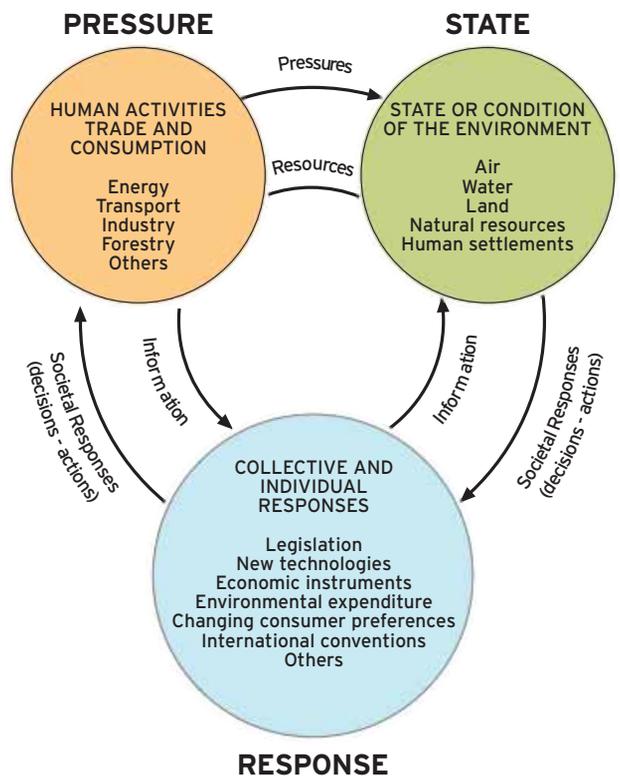


Figure 4: The Pressure-State Response Framework. After Pintér et al. (2000)

for example, result from human activities such as agriculture, forestry, settlements or industrial development. These are often classified into underlying factors or forces such as population growth, over-consumption or poverty. The "State" refers to the condition of the environment as a result of these pressures – for example, land degradation, water pollution, or over-harvesting of natural resources. These factors in turn affect the health and well-being of people who use and rely on these resources. The "Response" component of the framework relates to the actions taken by society to ease or prevent negative environmental impacts, to correct existing damage, or to conserve natural resources. These responses may include regulatory action, public opinion and consumer preference, changes in management strategies, the establishment of new institutions, or changes in the way in which money is spent.

Overview of the assessment tool

ESAT comprises six main steps:

- (1) Gather as much information as possible about the project site (desk based);
- (2) Identify a multidisciplinary team for field work, involving key government departments, those with specialised knowledge, and local informants as far as possible;
- (3) Undertake a field-based assessment of the state of the area's natural resources, current trends and pressures on the resource base, and responses to pressures and changes;
- (4) Prepare a map of environmental characteristics, opportunities and constraints for the site;
- (5) Prepare an integrated environmental assessment of the site, with a focus on the key economic and livelihood activities or projects that are planned, the main environmental problems or opportunities that may arise if such activities take place, the significance and magnitude of any identified constraints, mitigating measures to avoid impacts, and the need for a comprehensive EIA; and
- (6) Based on the assessment, provide environmental input into the planning phase and implementation plan, including detailed indicators for monitoring and evaluation.

Also critical at this stage is the development of a resource management plan to address the longer-term management of natural resources in the area, to draw upon community involvement in the

development of such a plan, and to link it to post-transfer institutional support. Development of such a plan is particularly crucial given that land reform projects are often not associated with a specific development proposal, or with a change in land use, but instead revolve around livelihood-based activities that may entail an intensification of existing activities or a reallocation of resource rights.

How did they increase consideration of environmental issues in decision making or fail to do so

Over the past decade there has been increased awareness of the interdependent relationship between environmental sustainability and improved livelihoods, and the need to incorporate environmental sustainability principles into the different planning processes of land reform in South Africa. In practice, however, little progress has been made, and a growing body of evidence indicates that environmental sustainability is not central to these planning and decision-making processes (Phulisani Solutions and Development Services, 2005, Diako et al, 2006).

Yet early consideration of environmental sustainability issues in pre-settlement and post-settlement planning processes, could significantly improve the outcomes and impacts of restitution and other land reform projects. Such environmental assessments would at least clarify what natural resources are available, what land use activities and livelihoods could potentially be sustained, and what environmental constraints pose a threat to envisaged activities and livelihoods. Access to this information would in turn enable claimants to make more informed choices about the options available to them and the practical realities associated with having their rights restored.

Although legal requirements exist for certain listed projects to undergo formal environmental assessment procedures, for examples, the establishment of a large infrastructural development, this typically occurs late in the process when decisions regarding land allocation and land-use activities have already been made. Furthermore, major concerns have been expressed about the current EIA regulations (McCleod, 2006, Macleod, 2006) and their ability to inform planning and to achieve the goals of sustainable development (Sowman, 2005).

The ESAT was developed to ensure that environmental issues are identified, assessed and integrated into planning, design and decision-making processes associated with land reform projects. It is a simple and easy to understand method, light on financial and human resources, and easily implemented by 'non-experts'. A primary objective was that the approach be participant-driven, lending itself to participatory natural resource management and monitoring, and thus able to incorporate local knowledge and perceptions. It is a flexible method that can be easily integrated and streamlined into existing planning and environmental assessment procedures, and is adaptable for use on different projects by land reform participants and beneficiaries. Its adoption and use would reduce dependency on external consultants, and ensure a stronger institutionalisation within government departments of environmental sustainability considerations.

The development and pilot testing of the ESAT at four land reform project sites in 2005, demonstrated that early consideration of environmental sustainability issues in consultation with relevant stakeholders and local beneficiaries can lead to identification of environmental opportunities and constraints that can inform the planning process and development scenarios for the area.



Photograph: Conservation International

This information facilitated discussion amongst land reform beneficiaries and other stakeholders as to the implications for livelihoods and economic development, allowing for unrealistic expectations to be tempered. It also enabled participants to consider what capacities and skills were needed to put plans into effect. Application of ESAT across the range of land reform processes could ensure that environmental opportunities and constraints are identified upfront and integrated into project planning and decision-making processes, that informed choices are made by land reform participants, that natural resources are used sustainably and that environmental impacts are minimised. Ultimately this should lead to projects that deliver optimal and sustainable social, economic and environmental benefits.

How could it be improved on - what other approaches and tools could relate

This case study is an example of an emerging tool arising from a specific rural land management problem. There is a strong potential link between the tools of this case study and those mentioned in the climate change case study regarding adaptive management, empowerment, participative tools, vulnerability assessments, livelihood strategies etc. The formal planning tool links are numerous and amongst the type of tools that would be drawn in as applicable are: tools for environmental management, SEA, IEM, Social Impact Assessment (SIA), EMP, environmental review, EMS, environmental auditing, environmental management frameworks, environmental implementation plans, public participation, conflict management, cumulative impact assessment, protected area management, risk assessment and ecological risk assessment.

In 2002, the Department of Land Affairs produced the 'Guidelines for the Integration of Environmental Planning into Land Reform and Land Development'. The planning approaches that were listed as being pertinent to the subject were: Environmental economics approach for promoting sustainable livelihoods, the sustainable livelihoods approach, community based natural resource management, gender-responsive planning. The key methods and tools suggested were the environmental decision support tool, land evaluation and land capability for land use planning.



Photograph: Thomas Ferreira

ETHEKWINI: RE-IMAGING THE ROLE OF ENVIRONMENT MANAGEMENT

(Myles Mandler)

Purpose

This case study explores how a large metropolitan municipality, eThekweni, was motivated and mobilised into trying to mainstream the environment into development decisions by utilising a single politically acceptable resource economic tool which served to open up the more full range of available main-streaming tools. The case study demonstrated the need to understand and work with mindsets rather than tools.

Key approaches/tactics/strategies/tools applied and how did they change in emphasis

The case study highlighted that environmental economics is a persuasive means to re-imagine the role of environment management in municipalities. Ethekweni municipality was one municipality that embarked on this route. In 1998 Durban looked at what services the open space supplied and then the municipality *valued those ecosystem services*. This then led to a re-naming of the open space system, from DMOSS (Durban *Metropolitan Open Space System*) to the Environmental Services Management

Plan. The re-imagined approach was adopted by the Municipality's Council, establishing a *proactive policy for ecosystem services management* - thereby providing a politically defensible argument for ecosystems management. And later on, ecosystem services management was one of the key structuring elements in the municipality's *spatial development framework* (SDF) and also featured strongly in the *integrated development plan* (IDP). The progressive policy platform then served as a basis for regulating development and promoting environment management actions (as per the conventional tool box). Furthermore, many of the EIAs now require the developers to address issues of changes to ecosystem services and the associated human welfare. With this goes a public works programme - *working for ecosystems* - for the purposes of generating ecosystem services for meeting people's bread and butter needs via payments for work and via the increased supply of high value ecosystem services to users. People's welfare became the focal point of management.

This new perspective has given environment management in Durban the space to develop a substantial platform and a basis to be a bigger role player in decision making. Further supporting environment management, are emerging concepts

about natural asset values. Unlike the value of money which is discounted over time, the value of ecosystem services escalates by at least the local population growth rate as more people access quality environments and use the services supplied.

For example, flood mitigation service values will grow as population increases, in other words, with a fixed supply and growing demand - price goes up. So municipal natural asset values (and their associated ecosystem services) will grow by at least the same rate as the population and with urban in-migration. It is these types of arguments that ensure that the environment gets serious consideration in decision making. It is these arguments that provide the space for environment management to be effectively implemented.

How did the tools increase consideration of environmental issues in decision making or fail to do so

As described above resource economics opened the door of the municipality realising the value of the environment - at least to a degree. The flurry of strategies and tools that followed was met with various levels of success. The municipality also provided a useful demonstration of how various tools could be applied - it broke the codes of many approaches and tools and became a leader in the South African field of municipal environmental management. It was able to share its lessons learnt with other cities and towns across the country helping them avoid the conflicts and pitfalls they had experienced and helping them fast track their progress. The successes and failures of the eThekweni are ongoing and the comments of the environmental manager quoted in previous sections of the report

relay the challenges all municipal managers face with regard to the quest for sustainability in a finite world especially when there is a rapidly growing population with large consumer expectations.

How could it be improved on - what other approaches and tools could relate

eThekweni Municipality has used a large range of informal and formal environmental mainstreaming tools, tactics and philosophies available in the tool box - most of those have been listed in the contents of this document as summarised in Chapter 3 of the report. At the Stellenbosch workshop the environmental manager for eThekweni did caution about using environmental economics as a strategy that is relied to heavily upon because 'two can play that game'. A poor development scheme can come up with resource economics statistics motivating for it to get the go ahead and it becomes a matter of who comes up the largest figures at the end of the day. The strategy therefore is to use resource economics to open the way to numerous other approaches and tools and never be complacent and think the battle is won because the door is opened - unfortunately the battle for building a sustainable society moves on into tougher and tougher uncharted terrain. One approach needs to build up the energy and vision and commitment to face the next bigger challenge and so it moves to the next and the next level. It takes champions to support municipalities through these battlefields and Durban has its and recognising and appreciating and growing its champions must surely also be a valued approach to adopt.



Photograph: Prakash Bhikha

Chapter 6

Lessons Learnt



THE NEEDS

There is a need to focus on the context

- Change agents need to ask questions around how to address the *'where do we want to go and what needs to be achieved'* rather than *'what tool to use?'* Tools never match the problem perfectly - focus therefore needs to be on the questions that need to be answered, the tasks that need to be performed and the things that need to be organised around what the community, its practitioners or politicians are trying to achieve. Asking and answering these types of questions will help to shape and direct collective visions and address paradigm shifts required to get there.
- The belief that environmental issues are not mainstreamed because of a lack of insight is erroneous - environmental issues are often not mainstreamed because there are forces from other agendas at work which deliberately exclude the environment.

- The environmental challenge is big and it can be tackled through many small ways. Tools are only a minor part of various approaches people adopt to tackling these problems. The local context is important - this is where interrelationships are built up and a collective consciousness is created - it is not about developing experts. It is more complex than that and it acknowledges all things are interrelated... it's a process - there are no instant solutions.

There is a need to focus on the goals

- South Africa needs to change the way national goals are set - new goals and measurements need to be developed that focus on achieving happy and healthy people, living within ecosystem limits instead of focussing merely on GDP and national growth rates as indicators of success - only then will development actions change direction. There are tools that can help promote alternative thinking for example tools such as the Natural Step, Five Capitals and the Happy Planet Index.

There is a need to focus on the users:

- Tools cannot be analysed in isolation of the development paradigm, epistemology, worldview and cultures of the users.
- Environmental management is less about applying tools and more about generating conversations, processes, values and relationship building. There is a need to draw out deeper intelligence - indigenous knowledge working in a flexible co-evolutionary manner and avoiding straight jacketing from blindly following generic guidelines provided by tools.
- It is important to focus on marketing tools and implementing them correctly. There is wealth of information on tools themselves but a tool is effective only in terms of how it is implemented - it is a light to travel by. For example trying to brainstorm a dull document into something people will use takes the work beyond just using a tool.

CHARACTERISTICS OF SUCCESSFUL APPROACHES, TOOLS AND TACTICS THAT WILL SPEARHEAD CHANGE

- Respect different philosophical/epistemological views, but still be able to challenge world views, paradigms and power relationships that threaten environmental and social justice / human rights - the health and welfare of people and ecosystems
- Guide principle led development - give more powerful voice to the application and implementation of principles of sustainable development and systems thinking. There is a need for genuine and widespread buy-in to the principles, and then approaches and tools that are easy to apply but not simplistic.
- Give more voice to the poor, and empower communities to meaningfully engage and influence decision making that affects their lives. Success comes in making people aware of their environmental rights and responsibilities and the ability to act on this foundation.
- Change mindsets and material realities acknowledging the two way (dialectical) relationship that exists between these. (Many of the environmental mainstreaming tools such as SEA, EIA and SOE first require a change in values and mindsets at a leadership level before they will be used to their full potential). Changing values is a complex interactive and dynamic learning process and everyone has a small role to play in

the greater scheme of things and a small window from which they can build a picture of the whole and work out their points of intervention, tools of relevance and contributions

- Dispel myths that environment, economic and social development are separate entities and that one can be prioritised over and above the other. There is a need to use tools that work with the intelligence of nature, generate visioning, systems thinking and blending (synergy) between traditional wisdom and innovative sciences (solutions).
- Continue to build on the concept of an *Integrated Approach to Environmental Management*: Tools cannot be seen in isolation of other tools and approaches to development - in reality tools rarely ever successfully work as separate entities. Successful initiatives tend to mix, tweak and match and borrow from a whole host of approaches and tools and this occurs through a continuous cyclical creative and learning process. The cycle takes on energy of its own as people strive to make meaningful changes in dynamic and complex situations requiring multiple ongoing decisions at multiple levels and using trans-disciplinary approaches
- Understand the correct balance between the need for technocratic tools and systems thinking and more fuzzy/softer philosophical approaches
- Understand that using tools may help to damage or poison things less quickly, and may help some sustain wealth for a little longer, but if causes of problems go unattended, the end result will be dwindling resources, social conflict and ultimately the destruction of most forms of life including human life. Approaches, tactics and tools that address mindsets are therefore critical.
- Where appropriate use methodologies that can be tested, intensified, multiplied and synergistically applied, critically reviewed and revised. In the case of using formalised tools, standards and benchmarks need to be set and users need to be held accountable.
- Are sensitive to the need for knowledge, understanding and building positive relationships. In the end tools are only as effective as the user has a sensitivity (spirit of love and care) for the people and environment the tools are intended to ultimately serve. *'When the power of love replaces the love of power then will our world know the difference'* William Gladstone.
- Recognise the planet is in ecological debt and deal with this reality. Mainstreaming of environmental

influences must be integral in all key planning and decision making tools and this will need to be done more forcefully and purposefully. For example environmental impact assessments need to be turned around to become *'environmental contribution assessments'* ensuring no more net negative losses and ensuring environmental gains are made wherever possible

- Recognise the impacts of climate change and mitigation measures that are required to prevent further damage. Adaptive management approaches and the associated array of empowerment tools for local affected communities are emerging as tools of strategic value. Most of South Africa's borders comprise of the coastal zone and many of its major cities are located in that zone and as such planners and politicians need to look not only at the local application of tools but they need to comprehend the global link of climate change and work with more global adaptation and mitigation agendas. This will influence a whole host of tools and tactics utilised, for example planning and monitoring approaches will need to be adjusted to changing landscapes - where once it would suffice to monitor and plan 5 yearly, it may now be necessary to undertake such activities on a 6 monthly basis. In fast changing scenarios, experiencing increased intensities and frequencies of natural/manmade disasters, more cumbersome resource draining tools will give way to tools that can produce outputs and share results, cheaply speedily and accurately. Technology to assist with such complex planning will start playing a bigger role. Examples of this are evident in South Africa where fire management programmes now extensively use computer technology and satellite monitoring for information and strategy formulation in emergency preparedness
- Draw on past experience in revolutionary tactics, such as the gender movement of the 1970's and the South African struggle against Apartheid, and learn from the mistakes and successes. Environmental mainstreaming and systems thinking will require radical and speedy changes to *business as usual*. Society has to move on from a consumerist culture to a culture of treading lightly on the earth. There are predictable trends and outcomes that can be anticipated based on history of power struggles in South Africa and all over the world - understanding and being prepared will help ensure greater success especially in scenarios

where there is lack of time, lack of resources and where champions easily get axed. One of the lessons that can be learnt is to try and leap frog ahead to prevent thorny conflicts - get in place the more strategic aspects and prevent rearranging deckchairs on the titanic

- Recognise the value of incremental change and cumulative change. The scale of change has to none the less be appropriate to the scale of the problem. For example one farm doing the right thing will not suffice - it needs to happen across all farms, regions and countries in order to have a significant impact. *We are all guilty of subscribing to sustainable thinking and not applying the principles - we are used to big solutions and simple one tool approaches but incremental change is probably of greater impact in the end. We have to walk the talk ourselves.* Michelle Audouin
- Are able to strategically plan and adapt to rapidly changing circumstances, generate common visions and help society work towards a desired state of dynamic flux. The approaches we adopt need to recognise the importance of heterogeneity and they need to work at appropriate scales. They need to recognise the value of relevant monitoring and enforcement.



In short change agents are in a race against time and tools and tactics they select have to make strategic and optimum use of scarce resources and opportunities still available - they need to be fast moving and they need to work with all relevant existing institutions, technologies and economic systems whilst challenging them where they fall short of meeting the needs of a fair and just society.

THE RECOMMENDED NEXT STEPS

■ Change agents in all sectors of society need to continue to expand on the knowledge of ecosystems, deepen values on how to work within these systems and more vigorously, systematically and strategically explore the particular use of tools, tactics and methods in development practices. Governments, banking sectors, private enterprises, families, communities, non-governmental organisations need to build awareness of how to more efficiently and effectively direct energy and scarce resources to integrating environmental concerns into all we do as we go about our private and working lives. The tools and tactics are there, they need to be used more critically in the various contexts people operate within and according to goals that reflect the rising complexity of development challenges we all face.

- The South African study needs to be periodically updated as and when deemed appropriate by users of tools and approaches. The study needs to be adapted and presented to a wide range of interested parties to fast track more progressive critical action around mainstreaming the environment into development decisions.
- The IIED, through the international Stakeholder Panel, needs to continue to facilitate and support further country studies from poorer countries, concerning the most valued approaches, tools and tactics for environmental mainstreaming. The collective findings of which need to be synthesised and rapidly and strategically acted upon.
- It is clear South African change agents do support a global initiative that develops a User Guide for environmental mainstreaming, especially a guide that acknowledges a tiered approach to providing different levels of details to meet different needs. The User Guide would need to be well marketed and success would lie in the support provided in its roll out plan and actual buy-in and use. The impacts of the User Guide would need to be monitored and evaluated and continuously revised to become a more effective tool for promoting responsible development decisions.



7 Chapter

Conclusion



There is a wealth of local tools, tactics and methods being developed for integrating environment into decision making, and pursuing holistic and sustainable development. Whilst the questionnaires homed in on the tools and approaches, the interviews and the case studies were able to draw out more about the relationship of approaches/tools and tactics to concepts of sustainable development and systems thinking. The workshops raised awareness and levels of debate around favoured reoccurring themes.

In general South Africa draws on a vast range of indigenous and adapted approaches/tools and tactics to address the environmental crisis and pursue holistic sustainable development. Some of these approaches and tools are highly relevant, effective and internationally recognised. Change agents are however, not achieving the changes they want to bring about at the rate required. The environmental crisis continues to deepen and widen at an escalating

pace. South Africa needs to persevere in its efforts to rise to the challenge of building a healthy, safe and fair environment for all. It needs to work out how it will live up to its human rights commitments and formalised sustainable development principles as set out in its Constitution and policies.

There is a role for technocratic tools and fuzzy philosophical tools, for revolutionary approaches and for incremental approaches, for top down and bottom up approaches, for indigenous tools and adopted tools. The concern is to use the right tools in an integrated and appropriate manner, according to the issues at stake. What it will take to get this right is the subject of ongoing heated debate. It is hoped this study will help the debate materialise in more practical and appropriate actions.

Whether or not South Africans make significant progress will ultimately depend largely on factors other than tools. Every little step and every little

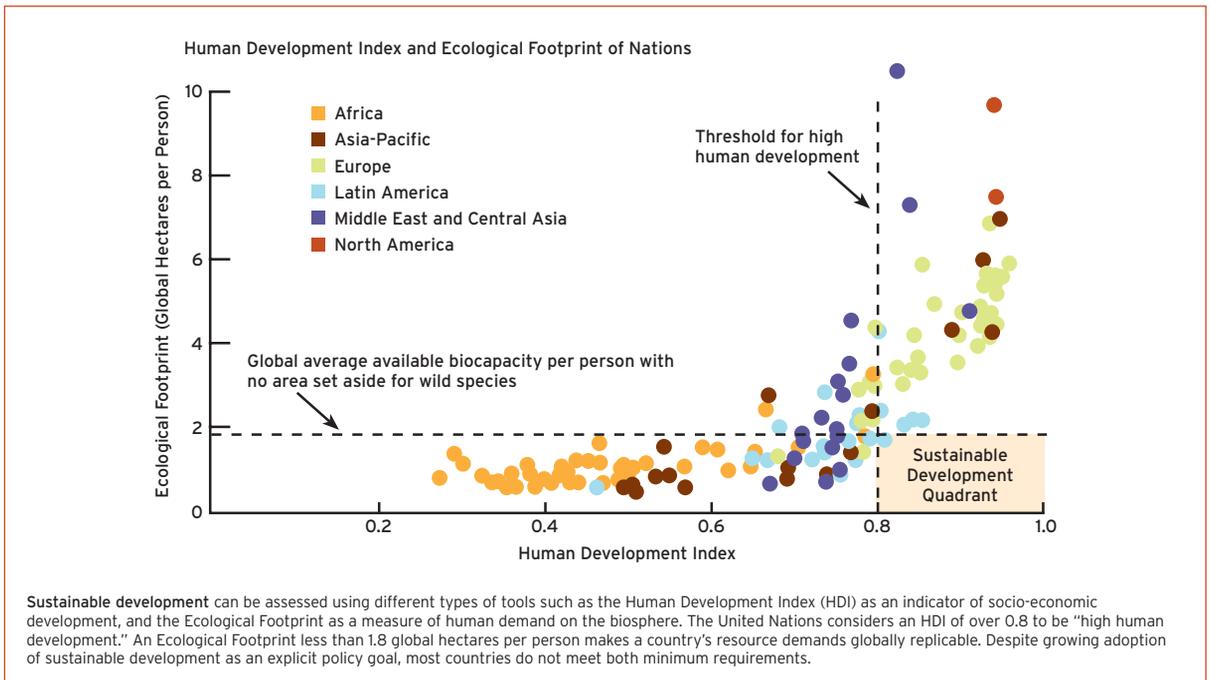
action every person makes will count because it is clear that only collectively can the problem be solved.

In the final analysis most South Africans consulted in this study, agreed the need is to focus less on the

tools and more on the value systems and knowledge base of the users of the tools and the context in which tools are applied. Not to acknowledge this is similar to producing more and more fishing boats when indeed there are less and less fish left in the seas.



Sustainable Development - moving on from where we are to where we want to be



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Chapter 8

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APPENDIX 1

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Acronyms

BEE	Black Economic Empowerment
CSIR	Council for Scientific and Industrial Research
CBNRM	Community Based Natural Resource Management
DA	Department of Agriculture
DBSA	Development Bank of Southern Africa
DEAT	Department of Environmental Affairs and Tourism
DF	Department of Finance
DME	Department of Mineral and Energy Affairs
DLA	Department of Land Affairs
DLGH	Department of Local Government and Housing
DWAF	Department of Water Affairs and Forestry
ELA	Earth Life Africa
EWT	Endangered Wildlife Trust
EIA	Environmental Impact Assessment
EMF	Environmental Management Framework
EMP	Environmental Management Plan
GDP	Gross Domestic Product
IIED	International Institute for Environment and Development
IDP	Integrated Development Plan
MDG	Millennium Development Goals
NGO	Non Governmental Organisation
SEA	Strategic Impact Assessment or Sustainability Assessment
SL	Sustainable Livelihood
SDF	Spatial Development Frameworks
UCT	University of Cape Town
WWF	World Wildlife Fund



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What Works For Us

South Africans draw on a vast range of innovative and conventional tools and tactics for mainstreaming the environment into development decisions. Despite the use of all these tools the environment continues to rapidly deteriorate.

This country case study sought to identify where the problem lay – whether it was with the tools used or whether it had more to do with other constraints such as the goals the country pursued or the knowledge base and value systems of the actual users of the tools.

The country study sought to identify the most successful and promising tools, tactics and methods and lessons learnt that would be relevant to assist change agents in all spheres of government, private sector and community organizations to rise to the challenge of ensuring a beautiful, safe and healthy environment for all.



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