PART III

EMERGING ENVIRONMENTAL ISSUES

Chapter 12

Conclusion: Emerging Issues and the Way Forward

We may recap that there still remain highly sensitive discourses on how best the African continent can speak in one voice in order to address some of the key environmental problems. An example is the importation of hazardous waste, with AU members having ratified the rival Basel and Bamako conventions. Africa has embraced the concept of sustainable development as a development paradigm for this century. Sustainability, or sustainable development, embraces politics, the environment, economics, culture and society. However, there is need to view sustainable development as an open question requiring continuous deliberations and debate. To this end, the issues that need to be addressed concern ways in which the AU should set up institutions and funds aimed at addressing continued environmental decay.

The issue of climate change appears remote, compared with such immediate problems as poverty, disease and economic stagnation. Development planners are often unsure whether, and how, to mainstream climate change considerations into development objectives (Agrawala 2005). It should be emphasised that the objective of the framework convention on climate change convention stresses the need to ensure that food production is not threatened, and to enable economic development to proceed in a sustainable manner (UN 2005).

The ratification of the UN framework convention on climate change was motivated by strong concerns that human activities are substantially increasing the atmospheric concentrations of greenhouse gases, and that this will result, on average, in additional warming of the earth's surface and atmosphere, with potential adverse effects on natural ecosystems and humankind (UN 2005). In spite of evidence in support of climate change, this issue has remained one of the most controversial in international negotiations since the 1980s (Shimada 2004). While assessments of past and present emission patterns strongly influence the debate over international climate policy, the central challenge is to limit future emissions (Baumert, Pershing et al. 2004). The Clean Development Mechanism (CDM) gives developing countries an opportunity to get involved in the implementation of the Kyoto Protocol, with the aim of meeting the emission reduction targets of the polluting Annex I countries, and the development needs of the developing countries. However, many methodological and other issues regarding the implementation of CDM activities, including the role of afforestation and reforestation projects, remain unresolved.

Given the prevailing stable investment climate in Africa, particularly in Morocco, Mozambique and South Africa, CDM projects will remain an attractive venture. However, due to various threats associated with the CDM – risks, uncertainty, ignorance in some sections of community and indeterminacy – Rio's precautionary principle should be applied in all dealings with the investing Annex 1 countries. The following suggestions are therefore set out: There is a need to enact firm and flexible stakeholder-driven CDM regulations at national, provincial and local government levels. The continent still has varying views regarding the best way forward concerning the CDM. Inter-ministerial and departmental coordination at country level remains chaotic and very weak, with regard to CDM project implementation.

The use of CDM project quota system is needed to safeguard biased investment in sectors considered 'low hanging fruit', of easy carbon credit picking, such as landfill gas and hydropower.

Capacity building and sustained awareness raising programmes are required at all levels of government, including traditional and community leadership. More local financial resources must be mobilised. For countries like South Africa this could be done through the King II Report and the JSE Socially Responsible Investment Index, whereby government and other local players earn 'carbon credits' for the benefit of the environment and future generations even outside the CDM. Dialogue is needed to continuously engage with the CDM and raise questions.

Although they cover only between 6 and 7 per cent of the earth's landmass, rainforests provide a habitat for about 50 per cent of all known species (World Bank 1992). The tropical rain forests are disappearing at rates that threaten the economic and ecological functions they provide. Shifting cultivation is considered to be the major cause of deforestation in Africa (Bundestag 1990), followed by logging, to meet the extremely high rates of timber consumption by the industrialised nations (Struhsaker 1998; Durning 1992). Tropical countries often struggle under massive debt loads, which drain their viability and encourage them to liquidate their forest capital more quickly to raise foreign exchange (WRI 1992). Additionally, logging offers an easy means of providing access roads to the rural areas, and easily wins rural community and national support.

Wildlife-human conflict, characterised by crop raiding by wildlife, is becoming an increasingly serious problem in Africa. This conflict can be attributed in large part to rapid human population growth, and poor land-use management strategies, which impose increasing demand on land. This demand results in an ever-increasing encroachment on wildlife habitats by agricultural activities and the development of human settlements. This phenomenon is explained by Hunter (1996), who postulates that the geometry of natural habitat fragmentation, induced by agriculture, indicates that as the wildlife range contracts in the face of human expansion, the interface of potential wildlife-human contact increases. Inyang (2002) observes that even hunting, which communities often employ as a strategy for addressing the problem of crop raiding by wildlife, instead helps to perpetuate it, as the targeted

species are forced to disperse wildly, and find refuge in farmlands, due to the increased disturbance in the forest. Furthermore, the land question remains unresolved. Countries like Namibia, South Africa and Zimbabwe are still battling with how best to resolve the land question.

Over-exploitation is characteristic of open-access regimes. It results in economic warfare, which, at the micro-level, forces individuals to increase their rate of exploitation in order to maximise profits (Hardin, 1998). At the macro-level, economic warfare is orchestrated by 1) the struggle by the developed countries to maintain their position at the top rungs of the economic ladder in order to continue to enjoy their dignity as super powers; 2) the struggle by developing countries to also reach the top rungs of the global economic ladder in order to gain recognition as super powers; and 3) the struggle by the undeveloped countries to get out of poverty in order to seek ways of developing and liberating themselves from an aid-dependent mentality.

Natural resource management (NRM) has become an important preoccupation of NGOs and governments around the globe. The role of NGOs in encouraging the devolution of power to rural communities by reluctant governments, and in building the capacities of the communities, in NRM is enormous. But despite all their efforts, problems still abound in the management of natural resources in many parts of Africa.

It is increasingly acknowledged that the success of natural resource management (NRM) depends on the involvement and active participation of the communities that traditionally have rights of access to, and use of, the resources to satisfy their basic necessities; hence the term community-based natural resource management. However, as Inyang (2005) warns, community participation is closely linked to perceived or tangible short-term and long-term benefits, not only to the entire community, but also to actively participating community members.

Gender issues are gradually, but steadily, taking centre stage in natural resource management, especially because the livelihoods of rural women and men are intimately linked to natural resources. Whereas men are more prominent in activities such as hunting and fishing, women are the primary exploiters of non-timber forest products such as *Invingia gabonensis*, *Gnetum africanum* and *Ricinodendron heudelotin,* for both domestic consumption and income generation. Women are also engaged in trade in these and other non-timber forest products, like game meat which is also sold by some women as pepper soup. The interactions of women with the environment are in no way less important than men's interactions, in terms, particularly, of their impact on both the environment and the human community. Therefore, the exclusion of women from environmental and natural resource management can have negative impacts at both household and community levels (Commonwealth Secretariat 1996).

The African continent has made significant strides towards addressing sustainability principles through the application of EIA as one of the key decision making tools for approving development projects. Significant gains have been recorded in terms

of establishing legislation, specifically addressing EIA requirements, in various countries. However, the following still remain slippery issues as regards the fine tuning of EIA procedures in the continent (El-Fadl and El-Fadel 2004; Kakonge 1993, 1994, 1998; SAIEA 2004).

Public Participation

The public still needs to be made aware of their environmental rights; governments need to open up when it comes to debating issues of good governance, so as to encourage participation in dealing with environmental matters in the EIA process.

Local Government Blackouts

Many local authorities are not directly responsible for EIAs. Yet most developments are implemented within their jurisdiction. In addition, local authorities have traditionally controlled development through various regional, town and country planning acts, which by their nature comprise considerable elements of EIA. In this regard, we recommend that efforts be made towards decentralising EIA permitting authority to local authority, so that harmonisation might be worked out between town planning and EIA laws; lastly, to cut red tap.

Harmonisation of EIA Legislation

At national, sub-regional and AU levels: the key challenge for Africa governments to harmonise EIA legislation at all levels still remains, culminating into an African Union 'mother' EIA legislative framework. EIA laws at national levels are still highly sectoral. Yet sub-continental frameworks, in eastern, central, northern, southern and West Africa, can be put in place, and can eventually feed into one EIA legislative framework within NEPAD, or at AU level, as an EIA convention.

Selective Sectoral Application

Most EIAs are applied to specific development sectors and even, specific projects within the sectors that are perceived to have severe negative impacts (Tarr 2003). Sectors traditionally exposed to EIA in Africa include mining, petroleum and gas; as well as agriculture, but mainly limited to dams. Agricultural policies seldom receive EIA attention, yet these have potential to harm the environment. Zimbabwe's 2000 Fast Track Land Reform Programme is an example of an environmentally harmful agricultural policy. Fisheries and tourism projects receive limited attention, likewise.

Expertise in EIA

As of June 2002, the whole of SADC had only eighty professionals managing EIA institutions (SAIEA 2004). Most tertiary institutions do not have courses addressing environmental management in general, and EIA specifically. Furthermore, government departments have experienced severe 'brain drain' on a national, regional and international scale. Experienced EIA professionals often switch jobs to join better

paying private and NGO sectors. Therefore, more effort should be made to encourage the establishment of courses in this area. Resource pooling can also assist in utilising the available limited EIA expertise through initiatives, which seek to form coalitions between governments, NGOs, private sector, universities and other research institutions. As in the health profession, issues pertaining to the environment and EIA must also be prioritised.

Enforcement

Most legal documents do not stipulate clear monitoring and auditing procedures for EIAs, nor prescribe resultant penalties to offenders thereof, additional to the lack of monitoring and auditing of EIA (Ahmad and Wood 2002). This area needs urgent attention. Regular monitoring is necessary (Tarr 2003) to ensure that developers implement agreed management plans. South Africa (DEAT 2004) is one of the countries to have taken issues of compliance and enforcement seriously, establishing for example Environmental Courts in 2004.

Under-resourced EIA Institutions

Many in positions of authority, in politics and business, still consider EIA to be another unnecessary hurdle that delays development, job creation, and ultimately poverty eradication in the continent. There is therefore a need for continued lobbying, particularly from peers who realise the benefits of engaging in EIA.

Sectoral Orientation to EIA

EIAs are still undertaken and driven from sectoral point of view. Hence many government ministries and departments consider EIA to be solely the responsibility of the ministries responsible for environment and tourism. A cross-cutting paradigm is therefore being advocated in this book.

Logistics and Team Management During EIA Preparation

Drawing from a large-scale EIA for the proposed Dune Mining at St. Lucia in South Africa, Weaver et al. (1996) note that EIA teams need to complement each other, not only technically, but also in their purpose. Expectations and approach to the EIA should also be mutually understood, and all members should be mutually accountable for their joint efforts. Logistical issues, particularly around public participation, are usually seen as delaying the process.

Recognition of Potential Sub-regional EIA Promotion Initiatives

Governments should recognise and resource sub-regional EIA initiatives. One good case example is the initiative by the Southern African Institute of Environmental Assessment (SAIEA), an indigenous NGO based in Namibia. SAIEA is dedicated to promoting EIA as a tool to achieve sustainable development and eradicate poverty in southern Africa. Through partnerships, SAIEA has been supporting government,

development agencies, other NGOs and the private sector in the field of EIA. Some of the support mechanisms offered by SAIEA include: developing terms of reference for EIAs, independent reviewing, monitoring implementation, training (including hosting student attachments or interns), and research and assisting with EIA legislation reform and formulation.

Environmental education is recognised not only as one of the instruments in the fight against environmental problems, but also as a precondition for introducing rational management of environmental resources needed for human survival (Touré (1993). Despite this recognition, the subject has hardly been given the scope and dimension it deserves in any single situation, due largely to disputes that exist about its goal. Schneider (1993) attributes this to the fact that in any given local or national situation, environmental concerns of individuals, groups of people, and even institutions, tend to be limited, rather than all embracing. For instance there is a tendency in site-specific situations to limit environmental education to areas such as agro-forestry, conservation education and hygiene. This is contrary to Martin's (1990) guiding principles that advocate for environmental education to consider the environment in its totality, thus, as natural and man-made, ecological, political, economic, technological, social, legislative, cultural and aesthetic. Environmental education should enable people to develop an understanding of the ecological processes that govern life on earth, and the geo-morphic and climatic patterns that influence living things and human activities; appreciation of the social, economic and cultural influences that determine human values, perceptions and behaviour; and awareness of an individual's personal relationship with the environment, as a consumer, producer and a sentient member of society (WWF 1988).

While awareness raising engenders consciousness of the existence of environmental problems and the causes, sensitisation leads to the cultivation of positive environmental attitudes, which can translate into positive environmental behaviour. Cultivating positive environmental behaviour depends on the level of sensitisation of the individual. This increases with age, not merely in biological terms, but with respect to an accumulated attachment to particular ideas and values; as well as through the powerful influences of the family and peer groups, rigorous norms and belief systems of the community, patterned indoctrination through programmes of the mass media, schools and similar institutions, or emerging economic and related opportunities (Patterson 1993).

Environmental education has developed significantly in southern Africa, spearheaded by the formation of the Environmental Education Association of Southern Africa (EEASA) in 1982. Since then, the grouping has grown from strength to strength, leading to the hosting of regular annual conferences throughout the region. The EEASA also hosts the *Journal of Environmental Education*, the only such journal from the African continent published regularly on an annual basis. Lastly, the concept of sustainability reporting remains one ot the new environmental management tools with which Africa is still grappling. This concept has been significantly developed in South Africa, resulting in the launch, in 2004, of the Johannesburg

Stock Exchange Socially Responsible Investment Index. It remains to be seen whether, beyond its public relations benefit, this new concept will propel companies to truly address environmental concerns.

References

Agrawala, S., 2005, 'Putting Climate Change in the Development Mainstream: Introduction and Framework', in Agrawala, A., *Bridge Over Troubled Waters: Linking Climate Change and Development*, Paris: OECD, pp. 85–132.

Agrawala, S., Gigli, S. and Raksakulthai, V., et al., 2005, 'Climate Change and Natural Resource Management: Key Themes from Case Studies, in Agrawala, S., *Bridge Over Troubled Waters: Linking Climate Change and Development*, Paris: OECD, pp. 85–132.

Ahmad, B. and Wood, C., 2002, 'A Comparative Evaluation of the EIA Systems in Egypt, Turkey and Tunisia', *Environmental Impact Assessment Review*, Vol. 22, pp. 213–234.

Baumert, K., Pershing, J., et al., 2004, *Climate Data: Insights and Observations*, Washington DC: Pew Centre on Climate Change.

Commonwealth Secretariat, 1996, Women and Natural Resource Management: An Overview of a Pan-commonwealth Training Manual, London: Commonwealth Secretariat.

DEAT, 2004, *Environmental Impact Assessment Regulations*, Pretoria: Government Printer.

Durning, A., 1992, *How Much is Enough? The Consumer Society and the Future of the Earth*, New York: W.W. Norton and Company.

El-Fadl, K. and El-Fadel, M., 2004, 'Comparative Assessment of EIA Systems in MEAN Countries: Challenges and Prospects', *Environmental Impact Assessment Review*, Vol. 24, pp. 553–93.

Hardin, G., 1968, 'The Tragedy of the Commons', *Science*, Vol. 162, pp. 1243–48.

Hunter, M.L., 1996, *Fundamentals of Conservation Biology*, Oxford: Blackwell Science.

Inyang, E., 2005, *Towards Effective and Efficient Rumpi Project* [unpublished].

Kakonge, J.O., 1993, 'Constraints on Implementing Environmental Impact Assessments in Africa', *Environmental Impact Assessment Review*, Vol. 13, pp. 299–308.

Kakonge, J.O., 1994, 'Monitoring of Environmental Impact Assessments in Africa', *Environmental Impact Assessment Review*, Vol. 14, pp. 295–304.

Kakonge, J.O., 1998, 'EIA and Good Governance: Issues and Lessons from Africa', *Environmental Impact Assessment Review*, Vol.18, pp. 289–305.

Martin, P., 1990b, *First Steps to Sustainability: The School Curriculum and the Environment*, Surrey: WWF.

Patterson, T.E., 1993, *The American Democracy*, New York: McGraw-Hill.

SAIEA, 2004, *Environmental Impact Assessment in Southern Africa: Summary Report*, Windhoek: Southern African Institute for Environmental Assessment.

Schneider, H., Vinke, J. and Weekes-Vagliani, W., eds., 1993, *Environmental Education: An Approach to Sustainable Development*, Paris: Organisation for Economic Co-operation and Development, pp. 147–57.

Shimada, K., 2004, 'The Legacy of the Kyoto Protocol: Its Role as the Rulebook for an International Climate Framework', *International Review for Environmental Strategies*, Vol. 5, No, 1, pp. 3–14, Kamiyamaguchi: Institute for Global Environmental Strategies.

Struhsaker, T.T., 1998, *Ecology of an African rain forest: Logging in Kibale and the Conflict between Conservation and Exploitation*, Gainesville: University Press of Florida.

Tarr, P., 'EIA in Southern Africa: Summary and Future Focus', in P. Tarr, ed., *Environmental Impact Assessment in Southern Africa*, Windhoek: Southern African Institute for Environmental Assessment, pp. 329–337, 2003.

Umozurike, U. O., 1995, *Introduction to International Law*, Ibadan: Spectrum.

United Nations, 2005, *Kyoto Protocol to the United Nations Framework Convention on Climate Change*, United Nations University Press.

Weaver, A.V.B., Greling, T. and Wilgen, Van Wilgen, B.W., 1996, 'Logistics and Team Management of a Large Environmental Impact Assessment: Proposed Dune Mining at St. Lucia, South Africa', *Environmental Impact Assessment Review*, Vol. 16, pp. 103–113.

World Bank, 1992, *The World Development Report 1992*, Washington DC: Oxford.

WWF, 1988, *A Common Purpose: Environmental Education in the School Curriculum*, Surrey: WWF.