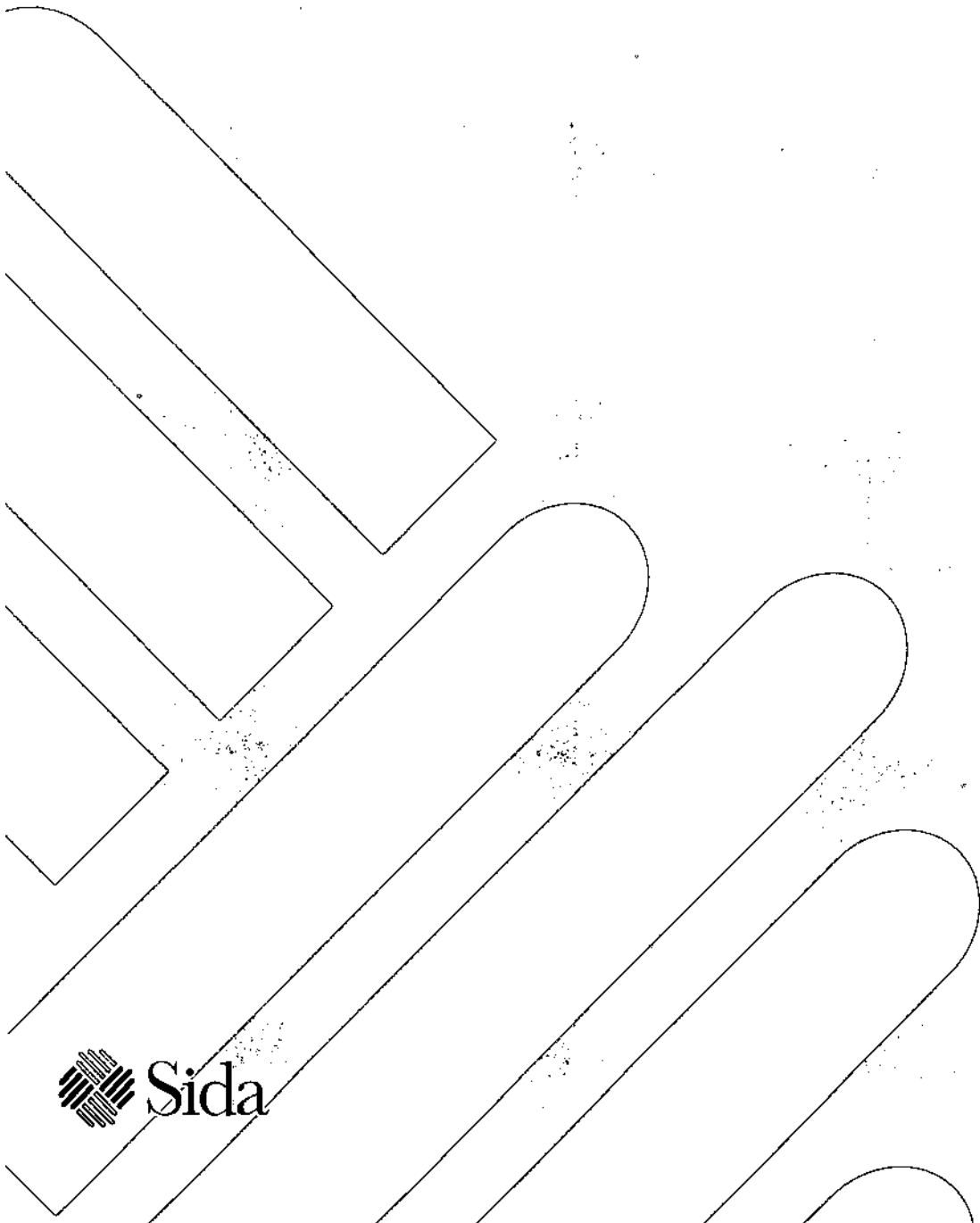


RESA-1995-0101/350



Southern Africa

REGIONAL STUDIES



 Sida

Southern Africa

REGIONAL STUDIES



Printed by: Tryckindustri, Solna
Printed on recycled paper

ISBN 91-586-7495-0

ISSN 1402-0599

Sida

Swedish International Development Cooperation Agency
S-105 25 Stockholm

INTRODUCTION

Project 2015 is the name adopted for a series of papers commissioned by Sida, the new Swedish international development cooperation agency, during its first year. The purpose of the project was to study on-going and expected changes in the world during the next 5 – 20 years, and to discuss the impact of these changes on the countries and target groups with whom Sida is working. The papers will be used in Sida's long-term planning and should be seen as intellectual inputs to the organization's country strategies.

Apart from studies on a.o. aid dependency and aid management, a number of regional studies have been undertaken. They have been designed in different manners depending on the specifics of different regions.

A great number of studies on different aspects of present and future Southern Africa do already exist. Considering this fact, the approach chosen for the region was not to commission new studies. Instead, 5 persons with an extensive knowledge about Southern Africa and with very different professional backgrounds were asked to write papers about the region. The Terms of Reference included few conditions except an analysis of the issues that each author felt would be of greatest importance for the development in the region, and a discussion on different possible scenarios in a 2015-perspective.

Five papers on Southern Africa, written by the following authors, are included in this booklet:

- Barry Dalal-Clayton – environmental perspective
- Sandra Wallman – socio-cultural perspective
- Bertil Odén – multiperspective with focus on regional cooperation
- Jeffrey Fine – economic perspective
- Lennart Wohlgemuth – human resource perspective

The papers have been discussed in Sida seminars. We hope they will contribute to further discussions about the future of Southern Africa and the role of development cooperation in that context.

Jan Bjerninger
Director, Southern Africa Department

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Barry Dalal-Clayton

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ENVIRONMENT AND ECOLOGY IN SOUTHERN AFRICA: CURRENT TRENDS AND SCENARIOS TO 2015

by

Barry Dalal-Clayton

International Institute for Environment and Development
November 1995

ACKNOWLEDGEMENTS

In preparing this paper, material has been drawn from an extensive range of recent publications which are listed in the references. Of particular help was the recently published "State of the Environment in Southern Africa" (SARDC 1994) prepared by Southern African Research and Documentation Centre in collaboration with the World Conservation Union (IUCN) and Southern African Development Community (SADC).

I am grateful to several IIED colleagues who provided advice, material and commented on particular sections of this draft: Ross Hughes, Diana Mitlin (population and urbanization), Jules Pretty (agriculture and pollution), James Mayers (information sources) and Dr Richard Moorehead. Dr Ian Scoones of the Institute of Development Studies, University of Sussex, gave advice on the approach to take and reviewed the section dealing with land degradation. I am also indebted to Professor Nigel Leader-Williams of the Durrell Institute for Conservation and Ecology, University of Kent, for providing information on elephant and rhino populations in Southern Africa and for valuable comments on the analysis of trends in biodiversity.

Responsibility for all interpretations of facts and trends is entirely my own. This paper does not represent an official position of IIED.

ABBREVIATIONS

AIDS	Acquired Immune Deficiency Syndrome
CWM	Community-based Wildlife Management
DDT	Dichloro-Diphenyl-Trichlor-Ethane (pesticide)
EIA	Environmental Impact Assessment
ELMS	Environment and Land Management Sector of SADC
ETH	Eastern Transvaal Highveld
FAO	UN Food and Agriculture Organisation
GATT	General Agreement on Tariffs and Trade
GNP	Gross National Product
HIV	Human Immuno-Deficiency Virus
IFPRI	International Food Policy Research Institute
IIED	International Institute for Environment and Development
IPM	Integrated Pest Management
IUCN	World Conservation Union
MFA	Swedish Ministry of Foreign Affairs
NSDS	National Sustainable Development Strategy
PWV	Pretoria-Witwatersrand-Vaal triangle
SADC	Southern African Development Community
SADCC	Southern African Development Coordination Conference (now SADC)
SAPs	Structural Adjustment Programmes
SARDC	Southern African Research and Documentation Centre
Sida	Swedish International Development Agency
UNCED	United Nations Conference on Environment and Development
UNEP	United Nations Environment Programme
ZACPLAN	Zambezi River Action Plan

BACKGROUND

This report has been undertaken under the framework of Sida's **2015 project**. Sida describes the background to the project as follows:

"Since the beginning of the 1970s, Sweden's bilateral cooperation with the 10-20 programme countries designated by Parliament has been based on 'country programmes'. Like country programmes managed by other agencies, these are based on the development plans and priorities of the recipient governments as well as on the experience and relationship emerging from many years of cooperation. In recent years, Sida's country programmes have been gradually superseded by 'country strategies', which are programmatic statements proposed by Sida and approved by Government, usually after some revision. Country strategies normally have a time perspective of around five years, and they discuss the objectives, experience and constraints at national rather than at project level. Apart from these 'programme' countries, official statements of strategy or programme – for instance, in documents of the aid agencies or in the Government's Budget Bill – are generally very brief and general, indicating support for certain development goals or for efforts to deal with a particular problem".

Under its 2015 Project, Sida is now examining trends and structural factors in various sub-regions of the world, paying particular attention to "some countries which currently receive Swedish aid or have important development problems. The purpose is to provide a general idea of how present trends and structural factors will influence their needs and capabilities in the years 2000-2015, under certain scenarios as regards external and internal conditions. Factors of particular interest include: (a) population, (b) food security, (c) the prevalence and nature of poverty, (d) environmental degradation, (e) democracy and human rights, (f) macroeconomic conditions (including government finance, balance of payments situation and indebtedness, and (g) the commitment of civil society, ruling elites and the administration of economic and social development

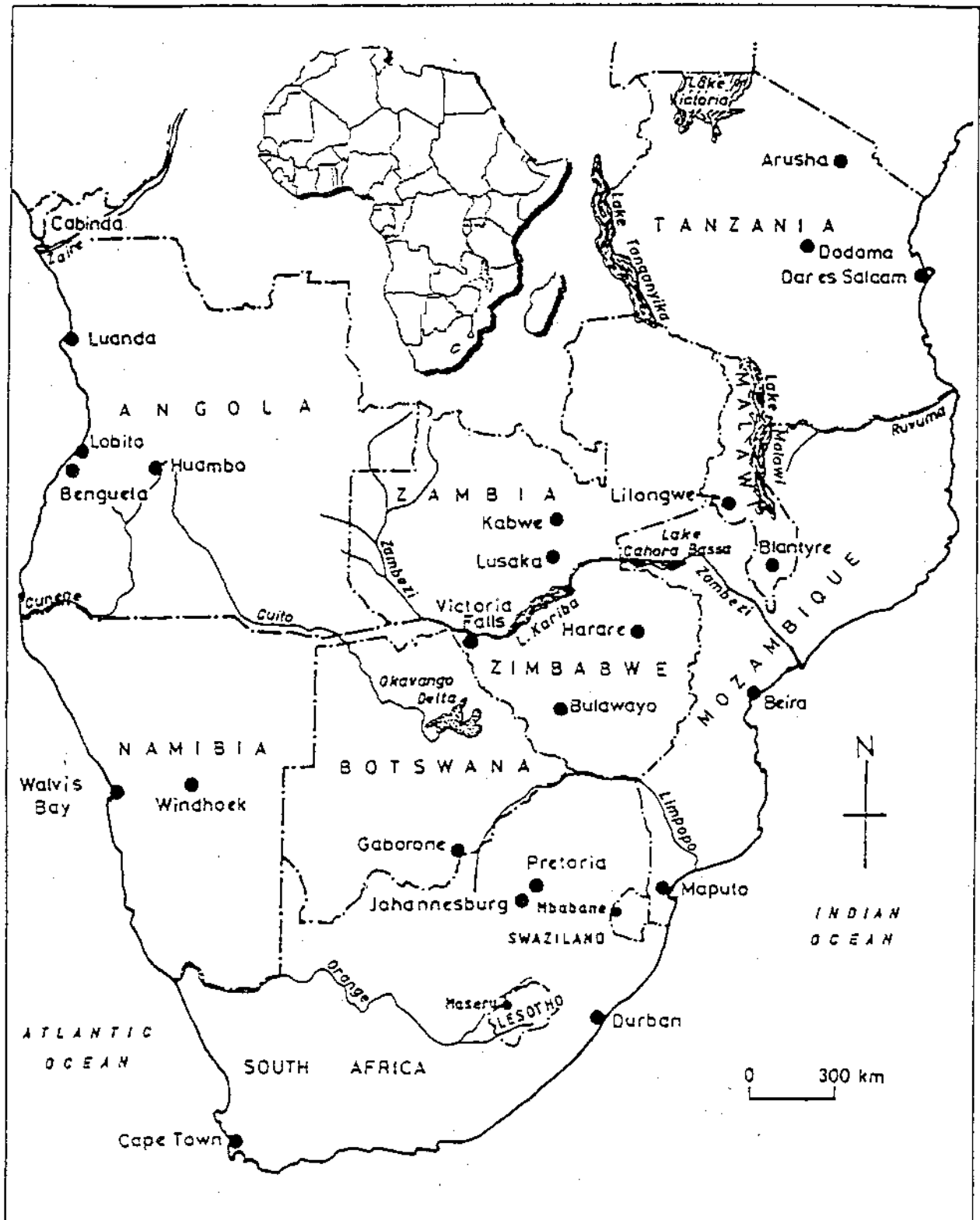
Combinations of these factors may produce more or less likely scenarios which may influence the scope and direction of Swedish aid. The latter question will be considered against the background of a review of Swedish experience in development cooperation in each sub-region, including with reference to SASDA and Sida studies of certain country programmes.

The aim of the 2015 project studies is not to produce quantitative projections for regions or countries, but to compare the effects of likely trends on the general socio-economic as well as the geopolitical environment in which Sida will function 20 years from now".

This particular study on environment and ecology in Southern Africa was commissioned by Sida's Department for Southern Africa, under the framework of the 2015 Project, as one of several inputs to the sub-regional study of Southern Africa. The focus is on mainland Southern Africa (i.e. not including Madagascar and Indian Ocean islands) covering the following countries: Angola, Botswana, Lesotho, Mozambique, Namibia, South Africa, Swaziland, Tanzania, Zambia, and Zimbabwe (see Figure 1).

The **terms of reference** for this study require it to "focus on natural resources, ecology and environment and on the relationship between man and nature", outlining critical factors and analysing scenarios which might determine development during the next 20 years, and highlighting changes that are likely to be needed in the development cooperation programme during this period. Sida has indicated special interest in differences between South Africa and the other countries of the region, particularly in terms of environmental degradation.

Figure 1: Southern Africa



Source: SARDC (1994)

EXECUTIVE SUMMARY

This paper examines current environmental trends and environmental scenarios for the next 20 years to the year 2015, and relates these to socio-economic and geopolitical factors. It has been commissioned by Sida as an input to the sub-regional study of Southern Africa under Sida's 2015 project. The paper is presented in three sections:

Section 1 discusses several key difficulties which inhibit the construction of scenarios of future environmental conditions in the region. Firstly, there is a serious issue of information poverty – data is lacking for many important variables and much of what is available is unreliable. Secondly, there are on-going, vigorous debates and disputes about a range of environmental trends and issues. For example, there is considerable controversy about land degradation – what is it, how serious is it, and how extensive is the problem? One of the most important considerations for both current and future environmental trends and environmental management is livelihoods. The vast majority of the people in the region depend directly on the environment for the survival. Yet there is very little knowledge in individual countries about livelihood strategies. These problems conspire to create an atmosphere of uncertainty which makes scenario-building extremely difficult, and casts doubt on its value.

In section 2, some of the key debates and important trends and issues are discussed to lay the foundation for subsequent scenarios. The issues selected for analysis include:

- ***Land degradation***

This 'problem' has been written about for decades, usually in terms of overcrowding, bad land management, overgrazing and soil erosion. Pastoralists, in particular, have been frequently blamed for overgrazing and causing extensive 'desertification'. New thinking about range management has questioned concepts like 'carrying capacity' and 'land degradation' and shown how, in practice, pastoralists adopt well adjusted management approaches in their highly dynamic, non-equilibrium dryland environments. These environments are very resilient and pastoralism is not the cause of extensive or permanent damage to the environment. Recent work has also cast considerable doubt on the reliability of soil erosion loss figures in the region. Land degradation where it is a serious issue, is often the result of issues such as poverty (poor people often have little choice but to use the land badly in order to survive), unfair land allocation (such as the forcing, in the past, of people into communal areas with poor and fragile soils, where overcrowding is inevitably leading to misuse of the land, erosion and falling soil fertility).

- ***Population and urbanization***

The population of the region, currently 136 million, is expected to double by 2015. Over 40% are under 14 years of age and this, in the future, will place a severe burden on economics as an expanding and ageing adult population require jobs and health services. Urbanization is increasing rapidly, much of it due to rural-urban migration fuelled by war and conflict as well as economic factors, landlessness, the effects of drought, etc. But the greatest urban growth will be in small urban centres (< 0.5 million) where people are dependent on agriculture and agriculturally-related industries. Where rural populations are highly concentrated in communal lands, many households are vulnerable to economic and environmental factors. Statistics for urbanization, particularly projections to 2015, contain large margins of error and need to be treated with caution. Nevertheless, rapid urbanization (which is likely to continue) is leading to considerable problems – squatter settlements, unsanitary conditions inadequate services, urban waste, etc.

- *The AIDS issue*

A major problem in assessing the extent of the epidemic is the lack of data and its unreliability – cases are under-reported (maybe as little as 10%) for various reasons (including cover-up). Despite great uncertainties about the course of the epidemic, AIDS will have a significant impact at all levels of society and on all aspects of economies – with enormous pressures on health care systems. Skilled and trained manpower will be severely hit, particularly in major urban centres.

- *Armed conflict*

Liberation wars, civil conflict, and destabilization (by South Africa's former apartheid regime) have displaced large numbers of people, creating severe refugee problems in various countries, leading to environmental impacts and fuelling urbanization. The region is now enjoying a period of stability and increasing democracy, but future conflict cannot be ruled out, especially over access to water.

- *Climate change*

There is much uncertainty over this issue. Information for the region concerning the potential impact of global warming and how it might be mitigated is uncertain and often not available. Models predict that the region will become more arid than at present, and that temperatures will rise by 2030 by between 0.8 and 1.7 °C, exacerbating problems in the arid and semi-arid areas, particularly water availability. The impacts are likely to include vegetation changes, increased disease vectors (e.g. ticks), reduced biodiversity (particularly ungulates whose grassland savanna habitats will diminish in extent), accelerated bush encroachment in rangelands leading to smallstock increasingly replacing cattle, and maize will increasingly become an unsuitable crop.

- *Water resources*

Water is arguably the most critical of all resources in the drought-prone region. Studies indicate that Southern Africa will experience critical water shortages by 2030 and some countries will be in actual water deficit. Some countries are undertaking massive water supply schemes involving the transport of water between catchments. More dams are being considered. SADC has been coordinating dialogue amongst countries in the region on sound water allocation and water-sharing agreements (e.g. Zambezi River Action Plan).

- *Pollution*

Pollution monitoring in the region is weak. In some countries, controls do not exist or are poorly enforced. Population growth, urbanization, industrialization and intensive agriculture are the main contributors to waste generation and pollution. The mining sector is a major polluter (particularly toxic metals and solid waste dumps). In coastal areas, industries discharge untreated waste into the sea and oil spills are a periodic problem. The worst air pollution is in South Africa's Eastern Transvaal Highveld where there is a high concentration of coal-burning industries. Pesticide residues have been shown to affect wildlife in lakes and rivers.

There is considerable debate over the need for (polluting) agricultural intensification to feed the growing population on the one hand, and an alternative (non-polluting) approach involving the adoption of resource-conserving technologies and practices and an emphasis on local resources on the other hand. The poor

suffer the most from pollution – they frequently have no choice but to draw water (for drinking and washing, and for supplying to gardens and livestock) from contaminated sources.

- ***Wildlife***

The region is well known for its protected areas and wildlife, particularly its large mammals – the basis of tourism. But wildlife is under intense pressure: grazing livestock are displacing wild animals; expanding agriculture is converting woodland to farms; dams are altering river characteristics; pollution is increasing; and habitats are being taken for various uses. The open range which large grazing animals require is being severely depleted and interference (e.g. by livestock fences) is inhibiting movement. Poaching has severely reduced elephant populations and black rhinos have been decimated in some countries. Conservation efforts frequently have been thwarted by ineffective legislation, inadequate penalties and weak law enforcement. Innovative wildlife management strategies have been pioneered in the region such as game ranching and community-based wildlife management schemes (e.g. CAMPFIRE in Zimbabwe). These offer promising and practical alternatives to traditional approaches to wildlife conservation.

- ***Energy***

Most electrical power in the region is supplied from hydro-power schemes and (polluting) coal-generating stations (particularly in South Africa). Generating further hydro-power is a problem due to strong competition for water on major rivers. The lack of bulk transmission lines limits South Africa from sharing its current spare (but idle) capacity (a Southern Africa grid has been suggested). There is debate about the acceptability of building more nuclear power stations in South Africa. A major factor is that most people (particularly in rural areas) rely on wood, charcoal and coal (again, mainly in South Africa) for cooking and heating.

- ***Mineral exploitation***

Southern Africa is rich in minerals. The richest states are dependent on mineral exploitation (e.g. South Africa on gold and diamonds; and Botswana – which has enjoyed spectacular growth since independence – from diamonds). Others are dependent on mining industries (e.g. Zambia on copper). Mining in the region is large-scale and causes considerable pollution, particularly from solid wastes. Indirect environmental problems are associated with migrant labour which depletes 'home' areas of labour to manage the land properly.

- ***Threats to marine environments***

Some marine resources are over-exploited – prawns, fish stocks. Some habitats are threatened by pollution, mismanagement and misuse, e.g. mangroves, coral reefs. Various species are threatened, e.g. turtles.

- ***Traditional resource management, access to resources, land tenure and rights***

Many traditional customs and practices of land management – which are often locally appropriate and sustainable (and far more suitable than new external solutions) have been discouraged, eroded and in some cases outlawed (by colonial governments). Traditional land tenure arrangements have been dismantled, and inequitable land divisions have been created (e.g. the best land for settlers, poor communal lands for Africans). Independent governments have continued to erode traditional rights (e.g. pastoralists' access to grazing lands).

The expansion of protected area management regimes often denies surrounding communities from entering those areas to garner resources on which they have traditionally depended (e.g. thatching grass, medicinal

plants, minor forest products, etc.). The lack of rights and land tenure often prevents poor people accessing loans and credit to invest in land management and to raise living standards. These issues need urgent attention.

- ***Institutional issues and skills (for environmental management)***

It is increasingly recognised that broad-based participation of stakeholders is required to define problems, set priorities and goals for environmental management and sustainable development. This is now part of the rhetoric in the countries of the region, but there is slow progress in giving real effect to these principles. National environment ministries, departments and agencies are generally weak, lacking influence and power, are starved of resources, and lack trained and skilled staff with experience and competence in environmental planning and management. These problems severely limit their ability to monitor and manage the environment. There is a need for education and to build environmental awareness within and across governments and societies. Environmental legislation and procedures (e.g. EIA) need to be introduced (where they are absent) or revised and made effective (i.e. with enforcement), and an ethic of sound environmental management promoted.

In section 3, these key debates, trends and issues are used to examine certain scenarios. Firstly some pioneering scenario planning work undertaken in South Africa in the period before the end of apartheid is discussed. This presented options for that country, based on environmental futures, and concluded, amongst other things that South Africa had no option but to become an African 'dragon' – a boom economy to lead the region. This 21st century vision has profound implications for the region: some positive – it could provide the economic lift the region needs; others less positive – it could lead to the region being 'swamped' by South African dominance.

Various boundary conditions, which will govern scenario-building, are outlined. These include those factors which are already set and are likely to remain the same (the "rules of the game"), and others which are largely beyond control (variables or key uncertainties). A number of key environmental trends are briefly revisited to set the scene and bring focus. Two scenarios are then outlined:

- ***The doomsday scenario – the road to 'hell'***

It is assumed that most, if not all, of the current trends in the region will continue. Some trends (e.g. population growth) have in-built momentum. Serious environmental consequences will ensue but, if trends worsen and accelerate, this would lead to a nightmare or 'doomsday' scenario with widespread conflict (possibly regional or sub-regional war), extensive environmental degradation and human misery. This 'road to hell' would be driven by a variety of factors: economic stagnation and decline; consequential worsening poverty; rapid population growth; the decimation of skilled and educated people – particularly in urban centres – as a result of AIDS; rapid increases in rates of urbanization as a result of refugees from civil unrest (because of disenchantment with governments) and war (due to conflicts over access to water as population growth increases demand and climate change – increasing aridity – reduce availability), land degradation, declining soil fertility, etc.; and increasing loss of habitat and biodiversity as agriculture (both intensive production and subsistence farming) expands to feed the expanding population; and the increasing moribundity of government institutions deprived of resources and skills and, subsequently, government collapse.

- ***Building a sustainable future – the road to 'heaven'***

Under this picture, the reverse of the nightmare depicted in the 'doomsday' scenario is envisaged. Governments increasingly engage in open, participatory processes to develop and implement national and local sustainable

development strategies. Lessons from implementation, and feedback through societal dialogue, will facilitate periodic (say every 5 years) review and revision in a cyclical process of 'learning by doing'.

Over time, with increased regional cooperation and collaboration, particularly with the economically stronger South Africa, the economy of the region will improve, living standards will rise, and poverty will decline. Increasingly, the (majority) rural poor will be able to invest in better land management. There will be significant increases in agricultural production – to feed the growing population. These will come (as economic growth takes off, enabling increasing investment in education and training) through sustainable farming practices – particularly amongst the majority small-scale farmers – which will recycle nutrients, improve and conserve the land and reduce pollution. Such practices will be enabled by improvements in land rights and access to credit and appropriate technologies.

Economic growth will lead to better performance by better-staffed government institutions, with improved and harmonised policies and legislation accompanied by policing and enforcement of environmental regulations. These improvements, helped by regional cooperation will guarantee peace and stability within countries and regionally, particularly as water-sharing agreements will be negotiated. There will be significant investments in habitat and biodiversity conservation, poaching will be eliminated and species reintroduced into their former range. The region will grow as a tourism mecca, further spurring economic growth and prosperity.

The real future, in practice, lies somewhere between the 'extremes' of these opposing scenarios. However, it is impossible to predict the exact alignment of the route. The future may well be shaped by the unexpected.

In section 4, a range of preliminary recommendations are made where Sida might focus attention. It is concluded that this preliminary and personal view of the environmental future in the region requires further peer review within IIED followed by 'ground truthing' in the region to develop 'best bets' for sound environmental management based on steps that can be taken now rather than aiming at perfection.

1: INTRODUCTION

Over the last 30 years, the countries of Southern Africa have seen great political changes: the colonial powers have withdrawn, minority governments have been replaced and apartheid ended, and one-party states have given way to democracies. Sometimes these changes have been peaceful, in other cases they have followed protracted struggles and armed conflict.

The political transformations have been accompanied by great social changes. For example, there has been an explosion in the region's population, urban centres have mushroomed and rural populations have migrated to the cities in search of work. The demand for permanent housing, for water, sewage and transport systems, for industrial and consumer products has increased dramatically.

These pressures have had their environmental consequences. For example, there is now significant land degradation in some areas; pollution (particularly in urban areas) is steadily increasing; there has been a significant loss of forests (much converted to agricultural land and/or cut for fuelwood) and biodiversity, with the survival of some species now threatened – some are already extinct throughout most of the region (e.g. the black rhino).

What is the future likely to hold for Southern Africa? What are likely to be the environmental trends in the period 2000-2015? This paper was commissioned to explore these issues. But this is an almost impossible task. Much can happen over a twenty year period. The unexpected is always likely to happen. Even five years ago, who would have predicted a peaceful end to apartheid? Whilst this is a political issue, it also has considerable environmental implications related to South Africa's influence and role in the region.

As SARDC (1994) note, "many techniques have been used to predict the future, from casting bones to reading the stars to vast mathematical modelling incorporating large amounts of data". Many studies examine past experiences and directions and current trends and project these into the future. This was the basis of visions presented in the concluding chapter of a recent book prepared by the Southern African Research and Documentation Centre (SARDC) in collaboration with IUCN and SADC following a three year study (SARDC 1994).

A great deal has been written in recent years describing existing environmental conditions and trends in the region and in individual countries. Much of this is contained in environmental profiles, national conservation strategies, national environmental action plans, sustainable development strategies, sector plans, and similar documents. A list of useful reference documents is provided in Appendix 1. Drawing from this database, a brief overview of the dynamic and rich environment in the region is given in Appendix 2, as a background to the discussion in section 2.

Apart from the socio-economic paths and environmental management ethics that individual countries have already adopted or might follow in the coming years, a number of key factors will influence any analysis of current environmental trends and any attempt to derive possible scenarios for the period 2000-2015. Amongst these are such issues as the availability and reliability of the necessary environmental data; disputes and debate about particular environmental 'problems'; and the lack of knowledge about livelihood strategies. These issues are discussed in sections 1.1 to 1.4.

1.1 Information Poverty

Despite the wealth of documentation on the environment in the countries of Southern Africa, a major problem is that, all too often, a significant proportion of the data which they report has not been 'ground truthed' by field observations, but is based on or summarises information from other existing sources, much of which is itself repeated from elsewhere. Furthermore, there is often uncertainty about the reliability of data in the original

sources. This means that questionable information continues to be given currency without checking, and various 'environmental myths' which they are used to support, such as the extent and seriousness of land degradation in the region, are perpetuated. This particular issue is returned to in section 2.1.

As indicated above, a major question arises over the reliability and comparability of statistics reported for environmental processes in the region (this problem is not restricted to Southern Africa). A notable example is the widely varying figures for soil erosion reported in different countries – probably because of the use of different methods of measurement. Conventional wisdom about soil erosion and the reliability of particular data sets has recently been called into question (Stocking, 1996 forthcoming) (see section 2.1).

In practice, for many environmental factors for which reliable data is required meaningfully to assess trends and predict future positions, the available data are either questionable or not sufficiently available. Another example is the difficulty of making comparisons between data for rural and urban populations in different countries – a point taken up in section 1.3.

The information poverty gap in Southern Africa is a serious impediment to predicting future environmental trends. However, whilst there is an undoubted problem with data availability, in some cases the problem is more one of 'invisible information' – i.e. information exists, but it is dispersed, inaccessible or un-recognised (James Mayers, pers.comm.). A key challenge in addressing many sectoral and cross-sectoral information issues is to think creatively about accessing hidden and unconventional information sources as well as making obvious existing information more useful.

1.2 Disputes and Debates

Serious questions are being asked and a series of debates are taking place over various environmental 'problems' or trends (land degradation, the effect of AIDS, the impacts of climate change, etc.). For some time, a number of trends have been taken as fact and have been the subject of a considerable amount of alarmist writing (e.g. on rates of soil erosion and desertification). For example, during the 1980s, famine and images of starving rural people created a perception in the industrial countries of environmental or ecological catastrophe in Africa. Africa was 'in crisis' (Timberlake 1988) and the problem was, at least in part, blamed on African farming methods. For example, the World Bank (1989, p95) commented:

"Pressure on the land is resulting in declines in crop yields and in overgrazing. Vegetative cover is weakening, erosion accelerating".

In contrast, other observers pointed to the sophisticated and sensitive way in which many African farmers manage their environment, e.g. Richards (1983) noted:

"Technical characteristics of African land management systems ... are inventions appropriate to changing environmental and economic conditions. There is no intrinsic reason why they should be treated as survivals from an era of traditional subsistence production or as evidence of involution in the face of population increase and capitalist exploitation. Recent ecological research suggests they may be better regarded as advanced rather than backward farmers".

In the last few years, new evidence and new ways of thinking have challenged previously-held 'certainties' (see, for example, Scoones (1994) on pastoral development). Some of the key environmental issues and debates concerning Southern Africa are discussed in section 2 to illustrate the difficulty. Most are still largely unresolved and are the subject of considerable dispute amongst experts and opinion-formers. This makes it difficult to draw conclusions about trends, both existing and in the future.

1.3 Livelihood Strategies

Perhaps one of the most important implications of resolving these debates and of environmental, social and economic changes in Southern Africa over the next 20 years, will be for the livelihood strategies of the region's peoples. Yet whilst a few studies have looked at livelihoods in particular countries or environments in the region (e.g. Scoones, 1996 forthcoming, in Zimbabwe; IUCN 1992, in Botswana), in general, little seems to be known. Even in South Africa, there is little actually known about livelihood strategies in the overcrowded communal lands (homelands). This makes prediction about the consequences of environmental trends for people very difficult.

Throughout Southern Africa, the primary concern of the vast majority of the region's 136 million people is securing a livelihood – gaining a living, including livelihood capabilities, tangible and intangible assets (Chambers & Conway 1992). Employment can provide a livelihood, but most livelihoods of the poor are based on multiple activities and sources of food, income and security. 57% of the population live in rural areas where they:

“gain their livelihoods in a variety of ways from different types of farming and a wide range of other activities. They do so with varying degrees of success according to their access to resources and employment and how they deal with pressures arising from social, economic and environmental change. Life for many entails a daily struggle in which much energy and ingenuity is needed to secure livelihoods in the face of various crises” (Bernstein, 1992).

It needs to be noted, however, that there are difficulties in defining ‘rural’ with any great precision. In population censuses, ‘rural’ and ‘urban’ are defined by residence in settlements respectively below or above a particular size. The cut off point for settlement size varies between countries: in one it may be 5000 inhabitants, in another 10,000. This makes precise comparisons impossible. Furthermore, many rural people move between rural areas and towns, and between different rural areas. Such movements occur with varying frequencies, for different lengths of time, in regular or sporadic patterns of migration, and for a variety of reasons. The latter include: to seek work, sell produce, gain education, visit relatives, purchase goods, and for official business (i.e. with government officials, lawyers, etc.). The livelihood strategies of many rural households are dependent on regular or intermittent contacts with the urban economy, to supplement farming incomes and to obtain basic consumption goods (salt, cooking oil, sugar, soap, textiles, medicines). Similarly, some urban residents, when faced with declining real incomes and employment opportunities rely, at least in part, on rural relatives for their supplies of food staples. Such key rural-urban linkages and interactions are important, but often overlooked.

Farming, including crop cultivation and pastoralism, is key to rural economies virtually everywhere. As Bernstein (op.cit.) points out, it is

“a direct source of employment and income and an indirect source through a range of activities ‘upstream’ of farming (supply of inputs, like tools, seeds and fertilizers; and of services, like credit, technical assistance and construction and maintenance of infrastructure such as irrigation works and roads) and ‘downstream’ of farming (processing, transport and marketing of crops and livestock products). In addition, incomes from farming and its linked activities in the countryside generate demand for a range of consumer goods and services”.

But many rural people cannot achieve an adequate and secure livelihood from farming: some are landless; others are ‘marginal’ farmers because their land is of poor quality or is too small, or is located in a difficult and unpredictable environment, or because they are under pressures from big farmers and merchants or suffer from adverse market conditions and government policies. For rural people in such circumstances, livelihoods are pursued through a variety of means, as illustrated in Table 1, and often requiring mobility over shorter or longer periods.

Table 1: Means of Rural Livelihoods Other Than Farming Own Land

	<i>Wage Employment by:</i>	<i>Self-Employment in:</i>
Agriculture	(Richer) farmers	Share-cropping or other tenant farming
Agriculturally linked	Input suppliers, contractors, crop merchants, transporters	Artisanal production (e.g. tools, equipment), small-scale processing
Non-agricultural	Industry, trade and other services and other services	Handicraft production, petty trade

Source: Bernstein (1992) Box 1 lists a range of strategies and sources of food, income, support and survival.

Chambers (1995) also writes of the usually diverse and often complex livelihood strategies of the poor. He compares them to foxes – after the saying of Archilochus that “the fox has many ideas but the hedgehog has one big idea”:

“Full time employees in the industrial world and industrial sector are hedgehogs with one big idea, a single source of support. Those poor people, often powerless, desperate or exploited, who have or can have but one survival strategy are the same – slaves, bonded labourers, outworkers tied to single supplier-buyers, beggars, some vendors, prostitutes, and some other occupational specialists. But most poor in the South, and more now in the North, are foxes with a portfolio of activities, with different members of the family seeking and finding different sources of food, fuel, animal fodder, cash and support in different ways in different places at different times of the year. Their living is improvised and sustained through their livelihood capabilities, through tangible assets in the form of stores and resources, and through intangible assets in the form of claims and access”.

Box 1 lists a range of strategies and sources of food, income, support and survival.

Pretty (1995a) also takes up these themes in discussing the complex, diverse and risk-prone (CDR) nature of agriculture for many poor farmers in the world, and how such CDR farmers seek to reduce risk and increase food and income by complicating, diversifying and, where labour is available, intensifying their farming systems, adding to their enterprises.

Box 1: Some Examples of Livelihood Strategies

Home gardening – (both rural and urban) and the exploitation of micro-environments.

Common property resources – fishing, hunting, grazing and gathering in lakes, ponds, rivers, the sea, forests, woodlands, swamps, savannas, hills, wastelands, roadsides ... for any of a vast range of fish, animals, fodders, wild foods, fibres, building materials, fuel, fertiliser, medicines and much else.

Scavenging (mainly urban) and **gleaning** (mainly rural), including traditional rights and access to private residues (buttermilk, crop residues as fuel, etc.).

Processing, hawking, vending and marketing, including produce from home gardens and common property resources.

Share-rearing of livestock, where livestock are lent for herding in exchange for rights to some products and/or offspring.

Transporting goods with a horse, donkey, mule, cart, bicycle, or head or backloading.

Mutual help, including small borrowings from relatives and neighbours.

Contract outwork – weaving, rolling, cigarettes, making incense sticks, etc.

Casual labour and piecework especially in agriculture.

Specialised occupations – barbers, blacksmiths, carpenters, prostitutes, tailors, etc.

Domestic service – especially by girls and women.

Child labour, both domestically (collecting fuel-leaves, twigs, branches, dung, collecting fodder, weeding, herding animals, removing stones from fields and ticks from livestock, etc.) and working in factories (making matches, candles, fireworks, etc.), restaurants, people's houses, etc.

Craft work of many sorts.

Mortgaging and selling assets, future labour and children.

Family splitting, including putting out children to others.

Migration for seasonal work in agriculture, brick-making, urban construction, etc.

Remittances

Seasonal food-for-work, public works and relief.

Stinting, in many ways, with food and other consumption.

Begging.

Theft

Triage (i.e. assorting according to quality) especially with girl children and weaklings.

Source: Chambers (1995).

1.4 Living with Uncertainty

The inadequacy or questionability of available information, ongoing disputes and debates about environmental issues, and general knowledge gap about livelihood strategies all conspire to create a situation of uncertainty in which it is extremely difficult to make predictions about future environmental trends and their consequences. Natural resource management policy is not a simple technocratic exercise but has to deal directly with issues of uncertainty – a challenge which is highlighted well by Wynne (1992).

For donors, the main implication is a need to plan within the uncertainties by helping and facilitating processes which allow the relevant issues to emerge and be discussed in an open, participatory way, so that sustainable development strategies can be identified and the right kinds of investment made.

Some of the key debates and important environmental issues and trends are discussed in the next section. These enable some scenarios for the next 20 years to be suggested in section 3.

2: SOME KEY ENVIRONMENTAL DEBATES, TRENDS AND ISSUES

As space does not allow a comprehensive review of all aspects of environmental debates, nor all environmental trends and issues to be discussed, this section will focus on some key aspects of the critical and emerging debates and issues which affect any consideration of future scenarios.

- Land degradation
- Population and urbanisation
- The AIDS issue
- Armed conflict
- Climate change
- Water resources
- Pollution
- Wildlife
- Energy
- Mineral exploitation
- Threats to marine environments
- Traditional resource management, access to resources, land tenure and rights
- Institutional issues and skills (for environmental management)

These debates are also linked to social, economic and political pressures and forces which are dealt with in detail in other reports prepared for the Southern Africa component of Sida's 2015 project.

2.1 Land Degradation

There is much discussion on the issue of land degradation (see, for example, Dahlberg 1994) and this deserves special attention. Some claim it is one of Southern Africa's most serious and widespread environmental problems. But such claims are not a new phenomenon. There have been reports of impending disaster for decades. For example, Allan (1949) reported serious degeneration of woodland and soil deterioration in overcrowded 'Reserves' in eastern Northern Rhodesia (now Zambia) after the Second World War. Kay (1965) describes the situation:

"Large areas were deforested and fallow periods were insufficient to permit regeneration of the woodland. Overgrazing and annual bush fires contributed to the degradation of the vegetation both on the plateau and in the dambos, and 'any prospect of recovery became increasingly remote as the soils deteriorated under the punishing treatment' (Trapnell 1943). Soil deterioration – the loss of organic matter and available plant nutrients and of the structure of the soil – is less readily observed than soil erosion but is equally serious and, in fact, it greatly facilitates erosion..... Destruction of the vegetation cover, particularly on steep slopes and dambo margins, and soil deterioration greatly increase runoff and reduce the stability of soils. Excessive sheet and gully erosion follow; valuable top-soil is removed, and deep gullies are cut in dambos and other drainage lines and the local water table is thereby lowered and water supplies are endangered".

Similar problems continue to be identified today in many areas of the region, and assertions are made about their consequences. According SARDC (1994),

"A combination of inequitable land allocations [this issue is returned to later] leading to high population densities in specific areas, and poor farming methods, have led to declining productivity of grazing lands, falling crop yields and diminishing water supplies. This has been aggravated by increases in livestock numbers without a commensurate increase in land area for grazing".

UNEP (1992) reports that over 50% of the soil degradation in southern Africa is due to overgrazing, with cultivation causing most of the rest. The contribution of domestic felling of trees for fuelwood, fencing and other purposes is said to be relatively minor.

Whilst the use of improved seed varieties and fertilisers can increase yields for a time, real productivity declines with soil degradation. It is predicted that in 30-50 years, crop yields in the region will be reduced by 50% if the degradation of cultivated lands continues at current rates (Scotney & Dijkhuis, 1990). According to Twyford (1988), after over 20 years of soil erosion, the effectiveness of fertilizers has already been cut by 50% in some intensively farmed areas in Malawi. Stocking (1986) has calculated that soil nutrient loss in Zimbabwe through soil degradation costs as much as US \$50 per ha on cultivated and US \$80 per ha on grazing land. The costs for the region are undoubtedly enormous.

Figures for soil erosion are available for most countries. But they vary considerably, probably because of using different methods of measurement. In any case, they give no real indication of productivity changes. SARDC (1994) reports examples of national calculations of annual rates of soil loss through erosion (e.g. 300-400 million tonnes in South Africa, 96 m.tonnes for Zimbabwe's Save Catchment, 3 m.tonnes of topsoil in Zambia from cultivated land, and 50,000 tonnes of soil in Swaziland from gully erosion alone). But how reliable are such figures?

Stocking (1996, forthcoming) has challenged conventional wisdoms about soil erosion in Africa, exposing contradictions between the scientific evidence of erosion, the selective use and misuse of results, orthodox 'knee-jerk' responses to visual evidence of erosion, and policy responses:

"Soil erosion 'facts' may be as hidebound with bias, error and prejudice as the outpourings of social science..... A major pillar of received wisdom in narratives about environmental change and environmental policy-making in Africa may not be as solid as some scientists and policy-makers would wish us to believe".

He points out that there are many false assumptions, particularly about scale effects (notably from data from field erosion/runoff plots), and that great caution is needed about relying on generalisations, interpolations and extrapolations based on the available data. The potential for experimental errors is raised and doubt is cast on the validity of some of the methods used to determine soil erosion, particularly the use of soil mounds beneath trees, and Stocking even challenges some of his own calculations in Zimbabwe. Biot (1990) has similarly called into question the trustworthiness of this technique.

Decision-makers, planners and donors clearly need to exercise caution over claims for the rates and extent of soil erosion. Yet there is, without doubt, much land degradation in the region. However, there is surprisingly little information available about its extent, despite its importance. Nor is much known about the processes involved and cost-effective control measures (Chakela *et al.* 1989). The World Atlas of Desertification (UNEP 1992), shows the most extensive serious degradation as occurring in central and western South Africa, with localised pockets of serious degradation in Angola (between Luanda and Huambo), in northeastern Botswana, and in central and northeastern Tanzania. Little or no soil degradation is indicated over half of the region. However, given the challenges raised by Stocking (1996) and others, the reliability of this picture may be questionable, particularly in arid and semi-arid areas. Perhaps of more use will be the erosion hazard mapping

programme initiated in 1986 by SADC ELMS in the SADC countries and an equivalent exercise in South Africa.

For several decades, soil erosion research has been undertaken, soil conservation legislation has been enacted, and there has been repeated warnings of the threat of advancing soil degradation (some quite overblown with no factual basis). Yet there are still serious information gaps which make it difficult to provide reliable predictions of increases in soil degradation and the severity of the problem in Southern Africa. However, SARDC (1994) provides a useful review of the state of soil erosion in the regions ecozones.

Several types of soil degradation are important. Water erosion is greatest on slopes (even as gentle as 3%) and hillsides. Whilst gully erosion can be spectacular and is highly visible, it contributes only a modest amount of sediment. It is usually a symptom of a degraded catchment, not the cause; and is far less significant than sheet erosion. The latter is much less obvious, but is by far the most important and widespread – probably accounting for about 50% of all soil loss. Wind erosion is significant in some areas, particularly in arid and flat areas with little vegetation to break winds, e.g. the Kgalagadi desert in Botswana and Namibia, and parts of South Africa, Tanzania and Zimbabwe. Physical degradation affects soils to a more limited extent. It includes such problems as soil capping and crusting by heavy rain, compaction by livestock and machinery, and waterlogging from over-irrigation. Salinisation, acidification, loss of nutrients and organic matter, and pollution are forms of chemical degradation – mostly the result of human activities, particularly intensive high-input agriculture and irrigation.

Various factors combine to affect soil degradation. It is generally agreed that vegetative cover conserves soil – roots binding and aerating soil, protection from wind and heavy rain, reducing evaporation, etc. Much erosion occurs during heavy storms at the outset of the rainy season when vegetation ground cover is minimal. However, Stocking (1996) describes some of the ambivalent effects of vegetation on soils – it does not always have a positive and protective influence on sites where it grows – and points to the need to carefully “assess the specific conditions of site, slope, rainfall and vegetation type before determining whether or not plant cover is likely to conserve soil”.

Fire is employed to improve soil fertility (through ash), kill insects and poisonous weeds, and to stimulate grass growth for grazing. But it is often misused with fires started late in dry seasons – the “hot” burns baking the surface and limiting water penetration, and leaving the soil bare and vulnerable to rain, wind and sun. Droughts in the region exacerbate these problems with the roots of perennial grasses dying and annuals failing to set seed. As SARDC (1994) note,

“there is a vicious circle between drought and soil productivity. Drought increases soil degradation problems, while soil degradation magnifies the effects of drought. Because of this droughts can help to pinpoint areas of poor land management. Prolonged droughts during the 1980s exposed poor cultivation practices in parts of the Kgalagadi, South Africa’s Cape and Zimbabwe, for example”.

Another important issue about which there is considerable dispute is ‘overgrazing’. A large proportion of the people of the region is dependent on cattle and other livestock, particularly in the dry savannas and semi-arid areas which are not suited to crop production. The distribution of livestock is uneven in different countries and numbers vary significantly between droughts and periods of good rains. Over the period 1988-90, it is estimated that there were an average 45 million cattle and 71 million sheep and goats in the region (WRI 1992). The blame for soil degradation in the region is frequently placed on subsistence livestock-owners but, in practice, large areas of the degraded land in the region are actually under commercial ranching – notably in Namibia, South Africa and Botswana. In the latter country, a market economy, the production of cattle for sale, together with the sinking of thousands of

boreholes, resulted in a rapid increase in livestock numbers between the drought years of the early 1960s and those of the early 1980s. Grazing land policy has been constantly under review and many ranching projects have been attempted but without great success. Many of the largest stock owners are wealthy townspeople, some of whom have little knowledge of rangeland requirements.

Rangeland degradation, due to overstocking and overgrazing, is usually described as including: loss of overall plant cover and, consequently, increased water and wind erosion; decline in palatable grasses; invasion by unpalatable grasses, poisonous plants and thorny shrubs; and physical degradation through trampling. Whilst there is general agreement on these impacts, rangeland degradation has become the subject of considerable debate, with continuing dispute amongst 'experts' over the resilience of rangelands and their capacity to regenerate (Bell 1987, Campbell *et al.* 1989, Sandford undated, Skarpe 1991, Abel 1993). In fact, over the last few years, there has been major rethinking of various assumptions about range ecology and range management practice, focusing on environmental relationships in equilibrium and non-equilibrium ecosystems (see Box 2). These issues have been shown recently to be just as important and relevant in South Africa as elsewhere in the region (Dikeni *et al.* 1995).

It is considered that wild animals impact on Southern Africa's ecosystems far less than livestock, since they consume a much broader range of plants than cattle and eat more shrubs and trees (Taylor & Walker 1978) and since livestock tend to be "concentrated in relatively small areas year-round and protected from predators and diseases" (SARDC 1994).

Pastoralists (particularly nomads) have often been blamed for adversely affecting the environment – through overgrazing particular areas, but there is plenty of evidence to contradict this idea. For example, the Maasai in Tanzania's Ngorongoro District are said to destroy grass cover and cause soil desiccation, but studies of the area do not substantiate this view (Homewood and Rodgers 1984; Biot *et al.* 1992).

The new thinking in range ecology (see Box 2) also highlights the need to revise conventional wisdom about the relationships between pastoralists and their environments (Table 2). But land appropriation for other uses is steadily decreasing the areas available to pastoralists, often taking the best grazing lands, and forcing pastoralists to concentrate in smaller areas – with inevitably increased impacts on vegetation – and to use more marginal lands. Again, in Tanzania, large areas of Barabaig pastoralists were alienated from prime dry season grazing sites when the government established large wheat farms in Babati District (Lanc & Scoones, 1991), and cultivating peoples have settled extensively in similar sites even though the soils are not suited to cultivation – a fact that is likely to lead to land degradation problems in the future. Destocking is sometimes suggested to reduce grazing pressure and counter land degradation. But this is unlikely to work – particularly if on a voluntary basis – since most pastoralist families now have less than the minimum 30-45 cattle needed to survive.

A major challenge in Southern Africa is to feed the rapidly-growing population. Agricultural production is being increased through opening up forests and grazing lands to cultivation, and by intensification and irrigation. But the extent of suitable arable land is limited and there is increasing pressure to use unsuitable marginal lands and this is likely to add significantly to the region's land degradation problems. The situation is bad enough in many existing cultivated areas – even under modern farming techniques. Many farmers remove weeds and crop residues, depleting the soil of organic matter and leaving land bare for long periods. Regular ploughing has been shown to lead to organic matter loss (Elwell 1989) and to plough pans, particularly in soils with duplex profiles in which light sandy topsoils overly a heavy clay subsoil. Excessive fertiliser applications (particularly nitrogen fertiliser) leads to increased soil acidity and the release of toxic substances which inhibit plant growth. In South Africa, it is estimated that 10% of the cultivated land is affected by acidification (> 5 million ha severely; 10 m.ha moderately) (Farina & Johnston 1988).

Table 2: Comparison Between the 'Old' and 'New' Thinking About Pastoral Development

Area	'Old' Thinking	'New' Thinking
Objectives	Focus on commodity production; livestock development.	Focus on livelihoods; pastoral development.
Range management	Open range improvement (legumes, fodder trees, rotations), Paddocking and restrictive movement: fences	Focus on key resources: improvement, rehabilitation, creation. Mobility and Flexibility: no fences.
Planning	Blueprint development planning	Flexible, adaptive planning, with local involvement and a recognition of uncertainty.
Drought	'Normal' year development and drought relief separated. Focus on production issues in 'normal' years	Drought 'proofing' and safety net provision integrated. Focus on tracking: de/restocking, supplementary feeding, etc.
Tenure	Fixed tenure regimes: privatization (or exclusive communal). Conflict and issues largely ignored.	Flexible tenure: complex mix of overlapping integrated regimes. Focus on conflict negotiation, mediation and arbitration.
Institutions and administration	Service delivery package through centralized extension services. Extension workers for technical delivery.	Pastoral organisations for local management issues. Extension workers as institutional organizers.

Source: Scoones (1994)

Another major factor influencing land degradation, alluded to earlier, is the issue of land allocation. SARDC (1994) describe the problem as follows:

"Before colonisation, there was an abundance of land in southern Africa and population pressure was low, so very little damage was done to the soil. The colonial administrations did not recognise that traditional African forms of agriculture, such as pastoralism and shifting cultivation, were appropriate and sustainable use of land over the long-term. They believed that Africans were wasting land, and used this as a justification to designate most of the best land for themselves.

Today's soil-degradation problems are largely a consequence of the inequitable, colonial land-allocations. The problem now is not solely the quality of the land but the high population densities. Historically, lands designated for blacks in some countries were insufficient to allow for population growth, and today are extremely crowded. High population densities drive farmers onto marginal lands which erode more easily, and do not produce much, while the decreasing grazing area has to carry increasing livestock numbers".

These problems are particularly acute in the communal areas of Zimbabwe and the 'homelands' of South Africa, and pose a serious socio-political challenge to the governments of those countries.

Elsewhere, current economic and political policies of governments critically affect human pressure on the land. In Malawi, for example, commercial agricultural estates are strongly promoted. This has limited the land available to rural families and, in the southern part of the country, population densities now exceed 300 people/sq km. Many families have less than 1 ha to cultivate and are forced to crop the land continuously. Poverty is widespread and families are barely able to feed themselves. There is insufficient land to keep cattle and therefore no organic manures are returned.

Box 2: New Thinking About Range Ecology and Range Management Practice

“What were once the hallmarks of the discipline are now questioned. The utility of terms and concepts such as ‘vegetation succession’, ‘carrying capacity’ and ‘degradation’ are being reassessed, particularly for the dry rangelands where system dynamics are dominated by highly variable rainfall and episodic, chance events such as drought.

The ‘new’ thinking highlights, in particular, differences between so-called equilibrium and non-equilibrium environments. Equilibrium environments are those that show the classic feedback mechanisms normally assumed in mainstream range management. In such settings vegetation change is gradual, following classical successional models. Livestock populations are in turn limited by available forage in a density-dependent manner, so that excessive animal numbers, above a ‘carrying capacity’ level, result in negative effects on the vegetation. In the longer term this is assumed to cause more or less permanent damage – degradation or desertification. Such environments are typically found in wetter areas with more predictable patterns of rainfall.

By contrast, in non-equilibrium environments, range degradation is not such an issue. Production potentials of both grassland and livestock are so dominated by rainfall (or other external variables) that the livestock populations are kept low through the impact of drought or other episodic events. Livestock, under such conditions, do not have a long-term negative effect on rangeland resources. Such non-equilibrium environments have highly dynamic ecosystems and are typified by the arid or semi-arid zones where rainfall variability is high.

In practice, the distinction between these contrasting environments is often blurred. There is clearly a gradation between these two separate ideal types.

Three propositions summarise the recent thinking of range ecology:

Many arid and semi-arid grazing ecosystems are not at equilibrium and external factors (e.g. drought) determine livestock numbers and vegetation status. Grazing therefore has a limited effect on long-term grass productivity. In such situations, opportunistic or tracking strategies [matching of available feed supply with animal numbers at a particular site] are environmentally benign and waste less feed;

The productivity of African rangelands is heterogenous in space and variable over time; therefore, flexible movement is critical; and

African pastoral production systems are influenced by a range of different livelihood objectives. Therefore, blueprint interventions aimed at boosting single outputs (e.g. meat) using simplistic management tools (e.g. fixed carrying capacity) as part of standardized models (e.g. ranches) are unlikely to work”.

In essence, the history of livestock development in Africa has been one of equilibrium solutions being

imposed on non-equilibrium environments. For example, the ranch model – aimed at maintaining stability through regulating animal numbers and balancing grass species composition with fenced paddocks, water points and reseeded rangeland – is ill-suited to highly dynamic non-equilibrium ecosystems. But this model continues to be promoted and repeatedly fails in such areas. The development challenge is not the transformation of pastoral systems into ranching systems, but increasing the efficiency of tracking.

Source: Scoones (1994).

to the soil. It is not surprising that land degradation is increasing. It will be essential to address poverty issues as part of any programme to reduce land degradation. Otherwise, even though methods of soil erosion prevention and control may be promoted, individuals and families will be unable to respond to them. The region has seen various erosion-control programmes over the past few decades, most of which have failed due to their experimental nature; or because farmers' needs were not considered, yet they were expected to contribute much labour for few obvious benefits. The focus of agricultural extension is now on appropriate tillage methods and biological control approaches, whilst in Zimbabwe, a promising "no-till tied ridging" technique is being developed with communal farmers, building on local knowledge. Similarly, rehabilitation programmes are more likely to work if they are developed with local people, can adapt to local conditions, can change approach if needed, and are given time to become accepted and for the benefits to be recognised amongst communities. The experience of soil and water conservation in Kenya illustrates the issue (Box 3).

Box 3: The Catchment Approach to Soil and Water Conservation in Kenya

In Kenya, soil conservation is the responsibility of the Soil and Water Conservation Branch (SWCB) of the Ministry of Agriculture which operates in 222 divisions in all 47 districts of the country. The *catchment approach* to soil and water conservation was adopted in 1988 as a response to a realisation that conventional approaches (through farmers being advised, lectured, paid and forced to adopt new measures and practices) were not effective. In this new approach, the term catchment is closely associated with a specific community of people known to each other, rather than a strict physical watershed.

Local communities are purposefully involved in the analysis of their own farming and conservation problems, and decisions and recommendations made with their active participation. Community mobilisation is achieved by interdisciplinary planning teams, the formation of catchment conservation committees by farmers themselves, and intensified publicity and training through field days, public meetings, demonstrations and tours. This process enables information to flow to the community, the development of better understanding of the conservation problems specific to each area by the SWCB, and closer collaboration between farmers, the SWCB and other agencies.

Each Divisional Planning Team typically works in 3 or 4 catchments each year. Priority is given to catchments where local people or administrations have requested support, where soil erosion is serious, or where the SWCB has not worked before.

Multidisciplinary teams drawn from various government departments work for about a week in the catchment: beginning with a day of orientation and introduction to the methods, followed by 2-3 days building up a picture of local skills, knowledge and perspectives on problems and concerns using a variety of participatory inquiry methods), with a public meeting on the final day to present the findings in visual form.

Following the dialogue, a catchment conservation committee (CCC) of farmers is elected to coordinate action within the catchment (typically 8-15 people with the local Technical Assistant as an ex-officio

member). The divisional team then prepares a catchment report to serve as a baseline document for planning, implementation, monitoring and evaluation, and for the coordinated action by extension professionals based at Divisional and District level. The District Planning Team makes a detailed map of the catchment, and plans the soil and water conservation measures for each farm, working with the catchment committee. The CCCs receive support in the form of basic tools, equipment and technical training and advice from Ministry staff. In return, committee members assist fellow farmers in planning and implementing various individual and group soil and water conservation activities, and support the District Planning Teams in laying out and implementing plans for each farm.

The success of the approach is, in part, due to the ownership of the plan and commitment that has been achieved by active CCCs working with District Planning Teams. Lines of communication have been established and farming communities can exert a pull on the services of extension agents. The SWCB is aiming to extend the catchment approach to some 600 catchments a year. This will obviously bring new professional and institutional challenges, particularly with respect to the desire to maintain interactive participation.

Source: Pretty *et al.* 1995.

A major effort is needed to bring the elements of the land degradation debate and the insights from the 'new thinking' about range ecology to the attention of policy-makers, planners and donors, and particularly to the academic community. Otherwise, myths will be perpetuated and environmental management failures will persist.

2.2 Population and Urbanisation

The present and future people of Southern Africa will determine environmental trends, through their decisions and actions. The population of the region, currently 136 million, is expected to double by 2015. For the region, population growth averages 3% per year, although rates for individual countries vary between 2.2 and 3.8% (Table 3). In most countries, over 40% of the population is under 14 years of age, implying a high dependency rate and an expanding adult population in the future. This expansion is reinforced by declining death rates arising from improvements in health and nutrition. Although quite high, growth rates are stable or decreasing in six of the region's 11 countries. With the exception of Lesotho and Malawi, population densities are fairly low.

Three major trends are evident in the population dynamics of Southern African countries: first, population will be expanding rapidly during the period to 2015; second, the demographic structure of societies will place a great burden on national economies – initially because of the large youthful population and, subsequently, as a result of an expanding and ageing adult population that will require jobs (livelihoods) and health services (Mhone 1994). Thirdly, by far the greatest urban growth is taking place in small urban centres with population under 0.5 million (see Table 3) where people are dependent on agriculture and agriculturally-related industries for their livelihoods.

As Rowley and Holmberg (1992) point out, there are still some people who have "Malthusian fears of humans swamping the Earth and swarming over national borders". However, in terms of environmental impact, population is now seen more clearly as a multiplier of the interaction between consumption per person and the technologies to supply that consumption and dispose of the waste (Erlach and Erlach 1991). The increasing population has been identified as multiplying the effects of the region's environmental problems (SADC ELMS, 1991). Slowing the rate of population growth – conventionally through family planning – is often seen as a key way to ease and tackle the 'pressures' on the environment, but it is now generally accepted that the best approach is to reduce poverty and increase standards of living – and indeed this is now the professed focus of most donor agencies.

TABLE 5: Population Growth and Urban Centres in Southern Africa

Country	Population (millions) 1994	Average annual growth rate (%) 1990-5	Population (millions) 2025	Density per sq km (persons) 1991	Population in urban areas (%)			Annual urban growth rate (%) 1990-5
					1970	1990	Projection to 2015 ¹	
Angola	11.2	2.8	24.7	9.0	—	28	48.1	5.4
Botswana	1.5	3.5	3.4	2.6	8	28	50.8	8.9
Lesotho	2.0	2.9	4.4	66.0	9	20	39.3	6.3
Malawi	10.1	3.6	24.7	107.3	6	12	24.3	6.3
Mozambique	17.5	2.7	35.48	22.3	6	27	51.7	7.6
Namibia	2.0	3.1	4.7	2.4	19	28	46.1	5.2
South Africa	38.5	2.2	65.4	32.5	48	59	62.7	3.2
Swaziland	0.9	3.6	2.2	53.0		33	49.2	7.0
Tanzania	31.3	3.8	84.9	33.3	7	33	40.3	7.0
Zambia	9.8	3.8	26.3	13.0	30	50	52.9	5.6
Zimbabwe	11.0	3.1	22.6	28.2	17	28	47.9	5.4
TOTAL	135.8		298.7					
AVERAGE		3.0		17.7		42.7		6.5

Urban Centre Sizes in Southern Africa

	1 - 5 million			0.5 - 1 million			Under 0.5 million		
	1970	1990	2010 proj.	1970	1990	2010 proj.	1970	1990	2010 proj.
No. centres	2	4	8	3	1	2			
Pop.(million)	2.56	6.16	15.84	2.32	3.09	12.76	6.20	106.75	213.32
% urban pop	23.1	30.9	42.2	20.9	15.5	3.3	56.0	53.6	55.5

Sources: SARDC (1994), United Nations (1993).

¹These estimates for urban population in 2015 contain large margins of error, and the recent record of cessuses at the beginning of the 1990s suggests that they are likely to be too high rather than too low.

With the exception of South Africa and Zambia, most of the populations of the countries in the region are rural dwellers or and are dependent on agriculture, or – as already noted – live in agriculturally-dependent small urban centres with populations exceeding 2000. Where the rural population is highly concentrated in communal lands, many households are vulnerable to economic and environmental factors. As Mhone (1992) notes:

- there is an increasing concentration of land in the hands of a few better-off peasants while the majority are left with smaller parcels of land, often in areas that are environmentally poor and removed from the infrastructure and major markets;
- poorer households tend to have inadequate labour resources. This is illustrated by the tendency for household size to correlate directly with farm size among communal farmers, i.e. the larger, well-to-do farming households not only have more land but also larger households;
- extension services are more often targeted at and taken advantage of by the few better-off farmers;
- population pressure is undermining increasingly the capacity of the land held by impoverished households to carry these households;
- vulnerable rural households are under pressure to diversify their income sources and members disperse to take up a wide range of activities. This entails migrating to mines to work, to urban areas for casual wage labour, to squat, to engage in semi-feudal tenancy arrangements on better-off farms, to take on rural non-farm activities that have low productivity and so on. The pressure on households leads to a division of labour by sex and age that disadvantages females and children; and
- communal areas are overburdened by the cheapening of wage labour by subsidies to urban areas and by having to accommodate spent labour from the formal sector.

Despite the preponderance of rural population in the region, urbanization² is one of the most pervasive and powerful dynamics affecting Southern Africa (Dewar, 1994). In sub-Saharan Africa, excluding South Africa, the number of towns with a population of more than one million grew from one in 1960 to 14 in 1980, with 45 predicted by the year 2000 (Fair, 1990) (see Table 3 for Southern African figures). Generalisations about urbanization are difficult as the experiences of countries in the region are significantly different. Also the statistical data are not reliable and need to be used with caution, but they do indicate a clear pattern of what is happening. Current levels of urbanization vary. Fair (1992) shows countries falling into three major clusterings: low (lowest: Botswana, 20%), medium and high (highest: South Africa, 63.2%) (Table 4). But rates of urbanization are generally very high (Table 5), exceeding rates of natural increase by a significant margin as a result of rural-urban migration. The causes of such migration vary and are complex. They include: economic factors, landlessness, ecological and environmental factors (loss of soil productivity through land degradation, the effects of drought, etc.), social and political factors. The highest rate of urbanization (Mozambique, 13.1%) and the lowest (Angola) have been greatly influenced by war in those countries. In the former, thousands of rural people have moved to the towns for protection. In the latter, the same pattern has been balanced, since the mid-1970s, by a subsequent drift from the towns to the rural areas. Since the mid 1980s, in various areas,

² **Urbanization** is used here to refer to the growth of the number of people living in towns and cities and the commensurate growth of these settlements through rural-urban migration and natural increase.

government-controlled and guerilla-controlled towns and settlements have been evacuated and repopulated as the war has fluctuated.

Table 4: Levels of Urbanization: 1990

Medium	Low	Very low
South Africa (63.2%) Zambia (52%)	Zimbabwe (29%) Angola (28%) Swaziland (22%) Botswana (20%) Lesotho (6%)	Tanzania (15%) Mozambique (13%) Malawi (12%) Namibia (11%)

Source: Dewar (1994).

Table 5: Rates of Urbanization: 1990

Very high	High	Slow
Mozambique (13.1%) Botswana (10.1%) Lesotho (9%) Namibia (9.4%)	Malawi (7.7%) Zambia (6.6%) Tanzania (6.5%) Zimbabwe (6.0%) Swaziland (5.5%)	Angola (negative and fluctuating)

Source: Dewar (1994).

Note: Figures for South Africa are not given. The available statistics are meaningless. Relative to GDP, the country has a low level of urbanization because apartheid laws, and not economic and social factors, have determined where people have lived. The country is now undergoing rapid adjustment (Diana Mirlin, pers. comm.).

A number of population dynamics are evident: rural overcrowding, particularly where there is communal land tenure (discussed above); higher densities around regional transportation routes (e.g. 50% of people in Zambia live in towns and settlements along the main railway line); and rural-urban migration – South Africa’s Pretoria-Witwatersrand-Vaal triangle is a major target. In 1990, 38% of Lesotho’s entire male labour force worked in South Africa, although the figure has declined substantially in recent years (Europa, 1992). Although natural increase is the main cause of urban population growth in the most urbanized countries (particularly South Africa and Zambia), rural-urban migration is the main contributor in the less urbanized countries. The interpretation put on these pressures are the source of some debate. Dewar (1994), for example, argues that the consequence of these forces has been ‘hyper-urbanization’, which he describes as:

“a rate of urbanization that is too great for the urban systems to accommodate adequately in terms of formal sector job creation, the provision of social and utility services, housing programmes, etc. The manifestations of this are vast, often unserved, informal or squatter settlements, hawking and other forms of informal economic activity, begging, high incidences of crime and so on South Africa, since the mid-1980s, has moved from a situation of total control to one of almost no control. It is estimated that more than six million people live in informal settlements, many of which have only rudimentary services”.

Others point out that such judgements imply that there is some optimum level of urbanization but that history does not really support such an analysis. Whilst increasing rates of urbanization can be problematic, there are many cities in countries such as the USA that have grown very rapidly without any problems. This, it is argued, suggests that the problem is one of finance and development rather than urban growth *pers se* (Diana Mitlin, pers.comm.). In practice, whilst conditions in overcrowded urban centres may be dreadful, people actually move to such areas and stay in them for rationale reasons.

Urbanization at today's rapid levels can cause considerable problems. SARDC (1994) summarise them as follows:

"Housing and other services are often unable to keep up with demand, leading to squatter settlements and unsanitary conditions. Infrastructure (such as roads, or water and sanitation services) designed for specific population levels, breaks down under the strain of trying to serve too many. Towns and cities place difficult demands on water and fuel resources. Cities also produce huge amounts of waste in the form of sewage and industrial pollution, rendering water in rivers and lakes dangerous. Urban areas are the largest and most concentrated pollution sources in the region".

At present urbanization rates, over half of Southern Africa's population will live in towns and cities by the year 2000 and this means that the pressures described immediately above will increase. While rural population is declining in percentage terms, absolute numbers are increasing. Thus, urbanization does not relieve pressures on rural resources – it merely slows the increase.

No country in the region has adopted a cohesive urban land policy and urban development occurs in fragmented parcels – frequently grafted on to separated townships. As a consequence, whilst some township and squatter settlements have very high densities, other urban settlements are sprawling, fragmented and low-density, making poor use of land, water and other scarce resources. They contribute to environmental deterioration, are expensive and inconvenient for inhabitants, prohibitively expensive to service, almost impossible to provide with efficient public transport and generate few opportunities for small entrepreneurs (Dewar *et al.* 1991).

It is worth commenting that whilst the rapid development of squatter settlements is usually seen as a problem (due to under-servicing and under-resourcing), some people view this trend as a benefit since people are building communities, finding jobs and creating local demand, etc. Some even suggest that urbanization, far from being a major dilemma, represents a solution to aspects of population growth by relieving direct pressures on rural environment resources. They also point to the increasing contribution of 'urban agriculture'.

Another factor which has affected urban growth in the region has been structural adjustment programmes (SAPs), many promoted by the World Bank, which have influenced national economic growth rates, the size and allocation of government expenditure, and the impacts of government policies on different sectors. The impacts have varied in different countries. In general, the poor in urban areas have borne the burden of increasing prices of essential basic commodities, including food, resulting from SAPs and, in some countries, there has been increased unemployment and income loss following fiscal and monetary contraction. There have also been constraints on access to basic social and public services such as education and health due to reduced public expenditure. SAPs have impacted on public sector employment in some countries, e.g. through falling wages, civil service cuts, etc. Construction in other countries has been cut back. Many SAPs have reduced government subsidies for food, leading to increased prices which particularly affects the urban poor, especially those who rely on bought (as opposed to home-grown) food. The impact of SAPs may often have been to increase poverty, but the extent of the impact depends on who is most affected by cuts in public expenditures and recession. The poorest, who may not have access to services, may not be affected. Higher prices charged for services may also lead to better utilities with better quality of service and coverage. SAPs may also

disproportionately affect women, because of their particular roles in households (e.g. child rearing – affected by cuts in child and maternal health services; household management – affected by reduced water quality or reduced garbage collection). The World Bank is increasingly promoting poverty reduction and mitigation measures in SAPs.

Several points are important in considering future policies and actions. Continuing rapid rates of urbanization appear inevitable. Past experiences and failures suggest that policies to counter this are unlikely to work, but efforts can be made to mobilize resources to promote secure livelihoods for people in the rural areas, enabling them to stay there. Urbanization is usually seen as a problem issue and most official development actions are responses to 'the problem'. But more imaginative initiatives can be taken which might enable urban people to play a greater role in solving their own problems, e.g. providing urban households with secure tenure and promoting empowerment-based urban development strategies.. The importation of inappropriate (usually northern) planning and urban management systems and approaches has not worked in Southern Africa. Dewar and Uytendogaardt (1991) take the view that:

"It is necessary to move away from the township mentality that focuses almost exclusively on utility services and shelter and to give attention to creating qualities of 'city' – urban places that are vibrant, conducive to efficient public transport and flourishing small businesses, convenient for people on foot and notable for the quality of life. All this would require compaction instead of sprawl, integration instead of fragmentation, and a rich mix or overlap, instead of separation, of activities and uses".

Most research on urban issues in Africa has focused on the large cities. The potential of small towns as potential catalysts for rural development has received little attention. Much development aid to rural areas has ignored the urban component. Yet rural and urban economics are interdependent and complementary. As Baker (1995) notes, "much rural income is not derived directly from agriculture but takes the form of off-farm and non-farm income generated by farm households, often in small towns". The whole issue of rural-urban linkages needs much more research attention and policy consideration.

2.3 The AIDS Issue

Population trends are likely to be affected by the AIDS (acquired immune deficiency syndrome) epidemic which began to spread in the region in the late 1970s and early 1980s, and is now reaching massive proportions. The disease is a major challenge facing governments.

A problem in assessing the extent of the epidemic in the region is the lack of data and its unreliability. Cases are greatly under-reported (maybe as little as 10%) for various reasons, e.g. limited medical coverage, civil conflict, bureaucratic inefficiencies, and cover-up and refusal to record or publish statistics (Whiteside 1994). South Africa probably has the best data in the region in HIV incidence.

Most cases are among heterosexual men and women and paediatric AIDS is common (so-called Pattern II Aids) (although, in South Africa, until 1987, Pattern I AIDS was prevalent – with most cases amongst homosexual/bisexual men and intravenous drug users – with paediatric AIDS uncommon).

The region has had a varied experience of AIDS to date. In parts of the region, particularly Malawi and Zambia, levels of HIV infection in the general population are approaching those of Uganda and other Central African countries, and here the epidemic appears to be approaching its peak. Generally, however, in other areas, the epidemic is in its early stages and the incidence is much lower, e.g. Botswana, Lesotho, Namibia, South Africa and Swaziland. A further factor is the rapidly increasing incidence of endemic diseases which have hitherto been under some

control: malaria, tuberculosis (TB) and, in paediatric HIV cases, measles. Inoculation campaigns against these diseases are hampered by HIV infection in that the vaccine, instead of conferring immunity, can cause the disease.

The spread of HIV (and TB) in the region is being aided by social and political stresses: cross-border migration (mainly in search of employment, and many to South Africa), refugees, conflict and civil war, militarization, drought (causing large-scale movement of people), poverty, high levels of sexually-transmitted diseases, rural-urban linkages, etc. As a result, HIV probably will spread rapidly in Southern Africa – perhaps more rapidly than elsewhere in Africa because of the numerous factors that put the population at risk (Whiteside 1994). The spread of the disease cannot be halted – at best it can be slowed.

What are the implications for the region? This is the subject of considerable debate. Some observers have predicted that it will cause a decline in population growth rates, even reducing the actual population; others say that the lack of reliable information on the extent of AIDS makes any prediction questionable. Many commentators believe that economic growth will be affected adversely. There have also been predictions that labour will become scarce and that high levels of mortality will induce political turmoil. Whiteside (1994) concludes that “all of this could happen, but awareness of these dangers may go some way to averting them”. Whiteside also reports that there is consensus amongst Southern African modellers that the numbers of HIV-positives in the sexually-active population will not exceed 20-40% at the peak of the epidemic and the Southern African population will not decline.

Despite the uncertainties, the disease will have a significant impact at all levels of society and on all aspects of economics. There will be enormous pressures on public and private health care systems. A key indirect impact is that skilled and trained manpower – already in short supply – may be the first to be hit by the epidemic, slowing firms, industries and economic growth, and affecting both subsistence and commercial agriculture. A serious issue is that AIDS appears to spread first in urban populations, where a disproportionate proportion of the skilled and educated people will be infected – the very ones that societies can least afford to lose. There are likely to be major implications for government resource allocations due to the costs of testing and HIV-related illnesses clogging up health care systems, particularly hospital beds.

Whiteside (1994) suggests various steps that can be taken:

“The first is to acknowledge – at all levels – the presence of the disease. All the countries in the region should gather and make available data on HIV incidence and its rate of spread. There should be regional discussions on the epidemic and the role of regional co-operation in slowing it.

The immediate aim should be to slow the spread of HIV and the long-term aim to plan for its impact on the economies [environment (my addition)] and societies of Southern Africa. One of the most immediate ways to slow the spread would be to reduce mass movement of people without their families. This would entail looking at the refugee crisis and giving migrants, internal and international, the opportunity to have their families with them.

Research is needed urgently on the sectoral and macro-economic [and environmental (my addition)] effects of the disease. Knowing what it may do will be a large part of the battle in coping with it. In the long run AIDS will be largely a disease of the poor and disadvantaged and the best response is development and equitable economic growth”.

The governments of Southern Africa face a critical choice – for which a decision is immediately required. They can either ignore AIDS and hope that it goes away (as some are doing), or they can accept its presence and deal with it seriously, try to halt its spread, and plan for its consequences. Donors can play a major role in persuading governments to make the right choice and in helping to them to take action.

2.4 Armed Conflict

The last twenty years have seen liberation wars (in Angola, Mozambique, Namibia, South Africa and Zimbabwe), civil conflicts (in Angola and Mozambique), and destabilization by South Africa under apartheid (throughout the region). Apart from the civil war in Angola which flared afresh after the elections in 1992, other immediate military threats in the region have disappeared. SARDC (1994) list the direct environmental effects of war as including fires, bombings, pollution from war chemicals, trenches, anti-personnel traps and the felling of trees to remove cover. Indirect effects include over-exploitation of wildlife for food or cash, lack of management and law enforcement in protected and other areas, and refugees and displaced people who may cause localised environmental problems.

Domestic conflict will also have a decisive impact on current and regional transformation processes. Ohlson and Stedman (1993) list the following areas of potential conflict within the region's countries:

- conflicts over control of government or territory;
- conflicts associated with war termination and reconciliation;
- conflicts of participation caused by the monopoly of political power by a dominant party or racial group;
- conflicts over inequitable distribution of resources; and
- conflicts over identity, due to ethnicity.

One of the most important environmental consequences of war is the displacement and ensuing random settlement of refugees, but the environmental impacts depend on the numbers of people at any site and the duration of their stay. Large numbers concentrated in a small area often cause much more damage than fewer people dispersed over a large area. So far, Malawi has borne the brunt of the Mozambican refugee problem. SARDC (1994) discuss the issue of armed conflict in the region and its environmental consequences in some detail. Paradoxically, they point to some actual environmental benefits when areas become depopulated during armed conflict: regeneration of natural vegetation, revival of previously depleted wildlife populations.

More environmental damage has resulted from indirect effects than from direct destruction. The environmental damage resulting from the conflicts in Angola and Mozambique (and in neighbouring states) has not been fully assessed. There is a lack of verified data on war impacts, and baseline environmental data from before the conflicts, needed for comparison, is very limited. However, the people have been left among the poorest in the world.

The future of the region in terms of further war is impossible to predict. But two resources that could be the focus of considerable future conflict are fishing and water. Foreign fishing fleets are already plundering marine resources. If the region is ravaged by further and persistent droughts, then competition – even war – for access to water must be a possibility. After all, Egypt, Sudan and Ethiopia have already been in conflict over the waters of the Nile. Domestically, parts of some countries could conceivably become vulnerable to separatist tendencies, e.g. the Cabinda region of southern Angola, and the Afrikaner Boerestaat or KwaZulu in South Africa.

2.5 Climate Change

There is much uncertainty about both the issue and the consequences of climate change. Following worldwide concern about greenhouse warming, several general circulation models have been constructed to predict the nature of climatic changes. The implications of these models are the subject of much debate and their forecasts can be used only as a guide. Those for the region of four of these models, based on a doubling of atmospheric

carbon dioxide, have been reviewed by Tyson (1986). He concluded that there appears to be agreement that, with increasing atmospheric emissions of greenhouse gases, summer rainfall will increase over subtropical regions of Southern Africa and will increase over tropical regions. In addition, lower rainfall over the winter rainfall region of the southern Cape is also probable. Over the long-term, it is predicted that much of Southern Africa will become more arid than at present. This will exacerbate the current problems in the arid and semi-arid lands that constitute much of the region.

A subsequent study of climate scenarios for the SADCC region (Kelly & Hulme, 1992), undertaken by IIED and the University of East Anglia and sponsored by Sida, highlighted that information for the region concerning both the potential impact of global warming and the means by which that impact might be reduced is often uncertain and, in many cases, simply not available. The report outlines a range of possibilities for the climate future, using estimates for three points (Dar es Salaam (Tanzania), Harare (Zimbabwe) and Gaborone (Botswana)). The scenarios do not take account of local heating effects caused by urban expansion and represent rural areas beyond urban influence. They all agree on a rise in temperature in the region by the year 2030, but figures vary between 0.8 and 1.7 °C, depending on location and scenario. By comparison, there is much disagreement between the climate models for regional precipitation. Some scenarios show annual precipitation falling between 6 and 13 % by 2030; others suggest an increase between 7 and 14 % by the same year.

A more up-to-date study (Hulme 1995) provides climate projections to 2050. The same direction of trends is assumed to 2010, but with changes less developed and probably linear over this period. This report points out that Southern Africa has seen temperatures increase by 0.5°C since the 19th Century (a pattern similar to global changes) with the warmest years this century occurring since 1980 and the warmest (and driest) decade being 1985-94. A further warming by 1.7°C is calculated by the 2050s. Associated with this warming, three patterns of climate change are defined (Box 4)

If the predicted changes do occur, there will be inevitable changes in ecosystems and species are likely to become extinct, at least locally. It is likely that many of the currently threatened plant species in the fynbos (an ecozone in South Africa comprising mainly dwarf shrub vegetation with high diversity of endemic plant species -see Table A2.1 in Appendix 2) will become extinct. It is also predicted that sea levels will rise and that there will be regional shifts in food production and the availability of water.

It is suggested by some that global warming has already affected the region – causing recent droughts. But scientific evidence is not yet available to support this contention. In any case, droughts have occurred in Southern Africa since pre-historic times, and this makes it difficult to distinguish the contribution of climate change to such episodic events. Whatever the uncertainties about climate change, it will be prudent to expect and plan for further drought periods in the region. Susceptibility to drought can be reduced through improvements in awareness, education and training. But such improvements will require research to increase the knowledge base and understanding of the various factors concerned in drought. Improved information and early warning systems have already been established, and these need to be incorporated in drought planning.

Whatever the uncertainties, serious consideration needs to be given to adaptation to climate change in the region. Countries will need support so that they have the resources necessary to anticipate and plan for the disruptive consequences by adjusting land use resource management to the demands of the changing environment. For example, Hulme (1995) suggests crucial areas for adaptation in respect of the region's rangelands:

- policy-reassessments in favour of smallstock, wildlife and possibly gathering products. In Namibia and Zimbabwe, land reforms need to be considered;

- more research on these activities and on human activities under marginal conditions;
- economic diversification, creating alternative income opportunities outside agriculture and alleviating poverty; and
- drought-proofing measures such as early-warning systems, improving resource security, etc.

Box 4: Climate Scenarios and Impacts for the SADC Region to 2050

Scenarios: Three patterns of climate change are suggested: the 'core' scenario which sees modest drying over large parts of the region and changes in variability; a 'dry' scenario in which the region experiences rainfall decline of up to 20%; and a 'wet' scenario in which most of the region gets wetter. In all cases, temperatures rise and the scenarios also define changes in other important climate variables, such as vapour pressure, cloud cover and potential evapotranspiration.

Vegetation changes: For all three scenarios, the area of Tropical Seasonal Forest in SADC declines, largely at the expense of Tropical Dry Forest which expands. This change is greatest in the 'dry' scenario. Savanna areas also decline in the 'core' and 'dry' scenarios at the expense of Warm Grasses and Shrubs. Desert and Semi-desert areas expand under all three scenarios, these biomes expanding northeastwards into larger areas of Botswana and Zimbabwe. This expansion is not very noticeable under the 'wet' scenario. If improvements in plant water use efficiencies due to elevated CO₂ concentrations are assumed, the predicted vegetation changes are much reduced.

Maize: Under conditions of future climate change, maize suitability decreases throughout Southern Africa.

Vectors: For ticks, areas to the west of their present-day distribution will become more suitable, whilst areas to the east will, in general, become less suitable. Tsetse will experience a net decrease in climatic suitability, with the vector concentrated either in the west of their present range ('core' and 'dry' scenarios) or in the central/northern part ('wet' scenario).

Ungulates: The greatest negative impacts of climate change are on ungulate habitats in the grassland savannas of southeastern SADC (South Africa) where ungulate richness is predicted to decline under all three scenarios. All of the individual species in that region also show a consistent decline in their distributions. The important climate characteristics that distinguish this region from others appears to be related to temperature rather than precipitation, hence the consistent response among the three climate change scenarios. Additional possible negative impacts on ungulate diversity are predicted in the arid highlands of northwestern SADC (Botswana, Namibia, Angola).

Rangelands: The impacts of climate change will be mostly incremental, accelerating existing processes of environmental changes with respect to rangelands. Climate change is expected to accelerate bush encroachment (a trend towards thorn bush savannas) and a switch from cattle to smallstock since the latter are better adapted to marginal conditions. These ecological changes may have the following impacts on human activities: i) reduce overall development potential because of reduced useful biomass and loss of biodiversity; ii) changes in sectoral suitability, returns and attractiveness; iii) lower incomes; and iv) reduced livelihood security coupled with increased income inequalities.

Human impacts: The actual human impacts of climate change will depend on the relative resilience and coping abilities of different social groups. In general, the commercial sector and the high-income households in communal areas are best equipped to adjust properly and in a timely fashion. Source: Extracted from Hulme (1995).

Source: Extracted from Hulme (1995).

Changes in the region's climate, even if only partially in the direction of the scenarios predicted, are likely to place additional incremental stress on ecosystems which are already under pressure. As Hulme (1995) points out, these pressures include: increasing population (whole region), increasing subsistence needs (whole region), endemic droughts (most of the region), unequal land distribution (e.g. Namibia, South Africa, Zimbabwe), and a very limited coping ability (particularly in communal rangelands).

2.6 Water Resources

Water is the lifeblood of Southern Africa. It is possibly the most critical of all the region's resources given that much of the region is drought-prone and water-poor. Episodic droughts have a severe environmental impact on the countries in the region (see, for example, Tiffen & Mulcle, 1994). It is argued (Coetzee, 1994) that it is most likely that water shortages will limit development in the region and that water management will become an increasingly important part of development strategies. Only a few countries have engaged in developing water conservation and management strategies, e.g. Namibia and South Africa. Such strategies need to address three key challenges:

- impeding water shortage in the region, with available resources no longer supporting demand;
- supplying adequate water to individuals and maintaining supplies to support human life – particularly to rapidly urbanizing communities; and
- maintaining water quality – increasing urbanization and industrialization will cause increasingly serious pollution threats.

Climatic changes (see previous section) will only add to and complicate these challenges.

The only major natural lakes are in the north of the region (e.g. Lakes Malawi, Tanganyika and Victoria). Elsewhere, with seasonal and unreliable rainfall, storage dams are necessary to ensure supply. But dams, whilst vital, cannot solve the region's water problems. High evaporation causes major losses, silting-up reduces dam capacity, and many rivers have low flow or dry up in the dry seasons. Industry and agriculture make major demands on rivers. Agriculture uses water directly – through irrigation schemes, or indirectly – by lowering groundwater tables. Factories and mines also use huge quantities of water. Whilst some is returned (sometimes polluted), much is lost. Increasing industrialization will lead to greater demands on water resources. More efficient water use, and improved controls on water pollution will be needed to reduce and prevent river degradation. Pollution issues are dealt with in section 2.7.

Various studies point to critical water shortages in the future. SARDC (1994) argue that, at current population growth rates and with existing water pricing and allocation patterns, Southern Africa will be experiencing chronic water shortage by 2030. Similarly, based on water scarcity ratings³ developed by Falkenberg (1990), Coetzee (1994) argues that:

³ To quantify present water demand and to relate this to the pressures from increasing populations, Falkenberg (1990) has rated water scarcity on a scale of 1 to 5, using the number of persons per million cubic metres of water per year. Absolute water scarcity (levels 4 & 5) occurs at figures exceeding 1000 persons/million m³, whilst water stress (level 3) occurs between 600-1000 persons/million m³. Below 600 persons/million m³ (levels 1 & 2), there are water quality and dry season problems.

“By the beginning of the next century, all the countries in the region will be experiencing some scarcity, there will be water stress in South Africa and Zimbabwe, and Malawi will face an absolute water scarcity. By the year 2025, the situation will be considerably worse, with South Africa, Zimbabwe, Malawi and Lesotho all facing absolute scarcity and Mozambique experiencing water stress”.

Recognizing these scenarios, some countries have started to make plans for future water supplies. South Africa's industrial heartland lies in the Pretoria-Witwatersrand-Vaal triangle (PWV) where supplies from the Vaal river are already overstretched. A massive scheme is being undertaken to replenish the Vaal river with supplies from the Senqu river in Lesotho drawing from a network of dams, canals and tunnels, and a hydro-electric power scheme (the controversial Lesotho Highlands Water Project)⁴. Even more ambitious schemes have been suggested to pump water to the PWV from the Zambezi river, between Zambia and Zimbabwe. However, this proposal raises serious water rights issues, particularly with flow in the Zambezi falling to record low levels during the 1992-93 drought. The Calueque canal scheme in Namibia, constructed during South African occupation, also moved large amounts of water between drainage basins, from the Kunene river to supply Windhoek. Conservationists have criticised the scheme which cuts across game migration routes. Such expensive schemes, which are almost always dependent on foreign loans or aid, only provide temporary solutions – effectively buying time, and transfer water stress to the donor basin/country. Furthermore, elsewhere in Africa, large inter-basin schemes and international water supply projects have failed to deliver the expected goods (Adams 1992) and are inherently plagued by security threats. In these circumstances, great care is needed before embarking on new schemes in Southern Africa. At best they can only provide temporary solutions to the water problem and, at worst, could well have very serious environmental consequences and even political mistrust and conflict.

Dams, are also important throughout the region. Those at Kariba and Cabora Bassa have greatly changed local environmental conditions, impacting on biologically important floodplains and affecting livelihoods. They also became covered by aquatic weeds, and became anaerobic as vegetation rotted leading to fish deaths. There are always plans being made and debated for further dams to both store water and generate hydro-power. Further proposed dams on the Zambezi at Mana Pools and below Victoria Falls (on the stretch where the river passes through Zambia/Zimbabwe) have been the subject of great controversy over probable environmental impacts, particularly in the case of the Mana Pools site. Other ideas have been mooted to dam the Cuito river in Angola. This could lead to catastrophic changes in the dynamics of the inland Okovango delta in Botswana into which the river discharges, with mega impacts on habitat, wildlife and livelihoods for the communities dependent on the floodplains.

There are also a number of international known wetlands (swamps, marshes, floodplains, etc.) which are ecologically important. These are discussed in Appendix 2. Some are under threat. The Southern Okovango Integrated Water Development Project, proposed by the Botswana government, generated considerable international opposition. The government responded openly by asking IUCN to conduct an independent review of the proposals. The team unanimously took the view that the project was based on a number of deficiencies and would be environmentally destructive for the Okovango delta, and recommended that it be terminated in favour of alternatives (IUCN 1992). But controversy continues in Botswana over the project.

Concern amongst the region's countries about limited water resources has led to much discussion about regional water allocation. SADC has been coordinating an ongoing dialogue, initially amongst the eight

⁴ Project construction commenced before impact assessments were published. Mechanisms to compensate the rural economy in Lesotho for its loss of an important resource (these are controversial and not completely supported by the rural communities) were only implemented well into the project's first phase.

riparian nations along the Zambezi river. The Zambezi River Action Plan (ZACPLAN) process aims to “establish equitable and ecologically sound water allocation and sharing agreements along the river basin” (Meintjies, 1995). This had led to discussions involving all SADC member states which have established clearly defined procedures for instituting regional water management schemes. All countries in the region have committed themselves to the SADC “Protocol on Shared Watercourse Systems” which provides ground rules to standardise future regional water agreements (specifics will still require negotiation) and to prevent further exploitation by more powerful states.

The recent drought has raised serious questions about the suitability of large areas for growing maize – now the staple crop in much of the region. Sorghum – a more drought-resistant cereal – is increasingly being suggested as a more suitable crop (e.g. Coetzee 1994). Atenyo (1993) has suggested some broad guidelines for future water management which, perhaps not surprisingly emphasize the need to acknowledge water shortage, promote efficient water use, provide clean drinking water, ensure environmental sanitation, and foster ecosystem preservation. In rural areas, more efficient use is more likely to come from small-scale, participatory, community-based initiatives (e.g. water-harvesting and small-scale irrigation) and harnessing indigenous technological knowledge, than from aid-driven large projects, many of which have failed in the past (see, for example, Adams 1992).

In future, regional policies and agreements will need to plan development around available water resources. Planning development whilst ignoring the reality of water limitations, and subsequently trying to make environmental adjustments to support unsustainable goals and initiatives, is likely to lead to disaster.

2.7 Pollution

It is very difficult to assess the overall extent of pollution in the region and its impact on the environment and human health in Southern Africa since baseline data is lacking. There has been no long-term regional study of pollutants. Even when known to exist, pollution is not always monitored. Furthermore, pollution controls either do not exist in some countries or, where they do, they are often poorly enforced. Nevertheless, some generalizations can be made.

Population growth, urbanization, industrialization and intensive agriculture are the main contributors to waste generation and pollution. Uncontrolled urbanization – with overcrowding and poor sanitation – invariably leads to the contamination of fresh water sources with bacteria (most commonly faecal coliforms) which then cause diseases such as gastroenteritis, typhoid and cholera. Also, the release of household chemicals (e.g. cleaning products and insecticides) leads to pollution of both rivers and groundwater.

Industries release aerial emissions, liquid effluents and solid wastes (sometimes toxic) into the environment either in an uncontrolled manner (examples of major polluters include textile factories and pulp-and-paper mills) or through waste management systems that use landfills, incinerators and treatment facilities. A major polluter of rivers in Southern Africa is the mining sector, causing water acidification and discharging a variety of highly toxic metals (e.g. arsenic, mercury, cadmium and lead). As rainfall is seasonal in the region, the ability of many rivers to dilute pollutants varies during the year. The disposal of solid mine waste also presents serious problems. Durning (1990, p.15) suggests the scale of the problem in South Africa: “the nations 450 mine dumps cover some 10,000 hectares between them and hold perhaps 20 billion tons of rocky waste”. Examples of environmental problems include: coal dumps which, if they ignite, can burn for years; asbestos dumps – exposure to the tiny fibres can cause lung cancer; and leakage/leaching into water courses and seepage into groundwaters of toxic tailings. Even small-scale mining and mineral processing operations can be extremely damaging, depending on the chemicals used. For example, mercury (often used by artisanal gold miners to

separate gold and sand, especially in Tanzania and Zimbabwe) washed into water courses, is transformed into bio-available forms and accumulates in living organisms, where it can lead to serious illnesses and deaths.

In coastal areas, most industries dispose untreated wastes directly into streams or rivers which flow directly into the sea. The sea off the major urban centres around the region's coasts are polluted by industrial wastes. They are also subject to oil spills and discharges from oceanic tankers. Major oil spills include six off South Africa since 1965, two off Tanzania in 1981 and 1986, and one in the Mozambique channel in 1992. Chronic pollution occurs from frequent minor spills and routine disposals of oil-waste from smaller vessels.

South Africa's Eastern Transvaal Highveld (ETH) produces the worst air pollution (particularly sulphur dioxide) in Southern Africa due to the high concentration of coal-burning industries. Elsewhere in the region, such pollution is not a serious problem. The effects of acid rain resulting from emissions in ETH have not been well-studied, although potentially vulnerable ecosystems and areas have been identified (SARDC, 1994).

In many parts of the world, agricultural chemicals are a major problem. Pesticide residues render water unfit for consumption and enter food chains, with harmful consequences for wildlife. A well-known example is the spraying of DDT near streams and rivers in Zimbabwe in the 1970s to control tsetse fly. Residues concentrated in birds of prey at the top of the food chain with disastrous effects – egg shells became so thin that they would break before the chicks hatched. DDT has been substituted with Endosulphan (highly poisonous to aquatic life, though the effects are temporary) and, in areas where there is a serious risk to aquatic systems, systemic pyrethroids. The storage and disposal of obsolete stocks of pesticides presents considerable health risks. There is also significant herbicide use, particularly on sugar estates and forestry plantations which use large quantities.

Fertilizers cause relatively little harm to wildlife, compared to pesticides, but may affect human health. Nitrate in water has been linked with methaemoglobinaemia (blue baby syndrome) in infants, but there is little information for the region, probably because the condition is not recognized. Following an exhaustive search, Conway and Pretty (1991) report only one account which refers to a high incidence in a rural area of Namibia, but it was not clear whether livestock wastes or some other factor was the cause of the nitrates. In many parts of the world, fertilizer run-off causes eutrophication in rivers and lakes. Serious eutrophication has become a serious problem in South Africa's Vaal and Orange rivers.

With rapid population growth, increased food production in Southern Africa is vital. But the region is characterised by generally poor soils. Increased fertilizer use is expected to be necessary, but there is an intensive debate over the approach to be taken. For example, IFPRI/FAO (1995) hold that "there will have to be a very substantial increase in the use of mineral fertilizers to meet the food needs of human populations by the year 2020". Others argue that it is better to sustainably intensify agricultural production first, with an emphasis on resource-conserving technologies and practices and on local resources (e.g. Pretty 1995). They claim such an approach can yield substantial environmental and economic benefits for farmers, communities and nations. Depending on the results, further inputs from mineral fertilizers can be applied later. If the solely pro-fertilizer view holds, and massive effort is invested in increasing fertilizer use in Southern Africa, then increased pollution problems can be expected.

Household burning of fuelwood, crop residues, manure and coal (20 million people use coal) for heating and cooking, and this also leads to localised health hazards in the region. Additionally grass and forest fires (about half of the region's savanna woodlands are burnt each year, mainly to stimulate new grass growth) generate vast quantities of smoke. Some people argue that such pollution influences regional weather patterns and contributes to global climatic change.

It is the poor who usually suffer most from pollution. As SARDC (1994) point out:

“People who are poor are at higher risk because they are more likely to live and work in polluted environments, and are more likely to suffer from inadequate nutrition, which exacerbates the toxic effects of pollution. Industrial workers and those in the mining industry are exposed to noxious gases and poisonous chemicals. Workers on commercial farms handle poisonous chemicals. Low-income housing is typically located near rubbish dumps, electric-power plants, mines and factories spewing smoke”.

Many people – again, usually the poor – frequently draw water (for drinking and washing, and for supplying to gardens and livestock) from sources which are contaminated with poisons after passing through industrial areas, mines and agricultural estates.

Education of managers, workers and the public will help to raise awareness of the dangers of pollution and the hazards faced. More research is also needed to determine groups of people and environments/ecosystems which are likely to be at risk, and to facilitate better pollution management. Integrated pest management approaches will help to reduce pesticide use. Better pollution monitoring and the stricter enforcement of pollution control legislation is clearly needed.

2.8 Wildlife

Of its abundant natural resources, Southern Africa is probably best known for its wildlife, particularly its large mammals. Wildlife forms the basis for economically-important tourism throughout the region. If it is to be conserved successfully, the definition of wildlife should include all living organisms found in wild habitats – both plants and animals. Southern Africa includes both summer and winter rainfall belts and its habitats range from desert to rainforest and grassland to woodland. Its rich variety of ecological zones (described in Appendix 2) has endowed the region with a rich diversity of species. Many of its protected areas are of international repute.

Wildlife in the region is under intense pressure, and a great deal has been written about the threats to it (see, for example, Huntley 1989; Simon *et al.* 1990, SARDC 1994). The challenges include (SARDC 1994):

- conserving the region's biodiversity and dealing with threats to it;
- sustaining the extensive network of protected areas;
- fostering other conservation measures outside protected areas to maintain species diversity; and
- ensuring that countries in the region can afford to maintain wildlife through income generated from wildlife resources.

The protected areas network is probably one of the most extensive in the world (Figure A2.7), accounting for almost 16% of the region's land area. Not all of the region's ecozones are represented in protected areas, which face many threats (SARDC 1994). Rural poverty and demand for land for agriculture throughout the region is increasing the pressures around protected areas. In some countries, protected areas have been encroached, for example, in Tanzania and Mozambique.

Biodiversity is also being seriously affected by habitat changes throughout Southern Africa. Some examples include:

- grazing: livestock select the more palatable grasses, leading to changes in plant species composition; and displacement of wildlife;
- agriculture: woodlands and other lands are being converted to farms for crops;
- dams: alter river characteristics and flooding patterns, and modify nutrient regimes;

- pollution: mainly as a result of urbanization, industrialization and mining.
- fragmentation: wildlife habitats increasingly are being taken and divided for various different uses (settlement, farming, mining, industry, etc.), often interfering with migration and breeding.

Loss of habitat will lead to reduced numbers and even extinction of some species, particularly large mammals which need extensive areas to sustain viable populations. Severe impacts on wildlife have also resulted from preventing free movement through erecting barriers such as fences and canals. A well debated example was the livestock fence erected in Botswana to separate wildlife from cattle as a result of European Union disease-control requirements for importing beef. This caused the death of thousands of wildebeest which could not reach food and water in the Okovango delta and Bobeti river (Williamson & Williamson 1985).

In South Africa, most parks are very small and fenced and wildlife populations, unable to disperse, have become inbred. To prevent a similar problem occurring on private land may require intensive genetic management. One approach has been to take down internal fences to establish nature conservancies in South Africa and Zimbabwe, allowing wild animals from adjacent farms to mix and breed freely.

One of the most prominent and emotive issues is illegal poaching. This has caused severe reductions in the populations of some species (notably black rhinos and elephants) in some parts of the region. Demand for ivory in Asia has led to a decline in overall elephant numbers in the region from an estimated 600,000 in 1979 to only 264,000 in 1989, with the population in Zambia being reduced from 150,000 to 41,000 over the same period (Nigel Leader-Williams, pers.comm.). Dublin *et al.* (1995) estimate the Zambian population to have declined even further to about 23,000 by 1994. This picture is complicated by the fact that population declines in some countries (e.g. South Africa, Zimbabwe and Botswana) is due mainly to culling. It is claimed that the ban in 1989 on ivory sales (under the Convention on Trade in Endangered Species – CITES) has led to a significant reduction in losses to poaching in the northern countries of the region. However, the available data are not adequate to assess current trends (Dublin *et al.* 1995).

More serious has been the effect on black rhinos which are being killed at alarming rates for their horn (mainly for use in oriental medicines in the Far East, and ornamental dagger handles in the Middle East). Between 1970 and 1980, numbers in the region fell from 28,000 to about 9,500, and to only just over 2000 by 1993 (Leader-Williams 1992). However, numbers in Namibia, South Africa and Zimbabwe (where strong protection was provided) actually increased between 1970 and 1990, although there has been a severe decline in Zimbabwe since then as poachers from Zambia, having decimated the population there, have operated increasingly south of the Zambezi. By comparison, numbers of white rhinos have increased substantially, from 2600 in 1970 to over 6600 in 1993, although the vast majority are under heavy protection in South Africa (Nigel Leader-Williams, pers.comm.).

Pangolin, giant sable and marine turtles have also been overexploited, and the illegal bird trade (smuggling of eggs and live birds) has severely depleted populations of some species.

Wildlife conservation efforts have frequently been thwarted by ineffective legislation, inadequate penalties, and weak law enforcement (Leader-Williams & Milner-Gulland, 1993). Even Zimbabwe's 'shoot-to-kill' policy has not completely deterred rhino poachers from Zambia (Milliken *et al.* 1993). Wars (e.g. in Angola and Mozambique) have interrupted wildlife management and conservation activities, and soldiers themselves have resorted to killing wildlife for food and to fund war activities. One of the legacies of armed conflict in the region has been the proliferation of guns, many now in the hands of poachers.

Periodic outbreaks of disease (e.g. anthrax, foot-and-mouth, and rinderpest) can deplete wildlife stocks. Episodic droughts also take their toll, killing high numbers of animals. But their effects are aggravated by fences and

similar obstructions, e.g. cordon fences in Botswana prevent wildlife reaching water during droughts and magnify deaths.

Apart from protected areas, other innovative wildlife management strategies have been pioneered in Southern Africa, including game ranching and community-based wildlife management.

In Southern Africa, game ranching on private land is practised as a legitimate form of land use, with the same government incentives and subsidies as domestic livestock. There are now some 10,000 ranches covering 160,000 sq km (SARDC 1994). Ranchers own game on their land in both South Africa and in Namibia (where 80% of wildlife is located on private land). In Zimbabwe, about 10% of commercial farmers have wildlife on their land as proprietors, and many have turned to game ranching. Similar ventures are being established in Swaziland and; in Botswana, 8% of land is privately owned and large areas are used for hunting and tourism. Game from private land is often used to restock depleted wildlife populations elsewhere. The economic benefits from game ranching, relative to livestock, can be high through sales of trophies and meat, and through tourist and hunting revenues (Cumming 1991). Some conservationists fear that game ranching restricts population movements and breeding, although the formation of nature conservancies reduces this problem.

The traditional approach to wildlife management has been top-down, with the state owning wildlife in protected areas, and enforcing wildlife legislation. Where well supported with funds, this approach has ensured the survival of populations of certain species and contributed to the generation of foreign exchange earnings. However, elsewhere it has proved ineffective in controlling poaching and reducing other threats. It has failed to integrate local people into activities, particularly in marginal areas near protected areas, and has often had a critical impact on their food security and livelihoods. Faced with a diminishing resource base, conflicts between local people and conservation authorities have escalated, and law enforcement has become less practical and more costly.

Over the last decade, a range of community-based wildlife management (CWM) schemes have been initiated in the region, mainly outside protected areas⁵. The more innovative ones are typified by the more active participation of local communities. They have sought to devolve power and responsibility for resource management to communities, and local people have become involved more actively in the generation and distribution of benefits for community projects. A recent report (IIED 1994) has reviewed a wide range of CWM approaches in Africa and concluded that:

“community wildlife management is likely to be sustainable ecologically, economically and socially only if wildlife management can be made sufficiently attractive to local people for them to adopt the practice as a long-term livelihood strategy. This does not suggest that local communities respond only to economic determinants, but that these are one amongst a complex set of factors that determine behaviour.

Three broad principles are proposed to guide action towards achieving community-led initiatives: recognition of community rights to ownership of wildlife resources; building on formal and informal structures that facilitate community participation in wildlife management; and operation of effective mechanisms for the sharing of benefits of wildlife resource management with communities”.

⁵ Examples include: the Communal Areas Management Programme for Indigenous Resources (CAMPFIRE) in Zimbabwe; Luangwa Integrated Resource Development Programme (LIRD) and Administrative Management Design for Game Management Areas (ADMAD) – both in Zambia; and Selous Conservation Programme in Tanzania.

Both game ranching and community-based schemes offer promising and practical alternatives to traditional approaches to wildlife conservation. Recent evidence (Rihoy 1995) suggests that community-based wildlife management programmes are beginning to show results with potentially far reaching policy implications for national development policies.

2.9 Energy

The availability and reliability of electrical power varies considerably amongst the countries of Southern Africa. Most is supplied from hydro-electric schemes and coal-powered generating stations (particularly in South Africa). Some countries have a shortage of generating plant and experience periodic power cuts (e.g. Zimbabwe, Tanzania).

However, for cooking and heating purposes, most people (particularly in rural areas) continue to rely on wood, charcoal and coal. Per capita fuelwood consumption in the region is amongst the highest in the world (SARDC, 1994) and demand is rising with population growth, placing increasing pressure on forests and woodlands which are also under pressure as agriculture expands. Rural electrification is frequently suggested to alleviate this problem. However, it is unlikely to be accessible to most rural people. In any case, unless the widespread poverty in the region is overcome, few people will be able to purchase and use of electrical appliances.

Generating further hydro-electric power is a problem. There is already strong competition for water on the major rivers and tensions have arisen, notably along the shared Zambezi river (see section 2.6). As water demand rises, such stresses are likely to increase. Cabora Bassa dam in Mozambique has not produced electricity during the armed conflict in that country, and is likely to come back 'on stream' in the near future, easing regional generating capacity.

South Africa produces and uses 80% of the region's electricity, mainly in its mining and industrial sector. It has surplus coal-fired power stations in mothballs and sufficient idle plant to meet the entire needs of the rest of the region (Dingley, 1994). The main limitation currently is the absence of bulk transmission lines to supply other countries. Over the next 20 years, most power stations in the region – particularly those in South Africa – will be at or near the end of their operational lives. Consequently, the need for new power station plant as replacement and to meet growing future needs can be foreseen. A mix of plant is likely including coal-fired stations using the large coal deposits in the southern part of the region (within international limits set for greenhouse gas emissions) – although this will have serious environmental consequences from mining and pollution (see section 2.7); hydro-power stations on the rivers in the northern part of the region (including the Congo river) and possibly nuclear plant in South Africa.

There is considerable debate about the role of nuclear power. Proponents argue that it is a clean alternative to coal, producing less pollution and less risk to the environment and human health. Opponents argue that each of the stages of nuclear power production – including mining, enriching uranium, manufacturing nuclear fuel, reprocessing spent fuel and disposing of nuclear waste – present serious risks. At present there is only one nuclear site in the region, in South Africa. South Africa may want to build nuclear power stations to avoid becoming dependent on imported electricity.

A 'Southern African grid' has been suggested to attain the best economies of scale and mix, to link and share these various types of plant in a regional network. Whether or not this is achieved, the provision of energy to the countries of the region without causing unacceptable environmental degradation is a major challenge. More work is needed on investigating renewable sources such as solar power, wind and biogas.

2.10 Mineral Exploitation

Southern Africa is rich in mineral wealth, particularly gold, diamonds, cobalt, platinum, chrome and copper. The richest states in the region (in terms of GNP per capita) – South Africa and Botswana – are dependent for their prosperity on mineral exploitation. South African gold comes from an arc of reefs in the southern Transvaal and the Orange Free State, and the country is a major source of diamonds. At independence in 1966, Botswana was one of the poorest African countries. Since the discovery and subsequent mining of diamonds from 1971, and copper and nickel from 1974, the country has become the fifth most prosperous country. The Zambian economy is dependent on copper. Chromium is mined in Zimbabwe, uranium in Namibia, and petroleum is produced in Angola. Mining in the region is conducted on a large scale. The most direct environmental and health impacts are from various forms of pollution, particularly solid wastes (see discussion in section 2.7). Indirect environmental impacts are associated with migrant labour, both within countries and from other countries, leaving ‘home’ areas depleted of labour and often unable to manage the land properly.

2.11 Threats to Marine Environments

The marine ecosystems around Southern Africa are described in Appendix 2. Some resources are overexploited. Prawns stocks off Mozambique are under heavy pressure, and to a lesser extent off Angola, both from local fishermen and foreign poachers. War in these countries severely inhibited fishing control. Coral reefs (an essential habitat for marine animals) have been seriously damaged by dynamite fishing off Tanzania. The Agulhas bank – 200 km off the southern tip of the continent – is an important fish-breeding area, particularly for the Benguela system along the region’s west coast, and is seriously over-fished. Mining of diamonds in the Benguela system off Namibia is threatening seabed plants and animals. These cold, nutrient-rich waters support rich fish stocks which have been overfished in the past by foreign trawlers (until the area was declared an exclusive economic zone). But local overfishing still persists with significant drops in sardine catches, and reduced fish stocks has led to reductions in a variety of seabirds which breed in the area. There has also been over-fishing in open sea habitats. In response, Namibia introduced (and strictly enforces) an effective annual quota system. This has curtailed illegal fishing by foreign vessels, and seen sardine stocks double between 1990 and 1992, although they have since declined again – possibly due to environmental factors (Crawford 1993).

Soil erosion, mainly due to poor land husbandry, is causing excessive silting up in many estuaries. Threats from pollution have been discussed in section 2.7. Mangroves (vital breeding grounds for prawns) are being over-exploited in Mozambique and Tanzania for timber and fuelwood. A UNEP estimate in 1990 suggested that these countries had lost 60% of their mangroves. More recent estimates put the loss even higher. Major oil spills have also killed mangroves.

Various animal species are threatened, notably several species of turtle which have been over-harvested for their shells and meat. Increasingly, there is over-collecting of shells for the tourist trade. Efforts are being taken in most coastal countries to establish coastal protected areas and marine parks to conserve habitats and resources.

2.12 Traditional Resource Management, Access to Resources, Land Tenure and Rights

Governments and donors alike tend to forget that traditional customs and practices of land management can often be locally appropriate and sustainable, and far more suitable than new (and often big) ideas or ‘solutions’ from ‘outside’. Whilst such practices have been discouraged and eroded in recent years, in the past they were the norm. Some examples include:

- local approaches to dealing with environmental limitations such as unreliable rainfall;
- the greatly respected system of customary land-holding vested in Chiefs as custodians (cultivation and other use-rights were granted by the Chief who had power over all resources, including wildlife). SARDC (1994) comment that:

“equity in land distribution was common and built on kinship, except that most systems did not give equal rights to men and women. Equity was built on the understanding that when a male was allowed residence in an area, he was entitled to a set of rights, such as those of land for cultivation and grazing. With those rights to use land came rights of access to waterholes, wells and trees – which carried a duty to protect them”.

- the *chitemene* system of shifting agriculture in Zambia;
- the cultivation of *dambo* margins, particularly for vegetables;
- terracing steep lands, cultivating mounds, and the use of fire to burn the ‘bush’.

Colonial governments incorrectly viewed many traditional practices (including pastoral production systems) as destructive of the environment. They disrupted and even outlawed many of them. The authority of Chiefs was diluted and traditional systems of land-tenure were dismantled. Inequitable land divisions were created which appropriated the best land for settlers and marginalised Africans to often infertile communal lands or reserves, leading to overcrowding (see section 2.10). Policies were introduced to impose permanent cultivation within cash economies. This led, in some areas, to extensive soil erosion, and strict controls were introduced in some countries to impose soil conservation. These measures often failed (or were abandoned at independence), not because they were technically unsuitable, but because of resistance due to their imposition.

Successor independent governments often perpetuated (or at least did not substantially change) many of these colonial systems and regulations. They have also continued to erode traditional rights. In Tanzania, for example, Barabaig pastoralists have been alienated – without recompense – from traditional prime dry season grazing areas when the government developed extensive commercial wheat farms on rangeland in Babati District during the 1980s (Lanc & Scoones, 1991). Indigenous techniques of environmental and land management have been further disrupted and eroded by war and conflict (e.g. in Angola and Mozambique) and by rural-urban migration which has depleted rural communities of people to maintain traditional methods.

Many people, particularly those living in communal lands, now lack any rights to the land they occupy or use, or any formal tenure or title. As a consequence, they cannot effectively own and control the resources on which they depend and frequently are subject to the negative impacts of resource management and use decisions taken by others (often governments). Such people, particularly pastoralists, live in great uncertainty and their livelihoods are insecure. They cannot use land as collateral to secure credit and loans. There is little real incentive to invest in the land and its sound management.

Communities living in areas surrounding protected areas are often prohibited from entering those areas to access resources on which they traditionally have been dependent, e.g. thatching grass, medicinal plants, minor forest products, etc. This has been the cause of considerable conflict and tension. Fortunately, in some areas, the issue is now recognised. Recent attempts to establish community wildlife management schemes (see section 2.8) have gone some way to addressing the problem.

There is an urgent need to address such access issues and institute processes of land reform in the region. Problems are particularly acute for pastoral communities. As Lane and Moorehead (1994) point out, the orthodox view portrays pastoralists as

“economically irrational and operating with inherently destructive communal land tenure systems,[but this] has been challenged and is now recognized as a flawed basis on which to design future rangeland development strategies. However, these mainstream views, and the policies they spawn, continue to encourage the withdrawal of pasture land from pastoral production, for the benefit of encroaching farmers and commercial production and for acquisition by individuals and the state. The viability of opportunistic grazing systems within dynamic environments, together with the need for mobility as an essential component of African rangeland management, has now been demonstrated [see also section 2.1]”.

Providing appropriate tenure rights to herders is a difficult challenge. Ideas will need to be tested on the ground. New approaches will need to be firmly based on sound empirical research and will need the clear support of government and technical agencies, and herding groups will need recourse when their tenure rules are broken by outsiders. Lane & Moorehead (1994) conclude that:

“Responsibility for which type of tenure system should be used in a given area should be left to local user groups. There can be no prescribed, rigid model of land tenure. In different areas, different tenure arrangements will be developed by local users, who will learn at their own pace what is most suitable. The role of outside investors and development agencies should be facilitatory, and should adopt an incremental approach to project planning which allows adaptive management to changes in tenure systems. An appropriate role for government and other actors in the pastoral sector is to strengthen institutions for conflict management and the provision of information and legal support to weaker groups”.

2.13 Institutional Issues and Skills (for environmental management)

In Southern Africa, the links between environmental issues and poverty are as clear as elsewhere in the world. For most people, life is still a daily struggle for food, water, shelter and warmth, and “values of the poor are tied to immediate use of the land and its resources to meet pressing needs” (SARDC, 1994). There is still much mistrust by people of governments at all levels. One of the key requirements for sustainable development is to ‘build bridges’ and generate trust and cooperation between communities and governments. Just as top-down blueprint strategies and plans have failed in the past, they will not work tomorrow. Broad-based participation of all interest groups is required to define problems, and to set priorities and goals for environmental management and sustainable development. This needs to be matched with empowering and enabling groups to assume responsibility for and to undertake environmental conservation and management, particularly at local levels. Many of the green plans, conservation strategies and sustainable development strategies prepared in the region over the last decade have made important progress in meeting such objectives. But policies and plans can only be implemented if effective institutional mechanisms exist.

All countries in the region have established national environment ministries and departments, and most have created central environment agencies. But these generally are weak, lacking the influence and political power of other line ministries. Environment is low in the pecking order. They are also mainly starved of budgetary resources to fund operations, severely restricting their ability to monitor and manage the environment. In the region as a whole, there is a severe shortage of trained and skilled people with experience and competence in environmental planning and management. Nevertheless, there are individuals and ‘staff cells’ with the key knowledge and experience within particular government departments in individual countries and in universities, NGOs, industry and elsewhere. This provides a

basis on which to build. The scale of the problems facing the region, both now and in the future (see preceding sections), requires that much more investment is made in training.

Donors can help by using their contacts and dealings with governments in Southern Africa to focus attention on the urgent environmental issues and scenarios to help raise the influence of environmental departments and agencies, and to promote the development of environmental awareness and responsibility and an environmental reflex throughout governments.

It will be vital to continue raising environmental awareness within and across government at all levels, as well as in all sectors and across society as a whole. NGOs can play a pivotal role, especially in working with the poor and local communities. Regional and international networks and partnerships will also be important. The SADC Environment and Land Management Sector (ELMS) programme was established to define priority areas of concern for the region. It has made significant progress but much is still to be done. The role of environmental impact assessment increasingly is being understood although only a few countries in the region have yet established EIA procedures (Roe *et al.*, 1995). Environmental policies, laws and practice are also deficient in most countries in Southern Africa. Even where elaborate legislation exists, it is often poorly enforced (e.g. for pollution). Countries in the region will need to subscribe genuinely to the ethic of sound environmental management if serious attempts are to be made to tackle the many environmental challenges that already exist and which are likely to become worse over the next 20 years. A sign of commitment will be enacting and then enforcing good environmental legislation.

3: SOME SCENARIOS FOR THE FUTURE

Predicting the future is extremely difficult – some would argue that it is futile given the many possibilities and uncertainties. In section 1, a number of key factors are discussed which limit our ability to derive scenarios for the environment in Southern Africa over the next 20 years: the lack of and unreliability of existing environmental data; disputes and on-going debates concerning particular environmental ‘problems’ – some, whilst still seen by the mainstream as facts, have now been shown to be myths; and a general lack of knowledge in the region about livelihood strategies and how the main environmental trends and issues are likely to affect livelihoods. In section 2, some key and important debates, trends and issues have been discussed. Despite the great uncertainties, past history of environmental change and current trends allow us to examine certain scenarios. The latter are taken to mean depicting the future through a broad range of possibilities, not pinpointing sharply defined forecasts.

3.1 21st Century Vision in South Africa

In the years preceding the end of apartheid, various studies looked at the environmental consequences of that policy (e.g. Bromley 1995) and considered the future. Some pioneering scenario planning has been undertaken that offers a platform for scenario-building for Southern Africa as a whole. A group of people (supported by the Anglo American Corporation) examined South Africa’s choices for the future, embracing political, social, economic and environmental issues. Their analysis (Huntley *et al.* 1989) provided a powerful argument to end apartheid and join with the rest of Southern Africa to face the environmental challenges of the 21st century. How much influence this work had on political events is not clear.

The work considered “both global and regional trends in environmental health, from the potential holocaust of a ‘nuclear winter’ to the insidious invisible threat of the ‘greenhouse effect’ and the ozone hole”. Against this background of possible global issues, the boundary ‘rules of the game’ for South Africa were analyzed. These included:

- its basic geography;
- the immense natural diversity and richness of landscapes, habitats, fauna and flora;
- the climate and weather cycles;
- population dynamics and settlement patterns (mass urbanization);
- distribution of key natural resources - minerals, water and arable land;
- agricultural and forestry resources;
- homeland (communal land) poverty;
- marine resources; and
- economic growth and consumption patterns.

Two key uncertainties – the different socio-economic paths and environmental management ethics that the country might adopt – were used to derive four possible environmental scenarios in the early 21st century. They ranged from the ‘*Paradise Lost*’ of a regional wasteland and the ‘*Separate Impoverishment*’ of continuing down the ‘*Low Road*’ (stagnation of the political reform process, big government, more centralized economy and siege mentality) to the ‘*High Road*’ (negotiated political settlement, multiparty political system, decentralized power, free enterprise, mass education, etc.) options of ‘*Boom and Bust*’ where the nation’s natural resources were plundered to achieve maximum short-term economic gains and ‘*Rich Heritage*’ where sustained development was pursued.

Taking this process further, Sunter (1992) has looked at the future South Africa in relation to Southern Africa and the greater world. Here, he sees the ‘*High Road*’ as closing the gap between the rich and the poor nations,

and the 'Low Road' as allowing that gap to increase with "dire consequences for the stability of the world". This approach is just as applicable to all the countries of Southern Africa.

Sunter discusses four 'rules' for 'this game' covering issues related to population, technology, social values and 'winning nations' (with mass education, a work ethic, high savings rate, a "dual-logic" economy – big business and thriving small businesses, social harmony, and acting as a global player). He also points to key variables (uncertainties) in respect of geopolitics (international order versus disorder), the world economy (particularly relationships and possible economic conflict – between the USA, Japan and the EU – the 'Triad game') and societal uncertainties (particularly how the three Triad societies will react internationally to the global challenges facing them) which could drive the world down different paths over the next 20 years.

The one 'key variable' is seen as fundamental to achieving the 'High Road', i.e. "will the Triad foster a sufficiently viable relationship with the developing world so that the 'Poor Young Billions' uplift themselves or not". For South Africa to take the 'High Road' and become a 'winning nation', Sunter argues that the country "must take the path of the African Dragon" and become the 'engine' economy of Southern Africa, just as Singapore, South Korea, Hong Kong and Taiwan are Asia's dragons. He suggests that the country can build on four great strengths: it has the best infrastructure in the region, and abundant untapped mineral resources; it is a "world in one country" which could make it a tourist Mecca; and it is a "nation of entrepreneurs waiting to be released".

This vision has profound implications for the other countries of the region. On the one hand, they could all benefit from the 'lift' to the region provided by a strong South African economy and by improved cooperation; on the other hand, they could become 'swamped' by South African dominance. Will South African industrial power disrupt the small and fragile industrial base in the other countries of the region and increase their dependence on South Africa? There are already indications of South Africa extending its influence in the region. For example, South African goods are now being exported to all countries in Southern Africa, South African farmers have moved into Zambia, South African experts and advisers are promoting and 'selling' their skills throughout region (even environmental management skills). Will the latter trend help to build or hinder the development of domestic capacities and competencies?

A number of studies are now being undertaken of the future of the Southern Africa region following the dismantling of apartheid. A recent report of the Scandinavian Institute of African Studies (Odén, 1993) examined some of the issues related to alternative modes of regional integration and cooperation and the role of external resources, especially development aid. Southern Africa has always been and still is an important outlet for South African goods and services. The need to retain and develop these markets is reinforced by the fact that large sectors of the South African economy are not competitive on the world market (Tostensen, 1993). The emphasis is changing from destabilisation of the region (under apartheid) to restabilisation and reconstruction under the new regime.

3.2 Boundary Conditions – the 'Rules of the Game' and Key Uncertainties

The development of any scenarios needs to take into account two sets of factors: firstly, the boundary conditions – those factors which are already set for the region and are likely to stay the same (called the 'rules of the game' by Huntley *et al.* (1989) and Sunter (1992)), and secondly, those factors which are largely beyond control and are likely to change (the variables or key uncertainties).

Those 'rules of the game' listed in section 2.1 for South Africa apply equally to Southern Africa as a region. In its recent review of the environment of Southern Africa, which also included some brief future scenarios, SARDC (1994) examined the context (boundary conditions and uncertainties) in which trends and scenarios were depicted (Box 5).

Box 5: Contextual Factors for Scenario-Building

Regional resources: Southern Africa's geographical and geological conditions set certain boundaries on what can or cannot be changed. Written records dating back over a century show droughts have regularly afflicted the region in that period, while geological evidence shows recurring droughts going back many hundreds of years. The natural resource base is largely fixed. Geology determines the location of minerals and, in part, soil types. Soil fertility is rarely high, and typically heavy rains deplete nutrients in the soil. Forests and other vegetation grow where the weather, soil and other natural conditions permit. Water is scarce in many parts of the region, especially in the south and west, and natural sources of supply in those areas are few. Most energy resources are also limited. The majority of people depend on fuelwood, charcoal or, in some cases, coal for domestic heating and cooking. Access to electricity is largely restricted to major cities, and many people cannot afford to pay for electricity or electrical appliances. Little oil or gas has been found or commercially exploited in the region, except in northern Angola, although several countries are still exploring. Renewable energy sources such as wind and sun are abundant but not widely used, and access to technology to harness them has been limited by cost.

International factors: A number of political and economic interactions in the international arena have an impact on the region. In particular, development loans and trade barriers remove a great deal of control over local economics from national governments. The unmanageable debt burden in most countries has severely limited the availability of government funds to monitor and manage the environment. Many countries in the region have to pay huge sums in interest each year without reducing their debt. Low global commodity prices have reduced export earnings, requiring much higher levels of production to earn sufficient foreign exchange to maintain payments. The recently completed Uruguay Round of the Global institutions such as the General Agreement on Tariffs and Trade (GATT) is likely to affect the region, although it is not yet clear how. Other factors include commitments under international agreements and conventions (e.g. on Biodiversity, Climate Change, Desertification, Trade in Endangered Species, etc.).

Global environmental changes: Several global processes will affect the region's environment. Ozone depletion is expected to increase over the next 20-30 years. The likely impact(s) are not clear, but might include decreasing agricultural productivity and increasing incidence of skin cancers and eye diseases. Animal and plant health might also be affected. The effects of global warming (see section 2.5) could easily dwarf those of ozone depletion and could include a rise in sea level, increased diseases and pests, more extreme weather conditions – particularly drought. Changes in weather patterns could disrupt ecosystems, such as the highly productive Benguela marine system on the southwestern coast of Africa.

Adapted from SARDC (1994, p291-292).

The two main components of global change – human population and climate change – are unlikely to affect the region significantly during the remaining few years of this century, nor is their effect over the next 20 years sufficiently understood or clear to build scenarios specifically around them. However, they will undoubtedly have profound affects in the long term. Obviously the countries of the region will need to cooperate with international efforts to counter the worst outcomes of the 'greenhouse effect'. And any efforts to deal with population growth will contribute to addressing the global problem.

Some issues can be viewed as surprise 'wild cards' which could have dramatic effects. The regional impact of AIDS is a key uncertainty in this regard (see section 2.3). If global warming occurs, the incidence of a range of tropical diseases could increase dramatically, e.g. malaria, hepatitis-B, cholera, bilharzia, foot-and-mouth diseases and rinderpest. The region is currently moving towards political stability following the end of wars in Angola

and Mozambique, and the end of apartheid and free elections in South Africa. Whether this position will continue, and whether the region's countries can avoid turmoil from internal conflict, is a major uncertainty.

3.3 Some Key Environmental Trends Revisited

A range of environmental trends have been discussed in section 2. Two important positive trends are likely to have beneficial affects on the environment in Southern Africa. First, notwithstanding the uncertainties highlighted in section 3.2, the current trend towards greater democracy is encouraging greater public participation in decision-making. It is enabling the involvement of more people from a wider cross-section of societies in the process of policy development (including in national and local environmental action plans and sustainable development strategies to which increasing attention is now being given in the region), more commitment to policies once agreed, and increased accountability and responsibility – of both governments and publics. Participatory policy-making and environmental management is being encouraged by international accords (e.g. Agenda 21 and the Conventions on Biodiversity, Climate Change and Desertification) to which the countries of the region mostly are committed.

Secondly, scientific advances are being applied in several areas. For example, infrastructural development is increasingly using improved technologies (for dams, industrial processes, water and sanitation services and roads, etc.) and there is increasing use of more efficient and non-polluting technology.

There are, however, various trends which are having, and are likely to generate increasingly more, negative impacts on the environment. The problems of pollution from industry, agriculture and urban areas have been discussed in section 2.7. Soil erosion and other forms of land degradation have been considered in section 2.1. These problems will get worse as patterns of increasing urbanization continue and as pressures to increase industrial and agricultural production grow in response to population growth. The latter trend is likely to be accompanied by increasing poverty which limits people's options to use environmental resources in a sustainable way. Similarly, continuing debt and limited financial resources available to government departments will also restrict their ability to discharge their responsibilities and manage the environment. SARDC (1994) contend that much formal education and training in the region is usually based on foreign biases and is "out of touch with local environments, processes and traditions" and, as a consequence, has "overshadowed and disrupted the role of traditional education and culture". Many traditional, religious and cultural practices worked to protect the environment, but have been displaced (and even outlawed) by new 'western' values and by the growth in systems geared to satisfying increasing consumption patterns (see section 2.12). But, equally, the introduction of new ideas needs to be sensitive to traditional values. Finally, episodic natural disasters such as droughts and floods lead to severe environmental impacts and all countries in the region will need to improve their preparedness strategies.

Two main scenarios can be envisaged. The first (the doomsday scenario of an unsustainable world) assumes that current environmental trends continue and get worse, with negative impacts gradually increasing. The second assumes that governments and peoples take effective steps to counter these trends and manage the environments and economies sustainably. The main thrust of the 'High Road' and 'Low Road' scenarios depicted for South Africa (see section 3.1) can essentially be equated to the choice between following these alternative unsustainable and sustainable development paths. These two scenarios are discussed below.

3.4 The Doomsday Scenario – The Road to 'Hell'

It is not unreasonable to assume that most, if not all, of the current environmental trends in the region will continue, at least for the foreseeable future. Some trends (e.g. population growth) have an in-built momentum. Changing course is difficult in the best of circumstances (i.e. where government and societal will exists, where

the financial resources to support the changes are available, and where the changes are achievable), but these do not exist in Southern Africa. Even if some of the necessary changes are instituted, they will take years to have a marked effect. The region is likely, therefore, to suffer serious environmental consequences as a result of existing trends. These will be much worse, however, if the trends accelerate. This could lead to a nightmare or doomsday scenario with widespread conflict, extensive environmental degradation and human misery. Some of the key variables are considered below.

(i) Poverty and Population

Two major trends are likely to have a dominant influence on the environment in Southern Africa over the next 20 years – persistent poverty and rapid population growth. Poverty (inadequate financial and other resources) often means that, in order to survive, people have little alternative but to use land and resources badly to satisfy their needs. They do not have the luxury to consider the consequences or environmental impacts – even though they may be aware of them, e.g. soil nutrient depletion, soil erosion, excessive tree felling for fuelwood. They are unlikely to be able to afford the costs or the ‘surrender’ of cultivable land to conservation works. Even animal manure and crop residues, which might be returned to the soil to provide nutrients, are likely to be burned for cooking and heating. Many poor people, particularly in urban areas, have little alternative than to live in squalor in overcrowded and unhealthy slums or shanties in insanitary conditions and without basic services such as clean water and sewage systems.

The region’s population is growing rapidly. It is expected to double to at least 270 million by 2015, unless growth rates are changed – either by intervention (e.g. family planning), or by natural events such as the AIDS epidemic (but this is far from certain, see section 2.3) or increased incidences of other diseases as a result of global warming (see section 2.5). There is a built in accelerator to population growth in that a large percentage of the region’s population is currently young (over 40% are under 14 in most countries) and will be capable of producing children throughout the next 20 years. As SARDC (1994) comments, “the population is not likely to stabilise for several decades”.

The increasing population will place more stress on the environment, as rural communities are forced to ‘mine’ resources and as people increasingly migrate to urban areas in search of work, food and shelter, with its dire consequences, i.e. increased overcrowding and pressure on already inadequate urban services (see section 2.2.). The population increase will also generate ever increasing pressures to produce more food. The burgeoning urban population will have to be fed by production increases in commercial farming. This most likely will be achieved through an expansion of intense production: further increases in irrigation – to the extent that available water resources allow – but at the possible cost of localised waterlogging and salinization; massive increases in the use of fertilizers and pesticides which, inevitably, will lead to increased pollution of rivers and lakes and other waters with consequential effects on human health and the environment (see section 2.7); and probably an expansion of ranching, particularly in the region’s extensive grazing lands where more efficient traditional pastoralists (see section 2.1) will be displaced and, in a worst case scenario, their way of life may be completely eliminated. This picture assumes, of course, that chemical inputs continue to be available and affordable by the commercial farming sector. If economic growth becomes negative, this cannot be guaranteed (see section (iii)) and, in any case, people may not be able to afford to buy food. The worst case scenario here might be mass starvation. The masses of the rural poor will be unable to afford to use such agrochemicals. Their only recourse will be to cut down more forests and woodlands to expand the land under cultivation and, as suitable land becomes limited, to move into marginal areas such as steeplands and grazing lands. This is likely to lead to massive increases in land degradation (particularly soil erosion, and reductions in soil fertility), leading to consistently declining productivity. Increasing poverty is likely to fuel bad land husbandry and prevent nutrient recycling and investments in soil conservation. There will also be great pressure to bring protected areas and

environmentally sensitive areas (e.g. wetlands) under cultivation with loss of habitat, biodiversity and extinctions of many animal and plant species. Furthermore, the insatiable demand for food will mean that people will have little choice but to turn even more to wildlife as a source of protein – placing severe stress on wildlife resources (wildlife per capita has been declining steadily in recent years in any case).

A more optimistic view is that further increases in agricultural productivity are possible. In practice, Southern Africa has produced a net food surplus for several decades (although there have been severe food shortages and famine in some areas). However, overall productivity has not kept pace with the growing population. SARDC (1994) conclude that falling per capita production in the region “will lead to a net deficit well before the year 2020. Since other areas of the world are also experiencing these declines, they will eventually export less to Southern Africa because they will need more to feed their own people”. Of course, the greatest uncertainty in the food production ‘stakes’ is the uncertain effects of climate change on the food production capacity of the region. As noted in section 2.5, predictions suggest that the region will become increasingly more arid.

These are but some elements of the complex web of consequences that rapidly increasing population and surging poverty might lead to. These key factors will undoubtedly affect all aspects of the environment, economies and societies.

(ii) Economic stagnation and decline

In general, the economy of the region has seen slow growth in recent years. This has restricted the ability of some governments to maintain services such as health and education (which have positive spin-offs for the environment) and to fund agencies responsible for managing the environment. Many industrial plants have not been able to invest in efficient or clean technology. The farming sector, particularly poor subsistence farmers, has been unable to afford inputs or to maintain or install soil conservation works. Predictions of the future economic fortunes of the region are extremely difficult to make, particularly given the uncertainty in the relations between the Triad countries (see section 3.1) which effectively control international trade and commodity prices. However, if the current state of economic stagnation persists or if economic growth continues to decline, then average real incomes will decrease considerably for the majority of people, leading to greatly increased poverty (and its consequential negative environmental impacts – see (i) above), large-scale unemployment, severely reduced quality of life, increased corruption and crime, and imprisonment in the debt trap for some countries. The World Bank has promoted Structural Adjustment Programmes in some of the region’s countries, but it is not yet possible to judge what affect these have had on improving economic growth or reducing the extent of poverty.

Another problem is that the economies of some countries in Southern Africa have become heavily dependent on aid (e.g. Tanzania, Zambia). Yet, overseas aid flows are beginning to shrink because of budget cuts, particularly those to African nations. Donors are having to rethink the distribution of their aid – some focussing on fewer priority countries, many redirecting aid away from Africa to underpin the new democracies in eastern Europe. What happens if the aid starts to ‘dry up’? Some predict complete economic collapse in aid-dependent countries. Others argue that aid reduction or withdrawal will provide a much needed stimulus as countries are ‘forced’ to “manage their economies better”.

It is suggested, with increasing frequency, that South Africa will provide an economic ‘engine’ to support the economies of the other countries of the region. But some people are seriously questioning whether South Africa will be able to fulfil this role. The picture they paint goes like this:

South Africa, under majority rule, will follow a path of economic decline over the next 30 years. The experience from the rest of Africa, including the recently independent Zimbabwe, raises the possibility that competent civil servants

will be replaced inexperienced and unskilled officials. Whilst the economy may generate revenues, these will be increasingly 'sidelined', through incompetence and corruption, into inappropriate developments which will fail. As a consequence, the economy will gradually decline and the real values of civil service salaries will fall or may be frozen. Remaining competent staff will be forced into quitting government service. Officials will be tempted to augment their meagre salaries by engaging increasingly in corrupt practices. The government may even be tempted to create a one party state and to nationalise institutions. Over the years, the economy will completely falter.

Others argue that there are large numbers of highly educated people in South Africa and that, despite the history of events in other countries in Africa, this course of events will not happen. However, in a doomsday scenario, this picture is a possibility which needs to be considered, however unpalatable.

(iii) Water – the key resource

Consumption (for domestic and industrial use, livestock, irrigation, mining and power generation) is expected to double over the next 25 years. Chronic water shortages will emerge over this period and will limit development in the region (it is projected that Botswana, Namibia and South Africa will experience actual water deficits by 2020, with Zimbabwe, Swaziland and Malawi facing severe problems). Assuming that conflict between nations does not occur and that water-sharing is successful (discussions on cooperative water-sharing arrangements between the water-rich and water-poor nations have been taking place under the sponsorship of SADC and UNEP – see section 2.6), this will require more dams which will interfere seriously with the natural conditions of the major rivers and eliminate many important habitats. As SARDC (1994) note, "both river and lake levels will drop, floodplains will be damaged by loss of annual flooding, and estuaries will be disrupted when the mix of fresh to salt water changes". Disruption to freshwater ecosystems will inevitably affect other ecozones. In many parts of the world, dam siltation is a serious problem. There is no accurate information on the current trends in siltation in the region's dams. However, if population growth and increasing poverty leads to a massive increase in soil erosion, particularly in marginal areas – as postulated in section (i) above, then it can be assumed that dams will silt up rapidly and their useful life for power generation and for water storage will be increasingly limited.

Growing urbanization and industrialization (unless curbed by economic stagnation or decline) will lead to increased water pollution levels. These trends are already apparent. As previously pointed out, regulations, monitoring and enforcement are inadequate in most countries in the region. If rates of urbanization escalate (various possible reasons for this have already been mooted), pollution levels could reach critical levels in some areas, and the poor, who often have no choice but to draw water directly from polluted water sources, will be at serious risk. If economies deteriorate, governments are unlikely to have the resources to police and control pollution levels or to undertake the expensive treatment of growing amounts of waste waters and sewage; and if conflicts and domestic unrest become a feature in the region, control will be almost impossible.

(iii) Conflict and confrontation

The last decade has seen the end of most armed conflicts in the region and a trend towards democracy. However, a surplus of guns from these conflicts is increasingly being used for armed crime, mainly in the richer urban areas. If national economies continue to weaken, with various consequences (e.g. increasing poverty and unemployment – see (ii) above), there will be much wider disparities between the rich elites and the impoverished majority and discontent with governments will probably increase. Such conditions are likely to be a breeding ground for escalating crime, domestic unrest and even coups d'état.

As already noted, rapid population growth will place heavy pressure on natural resources. This pressure is probably most critical in respect of water – the lifeblood of drought-prone Southern Africa. As noted in the last

section, chronic water shortage will become a problem during the next quarter century. This will bring with it the likelihood of competition for water and possibly disputes over allocation, not only within countries, but between countries. Even the prospect of war between countries over access to water cannot be discounted. The Gulf War was arguably as much over access to water as other issues. Such conflicts could well lead to mass displacements of people (domestically and across borders) and large numbers of refugees which will result in a range of direct and indirect environmental impacts (see section 2.4). They are also likely to lead to further increases in urbanization.

(v) Biodiversity

Biodiversity will be under increasing threat over the next 20 years. As pointed out in sub-section (i) above, the need to feed the region's expanding population is likely to lead to the conversion of large areas of existing woodlands and rangelands lying outside protected areas into cultivated land, dramatically reducing the extent of available habitat for wildlife (both plants and animals). But governments are likely to come under increasing pressure to degazette parts of some of the region's famous protected areas to allow cultivation. Once this process starts and the precedent is set, it may be difficult to limit – especially if the choice is between people and wildlife. In a worst case scenario, one can envisage that, by the middle of the next century, all but a few of the region's parks and protected areas will be under the plough or grazed by cattle (after the elimination of tsetse flies by chemical screens or by massive spraying of pesticides – with its consequent environmental affects).

Habitats are also likely to be affected as increasing quantities of fuelwood and charcoal are used for heating and cooking by an expanding poor population. A statistic quoted by SARDC (1994) suggests that, with current population growth rates, annual habitat loss in the region will rise to 8000 sq.km by the year 2020 (it is not clear how this figure is derived). As habitats shrink, the most affected will be the large mammals which require extensive areas in which to feed, breed and migrate. Some species (notably elephants and black rhinos) are already under serious threat from poaching. Over much of the region, these species are likely to become extinct over the next 20 years, except in a few highly protected small reserves and game ranches.

The loss of Southern Africa's famous big game will severely reduce its attraction as a tourism destination, with potentially serious economic consequences. Lucrative game hunting may be less affected, provided private game ranching is unaffected; but even here, as poverty and hunger begins to bite, people may have little choice but to 'take' such private game as well as animals in communal lands and protected areas to satisfy their protein needs.

Increasingly, areas of species-rich vegetation may be lost forever. Pressures to continually intensify agricultural production (particularly through the use of agro-chemicals) may kill soil organisms and poison habitats (the affects of pesticides has been discussed in section 2.7). And increasing pollution from urban areas and industrial discharges will affect and kill many species.

A range of plant and animal species are already being exploited through lucrative illegal trading, e.g. various birds, reptiles and rare plants. It will be difficult to prevent such trade escalating if poverty continues to grow, and if economies weaken and other forms of income or employment disappear.

Both freshwater and marine fish stocks are likely to be severely reduced as the demand for food increases. Some lakes and rivers are already over-fished (e.g. lake Malawi, lake Victoria, parts of the Shire river in Malawi) with most of the larger fish already taken. This is leading to the use of smaller and smaller net sizes (mosquito nets are increasingly been used). As noted in section 2.11, marine fisheries are also already being over-exploited. Just as pollution is unlikely to be controllable if the doomsday scenario unfolds, so too will

overfishing escalate until stocks are depleted to extremely low levels, and some species may become extinct. Measures to stock lakes with species from elsewhere have already led to the displacement, out-competition and extinction of indigenous species. As demand for food increases, this pattern may be repeated.

(vi) A diminishing institutional response

Countries in the region are already hard pressed – in terms of financial resources as well as trained and skilled staff – to deal with current environmental, economic and social problems. It is already a problem to monitor, regulate and police existing environment regulations. Under the doomsday scenario, the scale of these problems will grow quickly as population and poverty rapidly increase, whilst the ability of government agencies and staff to respond will decrease. They will, in effect, be fighting a losing battle.

At the same time, the collection and analysis of information – vital for environmental management – will become even more ad hoc than it is at present, and possibly cease; and collaboration both within and between countries to ensure consistent approaches to data collection (for comparisons) will probably end. As a result, the voice and influence of ‘the environment’ in policy-making and decision-making will become even weaker than it already is.

3.5 Building a Sustainable Future – The Road to ‘Heaven’ ?

The discussion in section 2 has shown that the environment of Southern Africa is shaped and affected by a complex set of factors. Some of these are extremely uncertain, e.g. the consequences of global warming or AIDS. Trends in several factors over the next 20 years are already largely set, particularly for population growth. Trends in other factors, to a large extent, will be determined by regional, national and local policies and actions. To work towards sustainable development and a more secure future, the countries of Southern Africa will need to take account of all of these environmental variables, as well as social, economic and political considerations, at national, regional and wider levels. However, practicality suggests that countries will focus on those variables over which they can exert some influence, either because they can promote positive changes or can effectively mitigate negative environmental impacts. Some of the benefits and consequences of following a sustainability route are discussed below.

(i) Building the future through sustainable development strategies

Over the last decade, the countries of the region have gained considerable experience in developing and implementing national conservation strategies, environmental action plans, sector strategies and plans. Some have been more effective than others. Nevertheless, all have provided valuable lessons for developing National Sustainable Development Strategies (NSDSs) as called for in Agenda 21 (Carew-Reid *et al.* 1994; Dalal-Clayton *et al.* 1994; Bass *et al.* 1995).

In response to commitments entered into at UNCED and in Agenda 21, the countries of Southern Africa are now building on their past experience. They are all developing and beginning to implement ‘first round’ NSDSs of one sort or another. The evidence to date suggests that few of these are having or have had much real influence on overall development policy – they are not connected with the real centres of decision-making and are too remote from the central planning and budget processes. In other words, currently they are not part of the ‘real world’ of policy-making. However, they do have real potential if governments can be persuaded to draw these processes into the ‘centre of affairs’ and if they build on those elements of past strategy processes which have already been seen to work. For example, if monitoring and evaluation mechanisms are put in place, countries will be able to garner experience of what is working well, and what less well.

If governments remain committed to the NSDS process, they will be able to feed this experience back through periodic (possibly every five years) strategy reviews and revisions and facilitate the evolution of a cyclical process of learning by doing. With each round, governments will gain increasing confidence and experience in the strategy process. At first, they are likely to draw primarily on the civil service and probably academic skills and knowledge. Increasingly, however, if participatory approaches are encouraged and accepted, they will work with other key players and interest groups. These are likely to include not only government at all levels (from national to local) but non-governmental interests (notably: industry and business, religious groups, community groups, trade unions, social interest groups, environmental organizations, resource users such as farmers and fisherfolk, professional associations, schools and teachers, banking and financial organizations, the media, the judiciary, individual members of the public and international organizations).

Each turn of the strategy cycle (each round) should see an increase in the participatory nature and extent of the process. This will help to build and secure a sense of common purpose and common ownership of the strategy process. Policies and actions will be decided by an increasingly wider array of participants. The process will lead to greater dialogue at all levels and between all actors and interests. It will enable the integration of environmental, economic and social objectives; and where such integration is not possible, it will foster the process of making difficult trade-offs between objectives (a key to sustainable development).

The participatory process and the learning from doing, through successive cycles of strategy revision, is likely to foster spin-off effects. For example, there should be increasing trust and cooperation between government and communities. Stakeholders will increasingly be able to talk to each other and negotiate their differences to build a 'common future'. This should lead to reduced disputes and conflicts over resources and in other areas. Strategy processes will need to be accompanied by mass environmental awareness campaigns, involving the media and schools. They will foster environmental monitoring to generate information for policy formulation, priority setting and strategy revision, and lead – out of necessity – to institutional development and capacity-building in all sectors. Legal reforms will also be fostered (e.g. the introduction of EIA legislation, changes in land tenure regimes). National processes will need to complement and link with local strategy development, and feed into regional strategy development which will serve to increase regional cooperation (e.g. through regional bodies such as SADC).

Donors will have a role in assisting the first few strategy rounds (financially and technically) but, increasingly, with success, the processes should become increasingly internalised and become fully integrated with national planning and budgetary processes.

Effective participatory strategy processes will help to develop human resources and improve living standards in the region, offsetting the poverty which currently exists. They will enable traditional knowledge and culture to play a role in influencing the direction of development, and the adoption of a more holistic approach to environmental management. Furthermore, they have great potential to facilitate discussion on ways in which technology can be used, and agricultural and industrial production can be improved, in an ecologically sound way to feed the growing population and support economic growth. It should be possible to stabilise population growth rates in the region by the second quarter of the 21st century if effective NSDS processes are initiated (and seriously maintained in the way suggested above). Their success is probably the only route to securing sustainable economic growth and raised standards of living – the key means to reducing population growth.

Strategic approaches will help to reduce and eliminate current negative environmental trends and build on and sustain positive ones. Some of these trends are easier to address than others. However, many fundamental problems are the consequence of several factors at play together. It will, therefore, be necessary to work on linkages between trends. Strategy processes offer one of the best vehicles for such an approach.

(ii) Reducing poverty and improving living standards

Earlier sections of this paper have highlighted the links between poverty, poor societal conditions and environmental degradation. Alleviating such conditions and improving living standards requires sustained economic growth to enable the creation of wealth. But that wealth needs also to be distributed equitably and used to increase access to essential services. As SARDC (1994) point out, "investment policies should recognise that it is important to provide an enabling environment for people to participate in the benefits of economic development".

The issue of economic development is a complex subject in its own right and cannot be discussed in detail here. Under a 'sustainable heaven' scenario, it is assumed that the countries of the region will increasingly improve their integration and cooperation (out of mutual need) and find ways to use South Africa's current industrial and production base and comparative economic advantage to boost and drive economic growth throughout the region, with increased trade both within the region and internationally. In practice, South Africa needs the rest of the region as much as other countries need South Africa. Care will be required that South Africa does not become a 'dragon' at the expense of its neighbours in the region.

It is argued that particular emphasis is needed to promote increased wealth production and equitable distribution in the rural areas where the majority of southern Africans still live. As data in Table 3 indicate, even though urbanisation is rapidly increasing, by 2010, 55 % of the urban population will be living in centres with a population less than 500,000 and will be dependent on agriculture or agriculture-associated industries. At present, many subsistence farmers (and particularly women who do most of the farming) and those in communal areas (where they do not own the land to use as collateral) have difficulty in accessing loans and credit in order to improve their production and standards of living, and to invest in sound land management. The Vice President of Uganda, Speciosa Wandira-Kazibwe, recently commented:

"Unless you invest in women farmers, you are wasting your time. ... Women are going to be the engines of change. ... Women must be helped to own land. Until they do, we cannot expect them to improve productivity. They need credit, and they will repay it".

If NSDSs are effective and successful, particularly with participatory processes enabling increasing negotiation of difficult issues and trade-offs on such issues as rights, land tenure and access to resources, then the problem of accessing credit should diminish as innovative ways are found for more and more people to secure tenure to land. Innovative mechanisms for credit provision are likely to emerge, based on successful models elsewhere such as the Grameen Bank in Bangladesh which is helping to raise standards of living in villages by lending to the landless, mostly to women.

Individual countries and the region (through increasing cooperation) will develop and improve preparedness for periodic disasters (e.g. episodic droughts). Disaster planning, monitoring and early warning will combine to facilitate the mitigation (often through regional cooperation) of the worst negative effects of disasters. As economic growth takes off, governments will increasingly have available the resources (which currently are often lacking) to implement environmental protection and management.

(iii) Expanding education and environmental awareness

Significant progress in solving the region's environmental problems will come as a result of increasing investment over the next 20 years (as economic growth takes off) in education and training, at all levels, and in harnessing both conventional and traditional knowledge as well as building on cultural and religious experiences and

values. Minimum levels of education will be set and provided for all citizens, including girls and women. Education curricula will be developed as a cooperative venture between governments, educational institutions and communities, and these will be practical, holistic and development-oriented. They will utilise indigenous knowledge, language and materials, foster gender equality, and encourage smaller families. Sustainable farming practices will be taught in the curricula of schools and colleges and promoted through agricultural extension services. Using environmental information will become part of the routine portfolios of teachers and the media, and such information will be disseminated through all possible channels including through local languages and traditional mechanisms. The output of research facilities and institutions will increasingly be targeted towards information users and communicators. Apart from government, the media and schools, many other organisations will have access to and a role in information networking, including NGOs, religious groups, resource user groups, etc.

The investment in general education, at all levels, will significantly improve the skills available to government and non-government institutions. Their capacities and performance will improve immeasurably and, with more resources available to agencies following economic growth, there will be much better environmental management in the region.

(iv) Transforming agriculture and managing key resources on a sustainable basis

There is great potential for the basis of agricultural production in Southern Africa to be transformed over the next 20 years. Under the 'road to heaven' scenario, economic growth will gradually improve, peace and security will prevail, regional cooperation will be enhanced, and NSDSs will play an increasingly influential and key role in charting a sustainable future. These conditions and developments will foster production systems which, increasingly, will be based on sustainable farming practices which will recycle nutrients, improve and conserve (not degrade) the land and reduce pollution. Although still widely contested, there is plenty of evidence to suggest that low-input agriculture can be highly productive (Pretty 1995a). Such an approach is critical in areas such as Southern Africa with extensive areas of fragile soils, limited rainfall and widespread poverty.

Economic improvement will lead to regional investment in agricultural research. Extensive monocropping in large fields – which can damage the soil – will gradually be eliminated and be replaced by practices such as intercropping. But the vast majority of farmers are subsistence producers. The energies of these small-scale farmers will be released as they acquire land rights and gain access to the credit (particularly women who grow most of the food) and technology which they need to invest and raise living standards. Methodologies such as permaculture (permanent agriculture)⁶ are likely to take hold. Permaculture is a people-driven farming method which is suitable for both rural and urban areas. For the projected vast increase of people who will live in agriculturally-dependent small urban centres over the 20 years (see previous sub-section), this approach will provide a vital way of producing food intensively in small plots. As NSDSs lead to policies which help to lower fertility rates, women will be able to increase their food output. Changes in land tenure will also play a major role in encouraging higher and more sustainable food outputs. Affordable and environmentally-sound low-cost agricultural technologies increasingly will be used, e.g. integrated pest management (IPM) through which pests are controlled more cheaply without chemicals. A vision of sustainable agriculture is given by Pretty (1995a; summarised in Pretty 1995b):

⁶ Permaculture (permanent agriculture) – an idea developed in Australia in the late 1970s by Bill Mollison – is a system under which farmers use no chemicals or other inputs from outside the area where they farm. They grow a mixture of food and tree crops and usually keep small livestock, with each part of the system benefitting the other parts. Trees tap soil moisture, for example. Leaf-fall from trees enriches the soil and helps crop growth.

“A more sustainable agriculture tries to do things differently. It pursues an incorporation of natural processes such as nutrient cycling, nitrogen fixation and pest-predator relationships; a reduction in the use of external and non-renewable inputs that damage the environment or harm the health of farmers and consumers; a more equitable access to productive resources and opportunities; a greater productive use of local knowledge and practices; and an increase in self-reliance amongst farmers and rural people.

What has happened recently is that empirical evidence from the field is suddenly beginning to show that sustainable intensification works. Food output from the same land can be increased two to three fold, and sometimes more, with technologies and practices that do not damage the environment and that are accessible to all types of farming families.

[The way forward is] to put farmers at the centre of agricultural and natural resource improvement, work with them and build on their knowledge, develop new partnerships between different agencies, and food production will improve immeasurably”.

Pretty points out that successes with this sustainable approach are still only islands of success. This is partly because many scientists, and some international agencies, still argue that the only way to feed the world is through using modern ‘improved’ crop varieties and breeds of livestock, and high inputs of pesticides and fertilizers. Another reason is that national and international policy environments currently encourage farming that is dependent on expensive external inputs and inappropriate technologies. However, over the next 20 years, this picture will steadily change and, as NSDSs run through increasingly successful cycles, so too will integrated national policies for sustainable agriculture emerge and food production will increase. When the Director General of the International Food Policy Research Institute presented IFPRI’s 2020 Vision for Food, Agriculture and the Environment in 1994, he stated:

“The question is not whether we can feed the world, Rather it is whether civil society and governments have the political will... to take the actions that are needed”.

Under the ‘sustainable heaven’ scenario, the governments of Southern Africa will find that will, and will be supported by changing international thinking and policies. The transition to sustainable resource management will also include other approaches to counter the effects of poverty including social forestry as well as using appropriate, alternative energy to reduce use of dung and crop residues as fuel. Extension networks will be improved and extension officers trained in sustainable approaches to resource use and land management

(v) Curbing pollution

Governments will develop policies, legislation and regulations, and review and revise existing ones, to control pollution. Monitoring regimes will be put in place, strengthened and expanded, and regulations strictly enforced through fines and other measures, discouraging pollution. In addition, incentives increasingly will be provided to enable industries to adopt low – and even zero – emission technologies, and to adopt environmentally-friendly production methods and waste disposal systems, including recycling.

(vi) Planning for the uncertainty of climate change

Research undertaken by IIED and the University of East Anglia (and supported by Sida) under a pilot project, “Climate Change and the South”, shows how future adaptation and current development requirements may be achieved simultaneously in living natural resource sectors. This strategic approach is termed “**sustainable adaptation**”. It recognises that, given the present-day priorities of Southern

nations to meet the needs of their citizens, the most effective manner by which they can begin to adapt to future, and as yet unpredictable, climate change impacts on living natural resource systems is to explicitly couple adaptive planning and management responses with sustainable solutions to resource degrading development pressures. In this way, climate change responses can be based on actions that bring both immediate and long-term environmental, economic and social benefits. The research has demonstrated, firstly, that implementing adaptation policies and practices to minimise future climate change impact disturbances meets directly the current objectives for sustainable land use and forest management; and, secondly, that implementing sustainable land use and forest management practices meets directly the objectives for adaptation. In this way, the needs of both present day and future generations are most likely to be realised. In other words, what is good for sustainable development is also good for offsetting the effects of climate change. The best way for the nations of Southern Africa to plan for the future, given the uncertainties of climate change, is to adopt and persevere with sustainable development strategies.

(vii) Regional cooperation and the peace dividend

The current trend towards peace, stability and democracy will continue and give rise to increasing regional cooperation covering economic development, environmental management and many other fields. This will eliminate the problems and threats from refugees, reduce some of the pressures causing urbanization, and lead to agreements and action on resource use and sharing (particularly water). Similarly, a regional approach will be adopted to coordinate responses to disasters such as droughts.

(viii) Biodiversity – the mainstay of a tourism mecca

National and regional strategies developed under the emerging sustainability agenda in the region, and improving economic conditions and resources available for conservation, will provide for a mix of well managed and controlled protected areas, buffer zones and other areas managed under community-based wildlife management schemes and approaches, and privately-owned game ranches. Poaching will quickly be eliminated through better controls (including improved policing involving the authorities and communities working together) and as a consequence of raised living standards reducing the incentives for people to engage in such activities. Certain species (particularly elephants and black rhinos) will be reintroduced into areas where they have traditionally roamed. The region's physical and biological riches (including its big game) will make the region a major international tourism destination and contribute to employment and economic growth. As agricultural production increases, the pressure on over-exploited fish resources (both freshwater and marine) will be reduced and stocks will regenerate.

3.6 The Probable Future – A World In-Between

Sections 3.4 and 3.5 have set out two scenarios which represent opposing 'extremes'. In reality, we might expect developments in the region over the next 20 years to follow a route somewhere between these two extremes. It is impossible to predict the exact alignment or direction of that route. In general, however, many people expect most trends to continue as they are – some perhaps getting worse, other improving. But we cannot discount the unexpected to happen which might lead to major changes. It is clear that governments have little alternative but to plan within a climate of uncertainty and, as in planning for the uncertain effects of climate change, choosing a development route based on principles of sustainable development is likely to be the best strategy. The same conclusion was reached in a case study of Zambia for a Swedish government review of Swedish Aid after UNCED (IIED, 1994b).

An article in a recent special issue of the "New Scientist" magazine suggests that there is hope for the future:

"It seems to us that [hope for the future] lies where people are getting their hands on technologies for their own use, instead of being told what to do with them by outside experts. This is not large-scale aid, but the woman who can enrol on a literacy class because she heard about it on an independent rural radio station, the teacher who can demonstrate how to use e-mail on a school computer with the help of batteries and a radio link. Increasingly, governments and some donors, including the World Bank, are beginning to accept this view. They are introducing special programmes designed to help small businesses.

We are not deluding ourselves that technology will change Africa overnight – or provide a magic "fix". Most people don't have a phone, let alone a modem. Nevertheless, change is coming. In Tanzania, for example, it costs a quarter of a professor's monthly income to send a one-page fax abroad, but e-mail is twenty times cheaper.

What directions the changes ahead will take, no-one knows. What is certain is that each country's future will be different" (New Scientist, p35, 7 October 1995).

4: PRELIMINARY RECOMMENDATIONS FOR Sida

The range of environmental (and related) issues which Sida could address and the actions which the agency could take is very broad. Some suggestions are made below. Some of these are clearly political in scope or related to areas where Sida might exert influence or provide leadership within the donor community; others are of a technical nature. Many of the critical choices for the direction of Swedish Aid after UNCED have also been reviewed in a recent government study (MFA, 1995).

- **Plan for uncertainty:** Sida, as well as governments in the region, will need to plan for uncertainty and be prepared for the unexpected to happen – it almost certainly will. In this regard, Sida should place a major emphasis on facilitating national, regional and international debates on those environmental issues and trends about which there is controversy (some of these are considered in section 2); and help processes which allow the relevant issues to emerge and be discussed in an open and participatory way. Only in this way will it be possible to identify options for a sustainable future and the right kinds of investments.
- **Encourage and support sustainable development strategies:** Planning for uncertainty accords with the philosophy of national and local sustainable development strategies. Sida should encourage and support governments to remain committed to participatory and cyclical NSDS processes, to engage in processes which enable 'learning through doing', and to bring environmental and sustainable development planning into the mainstream of political decision-making and economic development planning.
- **Continue to support democratization:** It will be vital to continue to promote, encourage and support a continuing process of democratization within the region. In particular a careful package of support will be required in recently war-torn Angola and Mozambique to prevent them slipping back into conflict which will serve to destabilize the region and push it towards environmental degradation. Equally, investment and assistance to South Africa is vital if its newly won freedom is to be safeguarded and its potential to play a leading role in the economic revival of the region (upon which poverty alleviation and environmental stability depends) is to be nurtured.
- **Focus on institutional development and building capacity for environmental management:** There is already much donor emphasis in this area. This is particularly critical for supporting the new democratic processes in the region, and needs to be sustained and increased.
- **Plug the information gap and seek hidden information:** Efforts in this area need to be put in hand. The generation of relevant and reliable environmental data needs to be promoted and supported, with an emphasis on ensuring that comparable methods are used in different countries to facilitate analysis and monitoring of regional trends. But care will be needed to avoid the trap of collecting vast quantities of unnecessary information. Commissioning 'data needs assessments' for sustainable development would be a useful contribution in individual countries. As a balance to this approach, it will be necessary to think creatively about accessing hidden and unconventional information sources as well as making obvious existing information more useful.
- **Support education:** It is clear from the analysis in this paper that education will play a pivotal role in ensuring not only sound environmental management, but also economic growth. Sida should give strong support to improving mass education. This should cover not only the formal and regular

systems and curricula in schools, higher education establishments and training institutions, but also should embrace traditional knowledge and cultural values

- **Commission research on livelihood strategies:** There is a clear need for research on livelihood strategies in individual countries, both in rural and urban environments. Ultimately, livelihoods are at the centre of most issues concerning the environment. Another key area which would benefit from research concerns the potential of small urban centres (population < 500,000) where more than half of the urban population will be resident by 2015 (and dependent on agriculture or agriculture-related industries), focusing on their potential as catalysts for rural development. Efforts are needed to mobilize resources to promote secure livelihoods for people in rural areas, enabling them to stay there rather than migrate to urban areas. The whole issue of rural-urban linkages needs much more research attention and policy consideration.
- **Encourage and support drought proofing and disaster planning:** Countries in Southern Africa will need to invest effort in such approaches, both domestically and through regional cooperation (e.g. through SADC and other regional bodies). Sida should both encourage and support these efforts.
- **Adopt and promote participatory approaches:** These are recognised as a vital element in moving towards sustainable development. They need to be promoted within and across government, academia, industry and communities, etc. (i.e. horizontal participation) and within and between all levels – national, provincial, district, community, household and individual, and not forgetting groups who are frequently marginalised (e.g. pastoralists, women) (i.e. vertical participation). A strong emphasis is required to put the rhetoric of participation into action. Furthermore, ‘bottom-up’ needs to meet ‘top-down’. Research is needed on the **links and relationships** within and between ‘levels’, opportunities for ‘vertical integration’, and the role of meso-level institutions (those operating between governments and communities).
- **Promote debate on land tenure and resource access rights:** As pointed out frequently in this paper, problems over lack of land tenure, inadequate rights, and lack of access to vital natural resources are key factors in the current trend of environmental degradation in the region. These are sovereign issues, but Sida could promote debate on the links between these factors and encourage governments to address ways of overcoming the problems.
- **Facilitate the water-sharing debate:** SADC is currently promoting inter-governmental discussions on water-sharing. The success of these talks is vital if this key resource is not to become the source of conflict as water availability becomes acute (with chronic shortages in some countries) by 2015. Sida and other donors need to focus their attention on these efforts and assist them wherever possible.
- **Support pollution-free projects and assist the development of EIA capacity:** Sida should ensure that it supports projects which do not worsen the pollution burden and should encourage Swedish industrial investments in the region to use environmentally-friendly technologies. Assistance should be given to governments to develop appropriate EIA legislation (i.e. not necessarily based on western models) backed by institutional capacity to manage processes and police regulations. There is an urgent need for research to assess the performance of existing EIA processes in the region, to identify areas of and reasons for successes and failures, and to provide guidance for improving the efficacy of EIA frameworks.

- **Promote resource-conserving agricultural practices:** Sida should encourage and support the adoption of farming techniques which can be adopted by communities which are sustainable, and based on approaches which recycle nutrients, improve the land and reduce pollution.
- **Promote and support biodiversity conservation, and community-based approaches:** Clearly, biodiversity in the region is under threat. This is a serious issues in its own right. It also is undermining the future potential of the region for tourism. A range of measures to conserve and protect the region's biodiversity need to be supported. Particular support might be considered for community-based wildlife management schemes which, whilst still in their early days, offer considerable hope for the future. Research is needed on the impacts of such schemes and whether they are actually delivering the benefits which are expected from them.
- **Seek out policies and processes that work:** Sida, and other donors, will need to reflect critically on policy formulation and implementation processes, seeking out and analysing the kind of things that work and don't work in particular contexts. This will be a key route to determining the processes that can be effectively supported by aid. Research in this area should be supported.

Certain **over-riding factors** need to be borne in mind by Sida in considering its response to the challenges of development in the region over the next 20 years. First, the environmental trends are rarely the result of simple cause-and-effect relationships. Rather they are the consequence of complex (and sometimes obscure) linkages between a variety of factors. Secondly, economic development is crucial for environmental health and quality of life. But, trade-offs will be necessary between these three objectives and mechanisms will be needed to lead societies through the 'thicket' of trade-offs. Sustainable development strategies offer a route. Finally, investment is clearly needed in the following:

- **energy conservation**, including more efficient systems and less wastage on unnecessary processes or luxuries;
- the long-term **phasing out of fossil fuels**, which means the development of alternative and renewable energy sources and safer forms of nuclear energy. As Huntley *et al.* (1989) suggest, "for the first time in history, man will have to make do with less of one of his greatest discoveries – fire"; and
- **waste** recovery and disposal technology.

Only a very limited amount of time has been available in which to prepare this paper. As a result, it has not been possible to consult in any detail with IIED's professional staff who have wide experience across most of the fields discussed in the report. This draft paper therefore represents an individual review and interpretation of materials and trends by the author, and a personal interpretation of environmental and related consequences of two possible scenarios. It would benefit enormously from being subjected to **peer review** within IIED, leading to its revision.

This paper has raised many questions, but provided few answers. It would make much sense, following revision of this first draft within IIED, to have it '**ground-truthed**' amongst a select group of experts from within the region. This might best be achieved through a 'by invitation' (not representational) scenario-planning retreat (say three days), organised by a collaborating centre in Southern Africa (possibly the IUCN Regional Office for Southern Africa in Harare). The aim would be to inject more realism based on current actualities derived from indigenous knowledge, expertise and experience, and to develop

'**best bets**' for sound environmental management for sustainable development based on practical steps that can be taken now rather than aiming for perfection.

This should lead to the further review and revision of the paper for possible publication. The retreat would also be charged with considering mechanisms for establishing or promoting a **continuing debate** process at national and regional levels in the region to consider and take account of the issues and challenges set out in the final published report, and also involving donors and investors in dialogue with the countries and the region over how they can best assist in building a sustainable future.

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Appendix 1**ENVIRONMENTAL PROFILES AND STRATEGIES
FOR SOUTHERN AFRICA**

Hard copies of the publications listed below are located at IIED's Information Resource Centre in the Documentation Collection of the International Environmental and Natural Resource Assessment Information Service (INTERAISE). INTERAISE is a collaborative project undertaken by IIED, WRI and IUCN on behalf of the Working Party on Development Assistance and the Environment of the Development Assistance Committee (DAC) of the OECD.

Copies of most of these documents are also held by the India Musokotwane Environmental Resource Centre for Southern Africa (IMERCSA) – part of the Southern African Research and Documentation Centre (SARDC) based in Harare.

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Appendix 2

BRIEF OVERVIEW OF THE ENVIRONMENT OF SOUTHERN AFRICA

Ecozones

Based on previous classifications (Huntley 1982, Rutherford and Westfall 1986, Frost 1993), the region can be divided into various ecological zones or 'ecozones' (Figure A2.1 and Table A2.1). These provide a useful framework for understanding the environmental problems and opportunities in the region. Ecozones are large natural units controlled by a set of common processes, mainly climatic, and dominated by life-forms with similar physical adaptations to those processes. Boundaries between ecozones are often gradual and can change with fluctuating conditions. A combination of factors affect ecozones: water, geology, soils and their nutrients, fire, animals, climate, and human activities (e.g. through agriculture).

Marine ecosystems

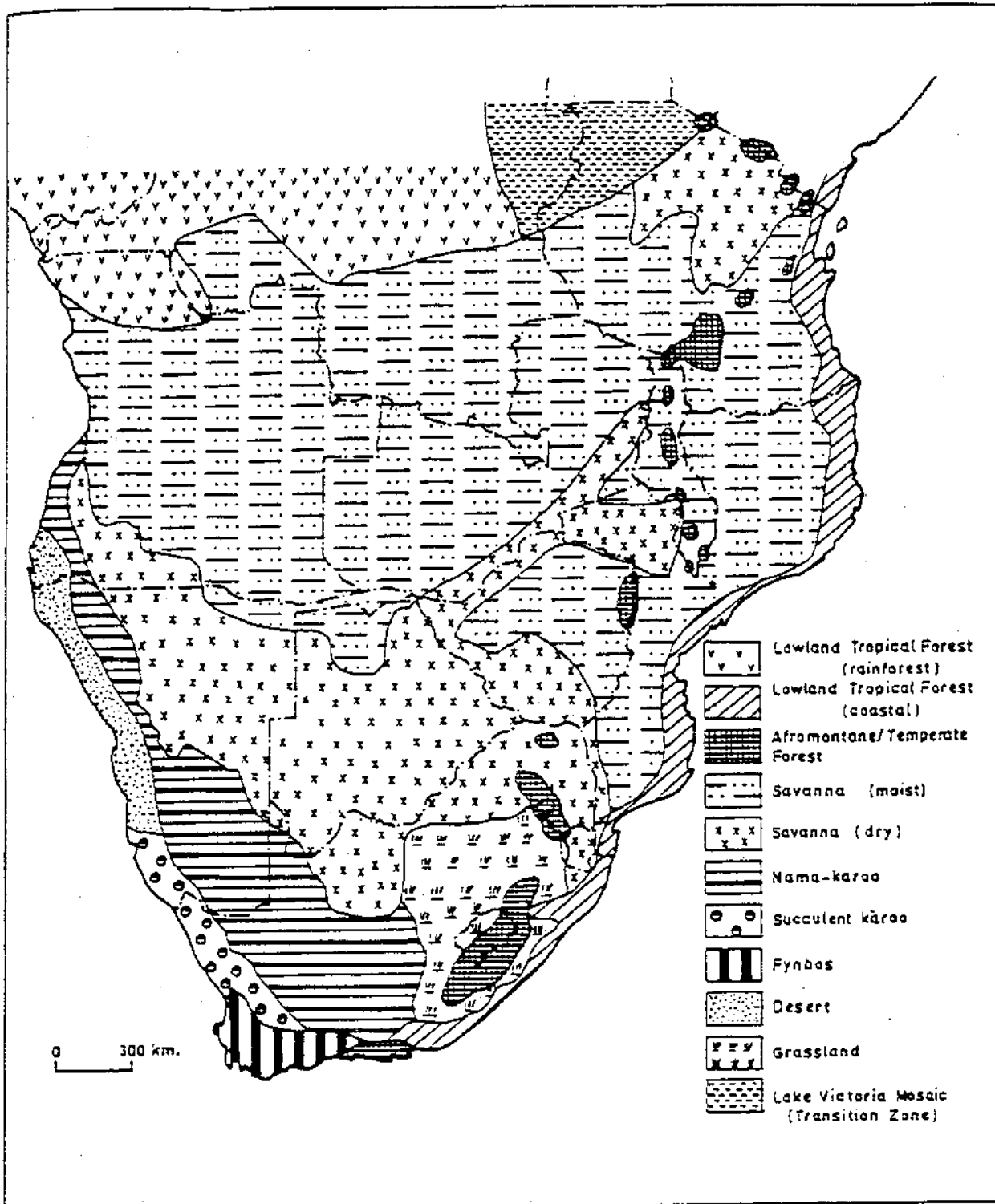
The region has about 10,000 km of coastline. There are four main marine ecozones (including waters to 200 n.miles off the coast) (Crawford 1993). :

- the warm east coast (Tanzania and Mozambique) – rich in species diversity, sea poor in nutrients, but coastal habitats rich in nutrients, e.g. estuaries, mangroves and coral reefs. Some resources over-exploited (e.g. prawns off Mozambique) or degraded (e.g. coral reefs destroyed by dynamite fishing off Tanzania).
- the temperate Agulhas bank off the southern tip of the continent – good fish-breeding area, particularly for the Benguela system. Affected by overfishing and pollution.
- the cooler Benguela system along the Atlantic coast – cold, nutrient-rich waters off the western coast of South Africa, Namibia and southern Angola. Rich in large seaweeds and fish – threatened by diamond mining off Namibia. Previously overfished by foreign trawlers. Cold waters responsible for sea fogs which provide moisture for desert-adapted plants and animals in Namibia.
- the warm Angolan coast – nutrient-poor current originates north of Angola. Productive coastal mangroves and estuaries. Commercially important prawn fisheries.

Rainfall

Southern Africa covers roughly seven million km². Its countries fall into two main climatic groups distinguished by rainfall – the lifeblood of the region. Firstly, a core of hyper-arid to semi-arid countries bordering the Kalahari desert: Angola, Botswana, Namibia, South Africa, Zambia, and Zimbabwe. Secondly, an eastern arc of mainly sub-humid countries: Lesotho, Malawi, Mozambique, Swaziland, and Tanzania. Rainfall generally increases towards the north east away from the Namib desert (Figure A2.2). The latter receives, on average, less than 100 mm/yr. Over the Kalahari semi-desert area, rainfall averages 100-400 mm/yr. In northern Namibia, northern Botswana, Zimbabwe and central-eastern part of South Africa, rainfall levels increase, averaging 400-800 mm/yr. Further north and east – across most of Angola, Zambia, Mozambique, Tanzania and along the east coast, rainfall ranges between 800 and 1600 mm/yr. Much of the rainfall in the region falls in the form of short, intense, convective storms which, on sloping land and particularly where the earth is bare – as at the end of a long dry season – often causes soil erosion.

Figure A2.1: Ecozones of Southern Africa



Source: SARDC (1994)

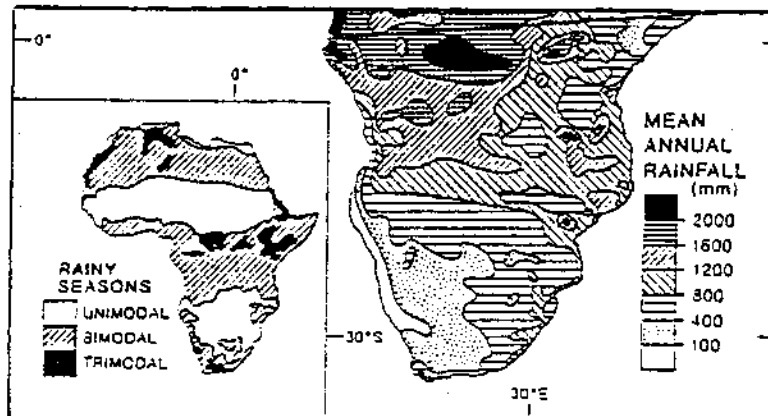
Table A2.1: Ecozones of Southern Africa

ECOZONE	KEY FACTORS	DISTRIBUTION
• Lowland tropical forest	High continuous rainfall; max 2 months low rainfall; high and regular temperatures.	Rainforest: Northern Angola Coastal forest: Eastern coastal areas.
• Afromontane and temperate forest	Min rainfall 700mm/yr; mean annual temp < 20°C, average 10°C in cold months; vegetation changes with elevation; high biodiversity.	Fragmented in mountain areas (usually above 2000m) from Tanzania along eastern escarpment to S.Africa.
• Grassland	Summer rainfall – average 400-800mm/yr; variable soils – generally silty to sandy.	Mostly east-central South Africa & parts of Lesotho; smaller areas in other countries.
• Savanna (dry & moist)	Seasonal summer rainfall – in 1 or 2 wet seasons; dry savanna – 200-500 mm/yr over < 6 months + fertile soils, mostly Acacia and mopane; moist savanna – 500-400 mm/yr over > 6 months + nutrient poor leached soils, mostly miombo; grass tree mix – variable proportions; controlled by fire & animal feeding.	Biggest ecozone – large parts of all countries except Lesotho, on high plateau (from 800 m in west, to 1700m in east). Dry savanna – mostly in southwest and northeast Tanzania.
• Nama-Karoo	Average rainfall 100-400 mm/yr (60% in summer), increasing from west to east; mean annual temp > 20°C in summer, sub-zero in winter; high potential evaporation; shallow erodable alkaline soils; dominantly shrub vegetation, overgrazed.	West-central South Africa. Namibian coast into southern Angola.
• Succulent Karoo	Variable rainfall, 20-290 mm/yr (60% in winter) + coastal fog in summer, sparse succulent plants (thick, fleshy); poor soils.	Coastal Namibia, south of Luderitz.
• Desert	Rainfall 10-85 mm/yr + fogs; v. high daily temp range; poor soils; sparse vegetation with annual grasses.	Coastal Namibia north of Luderitz, extending into Angola.
• Fynbos	Rainfall 250-2500 mm/yr; cool wet winters, hot dry summers; mean annual temp 17°C (varies with altitude); v. infertile soils; mainly dwarf shrub vegetation (high diversity of endemic plant species); infrequent intense fires.	Extreme southern tip of South Africa.
• Transition between forest and savanna	Rainfall 1500-2000 mm/yr – too seasonal for forests, not seasonal enough for savanna; less severe dry season than savanna; largely scrub forest, bushland & thicket.	Large area surrounding Zaire basin, particularly around Lake Victoria.
• Wetlands	Not regarded as a formal ecozone, but an important type. Includes rivers, lakes, swamps, floodplains, deltas, estuaries and coastal areas; grasses to trees.	Widespread (13% of region); including achenes in N.Namibia/S.Angola & ambois in central part of region.

Most of the region experiences long annual dry seasons (one or two) and periodic unpredictable droughts, the worst of recent ones in the region occurring in 1991-92 and affecting the savannas of Angola and Botswana and the pastoral areas of southern Africa particularly badly.

Most of the rainfall in the region is brought by the Intertropical Convergence Zone (ITCZ) – created when Southeast Trade Winds collide with Northeast monsoons – which moves south, away from the equator, marking the start of the rainy season. Rainfall patterns are intimately related to the distribution of the region's ecozones. Areas with least rainfall are most prone to high rainfall variability, e.g. the nama karoo, succulent karoo and desert areas.

Figure A2.2: Mean Annual Rainfall in Southern Africa



Source: Nicholson, Kim & Hoopingardner (1988)

Landforms and Soils

Southern Africa forms part of the African tectonic plate and is characterised by major basins (the Okovango, Kalahari and Karoo) and landmass swells. Much of the region has been affected by major earth movements. The interior of the region now forms elevated plateau lands varying between 1000-2000 m.a.s.l. (Figure A2.3) The East African Rift Valley extends south into the region, occupied by Lakes Tanganyika and Malawi, with offshoot rift valleys (e.g. Zambia's Luangwa Valley) and associated features (e.g. Zimbabwe's Great Dyke). The rifts are frequently associated with volcanic areas (e.g. Tanzania's Kilimanjaro and Ngorongoro areas). Uplifted highlands and mountain ranges run the length of the eastern flank of the region, in South Africa separated from coastal lowlands by an impressive escarpment (Figure A2.4).

There are no wide tracts of highly productive soils such as the wheatbelt chernozems of the Ukraine and North America, nor extensive irrigable alluvial lowlands such as the Indo-Gangetic plain of northern India and Pakistan. In each climatic region, there are fertile soils and those which are inherently poor; their quality depends on parent material and management history. Soil distribution patterns are controlled by climate, geology and relief. Poorly developed, sandy soils blanket the Kalahari basin and true desert soils occur in the Namib. In the plateau areas, leached latosols or ferralsols predominate where rainfall is higher, whereas well-developed, nutrient-rich (relatively) luvisols mantle much of the south eastern half the region. In the north east, in northern Mozambique and Tanzania, are extensive areas of soils with clay rich subsoils – either strongly structures (nitosols) or nutrient poor (acrisols). Deeply-cracking Black Cotton Soils are found locally on alluvial plains and in valley bottoms in the semi-arid areas.

Figure A2.3: Land Elevation in Southern Africa

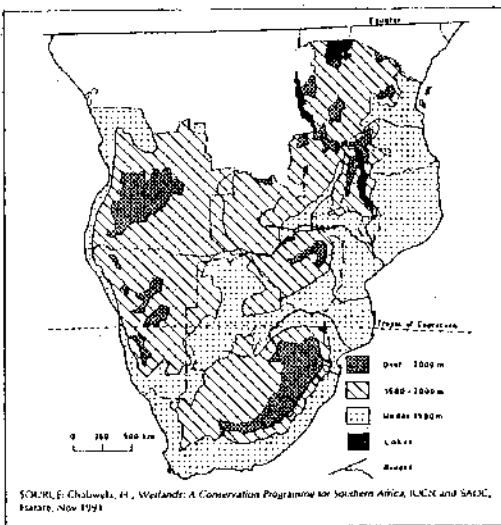


Figure A2.5: Simplified Geological Map

The unshaded areas are underlain by sedimentary rocks - sandstones, shales and limestones. Such rocks, and also volcanic, occur in the rift valley trough of East Africa. Au - gold; Bx - bauxite; C - coal; Cu - copper; D - diamonds; Fe - iron; Mn - manganese; O - oil; P - phosphates; Sn - tin; Ur - uranium.

Source: Grove (1989)

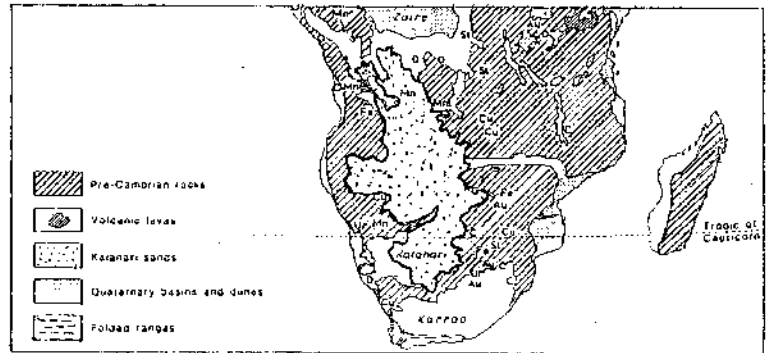
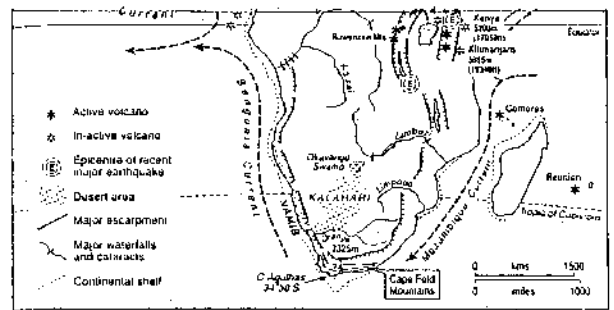


Figure A2.4: Physical Features



Source: Griffiths (1994)

Less than half of the region's soils are suitably for cultivation, being relatively infertile and difficult to manage. Large areas are subject to soil degradation¹; over half due to overgrazing, with poor cultivation methods responsible for most of the rest.

Geology and Minerals

The geology of the region is complex but related to the landforms (Figure A2.5). Over a large part of the plateau areas of the sub-continental interior, the dominant outcrops are Precambrian rocks (known collectively as Basement Complex) (e.g. granites, gneisses, schists). Elsewhere, younger sedimentary rocks (sandstones, shales and limestones) predominate, particularly in the Karoo area in South Africa and in some of the rifts (e.g. the Zambezi Valley). The Kalahari basin is occupied by wind-blown sands. The region is richly endowed with minerals and mining is economically important in most of the region's countries: notably, copper in Zambia, diamonds in Botswana and South Africa, coal and gold in South Africa, uranium in Namibia and South Africa, manganese and iron in Angola.

Drainage and Freshwater Resources

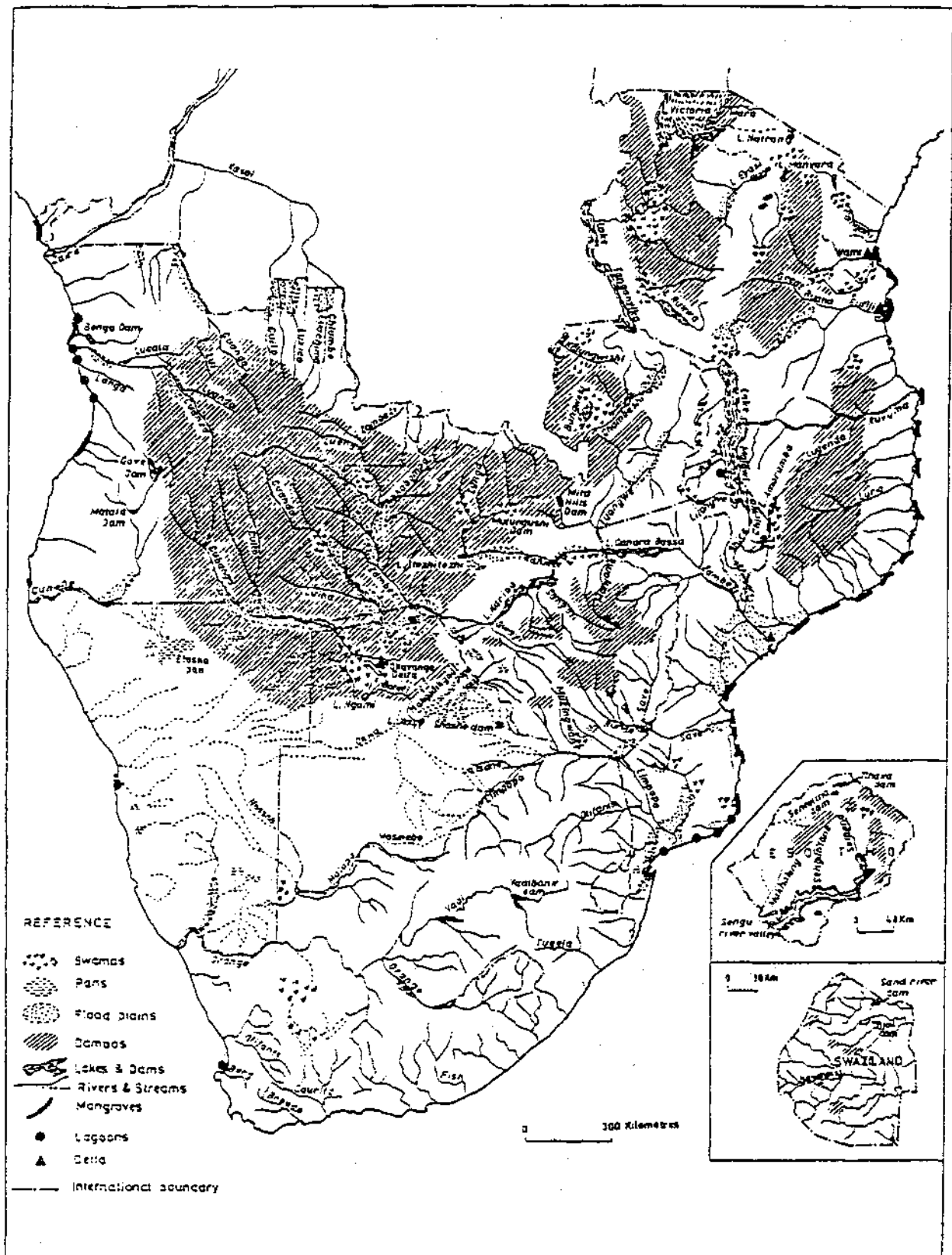
The main rivers systems of the region are shown in Figure A2.6. Three major rivers drain much of the plateau lands – the Zambezi (fed by tributaries in eight countries, and draining one fifth of the region), Limpopo and Orange. A series of other river systems drain radially around the coastal margins. Many of the rivers are shared running through several countries or forming borders. A major feature occupying the south-central part of the region is the internal drainage basin of the Okovango which discharges as a delta into the semi-desert of northern Botswana. A smaller internal drainage basin is located in western Tanzania. River flow varies greatly during the year between wet and dry seasons (e.g. low flow in Zambia's Kafue river can be just 2% of the amount at high flow); some rivers are seasonal, flowing for a part of the year after the rains; others are intermittent, flowing occasionally when occasional rains fall (e.g. many rivers in Namibia). Many rivers carry high sediment loads due to poor land management practices.

Freshwater is a key resource throughout the region – and the region's wetlands (see Figure A2.6 and Table A2.2) are vital to survival and development. They include lakes, rivers and their floodplains, dams, and palustrine areas (swamps, marshes and ambos²) – many of which are threatened by a variety of human activities. The region's deep lakes, Lakes Victoria, Tanganyika and Malawi, have the world's richest diversity of lake-fish – many endemic – and provide important fisheries. There are also many shallow lakes (< 10m deep) which are locally important for fish, but some disappear seasonally during dry seasons and some have dried up (e.g. lakes Xau, Liambezi and Ngami in Botswana which have been dry since 1982). The soda lakes of Tanzania (e.g. Lake Manyara) have unique species adapted to the saline and alkaline conditions. Similar shallow salty lakes and pans occur in the southern dry savanna areas and other arid areas such as the nama karoo. For example, the Makgadikgadi pan in Botswana and Etosha pan in Namibia provide important habitats for migratory birds and are conserved for tourism. Of the various large dams constructed in the region for hydropower generation, but only lakes behind the Kariba and Cabora Bassa dams are important for fisheries.

¹ **Soil degradation:** nutrient exhaustion and/or soil erosion, due to the combined effects of inequitable land allocations resulting in high population densities in particular areas, and poor farming methods, leading to lower crop yields, diminished water supplies and declining productivity of grazing lands.

² **Dambo:** a shallow, generally treeless, often linear depression which is seasonally waterlogged and may contain a drainage channel. They are typically distributed in the plateau areas of Angola, Zambia, Zimbabwe, Malawi, Mozambique and Tanzania (see Figure 7). Also variously termed mbuga, molapo, naka or vlei.

Figure A2.6: Wetlands Areas and River systems



Source: Chabwela (1991)

Table A2.2: Large Freshwater Wetlands in the SADC Region

SYSTEM	NAME	LOCALITY	WETLAND APPROX.		STATUS	SPECIAL FEATURES
			TYPE	AREA (Km ²)		
Eastern system	Chilwa	Malawi, Mozambique	sl, sw	6,500	un	fsh
	Chiuta	Malawi, Mozambique	sl, sw	115	un	fsh, res
	Amaramba	Mozambique	sl, sw	2,500	un	fsh, res
	Usanga	Tanzania	fp, sw	520	pp	wld, grz, agr
	Kilombero	Tanzania	fp, sw	6,650	pp	fsh, wld, agr
	Rufiji	Tanzania	fp	1,450	pp	wld, res
Zambezi	Barotsc / Zambezi plain	Zambia	fp	9,000	pp	grz, fsh agr
	Liuwa plain	Zambia	fp, sw	3,500	pr	wld, grz
	Luenya	Zambia	fp, sw	1,100	un	fsh, grz, agr
	Lukanga	Zambia	sw	2,500	un	fsh, grz, agr
	Kafue flats	Zambia	fp, sw	6,500	pp	fsh, grz, agr
	Chobe-Linyati	Botswana, Namibia	sw	200	pp	wld, fsh, grz
	Cuando	Angola	fp, sw	—	pp	wld, fsh
	Liambezi	Namibia, Botswana	sl ?	150	un	fsh, grz, agr
	Cameia	Angola	fp	—	pr	wld, grz
	Malombe	Malawi	sl, sw	390	pp	fsh, wld, agr, grz
	Elephant marsh	Malawi, Mozambique	sw, fp	520	un	fsh, grz, agr
	Vwaza marsh	Malawi	sw	—	pr	wld
	Marromeu	Mozambique	fp	—	un	wld, fsh
South-eastern	Pongolo river	Mozambique, S.Africa	fp	100	pp	fsh, grz, wld
	Pungue river	Mozambique	fp	—	pp	wld
	Incomati river	Mozambique	fp, sw	—	un	rds
	Limpopo river	Mozambique	fp, sw	—	pp	wld
Okovango	Okovango river	Angola, Namibia	fp	—	grz, agr	grz, agr
	Okovango delta	Botswana	sw	16,000	wld, grz	wld, grz
	Ngami	Botswana	sl	790	fsh	fsh
	Dow	Botswana	sl	100	—	—
Nile system	Upper Kagera	Burundi, Rwanda, Tanzania	sl, fp	350	pp	lks
	Lake Victoria	Ugand, Kenya, Tanzania	sw	—	pr	fsh, agr, wld
Western	Cunene river	Angola, Namibia	—	—	—	—
	Cuanza	Angola	fp, sw	—	pp	oil
Zaire/Congo	Kifukulu depression	Zaire, Zambia	sw, fp	1,500	un	fsh
	Mweru	Zambia, Zaire	sl	4,850	up	fsh
	Bangweulu	Zambia	sl, sw, fp	11,000	pp	wld, fsh
	Mweru wantipa	Zambia	sl, sw	1,300	pr	wld, fsh
	Rukwa	Tanzania	sl	2,300	pp	wld, grz, fsh
	Malagarasi	Tanzania	fp, sw	7,360	pp	wld, fsh, grz
Congo	Wemeri	Tanzania	fp, sw	2,500	un	wld, fsh, grz
	Moyowosi	Tanzania	sw	—	un	wld

KEY: sl = shallow lake; sw = swamp; fp = floodplain; un = unprotected; pr = entirely/largely protected; pp = partially protected; fsh = fishery; grz = grazing; lks = lakes; wld = wildlife; agr = agriculture; res = reservoir; rds = harvesting of reeds.

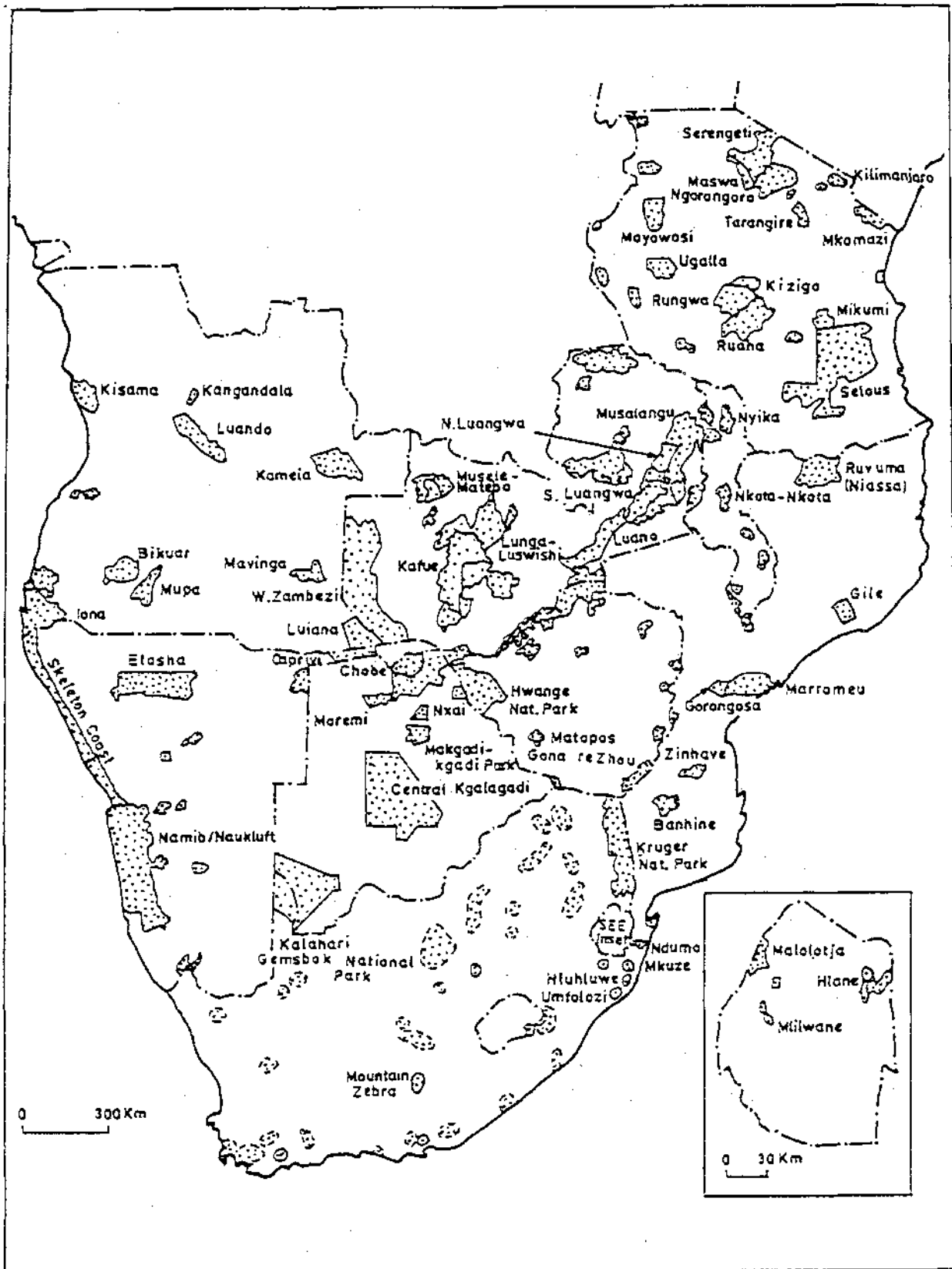
Source: Chabwela (1991).

Seasonally inundated floodplains also provide productive fish environments, e.g. the Barotse plains and Kafue flats of Zambia, the Okovango floodplains in Botswana, and the receding waters expose vital grazing for both wildlife and livestock. Apart from the region's internationally known swamps and marshes (e.g. the Okovango delta in Botswana, Kafue flats in Zambia), there are many smaller but ecologically important ones (e.g. Malawi's Elephant marsh) – some key stopping points for migratory birds. Ambos are another wetland type, widely distributed in river headwaters in central southern Africa and occupying as much as 10% of the land surface on the plateau areas. They are groundwater discharge zones and are locally important for grazing, rice and vegetable production.

Wildlife and Protected Areas

Southern Africa is renowned for its wildlife resources (both animals and plants), particularly its 'big game' – there are over 40 large mammal species – which make the region a popular tourist destination. There is an extensive network of protected areas, arguably unequalled in the world, accounting for nearly 16% of region's land area (see Figure A2.7). Wildlife is under increasing pressure, particularly from habitat change due to such influences as grazing by domestic livestock, land converted to agriculture, forests loss, mining and human settlement. Mammals are further threatened by the elimination of some 'pest' species (e.g. wild dogs, hyaenas) and the pet trade – legal and illegal (chimpanzees, birds), and the survival of certain species is threatened by poaching (particularly elephants for ivory, and black rhinos for their horns). Wars, diseases and drought have also depleted wildlife numbers. Little is known about the threats to plant species apart from in the endemic-rich fynbos and the karoo area where 34 species are known to have become extinct (SARDC 1994). Traditionally, wildlife conservation has involved protection in parks and similar areas and the prohibition of gainful wildlife utilisation. Recent years have seen experimentation with game ranching and, more recently, community-based wildlife management initiatives (e.g. the CAMPFIRE programme in Zimbabwe).

Figure A2.7: Protected Areas in Southern Africa



Source: SARDC (1994)

SOUTHERN AFRICA TO 2015: SOCIO-CULTURAL DEVELOPMENT AND THE IMPLICATIONS FOR SIDA PLANNING

by

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February 1996

1 PREAMBLE

The terms of reference for this paper require large amounts of material to be compressed into very few pages. It is therefore neither feasible nor appropriate to go at length into the concepts and frames of analysis which guide its author. Nevertheless, short notes in five key perspectives may be useful by way of preamble. These are *limitations, futures, boundaries, cultures and context*.

1.1 LIMITATIONS: Social-cultural development depends crucially on political stability, national unity, and regional co-operation – none of which can be achieved by the wealth, goodwill or forward planning of donor countries and international bodies.

1.2 FUTURES: To say that a development plan should fit the expectations of those who are subjects (or objects) of it is to say that there must be a reasonable match between their images of the future and those of the donor agency. But scenarios of the future are built on agendas of the present, changing as present conditions and aspirations alter.¹ These agendas are not the same in Europe and Africa, in every country of the southern Africa region, nor for every interest group in any one of them. The discrepancy both justifies the present exercise and limits its predictive clout.

¹ Wallman, *Contemporary Futures*. Routledge 1992.

1.3 BOUNDARIES: It is difficult not to talk in terms of national, ethnic or tribal cultures, but we should resist reifying their boundaries.² It is important to allow the possibility of inconsistency, – as when, for example, two countries in the region differ in respect of government structures or elites' attitudes, but still resemble each other on the ground, in respect of ordinary people's day-to-day experience of poverty or hope or insecurity. And it is historical fact that the nations (then colonies) of Africa were defined largely without reference to the territories and identities of the tribes they covered. The lasting implications of this are sketched (with a focus on Zimbabwe) in Doris Lessing's *African Laughter* (1992, pp. 6–9) .

1.4 CULTURES: 'Culture' is neither fixed nor finite. It is a process responsive to other-things-happening in the space and time frames it occupies. None of the traditional cultures of southern Africa exists still in its aboriginal form; all are in contact with and have been influenced by rural and urban 'others' in the region, and by western capitalism, western media and western aspirations.

1.5 CONTEXT: Cultural context can be visualised in concentric circles, expanding out from the micro-local through national, regional, continental and global levels. (A classic model is copied here as Appendix i). In a holistic perspective, which matches the experience of the social actor, all the levels are continually in play. The non-actor observer however, has for the sake of clarity an obligation to think/write about them one at a time. From another point of view we may say that he/she enjoys the luxury of holding other-things-happening in abeyance.

² Wallman, *Ethnicity at work*, Macmillan 1979.

2 GLOBAL ISSUES

Following the logic of para. 1.5 above, this section enters notes on a set of global issues which are dimensions of the wider context of developments in and of the future of Southern Africa. These issues are the subject of political debate and social discourse worldwide. Of course they do not pertain to poor countries in Africa in the way that they affect affluent countries in western Europe, but attention to them is justified (i) because we are concerned here with *relations between* (wealthy) donor and (poor) recipient countries, and the preoccupations of the first inevitably wash over to the second (and *vice versa*; see para. 1.3); and (ii) because analysts and developers are now urged, like every private citizen, to "think global and act local" – i.e. for present purposes, to pay) attention to global issues even while planning locally or regionally.

Short paragraphs on *environment, climate change, population, ethnicity, and information technology* follow. Some of the issues are 'only' problems; others, given the right circumstances and the right applications, represent opportunities for the region.

2.1 ENVIRONMENT. The terms, as well as the heat of environmental debate have changed very radically over recent years. The finitude of the planet's resources, and their vulnerability to the ravages of manmade pollution and hyper-consumption have become the stuff of popular debate. But it is important that the 'Green' politics which make the running everywhere in affluent societies actually have little cogency among the poor.³ The former have garbage to worry about, and with unintended and sometimes lethal consequences of technological advance on their doorsteps are tempted into post-progress postures and a 'return to nature'. The latter, sub-Saharan Africans among them, want and badly need more consumer goods, technology etc, not less, and in that sense are seeking to escape from nature.

Likewise in the 'protection of nature' their interests are very different. The so-called 'ecofascism' of some environmental lobbies is experienced in many African countries as favouring the protection of (other) species 'for the global future', over the present wellbeing, and incidentally the food security, of local populations.

The divide on this topic is probably as profound as any to be dealt with in the next twenty years. There is not space here to enter the political or ecological implications of it. On the conceptual level, however, there are signs of a rapprochement of philosophies of nature which may be hopeful. The move, so to speak, concerns mankind's *place* in nature: are we outside looking in, separate controlling and uninvolved? Or are we embedded in the natural world and subject to its laws like every other species? This last is a view which faded with industrial technology in the west but is now coming back into fashion, and it is one which matches the more enduring traditions of African culture and cosmology. The figure reproduced as Appendix (ii) sets out the contrast between the environment as globe (B) and as lifeworld (A).

2.2 CLIMATE CHANGE. This topic relates to the environmental debate, but has become, in its urgency, an issue of crisis management in the shortterm. A recent statement from scientists gathered to discuss global warming predicts "a one hundred year drought in Southern Africa" (*The Times* 18 October 1995). All predictions are fallible, but global warming is now considered by scientists to be a fact, no longer a possibility to be debated. Its effects are already widely apparent (see the notes on separate countries, Appendix v below). Reports for 1995 show Zimbabwe especially badly hit: national predictions are that grain production will be down by half; some farmers are expecting no maize harvest at all. By early June 2.5 million Zimbabweans had registered for food aid. Meanwhile Zambia is predicting that it will have to import as much as a hundred million tonnes of maize grain to make up the year's shortfall (*Focus on Africa* July-Sept 1995).

³ Wallman, *Perceptions of Development*, Cambridge U.P. 1977

Even if the outcome is less dire than expected in the longterm, "southern Africa is facing a catastrophe of unprecedented proportions" (*The Times*, *ibid*) and one which will skew, if it does not negate, donor efforts to secure even subsistence food supplies in the Region.

2.3 POPULATION. This is another global issue with local variants: definitions of 'the population problem' are very) different in different parts of the world. So too are the perceived 'causes' of that problem: in effect, the north blames the south for having too many children: notwithstanding the extra ravages of drought, war and epidemic, the gross population of Africa rises at Malthusian rates. At the same time the south blames the north for too much consumption: years after the new ecology, of the Club of Rome and 'spaceship earth' insights, most Europeans and north Americans aspire as individuals to perpetual economic growth and progressive betterment of their material circumstances.

Both these views are resource based and apparently simple quantitative assessments – i.e. the right number of people is a function of amounts of food, space and other resources available, and of the tasks to be performed by them. Basuto peasants – perhaps peasants everywhere – are aware of needing to strike the right balance between "hands to work and mouths to feed".⁴

But qualities of life and of people are also at issue. The affluent north has a higher level of 'basic need' than the poor south (and is of course reluctant to lower its standards). In this respect the rich are markedly more expensive, in global terms, than the poor.

The age, sex and skills of members of any population group also change the resource:liability ratio. The population of the rich world is ageing, "and the headache of policy-makers is how the shrinking proportion of economically active people are to feed, look after, provide medical care for an ever bigger proportion of 'non-productive' ancients. There is a fast increasing proportion of elderly people in the third world also, but the problem there is eclipsed by the two-edged fact that as much as half the population in some countries (including some in the southern Africa region) is under 15 years old (even marginally better medical care means lower infant mortality); and that war and AIDS have combined to decimate the cohort of young adults on which productive and reproductive life depend.

2.4 INFORMATION TECHNOLOGY. Again a polarisation. There are those who believe that information technology is an instrument of dehumanisation and minority control, and others who consider it the champion of empowerment and democracy. The topic is inherently political because of its link to decision-making through the provision (or withholding) of information. There are always tensions between the public's right to know, an individual's right to privacy, and a government's or organisation's right to secrecy. And these are political, not technical, questions. (*THES* 13 October 1995).

In parts of the world lacking the physical infrastructure of communication, education, medicine etc, the opportunities offered by information technology far outweigh the risks of hegemony. There is no reason why developing countries should pass through the same sequence of technological stages as the rest of us. And there is every chance that appropriate IT development over the next twenty years would enhance the prosperity and integrity of the Region more quickly and less expensively than other devices.

⁴ Wallman, *Take Out Hunger*, Athlone 1969.

3 REGIONAL CONCERNS

Pursuing the same contextual logic, we should note both that the parameters and priorities of social /cultural issues change when the geographic scope shifts from 'global' to 'regional' concerns, and that each issue affects and is affected by every other. For the purposes of this Section, their interconnectedness might be represented by a sunflower shape in which each 'petal' is a distinct point of donor and/or local concern, even though none of the problems can be addressed – let alone solved – in isolation from the whole. Each topic impinges on every other, although they are set out as separate sections: **Ethnicity, Leadership, Demography and Migration, Education, and Health**. The sequence is not in any order of priority.

3.1 ETHNIC RELATIONS. The salience of ethnic difference within the Region is again high. To some extent its resurgence only confirms the trend toward a new, sharper and apparently worldwide preoccupation with exclusion and belonging. In the general picture, while nation states are said to be losing power and credibility, ethnic, regional and regional-ethnic groupings are increasingly making the running.

The effects of this, as of most social trends, are good for some and bad for others. Certainly a revival of local/cultural/ethnic pride can stimulate and may even be necessary to all economic and social development. But just as certainly, a shift from national to ethnic loyalties can work against the public interest. Recent experience in Eastern Europe confirms that the lifting of externally imposed boundaries and/or the collapse of totalitarian regimes initially may serve only to blow the lid off internal tensions once suppressed or held in check by them.

Two among the more 'dangerous' consequences of decentralisation and democratisation are the combination of higher demands and less control over supply; and the shifting of blame from an autocratic or foreign authority to internal 'others' who are assumed to be taking too much of the collective cake. Both effects have followed the dismantling of *apartheid*. [see Appendices iii, iv & v:10].

There are differences in kind as well as degree between the rape and massacre of 'ethnic cleansing'; the terrible black on black conflicts within south Africa's cities; the self-interest of individual power holders/ seekers/ brokers; and the sane attention paid to balancing ethnic and tribal interests when constitutions are drafted or changed. All of them nonetheless build on, exploit, or are expressions of ethnic relations of one kind or another, and they have in common an underlying need to defend or gain identity and/or economic resource.

This defensive-aggressive impetus is an ordinary feature of normal social life, but it has always been aggravated by shortages or loss, whether of territory, security or material wellbeing. In this decade (and almost certainly extending at least as far as 2015), most countries of the Region are in the throes of changes and uncertainty which make them on the one hand extra defensive against outside influence, and which will, on the other hand, exacerbate latent tensions or competition between their constituent ethnic groups. [see, e.g., Appendix iv].

Not every country has the same potential for exploiting any ethnic idiom, whether for the collective good or for personal gain. Where a nation state is effectively mono-ethnic – as are, for example, the one-time Protectorates (Lesotho, Botswana and Swaziland) – we may say that the ethnic option as such has no internal resource value.⁵ In such places conflicts of interest will be focused around more available lines of difference. Traditional/ ascribed versus modern/ achieved elite status is an often handy alternative. This was prominent in the history of Botswana and still shows strongly in Malawi [see Appendix v: 5 and 8].

⁵ Wallman, Ethnicity, Work and localism: narratives of difference in London and Kampala, *Ethnic and Racial Studies* 1:9, 1996.

In this view, the fact that a country's political parties function without explicit reference to tribe or tribal difference does not ensure that the system is without factions, or that it can guarantee its citizens a fairer or more resilient democratic process. Nor does it imply that multi-ethnic conglomerates are inherently less stable and more problematic.

On the contrary: In regional perspective, the point signalled in paragraph 1.3 may have greater significance. Insofar as the borders of present day countries in the Region were drawn in colonial times and largely without reference to the territorial distribution of the then tribal nations of the continent, many (most?) modern day ethnic populations are distributed across two or more modern day nation states. Migration stirs up the population still more [Appendix Map 1].

The potential for inter-country networks, corporations, support strategies and communication systems may actually be enhanced by this (probably) unintended ethnic pluralism. Certainly it puts a more positive gloss on the prospects for specifically *regional* development, even – perhaps especially – among the multi-ethnic and currently conflicted giants of the area (South Africa, Mozambique, Angola).

Being concerned with donor and local investment in the medium or longterm future however, it will pay us to try to understand the dynamic of situations in which ethnic lines of difference are – or are not – called into play, and in whose benefit they are activated. Is the success of Namibia's non-racial constitution only sustained by a fear that historic conflicts will re-surface, or by practical considerations of investors' strictures and entrepreneurial opportunity? Can harmonious ethnic relations be assured by legislation?

In another light, was Zambia's Chiluba only opportunistic when he tried to use ex-President Kaunda's Malawian origin as a way to justify the latter's deportation? If President Chiluba wanted, as the story runs, to pre-empt the threatened political comeback of his predecessor, what feature might have served symbolically to exclude KK had he happened to be born in Zambia...? The hopeful sign in all this is that many Zambians, black as well as white, have been quick to dismiss the strategy of Chiluba as retrograde and unworthy of aspirations to modern nationhood. Since Zambia, like many other countries, does not mention ethnic difference in its constitution, this reaction is neither approved nor disapproved by legislation. Even if the reprimand was expressed only by an articulate few, it shows a level of political maturity which augurs well for the future of civil society.

3.2 LEADERSHIP. In all of these examples, the style, rhetoric and personal ambition of political and economic elites is crucial. **On the economic front**, elite behaviour depends on the options offered by the natural resource base, existing infrastructure, rural-urban balance and the like, as much as on traditions of male and female livelihood, customary habits of work and expectations of progress or improvement. Custom and attitudes are important, but changing them will not be sufficient to improve a nation's prospects or performance.

However skilled and committed the economic leadership, the level of infrastructure and the potential for converting natural resources (game, scenery) into tourist or export dollars is markedly greater in some countries than others [see Map II].

Lack of enthusiasm for development proposals which emphasise smallscale farming and cottage industry is not a simple function of lack of education. In countries like Lesotho for example, these kinds of enterprise are interpreted as an admission of lack of other options for livelihood, – both because agriculture has never been part of that nation's cultural identity; and because most Basuto have personal or at least indirect experience of industrialised South Africa. Even rural people may regard themselves as urbanised, 'modern', and will reject the opportunity of leading or being led in not-very-profitable rural enterprise.

Namibia, by contrast, has recently welcomed an influx of Afrikaner farmers to take up groundspace and water abandoned by whites departing from the old South West African community. For the new settlers, Namibia offers opportunities not available in South Africa. This case demonstrates economic leadership of two elites: Namibian immigration authorities and entrepreneurial Afrikaans farmers.

Politically speaking, different cultures, as well as different combinations of ethnic interest colour leadership profiles in each country, but in general we are dealing with a synthesis made up of parliamentary democracy imported from Europe, and Bantu traditions of political hierarchy and ascribed power sustained from the past.

Additionally, matters of national pride or personal ambition may encourage the revival or '**invention**' of **tradition** for current political ends. Items from the past are lifted out of their original context and used to justify present actions or future plans. The paternalism of the traditional chieftainship and/or of the one time colonial powers – usually, in this region, the British – has particular appeal in rural areas, and nostalgia can be used to secure cooperation in foreign aid projects no less than to burnish the authority of individual chiefs and the credibility of *traditionalist parties*.

Recourse to traditional culture is not always retrograde or self-seeking. Under a creative leadership the adaptation of old values or customs can contribute to **community capacity** to solve problems.

An example from Chikankata in Zambia, now famous in AIDS discourse worldwide, is a remarkable case in point. The local leadership, comprising chiefs and elders of the area, advised but apparently not directed by doctors from the local hospital, 'found' in the never-written cultural archive a 'traditional' alternative to the sexual cleansing of widows. Previously it had 'always' been achieved by ritualised intercourse with the dead husband's brother. In the AIDS era the practice brought new risks of exposure to HIV. But rather than outlaw sexual cleansing as such, the local elite found a symbolic way to maintain continuity with the past while dealing with new challenges in the present.

Most often the **nostalgia** strategy suits the purposes of older rather than younger office holders or aspirants to office: Kenneth Kaunda and Hastings Banda, onetime rulers respectively of Zambia and Malawi, have been masters of the art. But politicians know that it is not invariably the old who respond to appeals to past times or the freezing of cultural forms. There are also many among younger age groups for whom the present and future are more uncertain and less promising: it is not unusual to hear even young Africans regretting the passing of (aspects of) colonial as well as pre-colonial life.

Extremes aside, explicit disappointment with political elites in the sub-Saharan nations focuses on the lack of material progress; and on the alleged or proven lack of integrity of politicians and civil servants. The **blame** for the first is commonly deflected by members of the elite on to the **international donor community** which "holds us back", either by not giving "enough", or by putting too many conditions on the assistance it does offer.

While it is true that structural adjustment policies demand cuts in public spending, among major justifications for them are the chronic mismanagement of aid and the often flagrant **corrupt practices** of the same elite. The fact that government servants in most of these countries are paid too little to live on completes the circle; any improper behaviour of elite persons can be justified, if they are relatively well off, by the need to live at a level appropriate to their status, and if they are poor, by the need simply to get by.

In conditions of widespread poverty it is difficult for politicians to come up to the **expectations** of a new electorate. Immediately after elections in any democratic system, there seems to be a **grace period** of a few months during which people remain hopeful and are patient in their demands for a better life. But continued

enthusiasm for the new regime depends on some visible improvement happening within that time. Bad luck however, even without mismanagement, can cause things actually to get worse: in Zambia, Chiluba's new government had to deal with a massive drought which (combined with structural adjustment) raised the price of maize far above what it had been under his predecessor – a factor, incidentally, which figures in the campaign for Kaunda's return [see under 3.1 above].

The **instability** of this and other new democracies can be exacerbated by the requirements of donors. Most will only consider funding if a national regime can demonstrate trends or at least efforts towards democracy and decentralisation. At the same time, they require structural adjustments which make for economic strictures. In the context of donor political economics, both demands make sense. But the new African leadership must juggle with demands which cannot be imposed on the people 'undemocratically' yet will be rejected if brought to the democratic vote. Kaunda's one time refusal to 'adjust' is another boost to the heroic status some would like him to have. The fact that aid virtually dried up in the refusal period is a separate and different story.

It is inevitable that ordinary people will want to blame shortages and higher prices on some-thing or some-one. In Angola, Mozambique and countries receiving their refugees, the aftermath of war can function as an excuse for continuing hardship. It tends to make external as well as internal **criticism of government performance** less strident – at least it may lengthen the honeymoon period accorded the new regime. The same leeway is being given to post-*apartheid* South Africa. By contrast, those newly in power who are without the excuse of recent national trauma will quickly be called to account when conditions of life under a long-anticipated 'democratic' system actually become worse than the old chiefs or the autocrats of previous regimes were able to provide.

Because these criticisms and concessions are largely unaffected by differentials of individual effort or integrity, they can contribute to the **political cynicism** and disillusionment felt by many among the national elites. The job is too hard; the pay is too low; the returns are too distant, appreciation from foreigners and home-boys is hard to come by, – and for members of the elite there are two alternatives to struggling within local/ formal / legitimate constraints.

One is the consolation to be found in the opportunities they have for **fiddling** the official system. Petty and grand corruption are now such standard perks of professional life that they come close to being requirements of high status.

Another option for qualified women and men is **emigration**. In this arena one change has affected and will continue to enhance the Region's prospects to 2015. Whereas the preferred or only out-destination s for educated Africans used to be the United States, Canada or Europe, now there is a significant **circulation of elite individuals** within Southern Africa. It is a result of tighter restrictions in the northern host countries as well as better opportunities in the Region itself.

Inevitably, not every country has the same appeal. A good job with an international agency might once have enticed a national of, say, Zimbabwe into Lesotho, but a strictly *local* job would be unlikely to appeal. Lesotho incidentally lost further ground as soon as the new respectability of South Africa enabled international and bilateral agency offices to move out of Maseru and into the cities of the Republic very much the cultural (as well as economic) centre of the Region. [See the note re: Lesotho's aid addiction in Appendix v:3].

Preferred destinations are those which pay hard currency salaries (Botswana has been famous in this respect); are little prone to violence or civil disruption (Namibia, Swaziland); have good access to donor or investment funds; and/or seem to have good future prospects. South Africa definitely ranks highest on

the last two dimensions. Despite inter-ethnic violence, crime and civil disorder, it is the destination of choice for many and will probably remain so until the skills needs of South Africa are met. [re: non-elite migration, see 3.3 below & Appendix Map I].

Although leaving the home country has to be socially more acceptable than corrupt practices which involve milking the system for personal gain, there is a sense in which the exodus of a country's elite could be the more damaging to its development in the long run. An important objective of bilateral and multilateral aid programmes has been the growth of skill resources in poor countries. Yet according to one expert calculation, such is the rate of **attrition among the elite** (by reason of accident, violence or AIDS death as well as migration) that to ensure one well educated and well-skilled forty-five year old 'leader' in place in (say) 2015, requires that as many as *seventeen* individuals are trained to tertiary or other professional competence levels.

Short of regulation of the type imposed by the old Soviet Union, the only way that largescale elite emigration might be discouraged is by the design of salary and other **incentives** which would make it worthwhile for people with integrity and leadership potential to stay in their native country. The majority would prefer to do so if working and living conditions permitted.

3.3 DEMOGRAPHY & MIGRATION. Population is among the Global Issues noted in Section 2. In worldwide perspective the main concerns are overpopulation, implications of it for environmental exhaustion and pollution, and allocation of responsibility for the various problems.

In this section, three dimensions of demography are interwoven in ways which reflect and refract these issues while they tie in with more specifically regional concerns. They are the distribution of people by **age and gender** categories across the **rural:urban divide**, and change in the balance of options open to women and/or to men in each **urban system**.

Differences in the extent and style of urbanisation are among the more visible yet least recognised across the Region. Zimbabwe, for example, includes some urban sprawl, but 70% of its people live and work on small farms, and probably another 10% labour and live fulltime or for some part of the year on agro-business worksites. In Zambia, by contrast, more than 50% of the population is thoroughly urbanised.

Patterns of migration are a focus of concern in many quarters. Movements of unskilled labour in search of work within the Region have long been a feature of normal life for many. People from poorer rural areas inevitably gravitate to industrial centres. Map I (appended) shows the 'normal' pull of South Africa under the old regime. Lately drought and wars have made life still harder, and South Africa has more migrant appeal than ever. But everywhere cities are growing at an unprecedented rate, and social and economic stress grows with them.

It is socially and culturally significant that men and women who live in countries dependent on labour migration tend to be moving between rural and urban sites that are in different countries. Small countries like Swaziland, Lesotho and Malawi, having little room for internal differentiation, show this pattern most plainly. But size of country on the whole bears no relation to urban-ness as such: South Africa and Zambia aside, even the huge territories of the Region (Botswana, Mozambique, Angola) have each only one or two cities to speak of.

Size of town however, and more importantly, the type of urban system, affect **opportunities for livelihood** and so the gender, age (and sometimes ethnicity) of the people attracted away from rural areas into the various urban centres. Three points are worth stressing here. One is that the movement to town is not now impelled by push factors alone. The rural home area may be poor, family constraints onerous, early marriage to the wrong person

looming, but a decision to leave will normally be bolstered by the pull of network connections, the chance to find anonymity, and some idea of the job market or the working of the informal economy in the destination area.

The second is that the **decline of formal employment** following recession, post war disruption, structural adjustment etc. tends to change the balance of male:female opportunity in favour of women. Their customary responsibility for household livelihood in rural areas, and the capacity to 'get by' by combining social with material resources which it has fostered, may be better adapted to new forms of urban life *in some towns* than is the narrower employment focus of men.

Census trends across sub-Saharan Africa show the urban population generally less skewed towards men than it has been in the past. This implies **relatively fewer men** and more women now moving into towns. Age:sex ratios in central Kampala confirm that there are already significantly **more girls and young women** than boys/young men in residence, and ethnographic work in the area shows that the change of gender balance can be partially explained by changes in the urban system itself – specifically in the options for livelihood offered by it.⁶

While this specific evidence comes from outside southern Africa, there is reason to expect that it has parallel relevance in parts of Region. Certainly the immediate future will show important social-cultural **developments in the urban sector**, not least in gender relations. There is already a decline in formal marriage rates. While this does not always entail fewer committed domestic partnerships, increasingly we will see more female-headed households and more young children born and raised in cities. While many will continue to sustain networks of support and responsibility which involve the rural area, the balance of resource and the direction of **exchange between town and country** is bound to change.

In order to achieve maximum effect in the next twenty years, research and planning will need to pay closer attention to the dynamics of life in town. Once it could be assumed that the income-producing, wealth-generating job markets of cities made them able to look after their own, and that development aid could sensibly be concentrated in rural areas. This is very much no longer the case. Between now and the year 2015, the main argument for targeting development aid on the countryside will be the need to persuade people to remain there.

3.4 EDUCATION. In ideal terms, 'better' education is an explicit priority in every nation. But the **years of schooling** aimed at by each of the Region's governments varies with levels already achieved, the current state of infrastructure and national finance, and the pressure of other priorities which must compete for any resources available. Again here therefore, war or other 'destabilising' events seem to be more significant to difference across the Region than simple poverty, particularly where it is a matter of standards declining or having declined. The point made about **expectations** in 3.2 also applies here.

Consistent with this, 1995 figures show Mozambique with the lowest primary school enrolment (58% of the age group) in the Region, and 12th 'least literate' in the world; and Lesotho with the highest enrolment and long-admired levels of adult literacy among women as well as men. These items are neatly opposite to the two countries' respective claims to natural resource wealth and potential.

It is true that their **one-time colonial masters**, respectively the Portuguese and the British, may have set less and greater store by education in their colonies – a factor somewhat confirmed by the close and relatively high ranking of Botswana and Zimbabwe by these measures. (Zimbabwe, incidentally, now ranks sixth in *the world* in **primary school enrolment** – equal with the Netherlands and London !) But Zambia, with a similar colonial and post-colonial history, is 37th *lowest* in primary school enrolment; and Namibia ranks high in **adult illiteracy** as well.

⁶ Wallman, *Kampala Woman Getting By: Wellbeing in the time of AIDS*, James Currey, 1996

No one factor accounts for different levels of educational provision, but some reasons for poor showing can be identified and might be taken into account when planning for the future. Thus: the long war in Mozambique is a persuasive explanation of the bad state of all its vital services. Equally, the collapse of the copper market and depth of recession in Zambia – although here there may be some question about where funds that might have been earmarked for education have gone instead. And the newness of stability in Namibia gives the new regime an excuse for the patchiness of schools' provision.

The point seems to be that these variations can be accounted for without challenging the assertion that all current regimes in the Region are committed to improving their educational base. The question of commitment to **education for girls and women** is more nuanced, depending substantially on the strength of gender advocacy in each government, but it can be affected also by the demands of donors.

Gender in education is an area where the **gap between intention and implementation** is particularly wide, – so much so that factors making for the gap are currently the specific subject of ODA sponsored research. The study is specifically relevant to SIDA in the context of *Southern Africa to 2015*. It will first compare gender-in-education policies of three aid agencies (ODA, SIDA and UNICEF), and then consider whether/ how far each is implemented in three countries (Malawi, Tanzania and Zimbabwe). The intention is to identify the 'driving force' behind policy change which seeks to improve the educational prospects for women and girls, and 'the problems encountered in policy implementation'.

Recognising the potential importance of the results of this work, they need to be seen against the disparities of schools' provision and product, and the cultural and economic factors behind the scarcity of resources for education in general. War, disaster and disruption notwithstanding, male and female **enrolment rates have risen during the last thirty years, but gender inequalities persist** with respect to both enrolment levels and outcome. Across sub-Saharan Africa in the 1980s, girls made up two-thirds of primary school age children out of school. The proportion rises at post-primary levels.

While in 'modern' circles there is general recognition of the social benefits of educating girls, gender inequality is likely to deepen in the context of economic crises which have reduced the ability of governments to provide good quality basic education, even for boys. There is widespread concern that structural adjustment may cause further **deterioration** in the quantity and quality of education in all the countries affected by it. Certainly it can be used to bolster values which favour males (see 3.2 above re: the invention of tradition). Although some traditional cultures did/ do invest power and authority in particular categories of women (notably the Swazi of Swaziland, and the Bemba in Zambia), **donor impositions**, being both more modern and potentially more lucrative, may be turned into an extra excuse for short-changing girls.

3.5 HEALTH The role of **women as custodians** of household and community health, even in households with a resident and wage-earning male, is an important extra justification for their education, – although it may not be that formal education in the classroom is optimal to their needs in poor countries.⁷ It helps our understanding of indigenous approaches to health to know that in the Bantu languages of the Region, the concept is not distinguishable from the English notion of *wellbeing*, – i.e. it must be glossed to include opportunities for making a living, family welfare, social life, optimism and self-esteem... as well as the simple absence of illness or disease. 'Health care' therefore includes many non-formal, **other-than allopathic options** – which in some circumstances are very effective – and is only partially affected by the newly-imposed user fees.

⁷ Wallman, Which Resources pay for Treatment? A model for estimating the informal economy of health. *Soc. Sci. Med.* 42:5, 1996 (with M. Baker).

However, while it is not clear what changes to treatment-seeking will result from them in the longterm, demands for better services and some staying away have been reported as shortterm effects.

Official measures of country health status address only one dimension of public or private health at a time, necessarily lifting it out of the general context of *wellbeing*. They are nonetheless useful for comparative purposes. *The Economist's* figures (computed in 1995) for infant mortality, life expectancy, and AIDS give an indication of the range and depth of health problems across the region.

Infant mortality is an indicator of poverty and social stress as much as of poor health provision. The fact that rates are high in many countries despite massive efforts to ensure immunisation of babies reflects this. It is alarming therefore that four countries in the Region are included in the 50 worst cases (i.e. highest scores) in the world. Again, however, notice the disparities between this ranking and other measures.

Mozambique is 3rd worst in the world with infant mortality at 147 per thousand, (These deaths can only indirectly be the result of war). Zambia ranks 37th with 84 deaths per thousand. Lesotho is only slightly better with 79 deaths per thousand (remember its good showing on education ?); and Namibia ranks 45th with 70 p.m. This is a measure amenable to changes in infrastructure, security etc. In Namibia and Mozambique at least, on the grounds that things in general are getting better, we may expect lower infant mortality as 2015 approaches – with the usual irony that lower infant mortality will sustain population growth at its present high levels.

Looking at the conditions affecting adult **life expectancy**, it is realistic to suppose that it will not be so amenable to short term change. In the period 1990-1995, life expectancy at birth was highest in South Africa (63 years). Botswana, Lesotho and Namibia came close to that level (61, 61, and 59 respectively). Mozambique (47 years) and Zambia (45 for women and 42 for men) are much worse off. This brute count does not show cause of death, but other sources indicate combinations of disease, drought, accident, violent crime and, in Mozambique, war.

Age is another differentiating variable, although more significantly within than between countries. **Children under five** are especially vulnerable in poor rural areas, in the many urban areas with unclean water and open sewers, and where their communities have been disrupted or their parents have died of AIDS.

AIDS mortality as such affects very young children (by vertical transmission of the virus) and adults in the prime of productive and reproductive life. The decimation by AIDS of leadership cadres has been reported in all the countries affected. Lately the number of women dying of HIV disease has outstripped the number of men.

These are trends which apply to the Region as a whole. Variation in the rate of HIV infected people however is very great: Zimbabwe is listed as 6th worst in the world, with a rate of 181 per thousand (but is 6th *best* in primary school enrolment !) Zambia, where the disease is highly visible in every sector, ranks 16th but with a rate of 'only' 83 per thousand. Botswana drops still lower with a rate just under 60; and Namibia, with only 20 per thousand, actually has fewer cases *per capita* than Denmark, and only slightly more than the Netherlands.

All these figures are too high and show only the most visible tip of the epidemic. It is calculated that for every person known to have, or to have died of AIDS, at least thirty others are HIV infected. It is plain therefore that AIDS has, and must continue to have, profound impact on wellbeing across the Region in the next decades.

Communities deal with the epidemic in different ways, their strategies and capacity varying importantly with the **stage of epidemic** that each has reached – or will admit to having reached. The official figures mask non-counting and misreporting, however motivated. The epidemic was recognised in Zambia only after Kaunda, some time after the event, publicly admitted AIDS to have been the cause of his son's death. South Africa five years ago officially had no AIDS problem (perhaps most cases were still in the invisible phase) but now acknowledges it to be among the most serious of its present and future issues. Given the extent to which migration connects it to the rest of the Region, the likelihood of AIDS continuing speed to, from and around the big labour markets of the Republic can no longer be denied.

The **secondary stigma** of AIDS seems to diminish as prevalence rises: most people are by now related to someone who has died. But the mortality figures will continue to mask some number of individuals who will be said by their kin to have died of 'witchcraft', or of other afflictions which deflect shame and blame away from the sufferer. Few communities still need information about how the disease is caught; most people know that it is sexually transmitted, although perhaps not all that it is connected to **other STD**, and therefore that it is 'worth' getting ordinary STD treated. Assistance with homebased care will become increasingly important. Most health providers are committed to facilitating more open discussion of risky sexual practices, but even *feasible* ways of avoiding them depend on negotiating change in intimate relations, which in turn depends on changing the balance of power between men and women.

In all of this, AIDS is never the only thing women or men have to worry about. The risk of infection competes with more up-front risks of embarrassment, divorce, violence, and loss of status, reputation, or livelihood. Other health problems are more immediate. The possibility that improvements to **public health**, especially in cities, will give individuals a better sense of control over and so of responsibility for **private infections** is one to be explored in the period to 2015. To look into these local constructions of meaning would entail identifying and then addressing dimensions of the **social context of AIDS**. These, from governments' and donors' points of view, are '**curable**' in the way that HIV infection is not.

4 DONORS' DILEMMAS.

The background to some of these dilemmas was signalled in Section 2, in the sense that many Global Issues are perceived and experienced very differently by different interest groups. Certainly there can be serious culture clash between donor agencies such as SIDA, and recipient, or aspiring recipient countries such as the ten sketched in Appendix v.

Less obviously, but sometimes more importantly, there can be different and contradictory priorities held with equal force within a single cultural or interest group. It is these equal-but-opposite ideals which create the dilemmas referred to here. The point is that confrontation with other people's values is not a necessary condition of culture clash.

They are reviewed here because it is useful to realise that crises of conscience experienced by donor agencies or their field practitioners may be recognised as effects of the normal and proper contradictions inherent in any complex value system. If the political/ cultural/ moral 'no win' of planned change is acknowledged, it will be less likely to impede the formulation, implementation and justification of 'best possible' aid and development policy for the next period.

The major dilemma of democratic government agencies seeking to be helpful in Africa stems from the need to fund projects which fit the liberal, humanitarian and efficiency ideals of the donor system, but without imposing those values on the recipient system. (The conviction that it is wrong to impose in this way) is probably stronger in Scandinavian than in anglophone cultures.)

Several pairs of conflicting priorities are expressions of this underlying contradiction. They are *tolerance v. efficiency*; *anti-corruption v. relativism*; *gender equality v. traditional values*; and *rights of the individual v. rights of the group*.

4.1 TOLERANCE & EFFICIENCY. In practice, tolerance and efficiency, both of them highly valued objective in donor countries, are very often incompatible. How can an aid agency tolerate the mismanagement of work or the waste and inefficient use of funds?

One way of minimising both is to have projects directed expatriots, -- usually from the funding country. And yet how can 'culture aware' development consultants or advisors require their African counterparts to meet the demands they (ideally) would put on themselves?

The fundamental quandary is created by the equal importance of four priorities. Each belongs to a different context of time, place or interest group, but in practice they are all in play at once. (see para. 1. 5 above). *Viz:* How is it possible at the same time/ in the same project to build (long term) local capacity. . . to achieve a (medium term) reduction of social inequality, . . .to maximise the (short term) benefit of local people . . . *and*, increasingly important, to satisfy the **donor's home** constituency that taxpayer's money is not being misspent ?

4.2 RELATIVISM & ANTI-CORRUPTION. This is a more subtle variant, stemming from the difficulty any of us has in grasping the nub of another's morality, and aggravated by the unhelpful tendency to fear that criticism of African elites or behaviours is, or will be taken to be, racist and/or politically incorrect.

Largescale government corruption of the kind now alleged in several of the Region's states may, to the extent that the poor and vulnerable are visibly damaged by it, be more obviously unacceptable. But until recently it has rarely been considered clear cause for terminating or refusing to start an aid programme.

Petty corruption (in the European sense) is a still greyer area. It is very common in African bureaucracies, hospitals etc: in some places few services can be got without payment of a "fee" to the gatekeeper. Most foreigners accept the local interpretation: these fees are a necessary part of livelihood because salaries are too low to live on. But in the new, more stringent aid era, will it remain acceptable?...

4.3 GENDER EQUALITY & TRADITIONAL CULTURES. It is reported of the 170 or so nations which gathered at the recent U.N. Women's Conference in Beijing to reaffirm their commitment to women and to human rights that over half are known to condone torture, some 25 accept continuing, forms of slavery, and "all turn a blind eye to discrimination against women in one form or another". (*THES* 29 September 1995, p.20).

Signs of change were more promising in the parallel 'unofficial' *Fourth World Conference on Women* held at the same time in the same city. Hilary Clinton (in attendance at both meetings apparently) said: "If there is one message that echoes forth from this conference, it is that human rights are women's rights and women's rights are human rights, once and for all". (*Time* 25 September 1995). The principle of course matches SIDA's stand on gender quite directly.

But under this umbrella sentiment there were areas of dissent and debate which serve to illustrate the dilemma to be signaled here. Different cultures have different views of the problem, of how far solutions to it should go, and of the damage to their traditions and cultural integrity which will be wrought by changing the balance of relations between the sexes.

Practices widely regarded as barbaric are one kind of problem. They are readily made the object of international pressure, – specifically donor sanctions. But it is less easy to deal with traditional patterns of decision-making, resource allocation, education, political participation – even food distribution at the very local level. In the matter of gender, the donors (SIDA very notably) would seem to be less hesitant about resolving the dilemma by opting to maximise one 'side' over the other. It is important however that the decision to optimise gender-equality over other-people's-cultural-values should be explicit, and that the possible side effects of doing so are recognised. Because of the inherent cultural political/ moral contradictions, 'no loss' solutions are unlikely.

4.4 RIGHTS OF THE INDIVIDUAL & RIGHTS OF THE GROUP. The West in principle values and seeks to protect or enhance the rights of minority groups to self-determination and cultural integrity. It has also "spent over two centuries defining and reinterpreting an intellectual tradition based on the rights of the individual to live, believe and say what he or she wants to" (*THES* 29 September 1995). The dilemma here concerns the need to assist and enhance group leadership and cohesion, and yet to preserve the 'right of exit' of the individual members of that group. The same dilemma can be posed at the level of cultures (as in 4.3 above), as well as new nations and their constituent tribes.

5 DISCUSSION: SCENARIOS AND IMPLICATIONS

In the mid-sixties, Elspeth Huxley said: 'Writing about modern Africa is like trying to sketch a galloping horse that is out of sight before you have sharpened your pencil.' At that time it was a fair comment upon the changes that were taking place in African societies – politically, socially, economically and in terms of their landscapes.

Thirty years on it is more difficult to think of Africa in the same optimistic terms. The whole pace of change has slowed down and Africa now seems to be the continent in which the problems of economic development are to be seen in their more acute forms.

The advance of Africa to the levels of living, education and wealth already attained in earlier developed continents depends fundamentally on two things. The first is what used to be called the 'successful conquest' of the environment. One development that would alter the character of much of Africa would be the eradication of the tsetse fly. Animals for draught purposes, improved agriculture with mixed farming, better diet and health for millions would follow – even though the locust scourge, the worm diseases, malaria, a multitude of endemic diseases and of course HIV/AIDS have still to be conquered.

The second vital ingredient is political stability. This is hampered by the artificiality of many of the state units inherited from the colonial era and the lack of coincidence between nation and state in modern times. Many of the states are extremely small, in population and area; others are large but with relatively small populations; many have shapes that are administered with difficulty; while others find themselves landlocked and vulnerable. No other continent is divided into so many separate states, with so many of the entities being politically weak and of doubtful economic viability.

A major weakness derives from the fact that the state apparatus is frequently dominated by a particular ethnic group, often intent upon maintaining its influence and creating opposition from those who feel they are excluded from the decision-making processes or the distribution of benefits. For its part the government usually views such opposition as an undesirable expression of 'tribalism'. The one-party political organization, the charismatic leader and the prestige development projects which act as focal points for national aspirations have all been justified as means of providing a unity that is so obviously otherwise lacking.

Just as control by one ethnic group is likely to create conflicts, so too will personal rule, which has often resulted in disaffected groups attempting and sometimes succeeding, in overthrowing the government. These governments are rarely representative in any real sense, and it is partly for this reason that development planning has lacked proper direction, has often been based on wrong priorities, and has hardly anywhere resulted in maximum growth, more equitable distribution of wealth and benefit for the masses. It has also become clear that corruption has become endemic and political power is associated with the means of enlarging personal wealth. Previously accustomed to handling modest sums, officials found vast sums of development capital (from loans, grants and aid) passing through their hands. Politicians and civil servants have a first loyalty to their families, tribe and political support. They are urbanites and rarely have sympathy with distant rural populations or with rather nebulous concepts 'of the public good'. The evidence of 30 years of development effort shows that on the whole the poor have remained poor or have actually got poorer, and the elites have become markedly richer. Maldistribution of incomes has never been so severe.

The best performance in the provision of education and health services has been in those countries with the highest proportion of the population in urban areas. This reflects the urban bias in amenity provision and development planning but also the practical consideration that the services are more readily and more cheaply provided where the population is concentrated in larger groups. It is also a factor making for the attraction of

urban areas for rural people. The gap between the life styles of the peoples of the towns and country is still widening, and within the urban areas there is a sharp contrast between a small, relatively affluent, group and the much larger group which is poor, badly housed and on the fringe of the urban economy. Little has happened since independence to reduce the poverty of the mass of the population.

In several of the Region's countries, natural resources are meagre, but in all there have been problems of resource management. Too frequently, inadequate attention has been given to the questions raised by the transfer of technology – **when** (Is the time appropriate, the phasing correct?), **where** (Is the best location selected?) and **what** (Is the most appropriate scale and technology adopted?). Two further considerations might be **who** (Are the right people making the decisions?) and **why** (Are they being made for the right reasons?) There are certainly too many examples of projects that have been pushed through with undue influence from external parties (contractor finance projects in many countries, 'tied aid' projects, projects developed as part of the global operations of multinational companies) and where decisions have been made for largely political or prestige reasons rather than in the best interest of economic development.

On past performance it would seem that the rise to a tolerable standard of living is beyond much of Africa's ability. Frightening population growths that double populations within 20-25 years deflect income into immediate consumption rather than development investment. This situation is worsened by the heavy burden of debt-servicing, sometimes taking a quarter to a half of the value of exports, with the capital amounts still to be repaid.

The problem of raising capital for development is heightened by the past record of ineffectual use and dissipation of donor loans and grants. Here ideology bears some responsibility. Nearly all the states pledged themselves to various forms of socialism: in many this led to nationalization of major components of the economy and the creation of a new tier of officials and bureaucrats to oversee them. In country after country these projects, which have stifled individual initiative and entrepreneurship, have failed. Now priorities have to be reordered: economies will have to be loosened from state control and a healthy private sector with freedom for the entrepreneur and support for private initiative must be tried. At the same time there is international pressure to turn African states from costly and unsuccessful industrial promotion in favour of a revival and rehabilitation of the agricultural sectors. Central control and management of development have not been successful, and time has come to depend more on local and regional initiatives and replace the almost universal 'top down' with a more 'bottom up' strategy.

The future is unpredictable. A bad scenario would include escalation in political unrest and oppression; the continuation of corruption, social stratification and the brain drain of professionals; uncontrolled urban growth; continued neglect of rural development; more political misjudgement; and more misdirected aid: in the bad scenario, it will continue to be as much about supporting the countries from which it comes and will continue to shrink as those countries cut their spending. Some bad prognoses are impossible to escape from. The AIDS epidemic will skew the demographic pyramid resulting in the deaths of many young adults and an increase in orphans. There is already a young generation which has suffered directly from poor nutrition, poor health care and poor education. HIV incidence shows no sign of falling off – and already in select populations, prevalence is as high as 50%.

A good scenario would be new governments which demonstrate political integrity: an increase in sustainable support from donors and government for the poor but capacitated; and the free market economy and regional possibilities eventually playing into the hands of legal business. A good scenario depends on more honest expenditure of revenue, more emphasis and expenditure on the social sector and rural development, a decrease in the size of the civil service, a migration now from urban to rural areas, and an increase in internal, as well as external confidence.

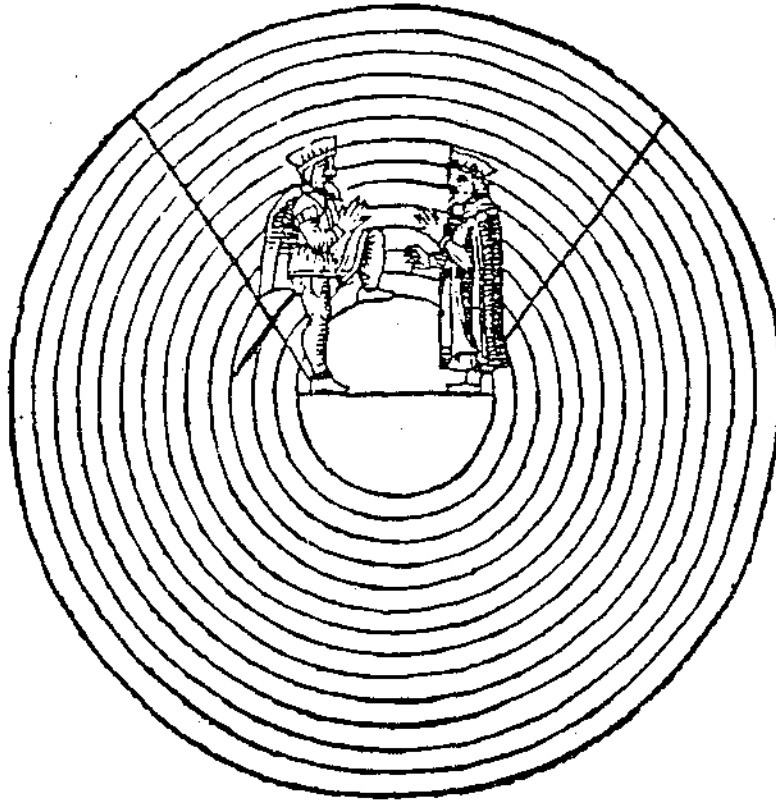
Two points to conclude. First, whether in a bad or good scenario the role of the (new) Republic of South Africa is likely to be crucial. 'If South Africa sneezes the Region will catch cold'. It behoves all of us to watch it carefully and assist as judiciously as we can. Secondly the future needs to be seen in phases. In the short term, each of the member countries needs to put its own political house in order and consolidate its food supply. In the medium term, economic co-operation among the separate countries will become a priority – each ideally supplying the economic or social resource(s) which (some) others lack. And in the long term – i.e. after the GATT agreement comes into effect – the Region will be poised to become a major exporter of natural and agricultural products, selling them on the ever less productive and more expensive markets of the industrialised north.

Either way, certainly short and medium term, aid for basic supplies and materials will continue to be necessary. This includes essential drugs, education materials, and rapid response to disasters such as drought, epidemic or a refugee crisis. Aid which builds on the capacity of local professionals and fosters skills which can be applied within the region or its separate countries should be a priority. It may be important to consider ear-marking aid for business development channelled to the small business sector (or the small farmer?) instead of the large and so often dubious bureaucracies of government: perhaps to create and sustain lateral links with similar sectors elsewhere.

Even this modest change of direction demands a change of donor heart. "The IMF and World Bank will not even consider backing a stabilisation programme until there is some proof that the government is trying". (*The Economist* 16th Sept. 1995).

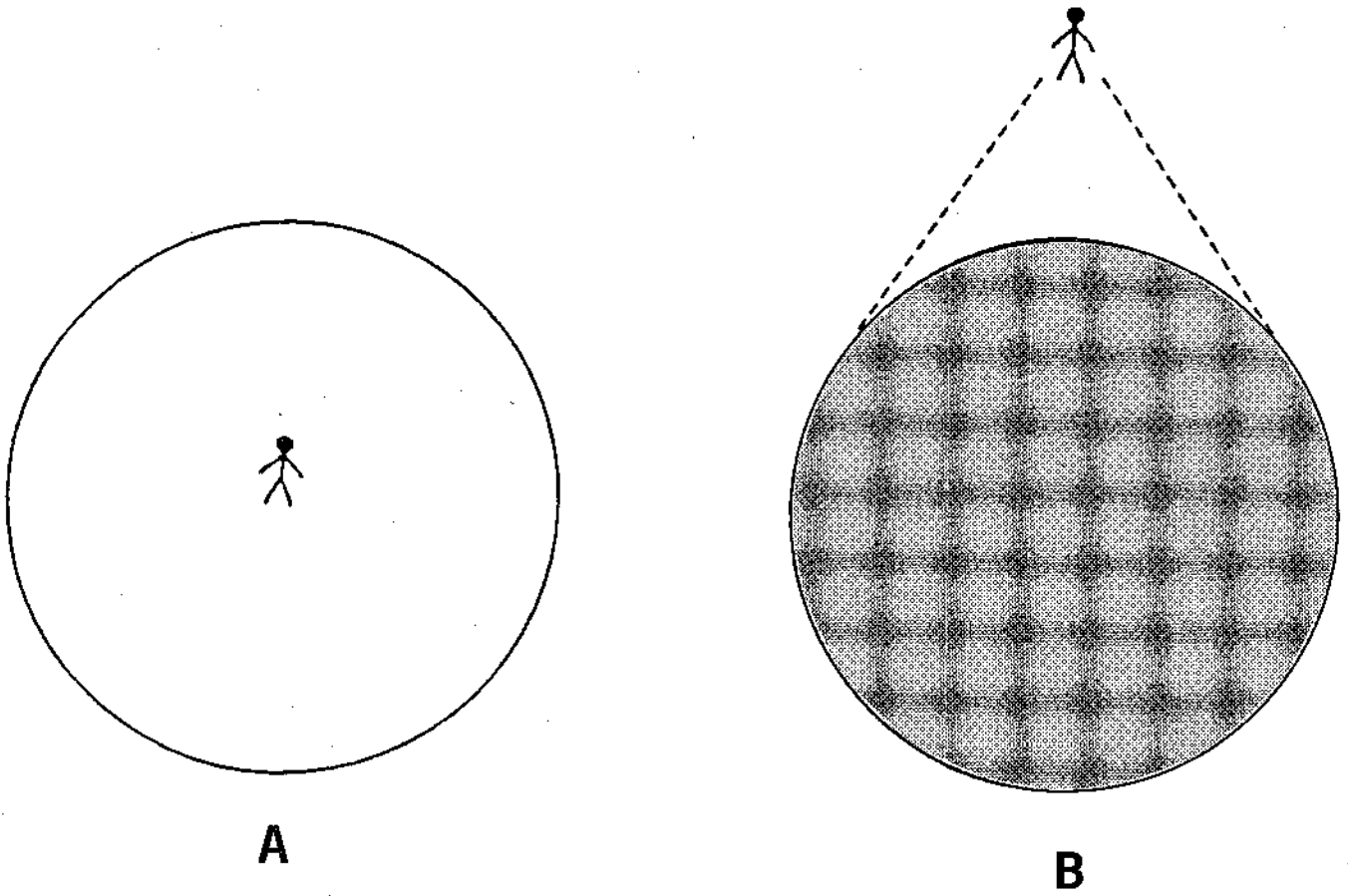
Their assurance cannot be given by ordinary people, however desperately they want it to be made. The statement refers to Angola, which is a particularly sharp example of the gap between local and international circuits of livelihood and development. But similar strictures apply throughout the region. The inevitable result is that many political leaders are more concerned with credibility in Brussels than efficacy at home. The structural adjustments now demanded by IMF and increasingly by national donor agencies make life harder rather than easier for the average citizen – food becomes more expensive, users must pay for government medical care etc., and the complicated past and present of relations among neighbours, are not going to go away.

APPENDIX I



The fourteen spheres of the world, as drawn by Giovanni Camillo Maffei in Solofra in his *Scala Naturale* (Venice, 1564). Giovanni's patron, the Count of Altavilla, is shown beginning his ascent through the spheres.

APPENDIX ii



Two views of the environment: (A) as a lifeworld; (B) as a globe.

APPENDIX iii

Sheila Sisulu, adviser to the South African education ministry, talks to Sarah Boseley about the hopes and needs of young people in the post-apartheid system

IN JANUARY, the start of the academic year in South Africa, schools, universities and teacher-training colleges come under siege. Pounding on their doors are thousands of young people, some illiterate, all ill-educated and all desperate for the promised future to begin.

They are members of what has been loosely termed the "lost generation". It is a label that Sheila Sisulu, special adviser to the education ministry in South Africa, rejects for its connotations of hopelessness. Dealing with the plight of South Africa's youth is perhaps the most important task facing the government. "We have to confront it," she said with quiet conviction. "Otherwise we are a lost nation."

Ms Sisulu, daughter-in-law of Walter Sisulu, is in Britain representing the South African Council of Churches at the 50th birthday celebrations of its partner, Christian Aid. She was seconded to government after she had worked as director of the SACC's Joint Enrichment Project, which aimed to improve prospects for youth.

It is an enormous job. Half the population are under 15. "All of our problems impact mainly on young people," said Ms Sisulu. "Most people, and I too, feel overwhelmed at what to do. Unfortunately it has not been easy to find models that work rapidly. It will be a long haul. We run the risk of getting young people angrier."

Research two years ago estimated that there were about 11 million young people aged between 16 and 30. Of those, 25 per cent are thought to be in school or careers, and socially integrated. Of the rest, about three million are considered to be marginalised, while another 4.7 million risk becoming so. Another half a million are embroiled in crime of all sorts. Education is critical for these young people, but it will not solve all their problems. "Many young

people of 25 have been through a war. They have participated, or have been victims, in the war. They have lost out on their own education and development.

"There needs to almost be an orientation programme to ascertain where the young person is coming from — were they a victim of the violence? Are they displaced from their home? They may have killed someone. Young people need to be enabled to unload their baggage," she said.

Without such support, young people join courses and drop out within months, unable to cope, disillusioned and angry. They need to be able to see where they are going and to be helped to get there — although the future may not immediately hold a job since 60 per cent of the unemployed are under 30 years old. Unemployment, crime, education and health — HIV/Aids is greatest among young people — are all problem areas.

"The problem of youth is not just an education problem," said Ms Sisulu. "The approach the government has taken seems to me much more hopeful. The decision is that there should be a youth commission in the office of the President. It would work through other ministries in an integrated way."

That any progress has been made is remarkable, given the wholesale restructuring of the education ministry made necessary by the end of apartheid. Nineteen departments, dealing with separate races and homelands, have been dismantled and nine created in their place. Some functions have been redistributed between central government and the provinces.

Guardian Education Tuesday October 10 1995

Selection in schools on racial grounds is no longer legal, but happens. Control of admissions to state schools in white areas was handed over by the outgoing Nationalist government to parents or governing bodies, who have been selecting children by criteria such as language, parental earnings and through testing. Known as Model C schools, they remain largely white, except in urban areas such as Johannesburg, where they have been forced to supplement numbers with black pupils.

One problem arising from the tribal homelands is a flood of unemployed teachers. "The homeland governments used teacher training as a political tool," she said. In the Northern Province there are 22 colleges and 7,000 unemployed teachers.

"The demand for places is growing, because young people are sitting around with nothing to do," she said. Integration of schools will not help jobless teachers get jobs. "Many of those young people who went to bad Bantu schools and on to Bantu

teacher-training colleges should, theoretically, be able to teach in any school in the country. But their chances are very limited." They now compete with post-graduate white teachers, who are being redeployed to black areas.

Pressure to achieve results is enormous, given the desires and expectations of black South Africans. It is vital, she says, to involve people in the midst of their communities. "A lot has to change for young people. Their own environments have to change."

"We're trying to push it forward with as much urgency as we can, but we have to be cautious. The signal of the beginning will be important. But in relation to the problems, the efforts made so far are almost insignificant."

APPENDIX iv (a)



■ SOUTH AFRICA

"Rise and Resist"

A Zulu power struggle threatens to unleash a civil war and spread violence

TIME, SEPTEMBER 4, 1995

By SCOTT MACLEOD DURBAN

FOR THOSE EAGER TO SEE IN NELSON Mandela's South Africa the litmus test for a new, peaceable world order, the gathering last week of 40,000 Zulus in Durban for an *imbizo*—a mass council of tribal elders and their followers—was a rude awakening. As the war drums pounded, Zulu chieftain Mangosuthu Buthelezi implored the spear-carrying throng to "rise and resist" and continue the Zulu nation's "just and noble struggle." Throwing down the gauntlet, Buthelezi read out a covenant demanding the transformation of the KwaZulu/Natal province into an autonomous Zulu kingdom.

By so doing, Buthelezi fanned the flames of a decade-old power struggle that pits his traditionalist followers against Zulus who have thrown in their lot with the African National Congress-led government of Mandela. It is also a power struggle that threatens to become an outright civil war. In the picturesque green hills rolling up from the Indian Ocean in the province of KwaZulu/Natal, Zulus are slaughtering Zulus in growing numbers. Some 1,000 have died since Mandela took office in May 1994, bringing to 20,000 the death toll in the clashes since 1984. Now, with Buthelezi on the warpath, the danger is that the killing will spread beyond the back hills of his homeland to the country at large, thereby besmirching the shiny new image of South Africa and threatening its economic recovery. "In KwaZulu/Natal," warns A.N.C. secretary general Cyril Ramaphosa, "the achievements we have won elsewhere in this country are being continuously undone."

The crisis stems in part from the landmark elections last year. The A.N.C. swept to victory in most of the country, but Buthelezi's Inkatha Freedom Party squeaked into office in KwaZulu/Natal with a 50.3% tally. Despite suspicion of widespread ballot rigging on Inkatha's part, Mandela chose to accept the outcome and even gave Buthelezi a Cabinet position in his government of national unity. But that did not put an end to A.N.C.-Inkatha rivalry. Indeed, for Buthelezi the win in his home province only served to strengthen his power base and encourage Zulu separatist sentiment among his followers.

Driving the dispute is Buthelezi's de-

sire for a virtual state within a state. Though he denies secessionist ambitions, his demands—including the right of KwaZulu/Natal to maintain what amounts to its own private army—have done little to reassure the rest of the country. To Jacob Zuma, the top A.N.C. leader in the province, Buthelezi is simply trying to win back the power and privileges he enjoyed during the days of apartheid, when the self-governing homeland of KwaZulu was his personal fiefdom. "Autonomy is not acceptable to us," says Zuma. "We want South Africa, which was divided by homelands under apartheid, to be a united country."

A frustrated Mandela in recent months has embarked on a risky strategy aimed at undermining Buthelezi's tribal power base by driving a wedge between him and the traditional Zulu leaders. Having won the allegiance of Buthelezi's nephew, King Goodwill Zwelethini, who was anxious to escape Buthelezi's political clutches, Mandela is seeking to oust Inkatha as the paymaster of the Zulu chiefs and to pay them from central government funds.

The President, however, may have miscalculated. At the *imbizo* last week most chiefs indicated that they would still support Buthelezi. "The A.N.C. bribed his majesty the King," says Khayelihle Mathaba, chief in Mandeni, one of the most violent areas in KwaZulu/Natal. "They thought the King has more power than Buthelezi. We cannot support his majesty."

Not one to allow others to seize the initiative, Buthelezi issued notice at the *imbizo* that if his autonomy plans are rejected, he will call new elections in KwaZulu/Natal with the aim of increasing Inkatha's local majority to the 67% needed to ram through a new constitution for the province that effectively would devolve power to him. "Mandela is trying to crush us," Buthelezi told *TIME* in a recent interview. "I think it is vanity on his part. He was so overconfident he was going to win the elections in KwaZulu/Natal. I'm not a psychiatrist, but I think his ego was hurt."

And what of Buthelezi's own sizable

ego, which appears to be driving his autonomy bid? Roelof Meyer, a National Party official whose negotiations with the A.N.C. paved the way for the landmark elections last year, fears Buthelezi is spoiling for a fight and could get one. "Inkatha is painting itself into a corner, and there is no way out," he warns. "What is the next step? An election will only contribute to further violence and tension." Sifiso Zulu, a prince sympathetic to the A.N.C., echoes that alarm. "Don't forget," he says. "The political mob is what helped the liberation movement destabilize the apartheid government. You can't underestimate Buthelezi." Ominously, Buthelezi has ably demonstrated that mobs are something he can mobilize—if necessary to rise and resist. ■

APPENDIX iv (b)

INDEPENDENT • FRIDAY 13 OCTOBER 1995

Crisis threatens to disrupt poll in South Africa

PRAKASH NAIDOO

Tensions in South Africa's government of national unity, and in the violence-prone province of KwaZulu-Natal, overshadowed a vote yesterday by parliament to hold historic local elections next month.

Polls to replace the last remnants of apartheid in South Africa's elected institutions have been bedevilled for months by uncertainty over voter registration and haggling over local authority boundaries. Although the National Assembly voted yesterday to go ahead on 1 November, KwaZulu-Natal will sit out the process for at least another five months.

The parliamentary debate, however, caused the worst infighting between the African National Congress and its governing partner, the National Party, since the national election 17 months ago. Mac Maharaj, the ANC Minister of Transport, called for the Deputy President and leader of the National Party, F W de Klerk, to be sacked as chairman of the cabinet committee on security and intelligence, accusing him of threatening a coup during a speech at the weekend.

Yesterday President Nelson Mandela's office moved to

dispel rumours, believed to have started in financial markets in London, that Mr de Klerk had resigned, although the ANC said it supported Mr Maharaj's call for his dismissal. Mr de Klerk said he had been misquoted.

Tension between the two parties has been aggravated by ANC claims that the NP was attempting to manipulate the electoral boundaries in the Western Cape, the only province controlled by the party, to improve its chances next month. Polls will go ahead except in the greater Cape Town metropolitan area, the centre of the dispute.

Voting will also be delayed in KwaZulu-Natal, the power base of Chief Mangosuthu Buthelezi's Inkatha Freedom Party, which has seen the worst wrangling over boundaries.

Peter Miller, Inkatha's provincial housing minister, said yesterday that it would be impossible to go ahead with elections before 27 March next year, the deadline set in the new legislation. If KwaZulu-Natal fails to meet the deadline, the central government is empowered to appoint administrators to run the province.

Fighting between the Zulu nationalists of Inkatha and

ANC supporters has killed scores of people in the province in recent months. This, coupled with bitter disputes over boundaries, has undermined any hope of a trouble-free election.

Inkatha, which governs KwaZulu-Natal with a small majority, has argued for a high degree of autonomy from the central government, and Chief Buthelezi is accused of seeking the secession of the province. The party is refusing to include any tribal areas within the electoral boundaries of the cities, and the issue will now be referred to a special electoral court, probably by early next month, for a final decision.

In the rest of the country there is increasing concern that voters' rolls may not be up to date. Despite a massive voter-education drive in the past six months, a survey this week revealed that many people still believe they can simply turn up at the polls and vote, as they did last year.

Appendix (v)

THE SEPARATE COUNTRIES OF THE REGION

These brief notes refer first to Angola and Mozambique, both Portuguese colonies until 1975, and both emerging from years of bloody conflict; then to Lesotho, Swaziland and Botswana, all one-time British protectorates made independent in the 1960's; followed by the old Rhodesias, now Zambia and Zimbabwe, Malawi and Namibia, with minority regimes until 1964, 1980, 1964 and 1990 respectively. South Africa, in view of its dominant role in the region, is left to last.

1 ANGOLA: Angola is vast, sparsely populated, and culturally diverse. Its people belong to more than hundred different ethnic groups and follow either Christian or 'traditional' religions. Under the Portuguese, the least permeable social boundary was that drawn around white settlers, but there was also significant difference between *asimilados*, who were formally exempt from forced labour, and the rest of the African population who were not. Portuguese remains the official language, apparently also the country's *lingua franca*.

In recent years, groupings around three political movements have been most in evidence, each of them with a different – and differently defined – constituency. The MPLA (founded in 1956 and now the party of government in a single party republic) welcomed 'everybody', including whites and *mestizos*; the FNLA was formed (in 1962) as coalition of tribally based groups, and UNITA, strongly supported by the Ovimbundu, was set up (in 1964) by 'southerners' quitting FNLA in protest against its domination by 'northerners'. Among non-African categories, the presence of several thousand U.N. troops during parts of this period will have had more than military influence on the country.

For thirty years, the country has been ravaged by combinations of war against the Portuguese colonials, civil conflict between the three resistance groups, and foreign interference on one or other side (in which the old South African apartheid regime was prominent).

Social and economic costs of all of this have been exorbitant. Tens of thousands were killed, and thousands more are left maimed, orphaned and displaced. Angola long spent up to two-thirds of its annual budget and half its foreign currency earnings on the military. Agriculture and communications were devastated, and their recovery, like that of education and health services, is impeded by huge burdens of foreign debt, high inflation and a shortage of people with administrative and technical skills.

There are nonetheless reasons for cautious optimism about Angola's future. "There have been ten months without war" and "Something like normal life goes on" (*The Economist*, 16 Sept. 1995). There is (again) scope for major productions of coffee, cotton, maize, rice, sugar and sisal (once the estimated 15 million war-leftover landmines have been found and defused). Fish once made up 6% of exports, and still ensure local access to a good protein source. There are diamond, gold, copper, manganese and other mineral deposits to be mined or re-mined. Oil, already 94% of official exports, remains substantially untapped, as does the country's hydro-electric potential.

Angola is classed in the World Bank category lower middle (rather than low) income for sub-Saharan Africa, presumably by virtue of its oil revenues, but most of its people are miserably poor. Corruption and crime feed such poverty, and the cultural resources and coping capacities of ordinary people are severely depleted. "War and the lies it breeds are all that most Angolans have ever known" (*ibid*).

There are amends to be made and repairs of all kinds to be done. Evidence of stable and honourable leadership is prerequisite to improvement over the next 20 years – both because "ordinary Angolans are growing restless

with a government that no longer has an excuse for its professed poverty" (ibid); and because, despite talk of a coalition government in which UNITA's Savimbi would be vice-president to Mr dos Santos, potential donors and most investors remain sceptical of a lasting peace.

2 MOZAMBIQUE: Mozambique, the other one time Portuguese holding in the region and also a single party republic, has been under varying degrees of Portuguese influence for 500 years. – long before it became a colony in the early 20th century. Not surprisingly, it too retains Portuguese as its official language. It has a larger population than Angola (16 versus 9.5 million), and is ethnically less fragmented. All its native inhabitants are Bantu. The biggest group is Makua-Lomwe speaking (about 40% of the population); and there are sizeable numbers of Thonga, Chopi, Tonga, Shona, Nyanja, Cewa, Yao and Makonde.

In social-cultural terms, it is important that each of these groups appears also in one or more other countries of the region, and that the Swahili speakers on the coast have their language in common with Tanzanians to the north. Furthermore, some citizens follow Islam, giving them at least affective ties with the Arabs. Indeed Frelimo (now the government party) was helped by radical African and Arab states (as well as by the Soviet bloc) in launching the ten year war of independence (1964-74).

These same tribal/religious cross-cut could augur well for, or at least might be adapted to, future efforts to secure region-wide co-operation. They may in fact have been an element in Mozambique's decision to join SADECC (the Southern African Development Co-ordination Conference) in 1980 – although the explicit reason given was the country's desire to lessen its dependence on South Africa. The effect was to provoke increased economic and military pressure: at the time of President Machel's death six years later, South African sources were talking of the imminent collapse of Mozambique.

The new President (Chissano) continued to adopt a more pragmatic and liberal approach and to look to the capitalist west for aid. In 1987 he implemented austerity measures 'recommended' by the IMF, including a 40% devaluation and cuts in government spending, but the hoped-for aid effect was spoiled by conservative groups in the US who dissuaded Reagan from helping the government in the civil war. In July 1989 Frelimo officially dropped Marxist-Leninist principles to move further toward a free market economy, but by this time the country's situation was desperate. The same year the Population Crisis Committee in Washington called Mozambique "the unhappiest nation on earth". This conclusion was based on figures for infant mortality, life expectancy, medical care, drinkable water, diet and public safety.

Although it is now by some measures less unhappy, Mozambique still has much lower per capita GNP than Angola (80 versus 650 dollars p.a.), and despite wealthy enclaves and at least one cosmopolitan town, it remains one of the world's poorest countries. The now dominant view is that its economy was ruined by the 'experiment' with socialism in which most private property was nationalised, and the bloody civil war in the decade up to 1993.

The government then signed a peace accord with the rebel movement and has since been returned to power in elections. But as in Angola the demobilisation of warring factions has not proceeded smoothly; and allegations of corruption are commonly heard. There are signs of economic growth (5.6% last year) – achieved here, in the absence of marketable minerals or oil by 'painful economic reform adopted at the insistence of donors'. Mozambique does have hydro-electric potential and it is admirably positioned to (again) be a gateway to the sea when railway connections with the landlocked countries in the interior are restored. These along with climate and beautiful beaches are its principle natural resources.

Portuguese and South African investors are beginning to show interest but most foreign investors, despite tariff concessions and free trade zones find better incentives elsewhere. It is aid and not investment that keeps the country going: aid receipts are still comparable to the entire gross domestic product. Half of this is agricultural: Mozambique's currently most important exports are shrimps (48%) cashew nuts (21%) and sugar (10%). They are not huge earners, but they do have the advantage of building on local agricultural and fishing expertise. The greatest impediment to development in Mozambique is the fact that 90% of its people were illiterate when the Portuguese quit in 1975 and chaos since has prevented the development of educational and social infrastructures to extend the skills of the workforce. Given civil stability this might be achieved in the twenty years to 2015.

3 LESOTHO: Lesotho is a stark, mountainous and very beautiful country enclosed by the Republic of South-Africa. Its total area is less than 12,000 square miles. A maximum of 1,500 of these are suitable to cultivation. Nearly two-thirds of the land area is made up of rugged foothills and mountains which are ideal for the raising of sheep and mohair goats but are generally inaccessible to the plough. On the eastern side of the country the mountains rise to nearly 12,000 feet; the lowest point of the south-western lowland area is 5,100 feet. The topographical difference between the two parts of the country is so marked that the Basuto refer to them by different names: the mountains are *Maluti* (which is also the name of the main range) and the lowlands *Lesotho* (which means "Basutoland" and is the independent nation's official name). Seventy percent of the country's one million people live in the lowland third of the country.

It is estimated that about forty-five percent of Basuto men are absent at any one time and that the number of women absentees has increased in the last few years. The migration of Basuto to work over the border in South Africa is therefore a fundamental factor in the life of the country. In this sense, Basutoland might be described as a dormitory suburb of peasants who commute back and forth across the border. They do not regard Basutoland as a place of 'work' i.e. of money-making.

A very small percentage of Basuto do in fact earn regular cash incomes at home. Aside from employment in Government or in the households of foreign residents the raising of smallstock is the only significantly lucrative occupation open to peasants. For many mountain Basuto it is the principal if not the only source of income. Basutoland conditions produce good wool and mohair which rise to excellence if properly looked after, and wool sold to South Africa ranks as Basutoland's main export.

Little food is exported that is not effectively re-imported in the same year. Nearly all Basuto are subsistence farmers; every family that has any possibility of scratching a piece of land plants maize. Wheat and sorghum have become significant in some parts and vegetables and stone fruits do well where climate is the only consideration. The land could produce more of everything if it were fertilized, but organic fertilizers are used extensively for fuel (there are few trees in the country) and artificial fertilizers are little known and relatively expensive. The overall level of production is so low that even basic foodstuffs must be imported from South Africa.

Basutoland's climate – although entirely untropical and probably very healthy – is itself a formidable handicap to high agricultural yields. Even lowland areas have heavy winter frosts; the mountains may be entirely snowbound and are often isolated for three or four winter months. Extreme cold and scorching sun alternate seasonally, and even daily. At any time of year an entire crop may be devastated by violent hailstorms. The air is dry; a complete absence of humidity has occasionally been registered. Rain falls torrentially in short seasons. Since much of the territory is now without vegetal cover, storm water runs off unchecked, breaking up quantities of the surface sandstone and carrying thousands of tons of topsoil into and through the republic of South Africa.

In terms of other natural resources, Basutoland is poor but unexploited. There are considerable deposits of diamonds, precious and semi-precious stones. Numerous surveys, both government and commercial, have

been unable to establish whether these exist in marketable quantities, and whether inaccessible deposits could be mined economically. The country's enormous potential for hydro-electric power is, however, undisputed and a new dam now makes water the country's most lucrative export.

Certainly in relation to water, the salient feature of Lesotho's present and probably also future situation is her position as 'an island in the middle of South African sea'. It has been salient also, but to less beneficial effect, during the latter years of *apartheid*, and boycott of South Africa by donor countries (Sweden foremost among them).

In 1990 the capital (and only) city, Maseru, was swollen with donor offices and foreign consultants, based there to be close to but not actually in the Republic. With the beginning of post-apartheid era, and after years of 'donor addiction', virtually all these donor bases moved into South Africa, taking jobs, business opportunities, perks, and useful connections away with them.

Lesotho, perhaps more than any other country in the Region, has been and will continue to be affected by what happens in South Africa – and what the world thinks of those happenings. Its economy was always precarious: the latter years of apartheid may have brought it prosperity of a kind, but only the hydro-electric supply now shows signs of contributing to sustainable development.

4 SWAZILAND: Like Lesotho, Swaziland is landlocked (although sharing one of its borders with Mozambique) and is overwhelmingly dependent on South Africa. In contrast, however, it is green, with considerable agricultural resources and a population, although not far behind Lesotho's, small enough not to place too much pressure on the land.

The great majority of people are Swazi, but with some few Zulu, Tsonga and European citizens. There are also Mozambiquan refugees, of both African and Portuguese descent. About 5% of the population live and work in South Africa.

Swaziland is a constitutional monarchy and single party state. The present king, Mswati III, came to the throne in 1986. He is descended in direct and dramatic line from the nation's foundation in the late 19th century, through King Sobhuza II who brought the country through independence. Like Sobhuza he 'continues to represent and maintain the traditional way of life' and to protect and enhance Swazi culture.

This has been a dominant theme in social and political discourse. Most significantly, the country's independence constitution was largely the work of the British. In 1973 the then King suspended it on the grounds that it was 'not in accordance with Swazi culture'. Four years later parliament reconvened under a new constitution which vested all power in the king. Sobhuza died in 1982, then the world's longest reigning monarch 'having assured the continued existence of his country and culture'. Opponents of the present parliamentary government make the not unreasonable claim that Swaziland is (still) an absolute monarchy.

There is a curious ambivalence in this culturalist emphasis. It shows in the respectful nostalgia for colonial times – perhaps better, for the country's one time protectorate status under the British. A feature of Britain's 66-year rule of Swaziland was the lack of violence with which it was resisted and overthrown. More surprising is the fact that the streets of Mbabane, have kept their colonial-era names: the capital city's main street is named after the first European to be born there.

Swaziland is not a wealthy country, but the economy is 'modestly healthy', certainly not in the crisis of some. In a country so small, even relatively modest development projects may have considerable impact on the job

market and overall development prospects. The building of the northern rail link, the Mnjoli hydro-electric plant, and the Simunye sugar project, boosting the country's major export, are just such schemes.

But these optimistic statements are misleading in one important sense. Although something like 80% of the people work in 'successful', even if largely subsistence agriculture, yet the country does not feed itself. The contradiction is not unusual. The ability to grow food in sufficient quantity and of good enough quality for export guarantees neither self-sufficiency nor adequate and secure food supplies for ordinary people.

5 **BOTSWANA:** Although with a political history and ethnic profile similar to those of Lesotho and Swaziland, present-day Botswana is very different. Notably, in political terms, it is a multi-party republic with a respected elected president, a functioning government system and a healthy parliamentary opposition. And in geographic/topological terms it bears not resemblance to the other one-time Protectorates: It has something like 35 times the area but little more than twice the population of Swaziland. Much of the land is so semi-arid however, that it could not support more people.

Water shortage have always been a limiting factor for agricultural development – unlike the new drought shortages suffered by Zambia and Zimbabwe. Also unlike these two, and for the same reason, European framers were never attracted to the old Bechuanaland in any numbers. The absence of a strong settler contingent may be a factor in the country's relatively smooth transition to independence, and in its maintained non-racial political stance.

The dramatic situation which challenges this anodyne picture is the marriage, in 1948, of Seretse Khama, hereditary chief of the Bamangwato, to a white English woman. His choice enraged the British authorities and the white governments of South Africa and Rhodesia, and Tshekedi Khama challenged his nephew's right to the chieftom. 'But when Seretse asked a full tribal gathering for support of himself and his wife, the crowd acclaimed him as leader: only forty people opposed'. The British nevertheless, fearing a political crisis, forced the couple to go into exile in Britain, allowing them back only when he renounced his chieftomship six years later. He returned to enter politics, campaigning for independence, and being elected Prime Minister then the country's first and very successful executive President (1966-80). He it was who established Botswana as a stable peaceful and, most importantly, non-racial democracy. And although these events have the status of past history, their power as cultural symbols affecting present/future social life and political decisions warrants their emphasis in this short review.

At the independence in 1966, Botswana, was one of Africa's poorest states, with only ten university graduates and 1,700 secondary school pupils. In 1985 it grew 20,000 tonnes of grain – about 10% of its necessary food consumption – but by that year mining had already made it Africa's fifth richest state in terms of per capita GDP. Not that a small population accounts for this ranking, and that it does not imply prosperity of individuals across the board. Note also that high unemployment and a heavy dependence of remittances from migrant workers to South Africa cause serious economic and social problems.

6 **ZAMBIA:** In a landlocked area of 750,500 square kms, the population numbers something close to 8 million. The main ethnic group are Bemba, Nyanja, Tonga and Lozi – as well as the statistically often invisible whites – but there are said to be 72 ethnic groups all told. Christianity, Islamic and traditional religions are followed, not always uniformly in any one ethnic group.

Two statements about present day Zambia appear contradictory, but are suggestive of its diversity. One is that two-thirds of the economically active population is engaged in agriculture, – mostly subsistence farming in maize, cassava, millet, sorghum, beans and tobacco for local consumption. The other is that half the population

is urban-dwelling, attracted initially to the copper mines which were once its defining feature and the mainstay of its economy. In fact it is changes in the world market for copper which are the ultimate cause of Zambia's economic distress at this time, but drought and political mismanagement have aggravated it.

Recent changes have caused the social system of Zambia, rigidly controlled under the colonial and Kaunda (UNIP) governments, to splinter into smaller groups. This stratification is both ethnic and economic, with an alarming and widening gap between the rich expatriates and the local elite *apanwamba* – and the poor. The latter, making up 70% of the Zambian population, live under the World Bank poverty datum line. Although kinship may cut across the boundaries, a family living in a good low density urban area is unlikely to socialise with a family living in a high density area. Nor are they likely to be educated together or to use the same health care facilities. The frustrations of the poor are often misdirected against minorities, such as West Africans and Indians, as recent riots demonstrate.

Backed by structural adjustment programme, the World Bank and other expert outsiders, the overriding philosophy of this government seems to be survival of the fittest. With the privatisation of many parastatals, some retrenchment in the civil service and the retraction of Zambian industry and agriculture (hit hard by drought in 1992, followed by interest rates of 300% per annum). The public is now asked to pay for basic services such as health care, primary education, water and electricity under the cost of 'cost recovery' and the political rhetoric of necessary hardship. This hardship, with particular reference to the gradual lifting of maize subsidies, was recently coined 'the doldrums' by President Chiluba. Policy statements about safety nets, in the form of exemptions for the poorest of the poor, often do not transform into practice. Indeed the only people above hardship seem to be politicians and those business men who are running illicit businesses (especially drug dealers and traders in certain other goods such as precious stones). The legal business sector is being hard hit not only by competition from South Africa, but also by new and efficient taxation system. The new Zambia Revenue Authority, is effective, – but what will happen to the revenue generated?

Over 60% of government revenue is from donor funds. The donors are trying to tighten the tabs on how these funds are spent. Although less donor support now disappears 'into dark holes', the directed support results in patchy, localised programmes and is still largely swallowed up before it reaches 'the problem' or 'the target group'. Significantly this year, the donors failed to stop the government sinking an enormous sum of money into a bank on the verge of collapse, despite the fact that some of those funds may have been donor funds earmarked for drought relief.

The other issue around expenditure is the lack of political integrity manifested in sometimes blatant corruption. Too often tenders are awarded on the basis of backhanders and personal contacts. Leadership is either too intricately involved or too compromised to challenge the practice. The authorities, from cabinet down to the village headman, are, for example, susceptible to handing over land or licences to so called 'investors' who are flooding into Zambia looking for ways to make money.

The future of Zambia Consolidated Copper Mines (ZCCM), whose exports generate over 90% of the government's foreign exchange earnings, is crucial. It is said that unless the government privatises it soon, the company may well fold up. But if it is privatised, large numbers of employees will be laid off by the new managers. This is the conundrum of Zambian politics which is consistently echoed in others parts of the region: if the government does what economically it should do, it may well lose the election.

One of the mistakes of current policy is the neglect of agriculture. Despite rising urban poverty and density, the rural economy does not on the whole attract urban dwellers. Lateral links need to be strengthened in agriculture and there are few incentives for small farmers to help Zambia become self-sufficient in maize. The commercial

farmers, hammered like the small-scale by drought and persistent poor rainfall, have also received little policy support. The wheat market was undercut by Canadian and French wheat in the 1993 season; Zimbabwean maize proved cheaper than locally grown maize this season; VAT is paid on inputs but not on outputs and so the list goes on.

The potential of Zambia lies in its low population and large area of land, regional opportunities in politics and economics (e.g. hydro-electric power and the possibility of Zambia feeding most of its neighbours – Botswana, Angola, Zaire, Mozambique all need maize), the rain-fed northern provinces, the mines, the relative political stability, unique tourism opportunities and, last but not least, the people.

In 1992, Zambia was hailed as one of the first African countries to embrace a democratic political system. In 1995 the country was saddled with a foreign debt 2.5 times bigger than the country's GDP, and petty as well as violent theft are increasingly common – especially, inevitably, in the larger cities.

With elections set for September 1996 and the region changed by post-apartheid South Africa and peace in Mozambique and Angola, the ruling party (MMD) must convince people that it should continue to stay in power – despite the fact that most people are poorer, less well-educated, having to work harder and suffering more illnesses than at any time in Zambia's recent past.

ZIMBABWE, also landlocked, is more densely settled than Zambia, with about 11 million people in just over 390,000 sq. kms. Most Zimbabweans belong to only two Bantu groups – the Shona outnumbering the Ndebele (Matabele) by four to one. Only one or two percent of the population is of European or Asian descent, but as in South Africa the minorities have been (are?) very influential. San (Bushmen) people, the other tiny minority, are negligible in influence as well as numbers. Christianity and traditional religion, but not Islam, are reported in socio-demographic statistics.

Fifty percent of Zimbabwe's population is under fifteen years old (not unusual in sub-Saharan Africa) but while, at Independence, there were only 820,000 primary school pupils, now there are more than two million. Secondary school pupils then numbered 66,000: now there are ten times as many. Tertiary education is also relatively well-developed. Something like 14% of Zimbabwe's budget is spent on education. The drive to provide schooling for everyone has cost the country dearly as jobs are not commensurate. But it is a long term policy and should pay future dividends. Already they show in an unusual wealth of writing: novels, short stories, poetry and sophisticated radio, television and newspaper journalism.

The country's complicated pre-independence history had settled by the early 1980s, and it became an important and respected member of the Commonwealth and the Third World groupings of states. The state socialist government tackled some social problems 'with pragmatism', but its geographic and ideological position between Mozambique and South Africa has not helped its progress – in spite of the fact that, excluding South Africa, Zimbabwe has the most developed and diversified economy south of the Sahara. It has been able to maintain in a rough balance between mining, manufacturing and agriculture. Most Zimbabweans are still subsistence farmers, but drought, the over-population of poor land; for women, the absence of their men in town; and economic depression have forced or encouraged many to develop supplementary 'cottage' skills and self-help schemes which have gratifying success for some number.

The country has rich deposits of over forty different minerals. At the national level, cotton, sugar, and especially tobacco are exported to earn foreign currency. It is striking that the hierarchical structure and racial divisions of many of the commercial farms which underpin Zimbabwe's economy are little changed since Ian Smith's Rhodesia. So too is the presence of 'foreign' migrant workers coming from other countries in the region.

Agricultural infrastructures and the manufacturing industries imply wide employment opportunities and the potential for a stable prosperity. But Zimbabwe has been going through a period of painful economic adjustment under ex-Marxist President Mugabe, who once publically declared that the country did not need foreign investment because western capitalists were only interested in looting the riches of Africa. The change of rhetoric has not been enough to attract foreign investment: although the country has (after South Africa) 'the most diverse and sophisticated economy in Africa'. Two problems dominate. It suffers persistent drought: over the last five years Zimbabwe has had less than 20% of its once predicted annual rainfall. It also has a reputation for state overspending and large budget deficits which discourage business. Licences for prospecting for gold and diamonds bring in revenue, and Zimbabwe's prolific wildlife and large wilderness areas encourage tourist development, but both these activities are vested in foreign companies and there is little assurance that local people will benefit as substantially as the figures may imply.

8 MALAWI: For the international press the most significant facts about this small country are the longevity of its longtime leader, Dr Banda, and an HIV prevalence of one person in ten.

In respect of the second feature, Malawi closely resembles other countries in the region. So does it in respect of poverty, poor infrastructure, and a declining resource base. Most useful for our purposes here is a specific history of human rights and civil society in Malawi, both much influenced by Banda and the country's particular circumstances, but instructive in the general understanding of these issues across the region.

During the Banda era, human rights were not on political agenda. Banda was an open dictator, maintaining that he had popular support in this respect, i.e. if it was the democratic wish of the people to have a dictator, it was a democratic dictatorship. His claim for popular support was not totally without justification, though there will have been much muted resentment to the heavy tactics adopted. One particular problem-area was that it was unclear what was illegal, i.e. there could be detention for 'disturbing the President's peace'.

Banda did not necessarily reject the idea of 'human right' as appropriate for other countries, especially developed countries. But his line would have been that one could aim for these only as a long-time objective in a country which was developing its political institutions, which might as a consequence have to cut a few corners where justice was concerned.

All this came to an end in 1992 with Lenten Letter, produced in a great secrecy by the Catholic bishops. This was read in virtually all Catholic churches in Malawi, and criticised the government on various counts, including that of human rights. The bishops were nearly executed as a consequence, but the government refrained from doing so because of international pressure, which was later backed up by sanctions in the form of suspension of aid. Other churches subsequently joined in criticism of the government, and Chihana, the Malawian trade union leader, returned with the intention of defying the prohibition of trade unions. He was imprisoned for a while but not executed, as would have happened previously. Banda had threatened that activists of this kind would be 'meet for crocodiles'.

Pressures of this kind eventually led to multipartyism, which was conceded very reluctantly. Banda's view was that Malawi was a unique country, and political developments in neighbouring countries would be quite irrelevant as far as he was concerned. The matter was eventually conceded, but Malawi was unique in having a two-stage process: first over the issue of whether to have a multiparty system, and then the multiparty election itself. In 1993 the vote went in favour of multipartyism (Banda's party opposed this since it would cause fighting and 'confusion'. When multipartyism was accepted Banda conceded defeat, and the multiparty election followed; voting was heavily regionally-based though there was not a one-to-one correlation between regional and political allegiance.

The law has been an important factor in establishing human rights in the new government. There have been numerous legal reforms going through parliament and there is a new constitution. Even Banda conceded while still in power that dissidents would be taken to court rather than simply detained without trial. The paramilitary Young Pioneers, which had previously had legal protection, have been above the law, and he used 'traditional courts' for political trials which they were not intended to be used for when established: but their rules of evidence were flimsy so it was easier to secure convictions).

Lawyers are still very active in the new multiparty system. The main issues are bringing to justice key figures in the previous government (including, in theory, Banda, though at 97 he is in practice too senile to stand trial).

9 NAMIBIA: A recent article in *The Economist* says of Namibia that 'President Sam Nujoma's multiracial government is doing surprisingly well, financed by a steady income from diamonds, fishing and farming'. It adds optimistically: 'Expect continuing improvement'.

One impressive feature, apart from this vaunted economic potential, is the country's constitution, which has been hailed as a model for the rest of the world. It was unanimously adopted by Constituent Assembly on 9 February 1990. Among the noteworthy provisions are guarantees of fundamental freedoms, a two-thirds majority requirement to amend the constitution and the protection of the environment. Provision is made for the separation of powers between the executive, legislature and an independent judiciary.

Freedom of religion is protected. An estimated 90 per cent of the population is Christian and more than half are members of one of the three Lutheran Churches. Other major denominations include the Anglican Church, Methodist Church and the Roman Catholic Church, while the Dutch Reformed Church ministers to the Afrikaans-speaking communities. There are also small Moslem and Jewish communities.

With an estimated population of 1.6 million people (1991), Namibia has an average population density of 1.9 people per sq. km. Although this can easily create the impression that the country is sparsely populated, the northern regions account for 60 percent of the country's population (up to 9 people per sq. km). This contrasts sharply with the arid southern parts of Namibia where the population density is as low as 1 person per 4 sq. km.

The population is mixed and relatively mobile. Migrant work, strictly regulated according to a contract system until the 1970s, brought together people from every region of the country. The mandate government, however, attempted to prevent migrant workers settling permanently in the south by means of pass laws. For this reason, the central and southern regions of Namibia were virtually a foreign country for northern natives. In order to obtain a temporary residence permit, one had to have a steady job, and these were hard to come by.

In 1977, the pass laws were repealed. The contract-labour system was no longer practical. Since then, migrant labour has followed its own course: thousands seek work in industry, trade or administration in order to escape, albeit temporarily, the country's 'vicious circle of subsistence economy'. Many return periodically to their families and villages; others are sucked more quickly into the maelstrom of big-city life.

About 30 percent of people live in urban areas. Urban migration has effected every part of the population, whether in overpopulated areas of the north or the thinly populated deserts to the south and west. Independence has speeded up the process to a remarkable degree. The country's few cities and population centres – Ondangwa and Oshakati, Windhoek and Swakopmund – are faced with the tremendous task of quickly creating reasonable housing for all of these people, to prevent the development of urban slums. Windhoek's population had risen to 100,000 by the end of the 1980s; before the year 2000, it will have doubled.

During the period in which apartheid laws were in effect – over 25 years – many thousands of black Namibians left the country illegally, emigrating to Botswana, Zambia, and later Angola. They were following the patriotic call to take part in the fight for Namibian independence, or hoping to receive higher education in foreign schools and universities. Before the great repatriation in 1989, many Namibians had spent up to 30 years in exile.

In 1978, the country's first attempt at independence, political uncertainty and economic recession induced the white population to emigrate in droves. However, the final successful, independence process in 1989-90 led to no significant emigration of white Namibians, although withdrawal of South African military presence in 1989 meant that several thousand white family members, who had for years lived in various military facilities within Namibia, left the country.

Originally, South West Africa was regarded as a 'settlement area' among the former German colonies, rather than merely as a source of raw materials, such as Togo or Cameroons. European settlers had a major effect on the ownership of land and on its use, but immigrants to Namibia never numbered more than a few thousand.

Another chapter in the history of immigration in this century is the resettlement of Angola Boers, undertaken in 1928 on initiative of the South African government. The newcomers were mainly survivors and descendants of the legendary "Dorsland trekkers" who in 1878, under great privation, had moved through the Kalahari and South West Africa with their cattle and ox-drawn wagons, settling in South Angola, where they remained for about half a century.

The most recent repatriation of Namibians took place in 1989, the year of the realisation of international plans to solve the Namibian question. The Refugee Commissioner of the United Nations set up an 'air bridge' to Windhoek and Grootfontein for every Namibian living in exile; most of them in Angola and Zambia. In this way, 42,000 refugees returned to their homeland. Many of them were children and adolescents who had never seen the country of their fathers.

The authors of Namibia's constitution selected one of the two languages which had historically been official in Namibia: English. Thus the common vernacular language of Afrikaans, after serving as an official language for some 60 years, was retired to a secondary position as first among 20 or so other languages recognised in the country.

The authors of the constitution deliberately chose not to use the language of the country's erstwhile colonial rulers, German, although this practice is customary among many newly-independent African states. At least 97 percent of Namibia's population does not speak English at home, their number is approximately equal to that of those raised speaking German.

The Ovambo dialect, including both written versions thereof, represents the largest linguistic family in the country, with some 680,000 native speakers. The fact that Namibia has survived so chequered and racially contentious a history to do 'surprisingly well' in 1995 may augur well for the development of civil society throughout the region.

10 SOUTH AFRICA: South Africa's population is said to be 38 million. – 29 million black, 3 million 'coloured', one million of Indian descent, and 5 million whites. More than half the whites are of Afrikaner descent, and most of the rest claim British ancestry. Most blacks outside the infamous 'homelands' are Zulu, Xhosa or Sotho.

Other groups in the Republic include Tsonga, Ndebele, Swazi, Lobedu, Tswana and Venda. Each of these had one or more 'homelands' in which, under apartheid, they were effectively confined. Now it is likely that population movement throughout and outside the country will become an increasingly normal aspect of work-seeking and social mobility. Again we may note that most of these ethnic groups are also represented in one or more other countries of the region. We may also note that the Venda, numbering about 500,000 are described in a current population geography volume as 'numerically the smallest' group, implying that numbers of Khoisan people – i.e. Bushmen and Hottentots – always small, are now negligible for demographic purposes.

South Africa unquestionably is the economic giant of the region (see Map II). But formidable hurdles, economic as well as political, still stand in the way of it qualifying as a unitary and democratic state. Its political structure is still to prove itself strong enough to hold together its many ethnic groups, and yet flexible enough to allow each to fulfill (some of its) separate aspirations. (see 4.4 below)

Long-standing economic inequality has left a terrible legacy. Educational, medical, recreational etc. services built up in the last decades are second to none in the world, and the performance of South Africans – mostly but certainly not entirely white – on the international cultural scene has been extraordinary. But these resources and services have been heavily subsidised by cheap black labour and minimally available to non-whites. More importantly, they have tended to mask the frustrated ambition and resentments of the majority, and the country's very real economic limitations. Despite pockets of tremendous poverty however, relative to the rest of Africa, the country's economy and social – economic infrastructure dwarf every other in the region. (Map II)

Traditionally, right wing whites argued that South Africa's prosperity and market edge would end with the end of apartheid, and that majority (i.e. black) rule would/will make South Africa a third world country. The reality is that for everyone outside the white minority and a tiny black elite, it always has been. In its new era, South Africa continues to combine first and third world, with disparities of income, standard of living, lifestyle, education and work opportunities as well as an unusual number of ethnic and 'racial' groups. Some parts of it show a still thriving modern industrial economy, others desolate slums, still others subsistence agriculture little changed since 19th century. Without massive development, assisted at least in short term by aid as well as investment, affluence is a zero sum pie – more for the poor has to mean less for the rich. The Mandela government faces a tough balancing act in keeping expenses under control while trying to fulfil its pledge to improve the living standards of the black majority. (Appendix iv)

The demise of *apartheid* ended a period of stagnating capital investment, and has raised possibilities as well as hopes of better life chances. South African companies have increased capital spending by 45% in the last three years. One estimate puts the value of projects in process at 31 million dollars – only one million from foreign firms. The low ratio suggests these firms are making time to see if the 'promising beginnings' will be carried through.

Trade with other parts of Africa rose by more than a third in 1994 (to nearly 8 billion), the balance of trade being heavily in South Africa's favour. A large portion of capital spending in Africa is funded by foreign aid, and companies with South African connections were previously not allowed to tender for this business. Projects failed in the past because foreign suppliers used methods and equipment unsuited to African requirements, and the value of local skills and expertise, black as well as white, was too long nullified. With the bans lifted, agencies of the World Bank can now encourage South African and South African connected companies to tender for World Bank projects. This will be the local companies, their foreign partners and the recipient countries. The changes are motivated by business interests and, hopefully, the large and aspiring semi-skilled workforce with the lifting of sanctions: 'Investment decisions are sealed with a balance sheet analysis, not a political handshake'.

For the international development community, South Africa is now 'a much hoped-for African success story. ...Aid (however) is useful for social enrichment but cannot support long-term economic growth. Only long-term fixed investment can do this And South Africa is still waiting for more foreigners to participate'. (Figures and quotes in this section from *International Herald Tribune* 11 September 1995).

All of this is good news (also) for the Region. South Africa became a member of the Southern African Development Community in 1994, ironically perhaps, since SADEC was set up (in 1980) to reduce its members' economic dependence on that country. Links on the social and individual level have been strong ever since the mines needed – and attracted – hundreds of thousands of migrant workers from all skills and resources among the nine member states. More than that, studies show that the member countries could save hundreds of millions of dollars a year by buying petroleum and hydro-electric power from each other, and by co-operative ventures in transport and aviation – all of which build on decades of familiarity with each other's cultures.

The optimistic view is that, once stable, South Africa will spread affluence and a benign influence throughout the southern part of the continent. What are the chances of its succeeding? It has a long and difficult way to go, but apartheid as a legal system is a thing of the past. Remarkably, most of the non-white population and its leaders seem to harbour very little bitterness, and the ANC – at least under Mandela – emphasises that whites are not 'the enemy', but the backbone of skill in a new partnership.

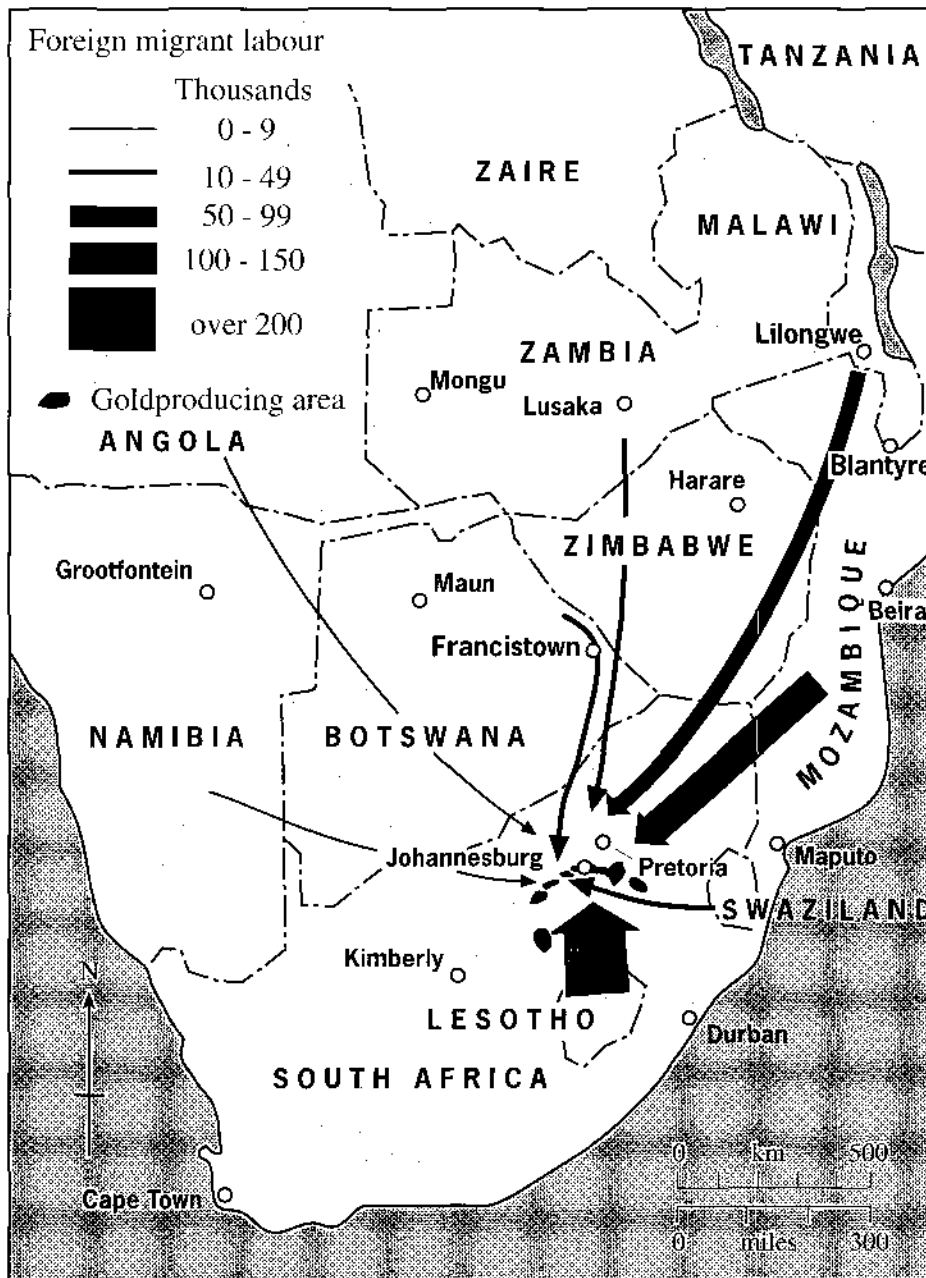
Indeed the greatest tensions now are within the (black) Bantu population. The fierce black-on-black conflicts of this era are focused around men of Zulu and Xhosa origin – ANC being identified with the latter, and Inkatha/Buthelezi inevitably with issues defined as Zulu – and the conflict seriously impedes national political development. But their mutual antagonism is not new. Certainly it has 'always' been a element in South Africa's murderous urban violence. Some estimate deaths since 1990 at over 7,000, most of them in Natal and the townships around Johannesburg and Capetown. A recent report cites a thousand Zulus killed by other Zulus since Mandela took office in May 1994 and highlights intra-tribal tensions as fierce as those between ethnic groups. (Appendix iv).

There have been clashes among political rivals, tribal enemies and opportunistic gangsters, and between those that live in the migrant workers' hostels (including some from other countries in the region) and their township neighbours. Some of these differences overlap. Zulu relative to Xhosa, for example, are more rural, rightwing, traditional, hostel-dwelling... Given that in some areas more than 90% are jobless and living conditions are appalling, violent clashes could occur even without the irritants of cultural, political and linguistic difference.

Under *apartheid* the control of movement was fundamental, and in that era draconian laws and armed police, although deplorable from the point of view of human rights in the country, did control largescale criminality and may even have deterred smallscale violence. Now the ideals are more democratic and the expectations of ordinary people have been raised. Either way it is important, in assessing the success of the post-*apartheid* regime, to be aware of the urban violence which pre-dates it. Nor should we ignore the extent to which national and non-national white interests have been and may still be implicated in black on black confrontations. Not everybody wants South Africa to make it! But against all the odds, the political will and goodwill of a big majority of its people is tremendous.

The supreme objective is social and economic development built on a much more equal distribution of the country's spectacular natural, educational, and industrial resources. This implies the protection, if not enhancement, of its already advanced infrastructure – which some see as the key to 'economic recovery' in the sub-continent – and crucially, civil harmony. On the social-political front. South Africa's success would seem to be a necessary (although not sufficient) condition for the future wellbeing of the rest of the region.

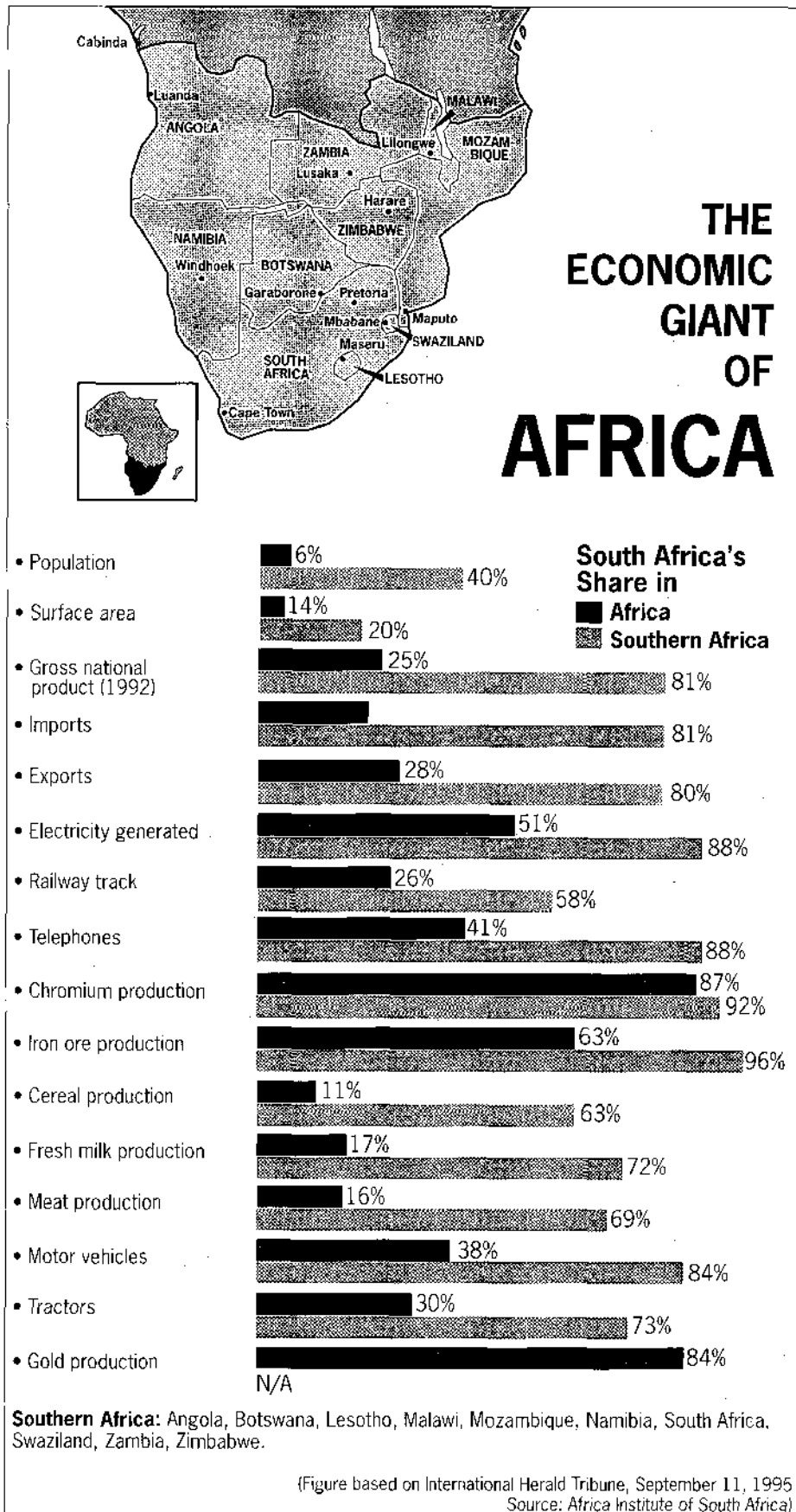
MAP I



Map 1. Migrant labour to the Republic of South Africa.

Southern Africa

MAP II



CRITICAL FACTORS FOR REGIONAL DEVELOPMENT IN SOUTHERN AFRICA¹ IN A TWENTY YEARS' PERSPECTIVE

by

Bertil Odén

The Nordic Africa Institute
February 1996

1. INTRODUCTION

The fall of apartheid in South Africa and the post-cold war international development changed the preconditions for regionalisation in Southern Africa. From being used as instrument in the overlaying regional conflict between apartheid South Africa on one hand and the front line states and the SADCC on the other, regionalisation now can be constructively used to improve the development in the entire region of Southern Africa².

Why should the countries in Southern Africa be interested in increased regionalisation? Is that a better strategy than for instance that each country individually tries to link itself as close as possible to the North? There are both theoretical and practical arguments to further expand the existing regional integration. One argument is even the existing integration in areas such as transports, energy, trade and migrant labour, in spite of the political conflict that perverted the regional development for decades. Another argument is that the increased political stability (with the possible exception of Angola) and the harmonisation of the macro economic policy at the national level improve

¹ An earlier version of this paper was written as part of the Swedish International Development Cooperation Agency, SIDA, Project 2015. A number of studies were commissioned to analyse the socio-economic framework for Swedish development assistance in a twenty-year perspective. I acknowledge with thanks helpful comments on earlier drafts by Thomas Ohlson, Roger Ridell, Finn Tarp and Arne Tostensen.

² The region *Southern Africa* is here defined as the twelve SADC countries: Angola, Botswana, Lesotho, Malawi, Mauritius, Mozambique, Namibia, South Africa, Swaziland, Tanzania, Zambia and Zimbabwe. As Ohlson (1993) points out, this definition is not unproblematic. The border line of a region may look different depending on whether geographic proximity, economic relations or political co-operation is used as the principal variable. Still, I argue that I have chosen the most logical definition for this case, based on the common membership in an internationally recognised organisation, the geographical closeness and the historical links. Mauritius, SADC's 12th member (since August 1995), is mainly related to the region through its trade and investment links with South Africa.

the conditions for successful regionalisation. The third argument is the obvious potential benefits for all involved of regional cooperation in areas such as water, energy, transports, communications, migration and tourism. Bigger markets are more attractive for foreign and domestic investors, which is one of the classical theoretical arguments for regional integration. The intra-regional trade of SADCC (later SADC) has been very modest, but with South Africa as a member the conditions are changed also in this field. To the regional arguments should also be added the increased international interest in regionalisation, not only related to the three major global trading blocks.

An analysis of the Southern African development focussing on regionalisation can be carried out with various time perspectives. In this paper it covers up to twenty years. Also with such a perspective it is easy to get stuck in the present situation. This is not necessarily wrong, as most of the factors crucial to the development over the next twenty years are possible to identify to-day.

This is also the reason why I avoid the common method to present the medium and long-term development of a country or a region in the form of "high" and "low" scenarios in the familiar matrix with two parameters. In order to avoid the slightly mechanistic account that sometimes is the result of that method, I choose an alternative, in which I identify a number of external and internal factors, crucial for the future of the regionalisation process in Southern Africa. Of course the selection of the factors can be criticised, and with more space I probably would have introduced others as well. However, I believe that I have included the most important ones. This does not exclude that paradigm changes will occur during the period, which by definition are unpredictable.

2. AIM AND OUTLINE OF THE STUDY

The aim of the study is to identify a number of decisive factors for the future regional development and regime in Southern Africa, and discuss their possible development.

This can be done along various analytical lines. One would be to discuss the development in individual nation states and then aggregate the conclusions to a regional picture, a second to focus on the possible regional regime that may come out of the relative strength of the states and main economic powers in the region and a third to look into the possible development within various sectors, some of which supporting increased regionalisation while others may be indifferent to what happens in the neighbouring countries. In the case of Southern Africa, the dominance of South Africa makes the development in that country, and its policy towards its neighbours crucial to the whole region. This study mainly uses the second and third analytical lines, mentioned above, which means that the perspective alternates between systemic and actor analysis.

The study contains five main components. The point of departure is a brief summary of the present political economy of the region. Then follows a section on assumptions made regarding the global framework. These two sections form the basis for the third, in which some conditions are identified, crucial to reach a "high scenario", characterised by high economic growth, political stability and absence of armed conflicts. The fourth section discusses external, regional and national factors and forces, supporting or threatening this "high scenario". Finally some tentative conclusions are drawn.

3. THE PRESENT POLITICAL ECONOMY OF SOUTHERN AFRICA

The history of the last hundred years has created a region, where South Africa dominates in many areas, and where transports, migrant labour, regional trade and other activities have in an asymmetric way connected various parts of the region.

During the period 1980-1992 attempts were made to reduce the dependence on South Africa of the neighbouring countries, through the SADCC economic co-operation. Although not very successful in reaching this objective, the co-operation still made some important achievements. Transport links were rehabilitated and communication systems developed. Co-operation in the fields of energy, soil conservation and other areas emerged. SADCC also mobilised significant flows of aid to the region and improved the general climate of regionalisation in the member states. Borrowing an expression from SADCC's former executive secretary, the national political and economic elites have got used to "think SADCC".

This improves the potential for SADCC's successor SADC to be used constructively for other purposes in the new era, which began in the early 1990s, when the cold war ended and dismantling of the legal part of the apartheid system started in South Africa, thus creating a more enabling regional climate in terms of security interaction, political relations and economic cooperation.

Another factor that improves the potential for regionalisation in Southern Africa is the on-going converging of the macro economic policy in all the countries, to an important extent through external pressure via the structural adjustment programmes, SAPs. This means that all countries to-day implement similar macro-economic policies, which makes co-operation and integration easier than when the SADCC co-operation started in 1980.³

All countries in Southern Africa, with the exception of Swaziland, now have a multi-party political system and in most countries the respect for human rights and pluralistic opinions is on the increase. The chances for the still fragile democratic processes to be strengthened are better to-day than any time since independence.

For the first time since independence there is a sort of peace in Angola and Mozambique, although in late 1995 local armed conflicts between UNITA and government forces still take place in Angola. In South Africa the violence is still at an unacceptable high level, especially in KwaZulu/Natal, where the risk for an escalation is strong. There are potential conflicts also in other countries that may develop into armed violence, but on the whole the basis for political stability and economic development has improved significantly.

After a period of negative per capita economic growth in many of the countries, the last two-three years have turned that trend into one of modest growth, albeit not high enough to reduce unemployment.

The economic and resource dominance of South Africa in the region is well known. Suffice here to mention that the GDP of South Africa is almost four times that of the other SADC countries together, the industrial production is five times bigger and, the capacity in sectors such as transport, energy, financial services as well as the military strength is highly superior to the rest of the region.

The four other SACU member countries (Botswana, Lesotho, Namibia and Swaziland) are strongly integrated in the South African economy and take between 80 and 90 per cent of their imports from South Africa. Of the other SADC countries Malawi takes almost half, Zimbabwe more than one third and Zambia more than one

³ Uncoordinated trade liberalisation at the national level may, however, result in selective de-industrialisation, as the textile industry sector showed in Zambia and Zimbabwe in 1995.

fifth from South Africa.⁴ These shares have increased since 1990 as the trade between South Africa and its neighbouring countries during this period rapidly has increased.

Meanwhile, intra-regional trade between the other SADC countries represents only an average of around 5 per cent of their total trade, in spite of the SADC(C) objective to increase intra-trade.

The trade balance between South Africa and the other countries is heavily asymmetrical with South African exports to the other SADC countries more than five times its imports from the same countries in 1993. This ratio was reduced to around 4.5:1 in 1994 due to a significant increase in the volume of aid in both directions. The region is an important market for South Africa's manufacturing industry, which with a few exceptions is not competitive on the OECD markets.

For historical reasons the level of integration in the region is also strong in a number of other areas, notably transport, migrant labour, and mining.

Despite the SADCC efforts during the 1980s to reduce the historical dependence on South African transport links, these continued to play an important role and the capacity of South African transport and forwarding companies is superior.

Mining and farm labour has since the end of the 19th century partly consisted of migrant workers. In the mid-1970s the neighbouring countries provided 2/3 of the workers in the South African mines. Since then the share of migrant workers has been reduced, simultaneously with a reduction of the total number of mine workers due to the closing of a number of gold mines. The number of registered migrant mine workers has almost been halved from around 300 000 in the mid-1970 s. Since the late 1970s Lesotho has been the main source of migrant mine workers, with Mozambique as second.

A large number of – partly legal but mainly illegal – Mozambicans have been working at South African farms since the 1970s. During recent years the flow of illegal immigrants to South Africa has increased dramatically, coming not only from neighbouring countries, but also from for instance Nigeria, Zaire, Rwanda and Burundi. The existence of an estimated 2-3 million⁵ illegal immigrants is a major problem for the new South African government, due to the risk for political and social instability.

⁴ According to statistics for 1993 and 1994, published in recent Economist Intelligence Unit's quarterly reports for the various countries.

⁵ According to some estimates, quoted in South African media, they may be as many as 8 million. No information is however available on how this very high figure is calculated. The aggregate figures used, do not distinguish between migrants arriving during the last years and those who are residents in South Africa since many years. A government bill was presented in early 1996, suggesting that immigrants that have lived more than five years in South Africa would be entitled to apply for South African citizenship.

4. ASSUMPTIONS REGARDING THE GLOBAL FRAMEWORK

In order to discuss possible future regional developments in Southern Africa I have to make some assumptions as to the global framework in which the region will develop. I have abstained from assumptions which would totally disrupt the present global framework, such as major wars between countries or groups of countries in the North, or between civilisations, along the lines that Samuel Huntington has suggested, or for instance a collapse of the global financial system. This means that the changes suggested are evolutionary rather than revolutionary.

Thus, I assume that the present three major trading blocks will continue to be major components of the world economy, although division between the blocks will be less clear, for instance due to the effects of the emerging Pacific cooperation, linking East Asia and the western part of NAFTA and Australia/New Zealand.

If present global production trends continue, the relative economic power of East Asia will continue to increase, while that of North America and Europe will decrease. The magnitude of this relative change will be substantial, although any quantification is very uncertain. If the pattern of GDP growth rates of the last 12-15 years continues during the next 20 years, the East Asian (including China and Pacific) share of the total global production will increase from around 20 per cent, to around 40 per cent, while that of NAFTA will decrease from less than 30 per cent to less than 25 percent and that of the present European Union from around 34 per cent to around 25 percent. It is however unlikely that the present economic growth rate in East Asia will continue for such a long period, as is indicated by the present Japanese economic problems.

Still, a significant change will take place, which will affect also relative political power and the influence in various international organisations. It will also create a number of tensions related to trade and investments, of the same kind as that between USA and Japan in 1995. The relative decline of North America and Europe, may strengthen isolationistic and protectionistic forces, which could have an impact on trade policy, reduce the political support for development aid and focus remaining aid to support of what is perceived as direct national interests. Such a development may reduce the potential for increased integration between Southern Africa on one hand and North America and Europe on the other. To what extent such forces will be able to turn the present liberalisation trends as regards trade and capital flows is uncertain.

The inclusion of a number of the present NICs into the North, as part of a continuous global stratification, in which the other side contains a potential for further economic and political peripheralisation of most countries in Sub-Saharan Africa (SSA).

There are various opinions on the future of global food supply and world market prices of agricultural products. Some factors will increase the demand on the world market, notably population growth and continued industrialisation and urbanisation in East Asia, particularly in China. The supply will be changed by a more liberalised agriculture policy and lower protection for national agriculture producers in the USA and EU. These factors may increase world market prices and reduce the possibilities for poor food importing countries, such as many in SSA, to cover their needs. On the African continent, further urbanisation will require increase of marketed food crops, either as imports or from domestic production.

Effects of increased global pollution will be more visible over a twenty years period, although it is uncertain what forms it will take. A rather certain assumption is that irrespective of the forms, it will have to be met by internationally agreed and coordinated actions. Experience from the Rio Meeting in 1992 and other international discussions is that global environment issues contain potential interest conflicts between the North and the South.

The present trends with scientific breakthroughs and development within fields like electronics, information technology and biology will continue to globalize information, media, finance and trade. What is called market forces will be more and more difficult to control by political means and the capacity of the nation state as instrument for political decisions and their implementation will continue to be eroded. New political formations and organisational attempts to get control at a global or regional level will most probably emerge during the next 20 years.

The maturing of the OECD countries manufacturing sector, increased importance of secondary consumption (scrap and waste material), the introduction of more energy and material saving production methods, together with replacement by non-metal minerals or other products, make most analysts conclude that the declining trend, which has persisted for 10–15 years for the major minerals and metals, will continue.⁶ A counterforce to this trend is however the further industrialisation of NICs and other third world countries, provided new production capacity does not only replace capacity in the OECD countries.

In the post-cold war era, the demand from high-tech arms and defence-related programmes is declining, as some of the most technologically advanced and expensive programmes have been reduced or abandoned, notably the “Star War programme” of the Reagan administration in USA. The increasing number of minor wars of the post-cold war era are fought with more conventional weapons, of which there is a large supply. These factors will most probably also reduce the total global demand for both some basic and some alloy metals⁷.

The new technologies and the restructured pattern of metal processing and demand may also open up new fields, and a small group of more advanced developing countries will reap the main benefit. South Africa may belong to this group.⁸

The most probable outcome of these and other factors is that the on-going reduction of SSAs political and economic importance in the global political economy will continue, while a few countries may still be perceived as of a modest strategic value in Washington and some European capitals, due to its oil, minerals and military bases. Southern Africa is the sub-region with best potential to arrest or even change the marginalising trend.

Aid flows

Total aid flows to the South can be assumed to be significantly reduced during the period. In the beginning of the period the isolationistic forces in USA will increase their relative power and one effect of this will be further cuts in the aid budget. Most European countries will probably also reduce their total aid as part of the handling of their own budget problems and of the rest a large part will be allocated to Eastern Europe.

The capacity and resources of the Bretton Woods and UN organisations may be gradually reduced as a result of weakening financial and political support from the previous main sponsors. The discussions in late 1995 on

⁶ A slight increase of some mineral prices in late 1994 and 1995 is unlikely to be sustained.

⁷ However, problems experienced by major producers in the former Soviet Union due to the chaotic political and economic transformation at least in the medium-term may result in increased market shares taken by producers in Southern Africa, compensating for the reduced total demand.

⁸ This view is supported by Morales and Quandt (1992). They argue that the emerging industrial paradigm generates a constantly shifting basis of regional comparative advantage. New research and development and new technologies do not necessarily lead to globalisation, but also to technological and economic diversification, which enables comparative advantage to emerge in different places.

According to Gonzalez-Vigil (1985), perhaps the single most effective leverage in the long run may be the prospects for a faster growing market for metals in the developing countries themselves.

IDA replenishment (IDA XI) and the US Congress refusal to pay out already pledged funds under IDA X are recent examples of this trend. It is not likely that Japan in absolute terms will be prepared to compensate for the entire reductions of contributions from USA and some of the European countries.

The role of the Asian Development Bank will increase, as will the role of Japan and other East Asian countries in what is left of the World Bank and UN systems. By 2015 a number of the present UN aid agencies have most probably closed down, without major, if any, harm to the development in the South.

Aid will increasingly be allocated according to criteria such as 1) emergencies that may affect the stability of the North and 2) visibility. Examples of the first type are actions "to keep the African crises in Africa" and avoid that it spills over into Europe and North America. Another factor is increased focus on geographical areas close to the established countries in the North, exemplified at present with the increased flow of aid and other official resources to the countries in the former Soviet Union and Central Europe ("countries in transition") and to the Mediterranean area.

The visibility factor is also called "the CNN factor". When CNN and other global media focus on a specific war or emergency the effect is two-fold. First popular pressure is created on governments in the North to "do something". Second those governments and all the main non-governmental organisations in the emergency business rush in to the area, clearly for humanitarian reasons, but also to pick up the public relation bonus of being seen as "doing good" on the TV-screens all over the globe.

Two conclusions can be drawn from this: a) The volume as well as the share of total aid allocated to SSA will be reduced. b) A limited share of the reduced flow of aid funds will be allocated to support long term development. This is especially so in SSA, where the present trends of collapsing states, local armed conflicts and drought emergencies most probably will continue. Also in this context, Southern Africa is the sub-region on the continent with the best chances to avoid these negative trends.

5. MAIN COMPONENTS IN A POSITIVE SCENARIO

The briefly sketched features constitute part of the global framework within which Southern Africa will develop. Moving from the global to the regional and national levels, the complex interrelationship between economic growth, political stability and level of violence should be noted.

Three main components of a positive scenario for the region are:

- 1) Significant economic growth, making it possible to gradually improve the material situation for the majority of the population and improve the quality of basic public service such as education, health and physical infrastructure.
- 2) Political stability at the national level. This implies that governments are perceived as reasonably legitimate and that conflicts are handled with political means, rather than by violence. It would however be unrealistic to assume a completed nation-building process.
- 3) Absence of major armed conflicts, between and within the countries in the region. This does not exclude minor local armed conflicts, as long as they do not threaten the political stability. And with the present social situation a lot of criminal violence will continue to exist.

Due to history there is an inherited level of regional integration in some crucial sectors, normally with a strong South African dominance. This means that a fourth important component of a positive scenario would be a further regionalisation of a kind that takes advantage of the South African strength in a way that improves the situation for all partners involved.

It is obvious that the economic and political development in South Africa is decisive for the whole region. If economic growth, social and political stability fails in South Africa, there is no chance for a positive regional scenario. A positive South African development is on the other hand partly dependent on the development in the rest of the region. For the region as such it is however possible to envisage a positive development, also with significant negative economic and political development in one or two of the minor countries.

The points mentioned underline two important things:

- 1) The strong interrelationship between economic, political and security factors, which may bring about virtuous circles – but of course also vicious ones – and spill-over effects from one country to others.
- 2) That a positive scenario must be based on a number of optimistic, but not necessarily unrealistic assumptions.

The following section will discuss a number of factors that may support or threaten economic growth, political stability, level of violence and regional regime in the region. It first discusses some of the main external factors affecting the region, then follows a specific discussion of South Africa, then one part discussing sectors in which regional cooperation or integration would have advantages or lack of cooperation implies a risk of disadvantages, and finally a discussion of possible regional regime.

6. SUPPORTING AND THREATENING FACTORS AND FORCES

6.1. External factors

One assumption, shared by many people, is that the political and economic position of SSA on the global scene will further deteriorate in the next few decades.⁹ In the case of Southern Africa, it may however be argued that this sub-region will be less marginalised than the rest of SSA, mainly due to the role of South Africa. The sub-region, with South Africa included, is a more interesting export market, its potential for investors is more promising and some of its minerals are still in demand. From a Northern political point of view the idea of South Africa as a regional stabilising force is also attractive.

The on-going negotiations on a free trade area agreement between the European Union and South Africa, very likely will de facto include also the other SACU member countries, while other SADC countries gradually may be linked to such an agreement, via closer links to SACU.

The interest of external capital to invest is higher in South Africa than in most other SSA countries. South Africa is often envisaged as the bridgehead and external capital will therefore increase the regional imbalance. Since South Africa's international isolation has been lifted, a number of companies, mainly from USA have returned to the country either by re-buying the companies they left to South African interests during sanction times or by moving into joint ventures with South African companies. Most foreign companies up to 1995 have however been reluctant to invest in new production units. Among the exceptions are a limited number of companies from Japan and South East Asia.

Most observers agree that significant foreign investments are one prerequisite for a "high growth scenario" in South Africa. Uncertainty as to what rules and regulations will be in force and a perceived political instability influence potential foreign investors negatively. At the same time their own behaviour influences the rules and the complex interrelations between economic growth, political stability and level of violence. In this respect the relative attraction of Southern Africa as market and supplier as compared to others, e.g. in Eastern Europe, will be important.

South Africa's adjustment to GATT rules over a transition period of up to ten years and a possible free trade agreement with the European Union (under negotiation in 1995) will considerably reduce the previous protection of the South African companies, especially the manufacturing industry. This may create some de-industrialisation as it has in many of the weaker neighbouring countries, but hopefully also make a remaining and restructured manufacturing sector more competitive. This development will also influence the industrial sectors of the neighbouring countries, especially the other SACU members.

The predicted increase of world market prices on agricultural products, especially grains, as one of the effects of the GATT Uruguay agreement will be further strengthened by the continued urbanisation and industrialisation in many parts of the world. This will reduce the availability of arable soil.¹⁰ For food importing countries in the region this factor will reduce the prospects for growth, as a large part of available foreign exchange will be needed to finance food imports, to the extent emergency aid is not available. This situation will be further aggravated during drought periods.

⁹ While this may have negative effects due to reduced resource flows, it may also open up for increased regional cooperation.

¹⁰ This perspective is however not unchallenged. The *Vision 2020* report from IFPRI (International Food Policy Research Institute in Washington) assumes a price decrease of 1 per cent per annum, with increased East European production and changed consumption patterns as two contributing factors. Also this report projects heavily increased import need for SSA, which means that the conclusion holds also if IFPRI's model is accepted.

The ADB Report (ADB, 1993) estimates that the demand for grain in year 2000 will be 11 million tons (40 per cent) above that in 1989 and that with continued low productivity this means another 5.5 million hectare under cultivation. "In the long run, the recovery of agricultural production in Mozambique and Angola to a level of export surplus will be vital to regional food self-sufficiency."

To the extent that Southern Africa can use the potential for agriculture in the northern part of the region, it would, however, gain from world price increases, or at least increase the degree of self-sufficiency.

The foreign trade of the countries in the region is dominated by the European Union. In 1994 around 40 per cent of South Africa's foreign trade took place with the EU and this is on average similar to the share of the other SADC countries, although there are significant variations between individual countries. One trend in the recent trade pattern will probably be further strengthened and that is the increased relative importance of East Asia. The argument is not only the rapid economic growth in that area but also its demand for metals and minerals, that are not available in most of the East Asian countries, with the exception of China.

A further factor may be increased protectionism in the European Union as a defence against reduced international competitiveness. A rather certain projection is that the Lomé Convention in its present form will not exist in 2015. It is even uncertain what will replace the present Lomé agreement, when it expires in year 2000. In the foreign trade area the SADC countries (except South Africa), together with the rest of the ACP countries, can foresee a situation where their privileges on the EU market compared to other third world countries, are eroded or even abolished.

Regarding aid to Southern Africa, struggle for post-apartheid markets is replacing support to the anti-apartheid struggle as main driving force, especially in the case of South Africa. Recent examples are the present French so called aid and the main part of the Japanese "package" to South Africa. This trend will continue and thereby the content and impact of aid will change.

A successful economic development in the region would reduce the need for grant aid. This does not exclude semi-commercial official financing with the main aim of improving the competitiveness of companies from the own country beside emergency aid during drought periods.

One external factor eroding the political stability is organised international crime, increasingly using Southern Africa as both a market and a transit area for trade with drugs, arms and luxury cars. The problems to get state control over these activities are aggravated by the fact that existing or previous military, police and security forces interests are allegedly involved in the business. This is also an obstacle to the fragile democratisation process in many of the countries in the region, and difficult to control by government-to-government agreements.

The development of this factor depends among other things on to what extent international government co-operation is able to reduce the power of international crime. It is difficult to be optimistic, not even in the strongest and richest nation states are there many successes reported in this field.

The development in Zaire will have an impact on its southern neighbours. When Mobuto one time disappears from the political scene, the potential for improvements is not very strong, however. The eroded societal web may instead result in political fragmentation, where local war-lords go into military conflicts. Such a scenario would also create instability in the neighbouring countries.

Should the situation in Zaire improve, the long-standing discussions on the Inga-dam and hydro-power production may materialise. Such a development may also link Zaire closer to the present SADC countries. Major economic

interests in South Africa would support such a development, as well as an increased access to the important mineral resources in Zaire.

A tentative conclusion is that Southern Africa stands a better chance to avoid a continued marginalisation in the world economy than the rest of Sub-Saharan Africa, mainly due to the influence of South Africa but also the natural resources potential in many of the other countries. The global framework is also compatible with increased regionalisation in Southern Africa.

6.2. Development in South Africa

A prerequisite for a positive regional scenario is political stability and high economic growth in South Africa. These two factors are closely interrelated.

It is generally suggested that in order to reduce the very high unemployment in South Africa an economic growth rate of at least 5 per cent per annum is required. Factors conducive to a rapid economic growth, and thereby also to increased political stability are among others:

- Increased investments, both domestic and foreign. Most observers suggest that the investment ratio has to gradually increase from the 15-17 per cent in the early 1990s to around 25 per cent, similar to that attained during the 1960s and 1970s. This would imply an increase with around 10 billion USD, a figure far above the foreign investments taking place since 1994, in spite of efforts by the new South African government to persuade foreign investors of South Africa's promising future. Important parts of such an investment boom in South Africa could be attained by public sector infrastructure, together with private investments in production, both domestic and foreign.

There is a continuous hesitance among domestic and foreign companies to direct investments. The factor most frequently referred to by foreign investors is the high level of criminal violence.

This, together with the short term de-industrialisation that may take place as a result of opening up the previous protection for the South African manufacturing industry, when adjusting to GATT and EU rules, may slow down the economic growth and keep the unemployment rate at the present intolerable level. To avoid such a negative development a successful restructuring of the manufacturing sector has to be implemented, making it more internationally competitive.

Some commentators argue that the domestic companies are not reluctant to invest, pointing at some large investment projects in their planning or construction phase, particularly the Alusaf R 7 bn aluminium smelter project to be completed in 1996 and the R 3.5 bn Columbus stainless steel expansion, as well as plans at various stages to expand a number of mining projects.

Before the elections 1994, investors hesitated as they were uncertain of the policy of the new government. Now many hesitate, referring to the uncertainty of what will happen "after Mandela". Another argument used by foreign companies that are newcomers in South Africa is the difficulties to get in on a market so dominated by a handful South African conglomerates, uninterested in increased competition.

– A visible improvement for the African majority of the population, which were so heavily discriminated during the apartheid system. Increased employment is an important factor with obvious growth effects, but also improvements in the social and material situation in terms of better education, health, housing, water supply, sewage, etc. This means that the slow implementation of the Reconstruction and Development Programme has to be speeded up.

A major threat to both economic growth and social stability is the gap between expectations and actual development, which has a destabilising potential also in a longer time perspective. Linked to this issue is the risk of macro-economic instability caused by pressure to accelerate redistribution at the expense of long term economic growth.

The main threats against the political and social stability and thereby also economic growth are:

– The situation in KwaZulu/Natal and the unpredictable behaviour of chief Buthelezi and the Inkatha leadership. If the provincial Inkatha leadership runs into direct confrontation with the central government in Pretoria over the degree of autonomy of KwaZulu/Natal large scale armed confrontation may occur. At any rate the political and social situation may be very unstable over a number of years. This is incompatible with an economic growth scenario, as it will scare away both domestic and foreign investors, and probably a number of professionals as well. In a twenty year perspective this conflict may be solved, but as long as it continues it will be an important obstacle to both political stability and economic development in South Africa and thereby in the region. This is one of the most critical single threats to stability and economic growth in the region.

Our perspective is further three elections ahead and the fourth (2015) just ahead. The political landscape is certainly significantly changed then, with competing class interests being the major conflict issue. A positive development would contain a gradually deepened integration of KwaZulu/Natal as the influence of “modernists” in IFP increases, or the erosion of IFP as a political force. A negative development would contain a semi-autonomous KwaZulu/Natal at loggerheads with the central government in Pretoria and with “traditionalists” in command in the IFP. This would imply a high level of violence and continued risk for a local war.

– Further expansion of drug and arms trade with increased organised crime. Together with the difficulties to restructure the South African security apparatus and police, this will be a factor which risks to destabilise the fragile nation building processes.

– A whole generation of young people without formal education and grown up under stern apartheid repression in the townships will also constitute a socially destabilising force in the new South Africa. To integrate this group in the new South Africa is a formidable challenge.

A number of challenges thus have to be overcome to make South Africa take up the role of a strong regional driving force for which it has potential. The region in turn can support a positive development in South Africa both as a market for South African manufacturing and agricultural products, by regional cooperation to increase the value added of mineral products, by supplying needed South African imports of water, electricity and other inputs.

6.3. Regionalisation factors with conflict potential

The most important factors in the regional perspective can be divided into two categories. Those with a potential to create conflicts if they are not handled at the regional level and those with great potential benefits from regionalisation for the involved partners. To the first category belong water management and migration issues, including brain drain.

Water management

Water could also be categorised as a “regional good”, albeit with a much stronger conflict potential. Water availability in Southern Africa varies heavily both geographically and over time. South Africa and

Malawi are categorised as “water-stressed” by hydrologists, and already by year 2000 will South Africa be acutely water stressed and Malawi will have moved into absolute water scarcity. Namibia has great difficulties in mobilising its available water. Droughts in Zimbabwe threatened Matabeleland and almost forced evacuation of Bulawayo in 1992. Swaziland is totally dependent on rivers running through the country and thus vulnerable to the good-will of neighbouring countries. By year 2025 Mozambique, Tanzania and Zimbabwe will be water-stressed, according to hydrologists’ estimates, while Lesotho and South Africa will have moved into absolute water scarcity and Malawi will have gone beyond the present water barrier.

Water consumption per capita in South Africa is ten times greater than in most other countries in the region. Some 80 per cent of all water used in the region for other purposes than for hydropower generation, is used in South Africa, while 10 per cent of the available water in the region is derived in South Africa.

3/4 of the water is used for irrigation and of this 60 per cent is wasted, mainly through evaporation in systems with low effectiveness.

The growth of industry, agriculture, mining and further urbanisation will be constrained by inadequate water resources. The environmental scarcity of water is also exacerbated by the population growth.

The need to plan for both seasonal and annual variation and area distribution and management is very strong and those issues obviously have to be dealt with on a regional level. If this fails, there is a risk of conflicts emerging, which may escalate into important obstacles to economic growth and political stability. From that perspective it is promising that the first sector protocol in SADC to be signed was that on *Shared Watercourse Systems* (August 1995).

Migration

Migrant labour has been a feature of the Southern Africa political economy for more than hundred years. For many countries, revenue from migrant labour is a significant part of total resources. The most extreme example is Lesotho, where migrant remittances accounted for half of the GNP in the middle of the 1980s. 60 per cent of the adult males in the country worked in the South African mines and 70 per cent of its rural households have at least one member who is a migrant.

The changes in South Africa during the 1990s further increased the flow of immigrants, fleeing from unemployment, poverty and low wages in the neighbouring countries and war and hunger in countries further north on the continent, hoping for jobs in South Africa.

At the same time as high economic growth is necessary to reduce the very high unemployment in South Africa, such a development will also be a magnet for millions of people in the neighbouring countries. A high economic growth in South Africa will hopefully contribute to the improvement of the economics of the neighbouring states and thereby create new jobs also in those countries. This may reduce the need to migrate to South Africa. On the other hand, slow economic growth in South Africa may reduce the economic growth in the neighbouring countries, thereby strengthening the “push factor” and increase the immigration to South Africa.

Furthermore, as the ADB study points out, “If economic growth is high, it can be expected that rural-urban migration will proceed rapidly, urban informal-sector activities will multiply, and a growing proportion of urban workers in RSA will be migrant workers from SADC.”

The conclusion here is that irrespective of a successful or unsuccessful economic development in South Africa, the immigration will continue and probably increase, if no negotiated political solutions can be agreed between the countries in the region. In South Africa political pressure for stronger measures against immigration will grow.

To support a more balanced regional development and avoid among other things mass immigration into South Africa, the idea of a "RDP for the Southern African region" has been suggested in the South African debate. Feasible or not, this suggestion is based on the correct assumption that the long term solution of the migration problem is a more balanced regional development.

A special part of the migration issue is brain drain, from the countries with very low real wages in the northern part of the region to the SACU countries, and particularly South Africa, where real wages are possible to live on and the professional environment is much more satisfactory.

Brain drain

The ADB study concludes that "... in the short-run, a brain drain to RSA seems almost inevitable with potentially harmful consequences in the poorer SAR countries for the provision of social services, such as health and education, and for the rate of economic growth." (ADB, 1993a:175).

In a positive – or rather over-optimistic – scenario, twenty years may be sufficient to increase the number of professionals through the South African training institutions so that the pull factor will be weakened. This may however be an overoptimistic assumption, and anyhow it does not deal with the crucial factor, that of low real wages and weak professional environment in many of the neighbouring countries.

A continued and possibly increasing brain drain, together with the effects of AIDS may have severe consequences for the capacity of public administration, higher education and health as well as commercial activities in the non-SACU, SADC countries. This in turn may reduce political stability, as well as economic growth.

The ADB study suggests that "A regional solution to the brain drain could come through multilateral negotiations between the sending and the recipient governments. These could be conducted within whatever institutional framework is established to foster co-operation among SAR¹¹ countries. A crucial consideration as elsewhere is that the cost to the poor, sending countries would greatly outweigh the marginal benefit to RSA. It might therefore be possible, for instance, to persuade RSA to impose work permit quotas on high level manpower from each SAR country. Such quotas would be particularly important if measures are taken to standardise professional qualifications in the region." (ADB 1993a:177).

To this can be added that such systems, as well as systems to compensate the sending country for its loss, are complicated to implement. Also here the long term solution is improved balanced regional economic development, increasing the scope for increased real wages in the public sector. The challenge is to keep professionals and other highly trained people in their countries during a probably long intermediate period.

¹¹ Abbreviation for *Southern African Region* in the ADB study.

6.4. Regionalisation issues with strong potential benefits

Electricity

A successful growth scenario will demand increased electrical energy in the region. By mid-1995 there is a energy surplus at the regional level, due to the long period of weak economic growth and low investments. This situation will however change in a 10-20 years perspective. As investments in the sector are expensive and the time lag between decision and production is significant, new investments should preferably be decided before year 2000.

Plans to link the hydro-electric power plants together in a regional grid have been worked out within ESKOM. A stable regional situation during the next two decades would most probably mean that at least part of these plans could be implemented. One recent sign was the establishment of the Southern African Power Pool, in which ESKOM will have a dominant role. For further industrialisation and urbanisation in South Africa this is an important issue. One crucial factor is if there is enough mutual trust among the governments in the region, as linking to a regional grid means that you make yourself dependent on your neighbours.

Transport

Significant rehabilitation of the transport corridors in the region have taken place during the last 15 years. The Benguela railway remains to be rehabilitated, and the new "Caprivi-corridor" to the port of Walvis Bay is under construction. In the next decades, maintenance and management will be main issues. Here private sector companies and parastatals, such as the South African Spoornet and Portnet, probably will play important roles. At the same time they will be part of the South African transport corridors which will continue to play a major role in the regional transport network. Spoornet and Portnet get some problems with their "double roles" in such a scenario, if they will have to compete with themselves. The plans for a Gauteng-Maputo corridor, made public in 1995 and early 1996 is a further sign of the efforts by governments in the region to involve private sector interests in infrastructural investments.

Both electricity and transports are "regional goods"¹² with low "political" content, where mutual economic benefits are obvious. These issues therefore belong to a category with good potential for further regionalisation.

Trade integration

The existing regional trade pattern is characterised of South Africa's strong trade surplus towards the neighbouring countries, particularly so with the other SACU members, which take 85-90 per cent of their imports from or via South Africa, while most of their exports is directed to countries in the North. Although the total share of South Africa's exports going to Southern Africa is limited, the region is an important and expanding export market for a number of South African companies in the manufacturing sector which are not competitive in the world market, receiving around one quarter of total manufacturing exports 1993-94.

¹² I Balassa & Stoutjesdijk (1976) have made the following distinction between different types of common goods and services: national goods and services are normally not traded among member states. This class of goods involves perishables, housing, construction, retail trade and most government and private services. By definition regional goods and services cannot be imported from the world market, but may be provided on a national basis as well as jointly. Regional goods include electricity, transport and communications and irrigation etc. International goods and services may be provided on a national, regional as well as on a world market basis. This category comprises most agricultural and manufactured products.

As is the case with South Africa, the exports of the other SADC countries are dominated by mineral and agriculture commodities to the North. The intra-SADC trade, with South Africa excluded, has for many years represented around 5 per cent of the total and no persistent increasing trend has been visible. Meanwhile such a trend has been evident in the trade between South Africa and many of the SADC countries, although with continuous asymmetry.

Although the intra-regional trade may increase somewhat in the future, it will most certainly not constitute a significant instrument for further integration, also with an implementation of e.g. a free trade area agreement in the region. For most countries their national trade liberalisation under the structural adjustment programmes is more important. Such trade liberalisation at the national level, may however be locked in through a regional free trade agreement as has been discussed in recent literature.¹³

6.5. Issues at the national level important for the economic growth in the region outside South Africa

Demography and food production

With 3.0 per cent annual population growth (average figure for 1990-95), the population of the SADC member countries will double by the year 2018 from 136 million 1994. The lowest growth rate is estimated for South Africa (2.2 per cent p.a.) and the highest for Tanzania and Zambia (3.8 per cent p.a.)¹⁴. The urban growth rate is estimated to an average of 6.5 per cent p.a., which means that it doubles in eleven year. More than 40 per cent of the Southern African population were estimated to live in urban areas by 1990.

To this shall be added the demographic effects of AIDS in a 15–20 years perspective. Some studies on specific countries report frightening results. In Zimbabwe, for instance, around 30 per cent of the population in working age and 60 per cent in military and police forces are HIV-infected. One study on Zambia estimates that almost 2/3 of the mine workers will be HIV-infected in the year 2000. Bureau of Census calculates that by 2010 for Malawi the growth rate without AIDS would be 3.2 per cent and with AIDS 1.6 per cent. Corresponding figures for Tanzania are 3.0 per cent and 1.5 per cent, for Zambia 3.4 per cent and 1.4 per cent and Zimbabwe 2.1 per cent and 0.5 per cent.¹⁵

Effects of AIDS on the societies in Southern Africa also include: 1) A reduction of the highly skilled elite, which reduces the stability in security systems and political structures and weakens the capacity of the public administration. This may constitute one of the major obstacles to reach the economic growth target in a positive scenario. 2) Weakening of the multiactive households that are so common, especially in countries with low level of urbanisation. 3) Reduction of labour force during the labour intensive period of agriculture, which may result in reduced acreage and lower productivity. 4) Pressures on priorities in health budgets.

Continuing population increase, which will take place also with changing reproductive patterns, shrinks the per capita allotments of agricultural land. According to environmental studies,¹⁶ Malawi and Tanzania are the countries worst off, falling below what is considered the critical bench-mark of 0.07 hectare cropland per capita in 2025. Other countries in an increasingly serious situation are Lesotho, Mozambique and Swaziland. Population pressure together with increasing scarcity of land also increases soil degradation. The common

¹³ See e.g. Mistry, 1995.

¹⁴ Source: SARDC 1994. *State of the Environment in Southern Africa*, referring to UNFPA, *State of the World Population 1992*.

¹⁵ Bureau of Census, Statistical Brief 1994:4.

¹⁶ Summarized in Ohlson, 1995.

regional exporters of the staple food maize during years with good rains have been South Africa and Zimbabwe. Phasing out of subsidies for maize production and fertiliser consumption in South Africa has already reduced the maize production area significantly and this trend will probably continue.

The ADB study (1993) estimates that Southern Africa in 2025 will need to feed a rural population 50 per cent larger than the present and an urban population four times as large. This implies an increase in total demand of maize in the region of over 2.5 the level of 1990. If such an increase should be met by domestic production, it would require cultivation of another 20 million hectares for maize alone with another 12.5 million hectares for urbanisation. This would mean increasing the amount of land presently under cultivation by nearly 60 per cent. This increase in cereal production will have to come from increased productivity and from developing land areas in the northern part of the region (Angola, Zambia, Zimbabwe, Southern Tanzania, northern Mozambique, where average rainfall is typically between 750 and 1500 mm). According to the ADB study Southern Africa has the capacity to feed twice its population by 1990 on the basis of modest increases in agricultural inputs and a doubling of the area of land under cultivation. This means that beyond 2015 a significant increase of productivity has to be added, beside the demanding task of doubling the area under cultivation.

There is thus a theoretical potential for food production covering the demand for the population in the region by 2015. The practical activities to achieve that goal includes a doubling of the area under cultivation, taking place in the northern part of the region, especially in countries under rehabilitation after long wars (Angola and Mozambique) or with an extremely squeezed budget situation (Zambia, Tanzania, Zimbabwe) together with increased productivity. In order to avoid heavily increased imports of maize and other cereals to feed the population, strong efforts will have to take place.

In this context it should be noted that return to "normality" in Angola and Mozambique will improve the situation significantly. A prerequisite is a successful and quick demining of the rural areas. The main advantage of "normality" is that 6-8 million peasants will return and be able to feed themselves. This, however, will not solve the problem of feeding the rapidly increasing urban population. And the ADB study estimates that already by year 2000 South Africa will be importing food from the other SADC countries. It suggests: "Cross-border flows of food from Angola, Mozambique, Tanzania and Zambia to their southern neighbours should become a linchpin of regional co-operation and, eventually, of economic integration strategy."

There is a risk that the recent increased frequency of droughts continues in the region. This would constitute a serious obstacle to the rehabilitation of the agricultural sector which would be possible under peace and stability. It would also negatively affect the cattle sector with both economic and ecological negative effects. Furthermore, it will increase the scarcity of water resources, the distribution of which is one of the most critical issues in the region in a 15-20 years perspective.

Investments

Most observers agree that one prerequisite for a growth scenario is significantly higher investments not only in South Africa, but also in the rest of the region. While South Africa hopes for investments from overseas, the pattern of recent years suggests that foreign investment in the rest of the region – with the exception of Angola – will mainly be from South Africa-based companies.

An alternative, based on substantial overseas investments in the other SADC countries rather than in South Africa, which would reduce the present regional asymmetry of production capacity, is unrealistic. Although not ideal, the best we can hope for in this field is a sort of trickle-down effect in which overseas investments in South Africa, also generates investments by South Africa based companies. One important exception from this

rule is of course mineral sector investments, which have to take place where the resources are. The long term potential for such investments is highest in Angola, with Mozambique probably second.

The mineral sector has been suggested as one in which substantial advantages of regional co-operation can be gained, especially through further beneficiation in the region of existing minerals that at present are exported raw. According to one expert "An initial conclusion that could tentatively be drawn on mineral beneficiation is that the best potential for further beneficiation lies with products that incorporate a substantial transport advantage and that are relatively energy intensive. Thus it would appear that the best potential lies with the production of ferro-alloys and special steels, followed by pure metals and high-tech alloys and finally, mineral-based chemical products and hydrocarbon based products (oil, gas)."¹⁷

Tourism is also suggested as a sector with a strong expansion potential in a regional perspective, making cooperation expand along market rules. In South Africa the projections say that the 0.7 million tourist visits in 1994 will increase to 2.3 million in year 2000. There have been South African tourist sector investments in neighbouring countries, and even a few investments by Zimbabwean interests in South Africa. Joint ventures between South African and international hotel and tourist interests have increased during the 1990s. The attractive aspect of tourism is that it is labour intensive, the less attractive ones are the high import content and the risk for cultural distortions.

Significant investments in physical and social infrastructure, particularly rehabilitation in war-stricken Angola and Mozambique and rehabilitation and expansion in other crisis- and SAP-stricken countries. It can be assumed that this is an area for which international development assistance will be available.

With continued peace peasant agriculture production in Angola and Mozambique can be assumed to grow significantly and with improved infrastructure there will be scope for rehabilitation of commercial agriculture.

There are recent examples of investments by South Africa based manufacturing industries in neighbouring countries because of the lower real labour costs which have occurred mainly as a result of structural adjustment programmes in those countries. This pattern may be further developed, should it be perceived as permanent by the companies. It raises the issue of regional trade union cooperation and is a potential conflict area between countries, competing for new investments. In a number of labour intensive sectors the alternatives for the South Africa based countries are to move to other countries in the region with much lower labour costs or to close down when the transition period agreed with GATT/WTO is over and the imported competing goods from South East Asia or other low-cost countries face significantly lower tariff barriers.

The potential for local companies in other SADC countries to increase their exports to South Africa will also increase with a gradual reduction of the South African trade protection as a result of the implementation of the GATT Uruguay Round agreement, South Africa's membership in WTO, and internally decided trade regime changes.

This sums up to an improved potential for increased trade between South Africa and its neighbours in both directions. A movement of labour-intensive manufacturing production to SADC countries outside South Africa would also improve the prospects for at least a modest increase of the intra-regional trade between them.

Another, less favourable scenario for the region in this field is that the highly open national trade regimes in all countries make it impossible to compete with imports from external low-cost producers and an important part of the manufacturing sector is wiped out in ten years time.

¹⁷ Jourdan, Paul (ed). 1995:52.

Debt relief

Finally, an issue has to be mentioned in this context, which is outside the regional perspective. At an early stage of the period, further reductions of the external debt are necessary for some of the countries in the region, particularly Mozambique, Tanzania and Zambia. It is difficult to envisage a sustainable growth in these countries without a more generous debt relief than has been offered so far.

In this context the emerging discussion in 1995 on how to handle the debt of the poorest countries to the World Bank and the IMF raised some modest hope, but in early 1996 it seems as if both organisations have backtracked on this issue. Still for the three mentioned countries and a few others it is absolutely impossible to envisage any sustainable development, without a total different international attitude to the multilateral debts, demanding that the Bretton Woods organisations finally took some responsibility for the effects of their own advice and lending. It is not a plausible development, but some type of common Southern African attitude, if backed by some of the more liberal bilateral governments may be one instrument to improve the situation.

6.6. Issues at the national level important to the political stability in the region

The democratic process

If the trend towards increased democratisation from the beginning of the 1990s continues in the region for another twenty years, the population has experienced three or four multiparty parliamentary elections in increasingly open societies, and a whole generation will have grown up with democracy as "normality". This in turn would have made democratic institutions more stable and consequently reduced the risks for sliding back into dictatorships, authoritarianism and military coups. Governments would have a stronger legitimacy, the political stability would have been strengthened, which improves the potential for economic growth.¹⁸

It is easy to list a number of threats to a gradually increased democratisation process in Southern Africa, for instance:

- A serious conflict between the Inkatha leader Mangosuthu Buthelezi in KwaZulu/Natal and the central government in South Africa further increasing the level of violence and creating a more unstable political environment.
- That UNITA returns to war in Angola.
- That the gap between political leadership and the people in Zimbabwe develops into a highly unstable situation, in which some group with support from the military, seizes power.
- That multi-party democracy in countries like Zambia, Mozambique, Malawi is perceived as a "no-good" system if the introduction of it does not coincide with material improvements for the majority of the population. The continuation of heavy-handed structural adjustment programmes which may overstretch the limits of what people can take. It is hard to defend democracy as an abstract value on an empty stomach.

Relative peace

Peace in Angola and Mozambique is another prerequisite. This will make economic and social recovery possible, reduce the immigration to South Africa and increase the political stability in the region. Two important activities during the period discussed here, where aid agencies can make important contributions in this context is demining and demobilising parts of the military forces (both UNITA, Renamo and the two government forces).

¹⁸ The important part of my argument is that political stability is conducive to economic growth, which unfortunately does not mean that it has to be democratic, as history has taught.

Lasting peace in Angola and Mozambique may lead to improved political stability, although power conflicts between Frelimo and Renamo and MPLA and UNITA will be numerous. If they are fought at the political instead of the military arena, the peasant agriculture may be restored over the next 5-10 years, which reduces the need for food imports, including emergency aid. Reconstruction of physical and social infrastructure may be an important instrument for economic growth and increased employment. An initial part is de-mining. The Angolan government estimates that 10-15 million mines are planted around the country. A problem will be the financing of the reconstruction. Here development aid can play a strategic role, if donors are prepared to transform part of their present emergency aid into reconstruction support. At a meeting in Brussels in October 1995 the Angolan government presented a Community Rehabilitation and National Reconciliation Programme over two years (1996 and 1997) The total cost was estimated to around USD 700 m.

With peace and infrastructure reconstruction, production sector investments will increase. In Angola, companies mainly from South Africa, Portugal, USA and Brazil will be competing with each other, liaising with various domestic interests. A reconstruction of the coffee farms as well as food production for the domestic market could increase the agriculture production significantly and investments in the mineral sector be on its way.

As in many other countries where the state and the institutions are weak, unserious "entrepreneurs" will be around, but hopefully also serious ones. In a twenty year perspective Angola may have reached the level it had at independence, and with 40 years' delay, start development from what was square one.

In Mozambique foreign interest comes mainly from South Africa, although in the mineral sector TNCs from other countries have shown interest. The result may be significant increase of agricultural production both for domestic consumption, but also for exports, for instance sugar, tea and cashew nuts. Among mineral extraction projects both the natural gas fields in Pande (US energy company Enron) and the coal mine in Moatize may be exploited in twenty years time.

One problem during this period will be the extremely weak Mozambican capacity in both the public and the private sector. As in Angola this means a strong dependency on foreign interests, serious or not. As has been experienced during the last years, also open up for organised crime and various "Mafias". If they are allowed to get a firm position, they will be one of the main threats to the prospects for a successful reconstruction phase.

6.7. Regional regime and co-operation

The development of South Africa is decisive for the whole region. Stability and economic growth in South Africa makes it possible for the South African government to put more emphasis on regional issues. At the same time stability and economic growth in the rest of the region are instruments for improved development in South Africa. The positive scenario will make it possible for Southern Africa to avoid the total marginalisation of the rest of SSA. A negative South African development, on the other, hand will most probably result in fragmentation and further crisis in the region and which then will constitute just another part of a continuously marginalised continent.

Since the early 1990s South Africa based economic actors have increased their penetration of the neighbouring countries. South African companies, particularly in the tourism, mining and trade sectors have established themselves in the region.¹⁹ In a positive scenario this trend will be enforced.

¹⁹ Some examples: South African interests now own and run a number of hotels and tourist places in Mozambique, South African Supermarket chains are on their way into the neighbouring countries, AAC has announced expansion of various mining schemes, among them three in Zimbabwe. De Beers is increasing its stake in Williamson Diamonds in Tanzania, and discussing with the Angolan Endema diamond company. SA Breweries are involved in joint ventures in Tanzania and Mozambique. SA Airways and Spornet are involved in Tanzania.

Some of the investors try to explore a situation where rules and laws are weak and their implementation still weaker. The more serious investors will create economic production and employment in the neighbouring countries. At the same time they will further strengthen the South African dominance.

Policy statements by the Government of National Unity, indicate a political will to avoid South African dominance and let the other countries in the region influence regional policy. Still South Africa is the dominant and the stand of that country will be determined by a balance between various forces. The economic actors often have their own agendas. In the best case they create dynamism, production and employment, at the same time as they increase the South African dominance, in the worst case they increase the dominance without creating production and employment.

At the political level these activities have to be balanced, which means that the Government of South Africa co-operates with the governments in the neighbouring countries with a long term perspective. Such a development is constrained by the many urgent domestic tasks for the new South African government. It will however feel a pressure to organise regional co-operation in a number of areas, where South Africa is dependent on the other countries and the conflict potential is strong, particularly water distribution and migration. In other areas regional co-operation can be based on obvious advantages for all, although they are asymmetric. Main examples are electricity, transports and communications. Mutual, although probably not as comprehensive advantages, can be found in sectors such as mining, tourism and financial services. Trade integration without compensation normally benefits the strongest partner most.

There are no major signs of a reversal of the present trend of liberalisation of trade investment and capital towards a still more open global economy. And many of the SADC member states will be forced to continue the liberalisation at the national level as part of their structural adjustment programmes also if that means closing down of domestic manufacturing industries. The pressure is strong for any regionalisation effort to be in the form of "open regionalism" which does not threaten the on-going globalisation of the economy.

To renegotiate the SACU agreement seems to be the regional issue which presently is most important for the South African government, in spite of the complaints from other SACU members that it is dragging its feet. Also, if the negotiations will be finalised only in 1997, it can be assumed that in a positive scenario the integration in SACU will be deepened into a common market in a 10-15 years perspective, which means free movement not only for goods but also for capital and labour.²⁰ Furthermore a number of the other SADC countries are probably linked to this common market, either as members but more likely in somewhat looser arrangements, such as bilateral free trade agreements, eventually ending up in SACU membership.

The SADC co-operation have probably not developed into trade integration, but it has an important role as platform for discussions and negotiations in a number of functional areas along the sector protocols that gradually are worked out during the period up to year 2000.

In a positive scenario, by 2010-2015 SADC[†] is much more of a Southern African organisation, as the external support has diminished over the years. To mobilise external sources for projects in various sectors is still an important task, but not as dominant as it has been up to 1995. The main role of external sources is to support the mechanisms for regional discussions on issues such as water distribution, migration, transport and communications, financial institutions, energy, human resources development, environmental issues.

²⁰ In the case of Lesotho, the latter issue will have to be solved already during the ongoing negotiations. In a twenty years perspective, Lesotho may even be an integrated part of South Africa.

Regional activities in the production sectors are dealt with mainly by the private sector. Certain incentives to increase investments in the poorer member states are in place but they have not been used very much.

A crucial issue is if this development of SADC is consistent with the pressure for a continuous globalisation, which in the regional context means an open regionalism of the kind referred to above. There is such a scope for regionalisation for the typical "regional goods", but any attempts to develop a trade or capital integration with a significant protective element would meet resistance among international institutions such as the IMF, the World Bank, the WTO and the major bilateral aid donors.

COMESA will probably disintegrate *de facto* due to lacking support from the member states and aid agencies. It may remain formally with a reduced number of members, but with a very limited role to play.

The main threats against a positive scenario regarding regional co-operation, briefly outlined above, are what sometimes is called lack of political will in the member states, fragile institutions for regionalisation at both the regional and national level, and the risk of further strengthening of the South African dominance to a level where it creates back-lash effects in the weaker countries.

The concept of "political will" is a bit complicated, as it contains various interest groups in the participating countries and their relative strength and influence on their governments and their "horizontal" links to the corresponding groups in the other countries. While competitive companies are interested in as open co-operation as possible in their sector, less competitive companies may be much less interested in open regional co-operation. The usual time perspective problem related to regionalisation is also important. The long term advantages of regionalisation are less clear and less certain, while the disadvantages are felt immediately.

7. CONCLUDING COMMENTS

The arguments given lead to the conclusion that the regionalisation in Southern Africa will take place along functional lines, where the benefits for most participants are clear such as hydro-power, water management, transport and communication, but that they will be implemented rather independent of for instance SADC structures, although maybe under some formal SADC umbrella. Trade and investment pattern will be decided by market forces, which will flexibly adjust to the rules and regulations for cross border activities as they are already doing. The regionalisation process will be spontaneous, rather than politically guided. The positive side of this may be increased dynamism in the process, the negative side is the risk for increased polarisation in the region.

Commercial regional actors have already shown their interest in increasing intra-regional trade and investments. In this field success will feed success, as well as failures will feed other failures. This also means that if private companies are prepared to take some risks they contribute to improve the chances that the development will take a positive turn. If they, on the other hand, "sit on the fence", they will contribute to a negative development.

If peace will prevail in Angola and Mozambique, infrastructural rehabilitation and agricultural reorganisation may improve the situation substantially for a large number of people, which in turn could improve the political stability and the security situation, which reduces the risk of sliding back into war. Regional security co-operation could also improve the stability, and contribute to reducing the risks of interest conflicts between countries in the regional as well as containing internal conflicts in one of the countries, to avoid it to "spill over" into other countries.

The complex interrelations between the economic, political and security spheres will determine the regional development. South Africa's dominant position in the region should be utilised in a constructive way along the lines of a "benevolent hegemon", taking long term regional perspectives rather than short-sighted national interests into consideration. The other countries in the region will have to accept such a benign hegemony and put sufficient effort into the regionalisation activities in order to increase their own influence.

A positive development in South Africa is a prerequisite for a positive regional scenario, and here we may find the biggest threats, as shown in the following tentative list of main factors at the regional or national level threatening a "high-growth" regional scenario, which can be identified at present are:

1. The risk of escalation of the violence between Inkatha and ANC in KwaZulu/Natal and a try by Inkatha to break KwaZulu/Natal out of South Africa which will force the Government of National Unity to use military action against the province. Such a development may block the work on a permanent constitution and delay its implementation beyond 1999.
2. Conflicts regarding the use of regional water resources, that may create local political destabilisation and reduce regional co-operation also in other areas.
3. Conflicts related to regional migration flows and ways to control them.
4. The combined effects of brain drain southward in the region and AIDS, reducing the supply of highly educated staff in the non-SACU SADC countries to a critically low level, threatening already weak public administration, education, health, and commercial activities.
5. Prolonged drought periods, affecting agriculture and live-stock production and consumption and further reducing water supply.
6. Weak political support for regional integration with multilateral responsibility and measures to balance increased asymmetry between South Africa and the other Southern African states. Together with weak regional institutions this means that the potential for a regional development, where political agreements balance the market forces is limited.

7. Breakdown of the democratisation and peace processes in any of the countries, may spill over into others. Angola is the highest risk, but for instance a military coup in Zimbabwe or Zambia cannot be totally excluded if the economic situation deteriorates further.

A "high growth scenario" is a necessary but not sufficient condition for a positive regional development. The results of high economic growth have to become available to the majority of the people, the unemployment has to be reduced, peoples health, education and skills have to be improved. The alternative to this is a high growth, polarisation scenario where the gap between an elite and a majority of the population is increasing. In twenty years time such a development may have permanented the structure along lines similar to those in for instance Brasil. At a regional level a colonial pattern may emerge, with the typical enclaves of growth and wealth consisting of a number of urban centres and nature resource based production in some rural areas and linked together in a pattern, where national borders are unimportant. These enclaves would form an archipelago of wealth in a sea of poverty, consisting of rural areas, where the majority of the population would live. Such a scenario would make Southern Africa a typical model for the centre-periphery model.

Such a development is of course not intended by ANC or the present coalition Government in South Africa. It may, however, emerge by default if strong enough policies to avoid it are lacking. The more the gap between the modern sector and the rest is perceived as "normal" the bigger is the risk that it is permanented.

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SOUTHERN AFRICA: A PERSPECTIVE FOR THE FUTURE WITH COMPETENCE BUILDING IN FOCUS

by

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March 1996

1. BACKGROUND

Development is a many-faceted phenomenon. Since the beginning of the era of independence in Africa much research has been devoted to and much has been written about both the causes of underdevelopment and how development can be brought about. The basic criteria are that development should be permanent or, as it is termed nowadays, sustainable, and that it should take into account cultural and other features of the respective countries and populations. Moreover, the fruits of development should be reasonably equally distributed between classes, regions and sexes and take place under democratic forms of government.

This paper focuses on one of many crucial factors for development, namely Human Resource Development (HRD), as Southern Africa is heading towards the twenty first century. HRD deals with how people develop through new knowledge, skills and attitudes. This concept includes all types of activities which prompt a change of knowledge regarding this, such as education – both formal and non-formal – competence building in different forms, and institutional development, including the development of organisations.

The statement that people and their propensity for change is a central factor in development can hardly be opposed. It is, however, surprising that both in development theory and in its practical application questions around HRD are often overshadowed or completely ignored. It is my firm conviction that HRD in different forms, such as for example strong, independent institutions, is an absolutely essential precondition for a country to be able to attain long-term financial sustainability.

With this in mind I will attempt to concentrate the discussion below on the development of human resources, the problems and restrictions encountered today and how this development might appear in the future.

The point of departure for the discussion is the global situation in which we find ourselves today and which is well described by many (e.g. Carl Tham's introductory section to the anthology *Aid on Development's Conditions*, 1994 and in the Sida Department of Education's strategy paper, 1995). The situation can be summarised as global inter-dependence to an extent not previously known, combined, in many places, with a fragmentation of the nation-State for ethnic, religious or other reasons. At the same time, in the majority of the countries in Southern Africa economic and political reform programmes are being carried out. A rapid increase in population with environmental degradation and urbanisation in its wake are other important basic features that provide the framework for the analysis. This is the environment in which the development of HRD is to take place. This environment differs from country to country and is therefore not easily understood or analyzed. The disparities between countries are especially great in Southern Africa, with South Africa as the economic giant with a potential to lift the rest of the region on the one hand and Mozambique and Angola, ravaged by war and underdevelopment, on the other.

Southern Africa has, perhaps more than any other region in Africa, been characterised by attempts at regional cooperation during the last decades. The increasing tendency to fragmentation affecting Africa (and other continents) and which Southern Africa is not, nor will be, free from is, however, also important for this analysis. Having been virtually taboo for a very long period of time, a discussion around how conflicts between groups and especially minorities within a society should be democratically dealt with has become increasingly common. Having resisted or totally ignored opposition and differences between groups in the name of "nation-building", there is today an emphasis by researchers and other outside observers on paying attention to and appreciating differences of an ethnic, religious or cultural character. How these questions are dealt with, within the framework of a process of democratisation will determine both the fundamental stability of the respective countries and of the Southern African region as a whole.

2. HUMAN RESOURCE DEVELOPMENT (HRD) — THE ISSUES

HRD is thus a broad term and includes here all the knowledge, skills and attitudes which influence and change a person's behaviour, either individually or within a group. A number of sections follow below in which different aspects of HRD are discussed in a historic light, as compared to the problems met today and in a future perspective. In a concluding section I try to give a synthesis for the future seen from the point of view of the dynamics which are particular for the region. The discussion will for the most part concentrate on problems and how these should be dealt with. This should not be allowed to overshadow the considerable and comprehensive progress which has been made in this area during the last 30 years—life expectancy has increased significantly, literacy is more widespread, the number of children attending school has risen dramatically, apartheid is gone, etc.

2.1 Basic education

Basic education includes primary and adult education and literacy programmes. The meaning of these concepts varies considerably from country to country. Primary school, for example, means four years in Mozambique, seven in Tanzania and nine in Zimbabwe. It is generally agreed that education for all is a determining factor for all development. Here, the government's interest in building a nation-State, the individual's interest in improving him/herself and having a better life, parental interest in their children improving themselves so as to be able to provide for them in their old age and the calculations of development theoreticians coincide. All see primary education as extremely important. But there the agreement ends. The view of the school as a central factor in nation-building does not in any way coincide with, for example, the individual's or the development theoreticians' expectation of the school's scope and content. In one case quantity is the most important question, in the other quality – and different groups can have different ideas about what is meant by quality.

At independence, every country in Southern Africa named school attendance for all as one of the objectives to be given highest priority. By giving everyone the chance to attend school the new society would visibly differ from the colonial or pre-colonial order. From Zambia in 1964 to South Africa in 1994 this has been done. All countries made enormous progress in the beginning, measured in the number of pupils who began and then completed primary school. At the same time, for those who were older than school age, adult education of different kinds was organised, often in the form of mass campaigns (Tanzania, Ethiopia, Mozambique, Botswana and Namibia)¹. Many examples of success could be given, but suffice it to mention that in adult education's heyday in Tanzania 3.8 million students attended literacy classes, in Ethiopia over 3 million, in Namibia 150,000 and in Botswana 40,000 and that in several countries more than 80% of the relevant age group attended primary school (Tanzania, Zambia, Namibia, Botswana, Zimbabwe). Mozambique and Angola which began at a lower level, also made great progress in relative terms.

However, sooner or later all these countries encountered problems. To be able to provide such a wide range of education, larger and larger administrations were needed, (without comparison, the education sector quickly became the state sector with most employees, although most of these were teachers). Due

¹ Examples are also given from countries outside the Southern Africa region to take advantage of as wide a spectrum of experience as possible.

to its size, it became increasingly difficult to administer it efficiently, and combined with a lack of cost awareness running expenses escalated out of hand so that available funds were no longer sufficient to run the sector. One example is the decision to give all teachers in Zimbabwe the same salary as the small minority of white teachers had had before independence. As a result, the education budget was multiplied many times over without a corresponding addition of new educational places.

The economic crisis during the 1980s and the medicine taken either voluntarily or by force to cure it further worsened the situation. Literacy programmes have been almost discontinued in most of the countries and the number of children in primary school has drastically decreased. Basic education today is faced with a serious crisis and many difficult decisions. The acuteness of the problems varies from country to country. While the crisis in Zambia and Mozambique is extreme, Zimbabwe and Namibia are only partially heading in the same direction, and the crisis in South Africa is only potential. Botswana and Mauritius are the only countries in Southern Africa (and in sub-Saharan Africa) which have almost completely avoided the crisis.

For the future there are two major questions whose treatment will be decisive for continued development, namely the quality and the relevance of education. The question of wages and other incentives for employees is dealt with in a special section below.

1) Quantity

According to the declaration signed by the majority of the world's countries in Jomtien in Thailand in 1990, all countries are to strive to achieve education for everyone, an aim which should preferably be achieved before the year 2000. For the regular follow-up meetings since Jomtien, a couple of comprehensive studies have been conducted. They give a good picture of today's situation in, for example, most of the countries of sub-Saharan Africa. Even if the quality of the statistics has worsened at the same rate as the general deterioration in the countries' economies, studies indicate that the "proud" progress of the 1970s is today nothing more than a mere memory. Very difficult political decisions have to be taken in the respective countries. To come to terms with the situation in the first place, the politicians must face reality and accept how things are today. They must thereafter be prepared to determine a level of ambition related to the availability of financial resources.

It is fair to say that, for the region as a whole, there has been an emphasis on quantity at the expense of quality. But for education of a quality worth mentioning, it is necessary that teachers receive their salaries on a regular basis, that these are sufficient to live on, that the school environment is adequate and that books and other equipment are available. This costs much more per pupil than is allotted today. If it is not possible to make more funds available for running costs, the number of pupils and/or the number of years of primary schooling must be reduced. If such an adjustment does not come about through political decisions, the problem will be solved by the "market", i.e. by teachers supplementing their salaries by giving evening courses for those who can pay while the work in the ordinary school is increasingly neglected. Quality will suffer and pupils will stop attending school. In fact this is already happening in many places. Finally, only those who can pay will remain, resulting in an uneven distribution as regards class, ethnic group, sex and region in the countries in question. In addition to decisions on the level of ambition concerning quantity, difficult decisions also include questions of increased decentralisation of schools, a possible introduction of fees, etc.

The question of the number of places available in the formal primary school is of major importance for the long-term balance between men and women in the development process. Comprehensive research shows that education of women is a decisive factor for sustainable development. The reason for this is that education of women leads to fewer children, a better standard of nutrition for, primarily, children, better health, increased interest in basic education and increased productivity in subsistence agriculture. At the same time, we know

through a number of surveys that parents, first of all, send their sons to school and that if someone stays at home it is a daughter. Therefore, the greater the number of children attending school the larger the proportion of girls will be.

2) Relevance of education

The question of relevance is even more complicated than the question of quantity. It includes what is taught in relation to the world in which the pupils will later participate. Here, the expectations of the pupils and their parents often are at odds with the reality and the needs for educated personnel in the society. In country after country attempts have been made to diversify education, to introduce practical subjects or education with production, and to adapt curricula to reality. However, education still remains directed towards exams (aimed at exams in the final class to continue to secondary school and university) and is far too theoretical. In, for example, Zimbabwe serious attempts have been made since independence, to put into practice various kinds of reforms, which, however, in general, had to give way to a view covered by the slogan "to maintain quality".

Relevance also encompasses the question of the quality of education. While relevance implies that the pupils should find what they learn useful, quality means that they acquire what is expected by the system. This makes enormous demands on the teachers and their training, curricula, textbooks and other educational material given existing resources.

Another major dimension of the relevance of education is the language of instruction, especially during the first years of primary school. Already at the beginning of the 1970s, in connection with the first commission on education in Botswana, one of its members, Professor Torsten Husén, showed that a change from English as the language of instruction in the first three classes to the children's mother tongue, Setswana, would considerably improve the learning ability of the pupil and thereby the schools' efficiency. He showed that it is much easier to later make the transition to a foreign language if one has learned to read and write in one's own mother tongue. Botswana, as one of the first countries to do so, accepted this argument.

It is only very recently that serious discussions and studies of this question have again become possible in other countries and regions. From studies on adult education and the primary school in, for example, Mozambique, it has been possible to prove what Husén pointed out twenty years ago. In Ethiopia a full-scale attempt is at the moment being made to go over to mother tongue instruction in every province. With too limited resources and poor preparation it will, however, be difficult to draw any large-scale conclusions from this experiment. The question of mother tongue instruction is relevant for all the countries of the region. In South Africa and Namibia there are many who are of the opinion that this matter is not a problem. But, in fact, the problems in South Africa and Namibia are actually even more complicated as English for many is not even the second, but perhaps the third or fourth, language after their mother tongue/s and Afrikaans.

It is apparent that the deteriorating economic situation has slowly altered the expectations among parents and pupils of what can be expected of the school. Hitherto this has, however, led to a reluctance to send children to school rather than to expressed demands on what is to be taught. At the same time, as has already been pointed out, more and more studies indicate how important primary school education is for the development process in general and for the individual's, and especially women's, development in particular.

2.2 Higher education

Universities in Africa have a very short history. The development has however been rapid, from six universities in 1960 to 97 today. The number of university graduates has increased from around 1,200 to more than 500,000 today.

In spite of the expansion there is still a glaring inequality in the resources for higher education and research between the developed and the developing countries. African countries have less than 1% of the world's research and development-oriented academics and engineers and account for some 0.2% of the world's expenditures on such activities. At the same time, the developing countries have considerably fewer possibilities for higher education_ 5,000 students per 100,000 inhabitants in the developed countries as opposed to 25 in the poorest countries in Africa.

The quality of instruction at the universities varied during the 1960s and 1970s, but was for the most part acceptable. The problems wrestled with then were more about the place of the university in the society than how resources could be made to cover the day to day running of the institutions.

With the economic crisis which affected most African countries during the 1980s conditions altered radically. It is today generally accepted that the situation of most African universities is extraordinarily difficult. At the bottom of this lies a resource crisis, but this in turn has led to both a crisis of quality and management. The students' dissatisfaction with the situation has, in several cases, led further to conflicts between the universities and the political leadership in the countries involved and through this the question of the universities' position in the society has been brought to a head. The problems are developed further below:

– Firstly, the universities have been allowed, or rather been forced, to increase their student numbers without the slightest relation to either the needs of the labour market or available resources for education at the university in question.

The supply of higher education was in several countries allowed to increase at the same rate as the development of secondary education. The earlier ambition to educate for society's needs was replaced with the ambition to provide higher education as a right for all who had obtained the correct qualifications. At the same time, employment opportunities within the public sector have decreased and in several countries there is now rising unemployment among academics. A university degree is still, however, seen as a much desired ticket to a well-paid job and the growing middle class expects higher education to be provided for its children.

– Secondly, the lack of financial resources at the majority of universities has led to a virtually untenable situation: lack of textbooks, library and educational materials, run-down premises and laboratories, overfull student accommodation and poor material conditions for students, low salaries and insufficient benefits for teachers and administrative staff—all proof of the universities' insufficient funding.

The all-dominating reason behind this lack of resources is the economic crisis. Most countries have succeeded in allocating a relatively constant proportion of the state's budget to the education sector and within this allocation higher education has received a relatively large proportion. The real value of the funding has, however, been reduced from year to year, which has meant a considerable reduction of state funding to the universities in real terms while the value of foreign aid to higher education has at best remained constant.

The most serious effect is on the salaries of university teachers and other well educated staff. Salaries are in many cases not enough to live on. Those who can move do so to: 1) Europe and the USA where it is estimated that there are around 100,000 well educated Africans today, 2) other better off countries in the region, especially to South Africa, or 3) the private sector in the home country. To survive, those who remain must supplement their salaries with all kinds of other work.

– Thirdly, the quality of education and the conditions for research have considerably deteriorated during the past decade. The increasing intake of students combined with the fact that there is a lack of resources for virtually everything has meant that funds for running costs and research per student have been reduced to a minimum.

Lack of resources has also made the possibilities to promote equality in the recruitment to the universities more difficult, with implications particularly for recruitment from the rural areas and of women. The subjects most affected are science and technology, which are particularly demanding on funding if they are to be run in a meaningful way.

The development of research has been affected particularly strongly by the university crisis. Research is undermined by lack of time and resources. Potential researchers devote themselves to tasks which only as an exception contribute to the development of an academic environment. There is frequently not even time for proper supervision of degree and examination work and the re-growth of researchers is nipped in the bud. Even research institutes affiliated to major universities are affected by this lack of academic environment and poor quality in education. It is also these institutes which are first closed when the lack of resources becomes too great (cf. University of Zambia, which has closed four of its five research institutes).

– Fourthly, the relevance of university education is being questioned to an increasing degree by both the state and the general public. Growing unemployment among graduate academics and the poor quality of instruction which has led to new graduates being considered unsatisfactory at places of work, at the same time as the scope, quality and relevance of research are being reduced, have led to an increasing questioning of the relevance of the output of the universities.

– Fifthly, the relationship between the state and the universities has deteriorated in many African countries, with the question of the universities' autonomy reappearing on the agenda. The causes of this can be traced back to the factors mentioned above. The lack of resources and deterioration in quality create concern among students and teachers. This in turn worries politicians who see the university as a centre for criticism and political opposition. While the universities are demanding increased autonomy to be able to find solutions to their problems, the state prefers to see the solution in increased public involvement in the day-to-day running of the universities. However, at the same time as the state increases its involvement, its possibilities to act become more restricted through a lack of means to finance the necessary reforms.

Again Botswana and Mauritius are the exceptions to the general picture of development in Africa. However, if counter-measures are not taken quickly, Namibia is also on the way to repeating the mistakes of its neighbours to the north. It is still too early to predict what developments in South Africa will be. Hitherto, the large and rapidly expanding university sector in South Africa (there are today 21 universities which in 1990 had a total of 325,000 students) has for the most part served as a future example for Africa as a whole and Southern Africa in particular. Its attraction and higher salaries have, however, led to a severe brain drain from, first and foremost, neighbouring countries. This has made it even more difficult for these countries to maintain activities at their universities and in other areas which require a well educated labour force.

The number of students has in recent years increased considerably in South Africa. This has happened in a situation where there is a growing lack of state resources and enormous expectations in all areas. As a result, problems have arisen at several universities. There is reason to be on guard to avoid the situation deteriorating further. Tendencies already exist towards too high a demand for higher education at the same time as resources are being spread out more and more thinly. Great political courage is needed to resist this demand.

If the universities and higher education institutions are to take their rightful place in the countries of Southern Africa, the problems which have been discussed above must be taken seriously and a sustainable solution found. Once again, difficult political decisions are needed a) on the dimensioning of education, which can involve closing down certain parts; b) the allocation of sufficient resources; c) the introduction of

fees; d) the issue of autonomy; and e) the problem of relevant curricula and increased internal efficiency. If these problems are not solved, higher education cannot become the engine of development it has been in so many other places in the world.

2.3 Secondary education

I have here chosen to discuss basic education and higher education in relative detail. Secondary education is no less important. It comprises an important link between these two stages of education and will perhaps be even more important when a lack of resources leads to a reduction in the entire education sector. However, the questions discussed above concerning quality and relevance are just as important here. In addition, the questions about teachers' salaries and man-power planning and employment discussed below are of great importance for secondary education too.

The question which has perhaps played the greatest role in the discussions on secondary education (cf. e.g. Zimbabwe) is whether those who complete their secondary education are prepared for the labour market. If the discrepancy between the education and the expectations of the labour market is too great a situation is created which is very difficult to handle both politically and socially. This has already been encountered in a number of African countries (Nigeria, Kenya, Zambia and Zimbabwe).

The expansion of primary education during the period directly after independence was in most countries followed by similar pressure on and expansion of secondary education about ten years later, and of higher education after a further interval of time. There are few countries whose politicians have been able to resist this pressure. Education planners of today must therefore discuss the education sector in its entirety, and emphasis should be placed on achieving a balance between the different sub-sectors.

2.4 Education and employment

During the 1960s every independent country worth the name had to carry out man-power planning as an integral part of its overall planning. This was carried out with varying degrees of thoroughness and later served as the foundation for the dimensioning of secondary education; dimensioning and choice of subjects at university level; determining the number of scholarships for students to study abroad in countries which chose not to have their own universities, such as Botswana, Lesotho and Swaziland in the 1960s and early 1970s; and the dimensioning of formal vocational training. It soon became apparent that man-power planning suffered from the same problems as all other kinds of planning. The demand for education of different kinds was so great that the politicians could not resist the pressure and permitted an expansion considerably greater than what the planners had said was realistic in some areas. At the same time, the need for trained man-power in many areas was underestimated. There is, for example, in most places a chronic lack of people with a science background.

Man-power planning had, nevertheless, a very strong influence and even today causes shortfalls and/or overcapacity in many areas. For example, in Tanzania in the 1960s (and reconfirmed in the 1970s and 1980s) it was decided only to provide secondary education for 4% of the age groups who completed primary school, whereas later in Zimbabwe a figure of 80% was chosen.

Nowadays the dimensioning of the different stages of education is determined partly by historical conditions, partly by political dynamics and, more recently, to a certain extent by market forces. This has further strengthened the overproduction of those who have completed secondary and higher education and many of those educated at these levels lack the competence required by the labour market. This has already led to – and this might become more common – the creation of a proletariat of the educated unemployed. This proletariat can – for

better or worse – become the cause of widespread social and political upheavals. To deal with this situation the question of relevance in education is, and will remain, important indeed.

To come to terms with this problem, several countries (Botswana, Zimbabwe, Tanzania, Kenya) have worked out a policy for formal practical or vocational training outside the normal school system. The costs for, especially, the formal vocational schools are, however, so high that the question of replicability has been raised and, thus, whether this is a realistic alternative to secondary or higher education. In some cases the training could instead be carried out by firms, either in its entirety or as an extension to the ordinary school. This would, for the most part, involve large firms or state-run concerns/companies (telephone, post, railways, ports etc.).

Employment is also an important political question in the region for another reason. South Africa has, for a very long time, been an important source of paid employment for many of its neighbouring countries, particularly in its mines. This has been the most important source of foreign currency income in Lesotho, but has also been of great importance for Mozambique and Swaziland. After 1994, and with the continued high rate of unemployment in South Africa, this question has become increasingly important and politically sensitive. How it is solved will be crucial for employment within South Africa, but perhaps even more so for future prospects in the neighbouring countries and, especially, in Lesotho. Plans exist in those countries for dealing with a possible major reduction of migrant labour, but the problems involved in putting them into operation are considerable.

2.5 Alternative forms of education

Education is often associated with the western school and it is easy to conclude that education came to Africa with colonisation and particularly with the western missionaries/religions (or previously with Islam). This is however incorrect. Education of various kinds was included as an important part in most, if not all, of the socialization processes within all societies in the region. Traditionally children have acquired the adults' knowledge through different kinds of on the job training, e.g. taking part in the different tasks of adult life and the various types of education traditionally included before initiation etc. These are more or less formalised and follow patterns which have been established for centuries. This type of alternative education – or as I will call it below, non-formal education – has diminished in importance through the introduction of the formal school system. Its significance still today as an important, and for many the only, school must, however, not be ignored.

At an early stage the mission school sought to replace traditional education. In many cases these schools were sooner or later absorbed by the state school system. In a number of cases, however, the mission schools still survive parallel to the formal schools. At the same time as the state has lost control over the latter, the mission school has again acquired a more central role. This is especially valid for the so-called Koran schools run by Islamic clerics/mullahs, but in more and more countries even certain Christian schools. This occurs perhaps more in other parts of Africa (e.g. in Ethiopia schools run by the Coptic church are increasingly important), but can also become more common in Southern Africa (Zambia, Malawi, Mozambique and possibly Zimbabwe). An important point for the future will be to be open to all the initiatives and alternative forms of financing, rather than to resist such a development, and to use them to achieve a higher level of education, seen in its totality. Examples from other parts of the world, e.g. BRAC in Bangladesh indicate the possibilities that exist.

In an interesting study on behalf of Sida/Nordic Africa Institute Tekeste Negash argues for such an open view of non-formal education. His study deals with Ethiopia, but can be generalised to countries with the same difficult economic situation, e.g. Mozambique and Zambia. He is of the opinion that it must be accepted that, with the best will in the world, within the foreseeable future the formal primary school will not reach more than a fraction of the population and then mainly in the towns. Non-formal education must thus be an accepted

alternative, i.e. it must be realised that there will be two standards of education for different groups of the population. Non-formal education cannot be carried out by the state, but must be rooted in the institutions which already exist in the rural areas, among others, the thousands of churches and mosques throughout the country. The state's responsibility will then be to encourage, support and give training (upgrading) to teachers.

Non-formal education is not, however, only applicable to basic education, but is just as important where adult education is concerned, first and foremost for the labour market. At the same rate as the economic crisis in Africa grows, so does the informal sector, or, as Professor T.L. Maliyamkono calls it, "the second economy". According to him, this sector – which is not accounted for in GNP statistics – was equal to more than 40% of the total recorded production in Tanzania. If such a large part of the economy falls outside the "normal" economy, it is hardly surprising that a large part of education and training takes place there too.

Non-formal education or training also takes place within companies, both large and small. When the formal education, which is often considered as only reasonably relevant for the labour market, becomes even poorer, it is rational for companies to take responsibility for the training themselves. This, moreover, gives a lower status to the trainees who therefore accept lower wages. Smaller companies and the service sector cannot pay the stipulated wages for trained man-power and have no other choice than to provide the training themselves. In this area too, reality must in the future be accepted as it is. Rather than counter-acting this development, it must be supported. The paradox is, however, that from a point of view of definition it is impossible to give support to the non-formal sector as it thereby ceases to be non-formal. The support which can be given is more of the type which will clear away obstacles to non-formal education, accept those trained in this way and find channels for further training for those who so desire (an enabling environment).

The question of how contributions can be made to train people in connection with work has involved many, both theoretically and practically, during the past thirty years. The importance of this question cannot be sufficiently stressed and it is highly likely that the secret of how different countries have been able to induce sustainable development lies in how they have succeeded in tackling this question. There are many interesting experiments, both in Asia and Latin America, which also should be able to serve as good examples for Southern Africa.

2.6 Capacity building

Up to now I have discussed formal and non-formal education and training as one of the components of competence building. But competence building is much more than what we learn at school. Competence building can and should permeate all activities of a society, something which I will attempt to present in the following sections of this paper. In this area, perhaps more than in any other, aid agencies have been important actors and will therefore be part of my description. Nevertheless, it must yet again be emphasised that aid can never be more than a support to the internal development process and that the recipient country has just as much responsibility for the activities which receive aid as for all the others.

Capacity building, competence building and institutional development are all expressions related to the central question in all development work, namely how the knowledge which is the precondition for all development should be built up in individuals and institutions. People and their education, skills and knowledge are, as previously mentioned, the guiding star for all development efforts, as has been the case under different names since the African countries became independent. That the question has once again become a focal point is more a sign of previous failure than anything else.

Under this heading we will discuss the building of competence within the framework of the development of an institution. The term competence building has for many years been limited to the development of individuals'

competence. In terms of aid this has often meant, for example, that there has been a formal counter-part to every foreign expert or that a few specially chosen people have been sent abroad to acquire competence in an area which is relevant to a project.

Indeed, it must be the individual who is the focal point in the last resort. Individuals acquire and preserve knowledge. However, with a too individualistic view the fact is ignored that individuals within an organisation work with and are dependent on each other. It is not sufficient to ensure that one or two people can carry out the tasks that, for example, the foreign expert has carried out. If these people disappear the organisation is once again without the knowledge required to run the activities.

To get to the root of this problem it has become increasingly common to work with the organisation as a whole, with emphasis on administrative and managerial development. Every training or other development input must thus be planned together with the organisation and be directed at the organisation functioning as a whole.

If this is to be successful the work cannot only be limited to the unit which is directly affected by the project. It is vital to incorporate routines and reforms in the entire organisation which, for example, includes the introduction of new systems and the writing of administrative handbooks. The purpose is to develop an "institutional" memory, rather than an individual one.

Capacity building, as already mentioned, is nothing new. It has been part of the theoretical frame of reference for all development efforts and all aid during the past thirty years. In spite of this, every evaluation or study shows that the most important point which has been neglected is precisely the question of long-term capacity building and institutional development. For example, in the major Nordic evaluation from 1988, 55 completed aid projects were studied in three African countries (Kenya, Tanzania and Zambia). The conclusion was that the projects had been carried out very well in the short-term perspective. Seen in a longer-term perspective the evaluators were, on the other hand, sceptical to the sustainability of all but a few projects. When foreign aid was ended little or no internal competence remained in the organisations responsible for the continued running of the activities. As a result of this evaluation an action programme was worked out and decided upon within Sida. It was to be the basis for all future Sida supported inputs, according to which every phase of the project/programme cycle would be permeated by conscious measures to prompt long-term competence building. However, it would be even more important if the recipient country were to plan its institutional development and its use of aid in a similar spirit.

Below, under various headings, a number of important conditions for successful institutional development are discussed.

1) A changing view of the concept of institutional development

Institutions can be seen as the building blocks of a society. Together, all the institutions constitute the society which one wants to see developed. In the rather comprehensive literature on development produced in recent years the concept of institution has been given an increasingly important role. It has also been redefined and includes, for example, in the terminology of Douglas North, (recent Nobel laureate in economics), the basic preconditions in the form of rules and values which are needed in a society so that the development process can begin and become sustainable. In this terminology, as well as in that developed by like-minded academics, institutions become the overall social, legal and attitudinal environment which constitutes the basic precondition for development. This is of great importance and must always be borne in mind by those who work with development questions.

In the discussion below I concentrate, however, on institutions within a more limited definition, i.e. an organised group of people who together carry out a set of tasks in order to fulfil a well-defined objective.

2) A holistic view of institutional development

All experience thus far indicates that in order to secure a long-term sustainable result from a development input, a holistic view of institutional development is necessary. If any part of the whole is ignored, for example running costs, other inputs will only be effective to a limited extent. I have developed this reasoning further in a recent study of the basic needs for running the Eduardo Mondlane University (UEM) in Maputo, Mozambique. The study confirms what has been stated above about the situation for higher education in Africa.

Today UEM receives only 4.5 m USD from the state budget to carry out education and research. UEM has 5,200 students and around 2,000 employees (of whom 700 are teachers). Aid only marginally covers the running costs and goes mostly to cover capital costs, technical assistance, linkages and heavier equipment. The lack of funds for running costs results in salaries and scholarships being so low that teachers and students must complement them by all means imaginable. There is a shortfall of study material of all kinds, buildings are falling into disrepair and there is a lack of everything needed for daily operations. According to my calculations, the funds scheduled for running costs would need to be raised to 16 m USD to make the situation more or less acceptable.

The conclusion is that if institutional development is to be pursued at this university, it is necessary, parallel to other concerns, to ensure that those who comprise the institution and are to run its activities receive sufficient incentive for their work and that the environment in which they are to function is satisfactory. If this is not the case, it is difficult to justify other inputs to the university.

As a rule the financiers presume that the government of the recipient country will provide funds for running costs through the state budget. Conditions to this effect are often made, but despite the fact that the necessary funds do not materialise aid donors continue to give their support. This is, however, an untenable position which is made worse by a number of donors who temporarily top up salaries to staff in "their" projects.

Nevertheless, in my judgement, and that of many others, for the foreseeable future Mozambique will be unable to provide the necessary minimum funding for the efficient running of UEM and other similar institutions or state activities. If it is maintained that running costs are the recipient country's responsibility, no support to institutional development ought to be provided when such funds do not materialise. If, nevertheless, long-term institutional cooperation is to take place, a holistic view of the institutions is necessary, in which the costs required for their running are included. Previously there was much discussion on the running cost consequences of capital investments. It is perhaps even more justified to discuss their role in institutional development.

This reasoning is generally applicable to all institutional development, whether aid is involved or not. The situation in Mozambique can be seen as extreme and the university as a special case. However, even in countries as relatively well off as Namibia and Zimbabwe we have during the years since independence observed the building up of a great number of institutions of which almost all have proved to be underfinanced from the point of view of running costs. The difficulties in providing the incentives required to retain the personnel trained within the institutions are well known. A striking example is the dialogue which Sida has conducted in recent years with the highway authority in Zimbabwe. For a considerable period of time this very successful training programme never led to any strengthening of the actual institution as the employees left as soon as they had acquired a marketable training.

The question of a holistic view of institutional development is relevant also in South Africa. As a result of the very strong political pressure under which the government and administration now must act, decisions are easily taken to create new or expand existing institutions without sufficient attention as to whether the resources are available to run them effectively in the future. In South Africa the question of running costs will perhaps be even more important than in other countries. Whereas it can be claimed that in a poor country such as Mozambique there are special reasons for financing these costs with aid funds, there can never be any question of outside financing in a country as relatively rich as South Africa.

3) Salaries and other incentives for employees

Within the framework of running costs, salaries and other incentives constitute perhaps both the most important and the most difficult question. As has been shown above, the lack of local funding in many of the poorest countries means that the state institutions de facto are disintegrating. Since costs for salaries represent the absolute majority of the costs for running an institution, this has led to the fact that salaries which are paid are no longer sufficient to cover the costs of living even for a high level civil servant.

This has meant that a large number of civil servants, often the most competent, leave the civil service, in the best case for the private sector or a similar job in a neighbouring country, in the worst case for Europe or the USA. The accepted number (UNDP) is that at present around 100,000 well educated Africans from sub-Saharan Africa are working outside Africa while as many "experts" from Europe and USA are working in Africa.

Aid organisations complicate the picture with the good intention of making "their own" programmes work. They give higher salaries to those who work for "their" projects, which further fragments the civil service and creates imbalances and injustices. Sometimes aid donors directly employ the most competent civil servants to work for or within their own organisations.

In such situations institutional development becomes even more difficult. What in fact happens is that expensive foreign experts are contracted to "advise and teach" the recipient institution while the institution's own personnel disappear as soon as they are fully trained.

The effect of this in Mozambique, Tanzania and Zambia has been shown above. In countries with a large white minority, especially South Africa, but also Namibia and Zimbabwe, there is an additional problem which accentuates this question. It concerns the salary difference between whites and blacks which existed before independence. If salaries are raised for the majority of blacks to the earlier white "elite" salary level, every attempt at budgetary discipline and balanced economic policy would be doomed to failure. On the other hand, to lower the white salary level or simply to be restrictive with salary increases leads to mass flight of educated personnel, something which Zimbabwe has experienced in a very acute form and which has already been noticed in South Africa concerning, for example, white doctors.

Consequently, the problems of salaries in the civil service are not easy to solve. There is however, no doubt that a solution must be found where educated local experts are paid what they are worth (and we are not talking of aid experts' salaries). This is a necessary precondition to be able to rehabilitate the most important institutions, not to mention the civil service in its entirety.

This question is at present being very much discussed internationally and a special organization has been created to deal with the building up of research and policy development institutions (African Capacity Building Foundation). As an experiment, smaller institutions (Policy Analysis Units) have been set up in a number of African countries with relatively great autonomy from the state and with the possibility of determining their

own salaries. The limited experience thus far indicates that educated Africans presently working in Europe can be convinced to go back to their country of origin by being offered relatively modest salaries on which it is possible to live (Tanzania and Uganda).

4) Brain Drain

Within the Southern Africa region there is a long tradition of considerable migration of people — mainly unskilled labour — over geographical and ethnic boundaries. Under the heading employment above the very mobile labour market was discussed with, in the centre, the South African mines, which have been an important factor for the region during a long period of time and whose future is significant for a majority of South Africa's neighbours.

During the past ten years and linked to the effect of the economic crisis on the economy, a new phenomenon has, however, become more important in the region. This is the attraction which the high salaries in particularly Botswana and South Africa, and to a lesser extent in Namibia, Lesotho and Swaziland, have for the surrounding countries and the rest of Africa. The number of well educated university teachers, doctors, technicians, economists etc. who have moved to these countries for good or for a longer period of time has increased rapidly. Although a number of studies and surveys of this phenomenon already exist, there are still as yet no exact statistics available. For the countries which gain advantages from this phenomenon it entails an increased development potential without large investment costs. For the countries which lose their personnel it is extremely costly and problematic. In this way, the university in Lusaka has reduced its number of Zambian teachers (senior lecturer and above) from over 300 to around 20 in a ten year period.

In addition, the loss of educated personnel to countries outside Africa continues. Those who move between countries in Africa are more inclined to return home after having saved enough or when the situation in the home country has improved. It is much harder to get those who leave Africa to return. There are, however, examples which show that it is possible. To support this type of repatriation there are a number of aid financed programmes, through, among others, the UN. However, good conditions, as regards both money and working environment, are required to get people to move back.

2.7 Civil Service Reform

The measures aimed at coming to terms with these "conditions" fall within what today is popularly called civil service reform. This is a case of recreating the state in those countries where the state has virtually fallen apart, or counter-acting such a tendency in those countries where this has not yet happened.

As discussed above, the effect of the economic crisis, together with the too strong emphasis on reducing the role of the state, has during the past decade been that the state in many African countries today lacks the preconditions for taking responsibility for its most important functions. In the region, this affects first and foremost Mozambique and Zambia, but even other countries such as Zimbabwe. In East and West Africa this phenomenon is widespread.

Civil service reform involves a holistic view of the state. This must be based on each and every country defining what role the state is to play, both in the form of drawing up the rules and ensuring that they are followed, and as regards the areas for which the state shall have direct responsibility. Important questions include the dividing line to the private sector, i.e. what is to be privatised and what not, the degree of independence in state organisations as well as the question as to whether and how decentralisation should take place and to what extent. Using the answers to these questions as a point of departure, an overall plan of action must be

worked out which will be the foundation for the practical restoration work. The plan should contain a realistic time schedule for the work with possible privatisations, building of independent (autonomous) state institutions, plans for the dimensioning of the civil service and for a realistic and tenable promotion and salary policy within the civil service – and all of this must be related to available financial resources.

Civil service reform has been discussed and given high priority over a long period of time. Several well worked out plans have been formulated – most of them by outsiders, primarily aid donors. The World Bank has been active, in part through the means of its Public Expenditure Reviews. UNDP has created a specific department which has concentrated on support to the working out of such plans. Several well formulated plans of this type have also been worked out by commissions in the countries themselves. Three of the best are the Nsekela commission in Tanzania (1987), the Public Service Review Commission in Zimbabwe (1989) and the Public Sector Analysis in Namibia (1994).

In spite of often well conceived plans (and if they had been put into effect most of the problems we meet today would have been solved), very little has been done in practice. The conclusions from e.g. the Nsekela commission could just as well have been written today, almost ten years later, and be equally relevant. The problem is that in the majority of cases the plans are suspended in a vacuum. The basic political decisions have not been taken, or in those cases where there are decisions they are not rooted in the society at large. A reform by the state cannot be implemented through plans from abroad. It must build on a minimum of consensus in the society where it is to be carried out. Decentralisation reforms cannot be carried out without those who decide on them and those who will take over responsibility for them accepting what is to be applicable and really believing in them. Privatisation cannot be put into practice if there is no willing and interested group of entrepreneurs who are prepared to take over the companies and run them efficiently and if the society does not accept that this group, which is the case in many countries, is almost entirely comprised of a national minority (“whites”, “Asians”, Lebanese or Chagga). This is also valid for all other important decisions on the principles which lie behind a civil service reform.

It is for this reason that the question of reconstruction of the state has perhaps been the reform which has been most difficult to carry out within the framework of structural adjustment programmes. Because of this all other more positive results can be jeopardised. Certain important institutions will always come under the state's responsibility. This applies, for example, to the judicial authorities, whose undermining can counter-act all the positive reforms in both the economic and political areas. Another example is the tax authorities. In several countries, such as Mozambique and Tanzania, state tax revenue has sunk to such a level that it has very little significance for public finance. A well functioning tax collection system is crucial if these countries will ever be financially self-sustaining.

The question of reconstruction of the state must continue to be given priority also in the future. That the state can deliver is decisive not only for economic development, but also to give legitimacy to the democratic process. It is a difficult process which requires difficult political decisions in each individual country. That it is possible, however, is shown by the development in Botswana and Mauritius, even if these countries have never had the difficult point of departure described above. A perhaps more hopeful example is Uganda. Even if we have not yet seen that the developments there will be lasting, certain significant decisions have been taken by the political leadership in that country after a comprehensive process of ensuring that they were well rooted within the society. A number of reforms are now in the process of being implemented.

Those countries which had a considerable, often well educated, minority at independence have had to undergo, and in some cases are still undergoing, a special type of reform. The point of departure for a number of these countries has been to avoid the “mistakes” which were made in Mozambique at independence i.e. the emigration

of almost the entire Portuguese minority, which entailed the country losing the majority of those with education. This was one of many reasons why it was therefore written into Zimbabwe's as well as Namibia's and South Africa's constitutions how the old bureaucracy was to be dealt with and which restrictions would apply for the reconstruction of the new state. This politically determined compromise seems to have met its political objectives but has at the same time proved to be both expensive and presented other problems to the new governments.

As the new government has acquired greater freedom of action it has been possible to introduce new types of reform. Zimbabwe has therefore begun its reform work with the report referred to above from the *Public Service Review Commission* as its point of departure. South Africa still finds itself at the beginning of massive reform work, whose result will be decisive both for the possibility of fulfilling the enormous expectations within the society in a cost effective way and whether the government will manage the democratic balancing act between different groups. As in Namibia, the problem is the fusing together of the various previous administrations which were divided both ethnically and geographically into a completely new organisation, based on nine new provinces. At the same time as the constitution in great detail determines how existing employees are to be treated. Today's situation can be summarised as an overdimensioned administration where too few of those with operative tasks are loyal to the new policies.

2.8 Decentralisation and civil society

I have shown above that it is necessary that reforms, which are to make full use of people and their competence, are well rooted locally. That is, however, seldom the case. The research which deals with structural adjustment programmes and why they only have had limited success points to the fact that they have not been properly rooted in society. It would, however, be wrong to say that attempts have not been made. Suffice it here to refer to the Arusha Declaration from 1968 and its emphasis on education and self-reliance. Similarly, all the attempted decentralisation reforms in Zimbabwe.

The problems lie in the implementation of reforms and the willingness to actually delegate power and responsibility. There is no doubt about the importance of delegation and decentralisation. At the central level the state can neither physically carry out all the undertakings required to introduce and implement sustainable development, nor can it by itself finance all these measures.

A discussion is presently taking place on federalism as a possible solution to the fragmented nation-State which is increasingly seen in many parts of Africa. Although the question of federalism is still very sensitive, it might in five to ten years time become the answer to the question on how increased decentralisation and efficiency within the civil service is to be achieved. The question is relevant in many parts of Africa, notably in Nigeria and the Sudan, but also for South Africa and some of its neighbours.

1) Real decentralisation of the state

By real decentralisation is here meant that the state not only delegates implementation to a regional authority under the central authorities, but that the regional or local authorities are given autonomy, i.e. the right to decision-making and also to raise their own incomes. This is not merely a question of efficiency, but to the very highest degree also a question of democracy. Decisions are moved nearer to those affected by them. This type of decentralisation has in practice rarely been implemented, even when countries in the region have worked with decentralisation reforms. Experiences from the decentralisation reforms in Tanzania give good examples of the problems that may arise. The major and frequently discussed reform in Tanzania, planned by McKinsey Consultants in 1972, was nothing more than a transfer of the central authorities to regional and district capitals. The reform which then followed in the middle of the 1980s was more basic. It failed because the local authorities

were never given their own funds or possibilities to collect taxes. In the same way, interesting experiences and conclusions can be drawn from the almost 15-year long decentralisation debate in Zimbabwe in which Swedish expertise has participated and acted as an impatient observer.

In the future it will be extremely important to find methods and real political acceptance by the people for true decentralisation of those tasks which can both be better dealt with and controlled at district level. Discussions are taking place in many countries and interesting attempts seem to be under way, e.g. in Zimbabwe, Zambia, Mozambique and South Africa. Examples of the form this may take can be given through historical experiences from Sweden and the "primary schools" which were owned, run and financed by the local community. Thus, those who were directly affected by the school could make demands on the school and ensure that these were fulfilled. Through paying for the school and teachers' salaries the local community could also see a direct relation between costs and performance.

An important question which affects the state in general, but which is also particularly important for the local administration, is the question of payment for those services provided for the population. Even here there has been considerable discussion and research. A pragmatic approach is called for. As large a proportion as possible of the local population should be able to use the different services at the same time as funding in some way must, in the first place, be sufficient to provide the services. In the region, as in other parts of the world, it is impossible to provide a ready solution for each individual case. Whatever the solution, it will, however, be important for the state to make sure that quality, equality between the sexes, ethnic and religious groups and regions are taken into consideration and possibly supported with funding earmarked for the specific purpose.

2) *Civil society*

As an important part of the resistance to the former colonial power in the majority of the countries of the region and in particular in South Africa various community-based associations grew up and were active. In several cases they took over activities which the state, especially the local authorities, would normally have dealt with. What such voluntary groups can achieve both in the form of mobilisation and practical implementation is well known and confirmed by many. From Swedish history we also know how important the so-called popular movements can be to pressurise the authorities, but also for the implementation of activities of importance for the society. Groups can have different backgrounds and build on geographical proximity, religion, common cultural ties or various kinds of common interests. Political parties and their organizations can also be responsible for tasks which are usually the responsibility of the state. There is interesting research from Zambia which indicates that the local, both administrative and to a certain extent judicial, structure under the previous one-party regime was built on the basis of the party structure. With the fall of the one-party state the whole administrative structure also collapsed and has hitherto not been replaced.

The retention and strengthening of these voluntary organisations is also important for sustainable development in the future. After independence it happens all too often that the state is expected to take over their responsibility. Even those who had worked very actively with development questions before independence assumed a wait-and-see attitude. The well-built structures of those organisations were thus allowed to quickly disintegrate and have become difficult to re-create. The state often contributes to this through its interest in controlling development. In too many cases the state has nationalised projects (schools, health centres etc.) financed and run by private organisations, something which it later has deeply regretted. At present, it is interesting to see how South Africa will handle this question. Finding a *modus vivendi* to make it possible to build on all the involvement and skill which has been shown to exist throughout the country is of crucial importance; first and foremost, to fight poverty and to achieve a more equal society.

3) Private and state companies and services

A third category of actors to which the state can delegate certain activities is the private sector and the different kinds of more or less autonomous state companies and authorities. Without wishing to take up the ideological discussion behind the question of privatisation, it can be claimed that the state functions better in certain areas and less well in others. Moreover, many think that it is difficult to act as a controller and judge of quality at the same time as being the producer. The ability to pay for the trained personnel which is lacking makes this question even more relevant. On the other hand, as mentioned above, many difficult decisions have to be taken before carrying out privatisations. They must, however, be carried out with the utmost care and be based on good political grounds if they are to be successful. Unfortunately there are all too many examples of privatisations being carried out without sufficient care.

It is equally important for the activities which remain under state management to be planned and organised in a way which enables cost effective production/service. Increased autonomy and less political interference are of great importance in this connection. Autonomy permits companies to determine their own prices and thus gives them the possibility to be self-sufficient and reduce the need for subsidies. It also enables individual and competitive wages, which allows the companies to keep their trained personnel within the company and thereby in the country. I am of the opinion that as many as possible of the state's activities should be given the greatest possible autonomy, even in those cases where they are not self-supporting, simply to have the opportunity to set competitive wages etc. The state must however retain its regulating and controlling power, which will increase in importance in relation to the level of autonomy granted to the state companies. In recent years we have seen several positive examples of what autonomous state companies or authorities can look like, e.g. the telephone companies in Namibia and Mozambique. It is important to consider these experiences when planning future measures.

3. COMPETENCE BUILDING IN THE FUTURE — A SYNTHESIS

Important and difficult political decisions are needed for competence to be developed in the Southern African region in such a way that it will be the engine of development it has been, in other regions. In the ideal case and with the most favourable scenario, all necessary decisions will be deeply rooted among those who are to carry them out and are affected by them. In the most negative scenario, “development” continues as it is today in the weakest countries of the region, i.e. the legitimacy of the state and government remains weak and the central political decisions are not sufficiently rooted in the society to be accepted and implemented.

In all probability reality will lie somewhere between these two extremes and be different from country to country. Even in the most negative scenario a certain competence building will take place. As described under basic education above, the “market” will take over unless political decisions and initiatives are taken. There is a great demand for education of different kinds in every society and those who can afford it can acquire it. The rapid expansion of private education in recent years, especially within secondary education, but also at a higher level (private universities are at present being built and planned in both Zimbabwe and Mozambique) and vocational training, are proof of this. The problem is simply that without state involvement and control this development will be completely unmanaged and have negative consequences for equality between classes, sexes, ethnic groups and regions, create increasing tensions within the society and might well, therefore, in the long run lead to social and political unrest.

What the two extreme scenarios could involve is summarised below under seven headings:

1) South Africa's significance for the region

When talking about the future for the Southern African region the question of the relationship between South Africa and the other countries in the area comes immediately into focus. With its economic, military and political domination, South Africa has always had great influence on the region and will, with all certainty, continue to do so in the future. Until the fall of the apartheid regime its role was primarily destabilising and negative, while hopes today are that it will be stabilising and positive. Good development in South Africa is expected to lift the whole region. As shown above, where competence building is concerned this is not so straightforward. A rapidly expanding South Africa acts as a magnet which attracts capacity and educated personnel from neighbouring countries. In a positive scenario common agreements would be drawn up between South Africa and its neighbours, e.g. within the framework of SADCC, regulating the movements of both skilled and unskilled labour between the countries. Even if it is difficult to completely stop the brain drain of well educated and professionally trained personnel without simultaneous reforms in the countries in question, to compensate for its recruitment of educated personnel, South Africa could open its educational institutions to the neighbouring countries and thereby increase the number of those with further education in the respective countries and in the region as a whole. If these questions remain unregulated they could lead to difficult confrontations (cf. the on-going debate in South Africa concerning labour immigration from the neighbouring countries) and impede development in the region. This question may appear to be minor, but is probably extremely explosive, especially as regards the comprehensive brain drain at present taking place from e.g. Tanzania, Zambia and Zimbabwe to South Africa.

2) *Available resources and the dimensioning of the educational system*

In the discussion above the question of dimensioning, quality and relevance, particularly of formal education, was discussed at length and in this connection their importance was strongly emphasised in relation to available resources. There are many other factors which determine the dimensioning and content of formal education, not least the right to education for every citizen of a democracy. This seems to be the only way to re-create legitimacy for the formal school in the eyes of the pupils and parents who will benefit from it. This is not the case in a school which is underfinanced. Without a clear change in this area the number of pupils who attend the formal schools will continue to decrease, the teachers will to an ever greater extent be forced to take fees for their services direct from the pupils and those who remain will only be those who can afford to pay. At the same time, more and more private alternatives appear which attract the best teachers and other resources. More and more individuals fall outside the system. Awareness of this problem does, however, appear to have increased considerably of late and there is a certain hope in several countries of the region that the most pessimistic scenario will not materialise.

3) *Alternatives within the public sector*

The case has been presented above for increased autonomy and different forms of decentralisation to increase efficiency within the civil service but also – and this is even more important – for political decisions to be made nearer to those who are directly affected by them. If the state is to be reconstructed and acquire increased legitimacy this rooting of decisions within society is essential to ensure practical results, as these decisions are very difficult to take. In a pessimistic scenario, i.e. without any concrete decisions being made, these opportunities are not grasped, to the detriment of everyone. However, today there are plans and practical experiments in almost all the countries of the region regarding how progress is to be made in this area.

4) *Alternatives outside the public sector*

All forces should be used to develop competence within a society. Several examples of these forces have been pointed out above—all organisations of civil society such as churches and mosques, domestic and foreign private organisations, individual initiatives and companies etc. In the development literature new partnerships are increasingly discussed. Even here courage and imagination are required. It is difficult to see, for example, how South Africa will be able to meet all the expectations placed on the government from the majority of the population if these forces are not fully utilised. Unfortunately, development in most of the countries has passed through a phase where these actors have been resisted and in many cases completely removed from the scene, after which it has been discovered that they were really needed. It is then difficult to re-build the partnership. My hope is that based on the negative experiences of the past these alternatives will be exploited to a greater extent in the future. For South Africa this is perhaps more uncertain than for the other countries, at least in the short term.

5) *Education and work—interesting new combinations*

Much has been written on this subject but little has been done in practice. The attempts at diversifying formal education which have been made have foundered on the costs which have been all too high. The same applies to attempts at running state vocational schools. Experiences from both Asia and Latin America are, however, that, in particular, different kinds of training connected with the working life have been decisive factors for rapid development. In this area too, initiative and courage are required to try out or allow new ideas to emerge. South Africa would here be able to act as a leader in the region.

6) *Capacity building within organisations*

In spite of all the experiences and problems encountered in this area in the past it seems that awareness of the importance of competence building within the framework of institutional development is still very small. Roads, ports, power stations, colleges and hospitals are built and the technical descriptions of them are several metres thick, whilst the descriptions on how those who are to maintain the investments are to be trained and given an adequate working environment are very brief indeed. All those involved are just as surprised each time the roads collapse or the companies cannot be run because of lack of trained staff, suitable organisation and other important resources. This question is perhaps the one on which I am most pessimistic among all the questions concerning the future I have taken up here. If it is not understood that development is what happens in and around the people who comprise respective organisations and projects, rather than the buildings and equipment, there will be no permanent development. Included here is also the question of continuity, i.e. the retention of those who have been trained within the area for which they were trained. This is obvious when stated, but in practice usually ignored. If the most negative scenario is to be left behind, awareness of this problem must be allowed to take root and develop.

7) *Holistic view on institution development*

The last of the questions which I would like to present as decisive for competence building in the future is the question of seeing institutional development holistically and not only in the form of its parts. If running costs are ignored, as was often the case in the past, all other contributions will only be effective to a limited extent. This is a point of view which in the first place is directed towards the recipient countries, but also towards the donors. Running costs, i.e. the financing of salaries and incentives to the employees and the environment in which they are to work, is crucial if the institution in question is to develop or not. In the most negative scenario, today's "development" will continue, with the result that public institutions will be illegitimate and ineffective. In the most positive scenario, the respective countries will once again have built up an efficient bureaucracy which can deal with and be responsible for the most important of the tasks which lie with a state administration, to the benefit of democratic and economic development.

SOUTHERN AFRICA: ECONOMIC DEVELOPMENT TO 2015

by

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November 1995

1. INTRODUCTION

This study, commissioned by the Swedish International Development Cooperation Agency as part of its longer term strategic planning, profiles economic prospects and probable trends in Southern Africa to 2015. For a region emerging from a decade or more of internal conflict and wrenching economic retrenchment, and with further far-reaching changes portended in the political, economic, and social fabric of South Africa, its dominant economy, a study of this sort cannot presume to predict the future. Rather our aim is to identify prospects for economic growth, based on the likely outcomes of current policies and trends in the global economy and within the region. As would have been the case in a formalised economic modelling exercise, we attempt to improve the plausibility and hence the value of our analysis by focusing on a limited number of variables. These have been selected with three features in mind. First, they are reasonably "robust" in terms of their likely behaviour over the longer run. Secondly, they can set out clear parameters with respect to both the rate and type of growth necessary to alleviate poverty. Thirdly, they provide a basis for guiding Sweden's development assistance strategy, in its multilateral, regional, i.e. European Union and Nordic, and bilateral contexts over the medium and longer term. Even so, a cautionary note is warranted since the region, as a whole, will remain highly exposed to forces beyond its control. One is the likelihood of drought in an area where, over the period covered by our study, agricultural production will continue to exercise a major influence over individual living standards for most of the population as well as changes in aggregate income. The second is the global economy; sharp fluctuations as well as longer term trends in commodity prices will have a significant impact on economies that will remain heavily dependent on the production and export of commodities. Hence the region's economies will remain exposed to such "exogenous" and largely unpredictable shocks because of their openness, small size and thin economic and financial infrastructure.

Section two of this paper sets out the context for economic development over the next two decades. First, we highlight essential structural features of the regions' economies. Secondly, we determine, in a normative vein, a rate of growth that is necessary, if its inhabitants are to experience an improvement in their living standards and the overall incidence of poverty is to be reduced. We do so in two steps: first by examining the implications of demographic trends for growth of the labour force and secondly by determining the rate of growth that is needed to provide employment for *new entrants* over the next 20 years. Whilst employment does not necessarily translate into a major and more equitably distributed rise in per capita incomes, the opposite, namely a steady increase in already high levels of unemployment and underemployment, *does* imply that there will be no significant reduction in the incidence of poverty. We then proceed to examine whether this accelerated rate of growth is feasible and if so, how it can be sustained over the next two decades. Answers to these questions help us identify for virtually all of the region's economies the most promising and also most plausible scenario for longer term growth and change in economic structure.

Section three looks at this scenario for economic development from a regional perspective in terms of three salient features. The first is the dominance of South Africa, not only in terms of its economic size, but the depth of its economic infrastructure and capacity to absorb technological change. In what ways does this dominance affect prospects for growth and structural change in the rest of Southern Africa? In this respect, we pose two very different questions. The first is the impact of "failed development" in South Africa on the rest of the region. The second is whether more rapid growth in South Africa necessarily translates into equivalent or even greater gains for the other economies of Southern Africa. Our second perspective stems from the region's economic fragmentation. In spite of changes in formal political structures and significant past investment in physical infrastructure, most national economies remain very loosely bound to each other in terms of trade in goods and services. Will this situation change in future? *Must* it change, as a necessary condition to achieve rapid and sustainable growth? Our third perspective is the potential benefit, in terms of accelerated growth and structural change, from regional collaboration in certain key sectors.

Following on this analysis, section three draws inferences for Sweden's longer term strategy. The overall prognosis is favourable, both with respect to the region's prospects and the impact of a balanced and flexible Swedish strategy. Regarding the latter, we reach three major conclusions. The first is that previous and current Swedish efforts, in conjunction with others, have generally created a favourable context for more rapid and sustained growth in future. Nonetheless, some changes in short term policies, especially in a multilateral context, are necessary. Secondly, the mix of policy instruments will change. Although more conventional ones, falling under the rubric of "aid", viz. concessional transfers of financial and human resources, will remain important for some national economies, others that focus on less "traditional" concerns, such as regional security, technology transfer, social innovation, foreign investment, and especially trade will become more significant in future as the needs of the region necessarily evolve as a consequence of economic growth and structural change. Our third principal conclusion is that the combination of evolving needs and transformative technologies will result in a major change in the way development assistance is programmed and implemented. By virtue of its past involvement and internationally recognised commitment to the region, Sweden can play a leading role within the international donor community in introducing new instruments and more effective approaches.

2. ECONOMIC DEVELOPMENT: PARAMETERS AND PROSPECTS

As illustrated by the information in Table 1, the countries of Southern Africa differ in terms of expanse, economic size, population, and average income. Nonetheless, this table and table 2, which contains information on exports, highlight two features pertinent to their future development. The first is the dominance of South Africa. The second is their dependence on commodity exports.

Table 1: Southern Africa: Basic Indicators

Country	Population mid-1993	Area ('000 sq. km.) per capita % pa 1980-93	GNP per capita Dollars 1993	GNP Growth
South Africa	39.7	1221	2980	-0.2
Zimbabwe	10.7	391	529	-0.3
Zambia	8.9	753	380	-3.1
Tanzania	28.0	945	90	0.1
Mozambique	15.1	802	90	-1.5
Namibia	1.5	824	1820	0.7
Malawi	10.5	118	200	-1.2
Botswana	1.4	582	2790	2.4
Lesotho	1.9	30	650	-0.5
Swaziland	.88	17.4	1190	2.3

Source: World Bank, World Development Report 1995

As important as the size of its GDP is South Africa's modern and deep economic infrastructure, which is more advanced than might otherwise be suggested by average per capita income, which places it in the "middle tier" of developing countries. Of particular relevance are its highly developed transport network, sophisticated financial system, well established external commercial links, and technological capacity in such key areas as agricultural research, mining, energy, and informatics. Hence, the country's potential to diversify its economic base is considerable, notwithstanding the very considerable challenge of redressing major inequities in income and opportunity over the short and medium term. This capacity, moreover, is one that could prove singularly advantageous to the rest of the region.

Table 2: Southern Africa: Exports

Country	Total Exports 1993 (mln \$)	Annual % Growth in Exports 80-93	Fuels, minerals, metals as % total exports in 1993	Other primary commodities as % total exports in 1993
South Africa	22873	5.4	16	11
Zimbabwe	1500	-1.1	16	48
Zambia	1168	-2.6	*	*
Tanzania	420	-0.4	**	**
Mozambique	132	-6.9	14	66
Namibia	n.a	n.a	n.a	n.a
Malawi	320	2.1	0	94
Botswana	1725	6.7	n.a	n.a
Lesotho	109	n.a	n.a	n.a
Swaziland	n.a	n.a	n.a	n.a

Note: This information has been obtained from the World Development Report, 1995. Data for members of SACU are either incomplete or not obtainable.

* No figures cited for 1993. 1970 figures were 99% and 1% respectively.

** No figures cited for 1993. 1970 figures were 7% and 80% respectively.

The second feature is the dependence of the region, including South Africa on the production of commodities. Although South Africa does possess a much more diversified economic structure and Zimbabwe's industrial sector is also relatively large, all of the region's economies remain heavily dependent on their resource base, especially in terms of exports.

Referring to classical theory of economic development, we can posit that South Africa stands at the "second stage", namely advancement from a diversified structure for *primary* production to the production of manufactures both for domestic consumption and export. In this respect, we note that the post-apartheid government has endorsed the export oriented growth strategy adopted initially by the preceding government. As articulated in the most recent government policy documents on trade and industrial strategy, there is broad consensus that the policy of industrialisation through import substitution, which in fact can be traced back more than 70 years, has run its course. Furthermore, export oriented growth is considered consistent with the broader objective, as articulated in the RDP, of redressing inequities and expanding opportunities for economic advancement by the black majority. Moving well beyond endorsement of the GATT offer negotiated by the previous government, the current administration is proposing major strategic measures. Among the more significant:

- Replacement of export subsidies by other export facilitating measures
- A progressive rationalisation and dismantling of protection to promote competition and structural change
- A "social contract" between unions and industry
- Major investment in adult education, industrial training and retraining
- A variety of initiatives to promote medium and small scale enterprise

Seen in the light of earlier concerns with regard to post-apartheid policies, these initiatives should prove instrumental in setting the pattern of future development, not only for South Africa, but for the rest of Southern Africa as well. Nonetheless, there remains, especially over a twenty year period, the possibility of reversal or at least a slowdown in the pace of implementation. A future administration, bowing to populist pressures, may opt for short term redistributive measures that in undermining macroeconomic stability and inhibiting longer term investment, constrain implementation of this longer term growth strategy. Another possibility is a major adverse movement in the terms of trade before exports have been sufficiently diversified to cushion their full impact. In such circumstances, reduced import capacity could induce a future government to halt liberalisation measures and dampen investment in "non-traditional" exports. A key consideration, therefore, especially in terms of productive investment leading to a more diversified economic structure, increasingly less reliant on primary production, is the likelihood of "policy reversal" during this critical transitional phase. With respect to domestic political pressures, stemming from concerns of a populist nature or advanced by powerful interest groups adversely affected by this liberal and export oriented strategy, little can be stated with certainty regarding their likelihood of success. On the other hand, certain actions can be taken to "lock in" measures that reduce the likelihood of a major reversal in policy by future governments. Undoubtedly, such considerations did play a role in earlier GATT offer and its consequent endorsement by the post-apartheid government and loom large in current negotiations for an Associate Agreement with the European Union.

Accelerated growth and economic diversification, resulting from a liberal and export oriented policy inevitably raise the question of its likely impact on the rest of the region. In anticipation of our more detailed discussion in section 3, we highlight two. The first is that South African success will present a powerful model that other economies in the region will seek to emulate, much as post-war Japan offered a compelling example for the following generation of Newly Industrialising Countries of East and South East Asia. The other is whether more trade with South Africa, in *proportional terms*, is either likely

and/or necessary to promote more rapid economic growth and structural change in the rest of the region. Undoubtedly, accelerated South African growth will expand its domestic market for processed products and manufactures, including those originating in the region. However, there are no grounds for presuming that trade between South Africa and economies in Southern Africa will necessarily grow any faster than would be predicted by "gravity models" that formally incorporate such features as geographical proximity and average income. Furthermore, as we shall illustrate in the following section, a faster than otherwise predictable growth in trade is not necessary precondition for development in the rest of the region. Its longer term future will be closely linked to South Africa's but in other ways.

To elucidate prospects for accelerated growth and structural change among the diverse countries comprising the rest of Southern Africa, we first look at the size and extent of their resource base.

Table 3: Development Prospects

Category A	Category B	Category C
Zimbabwe	Botswana	Lesotho
Tanzania	Namibia	Swaziland
Angola		Malawi
Mozambique		Zambia
*Zaire		

In this regard we can distinguish several important features. The first is that some economies, regardless of current differences in per capita income, have a diversified and rich set of renewable and non-renewable resources that greatly enhance their *potential* for accelerated growth. Falling within this first category (A) are Zimbabwe, Tanzania, Angola, Mozambique and – although outside the formal purview of this study – Zaire. In a second group are two economies, Botswana and Namibia, that have a significantly narrower *range* of resources, both in terms of mineral wealth and agriculture. Nonetheless, prudent management of their resource base could facilitate diversification of their economic structure in future. The third "residual" category (C) consists of two sub-groups. The first, comprising Lesotho, Swaziland and Malawi, have few natural resources and also limited prospects for economic diversification, *except* through rapid growth of their immediate neighbours and significant improvement in economic infrastructure in the rest of the region. The second, Zambia is a special case. Immediate prospects for reducing the economy's overwhelming dependence on copper appear very limited because of a massive debt problem. Its satisfactory resolution is a necessary but by no means sufficient condition for a resumption of longer term growth since the magnitude of change in economic structure *in the short term* as a precondition for resuming rapid economic growth may well lie beyond both its capacity and that of the international community. Hence, Zambia's shift to a more promising pattern of development may lag considerably behind that of other countries in the region.

This categorisation, we must stress, focuses on *prospects* for development, based on a plausible longer term strategy of sound macroeconomic management, further economic liberalisation, and rapid expansion of commodity exports over the coming two decades. Our intention is *not to forecast* the likelihood of success of any or all of the region's economies. Clearly actual outcomes will depend on many factors that cannot be predicted or even anticipated at present. First and foremost, is successful avoidance of conflict and major civil disorder. A second is the commitment of governments to rapid economic development and hence to sound and consistent economic management. A third is the international economic environment. Continued global growth and the absence of major fluctuations as well as a significant longer term decline in the terms of trade will

offer benign conditions for steady economic growth and change. With respect to commodity prices we do note that most analyses do not foresee a further decline in the real prices of the principal commodities exported from the region. On the other hand, they do not envisage any significant rise either, due to slower global economic growth, greater efficiency in the use of raw materials, and increased supply in other parts of the world.¹ A fourth is natural disasters, in particular major and prolonged drought, especially during the first half of the period under review. That a major drought will occur seems a reasonable assumption. Whether countries are prepared to strengthen their capacity to cope with it through collaborative measures is another. Finally, we recall our earlier discussion concerning the region's dependence on the outcome of current changes in South Africa and its longer term development strategy

Having presented a plausible strategy for economic development that has been further qualified in terms of differences among countries in prospects for growth and structural change, we turn to the question of a feasible rate of growth over the long term. There are two ways of tackling this issue. One approach is to estimate a longer term "trajectory" for each country, drawing on various explanatory variables to approximate economic potential, major constraints (overall size, physical access to major markets and suppliers), growth in inputs and productivity, and global economic trends. From this trajectory, we can then attempt to draw inferences with respect to the alleviation of poverty and improvement in living standards, major aims of development assistance. Unfortunately such trajectories become increasingly less credible as one increases the number of explanatory variables and extends the period of analysis. Furthermore, there still remains the question of what can be drawn from any particular estimation with respect to the changes in living standards. Hence, we have adopted the opposite approach. To approximate poverty alleviation, we have selected employment. Whilst employment does not necessarily guarantee an improvement in living standards, we can with reasonable confidence presume that growing *unemployment* and underemployment over the period in question does imply no significant improvement in living standards for a significant proportion of the population. We then proceed to ask what rate of economic growth is necessary to ensure that unemployment does not *increase* from the currently very high levels present in most countries in the region. Finally we examine whether this *desirable* rate of growth is plausible, both in terms of the strategy posited earlier and the resources that can be mobilised from domestic and external sources.

We begin by looking at demographic trends, which in turn offer reasonably robust estimates of the likely rate of growth in the labour force over the period in question. Table 4 sets out population growth rates, both actual and estimated, for Southern Africa, from 1960 through 2025.

¹ See for example ADB *Economic Integration in Southern Africa*, Volume 3.

Table 4: Population Growth Rates 1960 through 2025 (annual averages)

	60-70	70-80	80-90	90-00	00-10	10-20	20-25
Angola	1.50	2.27	2.77	3.58	3.05	2.86	2.60
Botswana	2.62	3.77	3.22	2.91	2.62	2.10	1.64
Lesotho	2.03	2.33	2.70	2.49	2.37	2.07	1.78
Malawi	2.50	3.19	4.48	2.79	2.70	2.90	2.62
Mozambique	2.33	2.56	2.62	3.19	2.72	2.47	2.27
Namibia	2.50	2.78	3.05	3.16	2.88	2.57	2.21
South Africa	2.59	2.78	2.54	2.36	2.01	1.62	1.30
Swaziland	2.54	3.04	2.89	2.74	2.58	2.22	1.91
Zambia	2.92	3.20	3.56	2.75	2.67	2.86	2.65
Zimbabwe	3.27	3.08	3.39	2.87	2.45	2.22	1.81
Southern Africa	2.58	2.82	2.93	2.88	2.61	2.42	2.20
Africa	2.64	2.81	2.97	2.91	2.69	2.37	2.18
World	2.05	1.86	1.76	1.69	1.39	1.17	1.03

Source: Institute for Futures Research as presented in Du Toit, J. and Falkena, H.B. *op cit*.

These projections do take into account probable deaths due to AIDS although not, of course, the economic cost implicit in the loss of highly productive people, in the care of dependants and the cost of treatment.² These projections, together with a very young demographic profile (over 40% of the population under the age of 14) point to a rapidly expanding labour force, whose rate of growth of growth is expected to rise over the next twenty years. ILO estimates in table 5 for the period 1980 through 2010, in conjunction with demographic projections indicate that growth from 2010 through 2020 is highly unlikely to decline.

Table 5: Labour Force Growth, 1980 through 2010

Country	1980-1990	1990-2000	2000-2010
Angola	1.8	2.2	2.5
Botswana	3.3	3.4	3.7
Lesotho	2.0	2.2	2.3
Malawi	2.6	2.7	2.8
Mozambique	2.0	2.0	2.3
Namibia	2.4	2.8	3.2
South Africa	2.8	2.8	2.8
Swaziland	2.3	2.6	2.9
Zambia	3.3	3.6	3.9
Zimbabwe	2.8	3.0	3.3

Source: ILO (1986) as presented in ADB *op cit* table 9.1

Note: Although comparable data series could not be obtained for Tanzania, current demographic trends imply an expansion annually in its labour force of approximately 3%.

² Estimates vary concerning the impact of AIDS on total population size, but suggest that the population of Central and Southern Africa may be about 2.8% less in the year 2000 and up to 4% less in 2005 than in the absence of AIDS.

The capacity of economies to absorb this annual growth in the labour force through creation of employment in the formal sector has been steadily declining since the 1960's. Data from South Africa indicates that "absorptive capacity" in this sense has steadily declined from 63% annually for 1970-75 to only 9% in 1985-90. Undoubtedly this precipitous decline can be explained by retrenchment of the public sector, rising real labour costs and very slow, or negative growth in GDP since 1980. Similar data cannot be obtained for other economies. Nonetheless, assumption of a long term employment elasticity, viz. percentage increase in employment relative to a 1% increase in GDP, in the order of 0.5% appears plausible for the following reasons: a steady rise in labour productivity; a slower rate of growth than in the past in public sector employment; and limited scope for job creation in primary production and ancillary activities. At the same time this rate reflects, at the upper bound of the estimate, both the labour intensive nature of agricultural production and services, particularly trade, along with growth in small and medium scale enterprise.

Our data on longer term growth in the labour force suggest that its annual expansion will range from 2.3% to 3.9% across the region. Adjusting for the relative size of South Africa (with a projected growth of 2.8%), a region wide average of 3.0% appears reasonable. Taken in conjunction with an employment elasticity of 0.5%, an estimate that may well err on the optimistic side, we can infer that an average annual real growth in GDP of *at least 6%* is necessary if the level of *unemployment* is not to increase from the already high levels found in most countries in the region, including South Africa where its current rate among black South Africans exceeds 40%. Put somewhat differently, our figures imply that there will be no significant alleviation in poverty or expanded scope for personal economic advancement unless the economies of Southern Africa grow, on average, by at least 6% between now and 2015. Given the lower employment elasticity in South Africa, it would have to grow by an even faster rate, probably closer to 7% annually, if employment and underemployment are not to increase from their already high levels.

Is this rate of growth attainable and sustainable?

Examples from Asia and Latin America, and closer to home, from Botswana, suggest it is feasible especially where, as in the case of most of Southern Africa, absolute size of the national economy is small. Nonetheless data on past growth in GDP, and also recent levels of domestic saving and investment do cast serious doubts on whether this rate of growth can be achieved and *maintained* over an extended period. For all of the economies in the region, the average rate of growth in GDP has been lower over the past decade than in the preceding one, indeed often negative on a per capital basis. A similar decline can be observed with respect to rates of domestic investment and savings. Juxtaposing the currently low level of saving with the much higher rate of investment needed to attain and maintain growth in GDP in excess of 6% annually points to a major gap in resources that probably could not be filled from external sources, notably development assistance and private investment. Hence, we might quickly conclude that a rate of growth sufficiently high to accommodate the *very probable* increase in the labour force over the next twenty years lies beyond the capacity of most economies in Southern Africa, including South Africa. This conclusion would imply, at the very least, that there will be no substantial progress in alleviating poverty and improving living standards between now and 2015.

Table 6: Southern Africa: GDP, Investment and Savings

Country	GDP growth 1970-80	GDP growth 1980-93	Gross domestic Investment 1970	Gross domestic Investment 1993	Gross domestic Savings 1970	Gross domestic Savings 1993
Mozambique	na	1.0	n.a	41	n.a	-11
Tanzania	3.0	3.6	23	51	20	10
Malawi	5.8	3.0	26	12	11	2
Zambia	1.4	0.9	28	15	45	14
Zimbabwe	1.6	2.7	20	22	21	17
Lesotho	8.6	5.5	12	76	-32	-42
Namibia	n.a	1.3	n.a	10	n.a	4
Botswana	13.5	9.6	42	n.a	2n.a	
South Africa	3.2	0.9	30	15	27	19

Source: World Bank. World Development Report 1995

Note: no data were provided for either Angola or Swaziland

This conclusion may be unnecessarily pessimistic for the following reasons. First, in some countries, the past decade has been marked by economic retrenchment associated with a drop in GDP and the level of investment, especially by the public sector. Other economies, notably Angola and Mozambique are still undergoing rehabilitation from prolonged internecine conflict. South Africa's figures reflect the cumulative stifling effects of apartheid from within and sanctions from without. More recently, investment in some other countries has been adversely affected by the uncertainty caused by a large debt burden, accompanied by major destabilising shifts in macroeconomic policy. More generally, the low rates of growth and investment reflect the adverse longer term results of misguided policies biased toward import substitution and a dominant public sector. Hence, past trends may be misleading in terms of what is can be achieved by the region's economies in future.

Nonetheless there remains the unsettling question of domestic savings. These are low not only, as we would have anticipated, for those economies with low per capita incomes, but for others as well. Indeed the 1993 figure for South Africa is about 4% higher than the average over the preceding five years and may well decline next year due to the accelerated government expenditure on basic needs. There are, however, grounds for presuming that the data on recorded savings may understate their actual level as well as the potential for increasing them. These include the existence of a large "underground" or "grey" economy, long term dissaving by the public sector, in particular state enterprises, and the cumulative effects of economic stagnation. In future, domestic savings could be increased through more prudent public sector management, expanded opportunities for private investment, and a progressive deepening of the financial system. Hence, we would conclude that the financial resources implied by our growth rate could be obtained through a combination of increased domestic savings, foreign investment, and external assistance, with the latter playing a progressively less important role over the medium and longer term.

Even though our accelerated growth rate appears plausible in terms of financial aggregates, we must consider how it would be attained in terms of "real" economic activity. With respect to South Africa, we have already noted that it intends to pursue a liberal, export oriented policy aimed at progressive diversification and deepening of the country's economic structure. Among the factors central to a successful outcome are the following:

- Maintenance of a benign macroeconomic policy environment including a non-appreciating exchange rate, real interest rates sufficiently high to stimulate savings but not repress investment, and a manageable public sector deficit and debt.

- Major investment in training, retraining, adult literacy and "social goods" such as housing and health.
- A social contract between organised labour and industry that results in wage increases consistent with gains in productivity.
- Steady growth in factor productivity through investment in human resources, capital equipment, economic infrastructure, research and development, and technological innovation
- Expanded access to established and new markets for both traditional and non-traditional exports
- No major adverse shifts or destabilising fluctuations in the terms of trade, and in the prices of mineral exports in particular
- Successful implementation of current policies for promoting exports, rationalising and reducing protection against imports, and liberalising economic activity
- Major increases in the productivity of suppliers of key inputs, in particular electricity, telecommunications and transport through privatisation and/or increased competition

In contrast to South Africa, the other economies of Southern Africa will still be progressing to the point where they can move into this "second tier" of development typical of a newly industrialising economy. Hence, faster growth will be realised through more effective use of a resource base, comprising minerals, agriculture, and fishery, both in terms of exports of raw materials and processed goods. A partial exception is Zimbabwe by virtue of its relatively large manufacturing sector, established during the UDI period. Although it will remain heavily dependent, as at present, on commodity exports, movement "up" the "value added chain" will be more rapid.

Returning to the taxonomy set out in table 3, we would conclude that growth of 6% or more can indeed be achieved by those countries in category A. They are characterised by a large and diversified resource base both in terms of mineral wealth and agriculture/fishery. The potential for developing strong agro-industrial sectors seems particularly promising. For countries in category B, namely Botswana and Namibia, prospects for diversification appear more constrained because of a small population and limited potential in agriculture (except for the offshore fishery in Namibia). Nonetheless, existing linkages and proximity to South Africa should create opportunities for the development of secondary industry and services. Two countries in our "residual category" (C), namely Lesotho and Swaziland should be able to achieve more rapid growth, in spite of a limited resource base, by virtue of their close economic links with South Africa. Malawi's prospects, in contrast to the other two, appear more limited. Nonetheless, as we shall observe in the following section, more rapid growth also seems possible if there is greater collaboration in the development of the region's economic infrastructure.

The remaining country in this third category is Zambia. Its future prospects are uncertain because of an unsustainable debt burden. As noted most recently by the World Bank "*The balance of payments position, even under the most optimistic scenarios, is expected to be so tight that under the most generous Paris Club terms currently implemented, Zambia will continue to transfer nearly 10% of its domestic production abroad as debt service for the remainder of this decade and beyond.*"³ Unless this debt burden is reduced substantially, the country will be unable to attain a rate of growth sufficient to accommodate an annual increase in the labour force of over 3.5% for the foreseeable future. This scenario not only points to a continuing low rate of growth, but a progressive rise in the incidence of poverty. Whilst Zambia may represent the limiting example of external indebtedness, we shall return to the more general question of debt and structural adjustment policy in our discussion of development assistance policy in section 4.

³ World Bank, *Trends in Developing Economies, 1995* Volume I Page 568

3. ECONOMIC DEVELOPMENT: A REGIONAL PERSPECTIVE

The preceding section set out parameters for determining the need for and plausibility of accelerated growth. It would be pursued through an export oriented strategy accompanied by further economic liberalisation, with a progressively greater role for employment and wealth creation being assumed by the private sector. In this section we focus on the extent to which this accelerated growth will be affected by economic relations within the region itself. We commence by noting two salient features. The first is the dominant position of South Africa, not only in terms of economic size but the depth of its economic infrastructure and relatively diversified – in comparison to the rest of the region – structure of production. This latter feature is illustrated by the information contained in table 7.

Table 7: Infrastructure Indicators

Country	Electricity		Transport			Communica- tions
	Installed Capacity MW	Output GWh	Railways km	Paved Roads Km	Motor Vehicles '000	Telephones '000
Southern Africa	43608	168937	36621	89513	5527	5441
Angola	617	1810	3000	6000	127	40
Botswana	220	863	900	2400	42	21
Lesotho	2	11	2	600	23	14
Malawi	186	583	800	2700	32	47
Mozambique	2358	475	3000	3200	43	63
Namibia	360	1300	2380	4400	117	60
South Africa	35673	147244	21244	55913	4700	4804
Swaziland	123	416	370	700	45	29
Zambia	2436	8485	2180	6200	114	85
Zimbabwe	1634	7750	2745	7400	284	278

Source: Du Toit, J and Falkena, H.B. *The Structure of the Southern African Economy* Table 6.1

The second feature is the attenuated economic links among most countries in terms of trade. The figures in table 8 refer to the PTA over the period 1981 through 1990, and thus include some countries falling outside our study and exclude both Botswana and South Africa. Nonetheless they clearly indicate that in terms of overall volume, the proportion of trade conducted between countries within the region has been very low and not growing.

Table 8: PTA Trade 1981 through 1990

Indicator	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
Intra-PTA exports as % of total exports	7.80	7.02	6.47	5.84	5.64	6.38	5.63	5.51	5.26	4.92
Intra-PTA imports as % of total imports	4.87	4.72	4.67	4.57	3.99	4.67	4.01	4.38	4.07	3.95

Source: ADB *Economic Integration in Southern Africa*. Volume 2. Table 2.A1

With respect to the Southern Africa's trade with South Africa, more recent albeit incomplete data highlight two facts: South Africa exports considerably more to the region than it imports and secondly that this trade is less than 10% of its total exports. As indicated by the data in table 8 and confirmed by more recent figures, inter-regional trade has actually declined somewhat from its very low level in 1980 in spite of various initiatives, namely the PTA (and most recently COMESA), the Cross Border Initiative, and SADCC (now SADC) inspired initiatives that were intended to increase it.

One major exception, outside the Southern African Customs Union (SACU) is trade between South Africa and Zimbabwe. South Africa is the latter's largest trading partner and Zimbabwe in turn comprises an important market for South African manufactures, albeit the latter represents a small proportion of overall exports. This exception can be explained partly by historical links as well as a more developed manufacturing sector in each country. In fact, this latter observation underscores the principal reason for the low volume of intra-regional trade. Exports are comprised principally of commodities. Local manufactures, consisting principally of simple consumer goods for the domestic market, have been heavily protected. The limited prospects for expanding inter-regional trade have been confirmed by gravity models that use such explanatory variables as per capita income, overall economic size and geographical proximity to estimate trade flows.⁴ In summary, we can expect the absolute volume of trade to steadily increase as a consequence of a rise in per capita income. As a *proportion* of overall trade it should also grow, albeit slowly, as a result of further diversification in the structure of production, especially between countries with shared borders.

Judging from the historical record, we can anticipate that proactive measures aimed at advancing integration through the establishment of a common market – the latest target date being 2010 – are unlikely to be implemented in practice. Indeed, they will become largely redundant because of the liberalisation of external on an MFN basis through structural adjustment programs. In fact, the latter should prove more effective, in terms of actual implementation, than the piecemeal and tendentious approach characteristic of regionally negotiated protocols and treaties. In fact, pursuit of regional integration for its own sake may well *retard* growth in both intra-regional trade and overall economic activity by reviving a largely discredited development strategy based on import substitution. In view of the region's continuing dependence on the production and export of commodities, "integration" would quickly become a very costly exercise in trade diversion. Hence, we conclude that establishment of a zone for free trade in goods and services covering all of Southern Africa is neither plausible nor indeed necessary for more rapid economic growth.

The one exception is the current Southern African Customs Union (SACU) where because of historical ties, size, shared borders and existing linkages, there exists a relatively high volume of inter-regional trade. To this existing group we would add Zimbabwe, for whom South Africa is already its largest trading partner and where a sizeable manufacturing sector, in addition to the above mentioned factors, would point to a more rapid growth in trade. There is a high probability that Zimbabwe will become a member of SACU, if not through a formal treaty then indirectly via a bilateral agreement with South Africa whose provisions would be extended to the other four countries.

Notwithstanding this important qualification, we would conclude that regional *coordination* in certain key sectors is both more plausible and also more important in accelerating economic development. Before examining these in greater detail, we offer one final observation with respect to the overall importance

⁴ For example, Faroutan, F and Jenkins, C. **Zimbabwe's Regional Trade: An Evaluation. June 1994. (mimeo)**

of the longer term outcome in South Africa to the rest of the region. Clearly if South Africa experiences political and economic disintegration, the region's prospects will be diminished considerably. Immediate effects will include greatly reduced investment, loss of easier access to what would otherwise have been a growing market, heightened tension and possible confrontation, and much higher costs of trade with the rest of the world. Conversely, South African success in pursuing a liberalised, export oriented growth strategy will present a powerful model for other governments in the region to emulate, much as Japan offered an important "demonstration effect" for East and South East Asia. Hence, successful transition in South Africa, not only in the political arena, but the economic sphere as well, will have major implications for the rest of the region. In this regard, we simply confirm the conclusions of other observers concerning the importance for the following fifty years of the transition South Africa will be undergoing over the next five.

We now discuss some major aspects of regional co-ordination as they will bear upon economic development over the longer term.

Private Investment

Deficiencies in data do not allow us to estimate the actual flow of South African sourced investment to the rest of Southern Africa. Nonetheless, from interviews and the business press, three different patterns can be discerned.

The first entails ongoing investment by major South African multinationals, primarily in mineral exploration and production. In all likelihood, this investment will continue to grow, both in terms of geographical coverage and range of commodities. The flow of investment will be influenced by economic liberalisation, including a more accommodating policy toward foreign direct investment, as well as retrenchment and possible sale of state owned concerns. Although such investment will not be confined to South African based companies, the latter will be prominent because of their historical links, knowledge of local conditions, and world leadership.

The second pattern, of recent occurrence, has been prompted by the privatisation of public enterprises. Although divestment have often been slow and erratic, it has attracted South African capital from public as well as private sources. An example of the former is the establishment, under the leadership of the SAA, of a joint regional carrier that will replace the national airlines of Tanzania and Uganda. The sale of parastatal producers of consumer goods has also attracted private South African capital, as exemplified by the acquisition by South African companies of breweries in several countries. The impending break-up and sale of ZIMCO, the government owned industrial and consumer conglomerate in Zambia has also elicited South African interest. Among the factors behind this flow are the low purchase price of divested enterprises, an informed appreciation of local conditions, a desire to reduce risk by diversifying corporate assets outside South Africa, and opportunities to penetrate new markets.

The third pattern, still in its early stages, involves investment prompted by longer term opportunities within the region. Within resource based sectors, there is evidence of South African investment in production and processing in agriculture and fisheries, especially in developing non-traditional products for export. There is also some investment in manufactures in neighbouring countries because of lower real labour costs. There is considerable activity, indicative of more extensive involvement in future, in a wide range of services, notably tourism and finance. Less evident, but at least as significant is a growing South African presence in privately provided educational services including distance education (at all levels) and professional training. Their further expansion may well lead to joint public/private ventures or even sub-contracting for delivering certain public goods more efficiently.

The Environment

Economic development over the next two decades will be characterised by increasing pressure on the region's natural resources. Hence, an already fragile physical environment will be subjected to the demands of a rapidly growing population, an even faster rate of urbanisation, and increased exploitation of natural resources. Collaboration that draws on South African expertise, in such sectors as agriculture, forestry, livestock, mining, and water management, would be opportune. Initial involvement by South African agencies in SADC bodies has evoked negative reactions concerning their efficiency, but has also identified promising interventions wherein their expertise could be utilised by the rest of the region.⁵ Collaboration on an official level should improve over time, although past experience suggests that progress will be slow. More direct use of South African expertise is likely in large scale projects, in particular those involving financing from multilateral funds. There will remain, however, a major gap in coverage between official interaction at the policy level and such pursuits as small scale farming and mining where environmental protection and management will be weak. Their continuing neglect would reduce significantly the region's longer term economic prospects. Hence other initiatives are advisable. Initially these could be fostered through carefully designed interventions that utilise the opportunities created through transformative technologies in telecommunications and informatics. This possibility will be explored in our discussion of Swedish development strategy in section 4.

Energy

Regional collaboration in the development of energy has been characterised in practice by the pursuit of national interests, as demonstrated by the establishment of a coal fuelled power station in Zimbabwe instead of bilateral investment in a cheaper and environmentally less hazardous facility in Mozambique. This situation will change in future. Although currently experiencing over capacity in the supply of electricity, South Africa has displayed strong interest in developing the very substantial hydro-electric potential of the region in anticipation of rapidly growing demand after 2000. This development would also allow ESKOM, the state utility, to phase out expensive nuclear plants and some of its coal fired stations. Table 9 summarises the region's energy potential. Of note is the location of most of the hydro-electric potential in Angola and especially Zaire.

⁵ Mayer, Marina J. *An Evaluation of South Africa's Participation in SADC*. 1995

Table 9: Energy Resources of the Region

Country	Forest & Woodlands mn ha	Oil Proven mn ton	Gas Total bn cu m	Gas Proven bn cu m	Uranium Proven ton	Coal Total mn ton	Coal Proven mn ton	Hydro Potential MW	Hydro Potential GWh/yr
Angola	53.60	156	30	9	0	0	0	16000	64850
Botswana	32.56	0	0	0	0	50000	3500	0	0
Lesotho	-	0	0	0	0	0	0	350	1225
Malawi	4.27	0	0	0	0	16	2	515	2850
Mozambique	15.44	0	320	65	0	9531	240	9250	49600
Namibia	18.00	0	28	0	110.1	0	0	900	4500
South Africa	1.30	0	28	28	426.3	123500	55333	3500	7000
Swaziland	0.20	0	0	0	0	1549	208	75	360
Tanzania	42.04	0	190	163	0	1804	200	5040	22800
Zambia	29.51	0	0	0	0	282	69	3970	24200
Zaire	117.59	0	1	1	1.8	807	54	100000	750000
Zimbabwe	19.82	0	0	0	0	9500	1700	2515	16000

Source: ADB *Economic Integration in Southern Africa* Volume 2 Table 5.1

A collaborative approach toward developing hydro-electricity should prove extremely beneficial, not only for the sourcing country, as a major source of export earnings, but for others on the route of the transmission lines to South Africa. In practice, these opportunities are being explored outside the framework of SADC by ESKOM and other national utilities. The need for major external *public* financing is not evident, since external resources can be mobilised through international capital markets. Nonetheless, some multilateral participation may be desirable for three reasons: to reduce the risk perceived by private investors who might otherwise demand a higher premium; to help minimise environmental damage; and to monitor the monopolistic behaviour of a cartel consisting of publicly owned utilities.

Water

Recent droughts, including the worst recorded this century, have underscored the region's vulnerability, not only in terms of its dependence on rain fed agriculture, but the growing demands emanating from industry and burgeoning urban areas. Recent studies estimate that South Africa by 2000 will be utilising only 60% of its water resources. Nonetheless this aggregate figure disguises potential serious shortages within the country once the augmented supply from the Lesotho Highlands Scheme has been exhausted. In anticipation of this shortfall, several studies have identified the Zambesi River as a major new source over the longer term. Its development would entail trilateral co-operation, involving Zimbabwe, Mozambique and South Africa, with possibly added participation by Botswana. As in the case of energy, development of this resource will be pursued in practice outside the framework of SADC. This growing South African dependence would provide, in the case of Zimbabwe, additional leverage to expand access more rapidly for its manufactured products.

Transport and Industrial Corridors

The importance of South Africa's transport network is underscored by the region's continued reliance on it during the period of confrontation and sanctions. In spite of significant investment in alternative routes, the proportion of traffic flowing through South African ports and along its transport grid did not decline. Since

these other routes are much shorter, continued use of the South African ones highlights other factors, aside from cost that make them more attractive. These include a better level of service; a common language; more modern facilities; less corruption, pilferage, and bureaucratic obstruction; ancillary services including insurance; much better communications; a stronger legal and regulatory framework; and competition among different modes of transport. Furthermore, South African costs will decline in future in response to competition from other routes.

Nonetheless, collaboration in the development of transport linkages between countries in the region, as well as between themselves and South Africa could prove extremely beneficial not only in terms of lowering trade and transactions costs but for two other reasons as well. The first relates to the broader externalities resulting from "corridor development". This feature is prominent in recent South African studies focusing on improving transport and pipeline links between the PWV region and Maputo. Such investment is expected to attract investment in mineral development as well as manufacturing. Another possibility is the Beira Corridor Route between Zimbabwe and Mozambique which could accelerate the development of agro-industry on both sides of the border. This possibility has generally been ignored in the past because of the more immediate concern with viable transport links for land locked countries in order to reduce their dependence on South Africa. Another reason has been the virtual exclusion of private sector interests that might otherwise have drawn attention to these other possibilities and also pressured for badly needed improvements in the management of road, rail and port facilities.

There will be increased interest in potential "corridors" as a consequence of economic deregulation and investment by South African business. An additional benefit relates to long term growth, in terms of what has been called the "hub and spoke" phenomenon perceived in the concentration of industrial activity. Once industries have been established, future growth often tends to concentrate in the same location. In terms of the region, South Africa comprises a hub, with "spokes", namely financial, physical and electronic linkages emanating outwards to activities on the "rim". This pattern tends to be self-reinforcing, such that activities on the "rim" do not develop linkages with each other but rather via the "hub" at the centre. This "hub and spoke" phenomenon has been used to explain, with considerable plausibility, the longer term pattern of industrial development within the European Union. One disadvantage of this pattern, as observed in Europe, which could prove detrimental to future development in Southern Africa, is that the gap in productivity and in product development, especially in innovation driven activities, tends to widen over time between those industries located at the "hub" and those on the "rim". Conversely, collaborative investment in transport linkages within the region could accelerate the process of economic diversification outside South Africa.

Telecommunications and Informatics

As a consequence of the transformative technologies associated with the informatics revolution, the strategic importance of telecommunications has been quickly recognised within South Africa⁶, at present the only economy in Sub-Saharan Africa with the capacity to absorb them. Potential benefits extend beyond economic activity since these technologies will result in new delivery systems for many public goods associated with health, education and other basic needs.

Lagged development in the rest of the region cannot be ascribed solely to the absence of technological capacity or insufficient investment. A major factor, that will become more evident in future, has been the reluctance of governments to deregulate the sector. Underlying causes include a desire to maintain tight control over the flow of information and to capture the revenue generated by a (usually) profitable state owned monopoly.

⁶ South Africa. Ministry of Posts, Telecommunications and Broadcasting. *Green Paper on Telecommunications Policy*. 1995

It has become increasingly evident that overall investment in telecommunications will be extensive. Furthermore, such investments have a high private rate of return and therefore should be able to mobilise the requisite financing entirely from private sources. Finally, the countries of Southern Africa would benefit from closer collaboration that makes fuller use of South Africa's recognised capacities. Collaboration will ultimately hinge on the rate and pattern of deregulation, covering such matters as increased competition and/or privatisation of the state owned monopoly, and expanded access for the suppliers of value added services. From this perspective, "collaboration" along lines espoused by SADC might simply result in a region wide cartel of publicly owned monopolies. As a result, the region would fail to realise the promise held by the informatics revolution or to fully utilise South Africa's very considerable private as well as public sector capacities.

Three Issues: CMA, SACU and Food Security

We complete our overview of regional collaboration with three issues that have loomed large in recent discussion but, for various reasons, are likely to become less important in terms of their impact on either the rate or pattern of growth over the longer term.

In the period immediately prior to South Africa's re-emergence in the international community, considerable attention was focused on the fate of the Common Monetary Area⁷ and the Southern Africa Customs Union⁸. With the benefit of hindsight, their future evolution seems clearer. Expansion of the CMA into a common monetary zone for the region appears highly improbable over the medium term. For South Africa, any advantages must be weighed against the additional constraints on its fiscal and monetary policies. Both the current and future governments will be preoccupied with balancing conflicting domestic concerns, in particular maintenance of macroeconomic stability against strong demands for greater public expenditure on a wide range of needs in health, education, housing and economic infrastructure. Hence, maintenance of the CMA, let alone its evolution into a wider monetary zone, will assume low priority for South African authorities.

In the case of SACU, there are stronger reasons for maintaining a renegotiated Union. On one hand, the revised arrangement will need to accommodate the desire of the BLSN countries to advance their own industrialisation through expanded access to the South African market. On the South African side, there will be pressure to modify what is perceived to be an onerous financial obligation. South African interest is also prompted by a growing realisation that more rapid growth and employment creation will help offset pressures for immigration that will be exacerbated in future through further cuts in the migrant labour force and more generally in the movement of unskilled labour. If current negotiations between South Africa and the European Union over Associate Membership are linked to SACU, the longer term credibility of a renegotiated agreement will be enhanced considerably. Equally likely will be the inclusion of Zimbabwe in the medium term, either as an Associate Member or through a bilateral agreement with South Africa. As noted earlier, membership would be consistent with existing trade links, especially in manufactured products.

Considerable attention has also been devoted to regional collaboration in food security. Over time, we would expect this concern to become less pressing. In retrospect, the impact of recent droughts may have been heightened because of prolonged conflict as well as misguided national policies that depressed the production of food. Even under these very disadvantageous circumstances, existing infrastructure in combination with emergency relief measures by the international community was able to cope with the situation successfully. Over time, the region's resilience to such natural disasters will grow as a consequence of further investment in economic infrastructure, a steady increase in per capita income, expansion of agricultural production, and growth in export earnings. Continued

⁷ Including South Africa, Zimbabwe and Lesotho

⁸ Including Botswana and Namibia in addition to the above

maintenance of a strategic food reserve, especially in land-locked countries, would be prudent. On the other hand, a Malthusian spectre of a population outstripping the capacity of its resource base seems far-fetched. Hence, significant investment targeted specifically toward attaining “food security” appears unjustified.

4. IMPLICATIONS FOR SWEDEN

What are the implications of our preceding analysis for a Swedish strategy to promote development of the region? The following discussion is neither exhaustive nor prescriptive. Rather, by drawing inferences from economic prospects and likely trends, we intend to contribute to the current discussion concerning the scope and principal aims of future development assistance policy.

Our first observation is perhaps self-evident but nonetheless merits reiteration. An essential condition for longer term development is stability and internal security. The past two decades attest to the misery and stagnation caused by prolonged conflict. Hence, a priority, in terms of Swedish policy, should be conflict resolution. Ongoing monitoring of political trends (discussed in a separate study) should allow Sweden to anticipate possible points of confrontation and work, through multilateral, regional and bilateral channels, toward their successful and peaceful diffusion. In certain circumstances, by virtue of its long-standing involvement, extensive contacts, and international reputation, Sweden may well be able to assume a leading role.

In virtually all of the countries of Southern Africa, development assistance has been synonymous with "aid", viz. highly concessional transfers of financial and human resources, toward relief, rehabilitation and the alleviation of poverty. Increasingly, as a consequence of structural change, Africans will press for "trade" rather than "aid", in terms of *assured* access for a widening range of "non-traditional exports", viz. semi-processed, processed and manufactured products. In this regard, we note upcoming discussions concerning revision of the current Lomé agreement, scheduled to end in 2000. Pressure for major change will not be limited to ACP countries, since there is growing dissatisfaction within the EU itself. Undoubtedly, it is partially attributable to political differences within the Union. However, there is also a growing recognition that the Treaty over the past 40 years has not accomplished one of its stated objectives, namely significant economic diversification. Early commencement of discussions concerning revision of the Treaty would be highly desirable since it provide a valuable cue for potential private investors. Conversely, continuing uncertainty over access for different products could significantly retard investment from both domestic and foreign sources.

In formulating a Swedish position, two other potentially significant consequences warrant emphasis. The first relates to linkage with shorter term macro economic measures aimed at the achieving sustainable domestic and external "balances" and restructuring the public sector. In the past, "aid" has proven an unreliable guarantor of economic reform. Indeed, in many circumstances, especially in cases of extreme indebtedness, it has had the perverse effect of actually undermining policy credibility. Private economic agents are aware that repayment of official debt has precedence over the settlement of outstanding private balances, and the maintenance of government policies ultimately depends on the political calculus of international donors. Seen from this perspective, the often disappointing lag in "supply response" to adjustment policies becomes more easily comprehensible. By "locking in" policies, i.e. reducing the probability of abrupt reversal, an international treaty that expands assured access for exports in return for agreed policy changes may actually enhance policy credibility and reassure private economic agents. This process has been apparent in South Africa, where the Government's adherence to the GATT offer has underscored its commitment to major changes in trade and industrial policy and an export oriented strategy for growth. Policy credibility will be greatly enhanced by an Associate Membership treaty with the European Union that could only be abrogated with considerable difficulty by a new government. Hence, progressive replacement of "aid" by "trade", not in terms of further concessional access, but rather *assured* access for a much larger range of products may reinforce economic management and accelerate private investment. Finally, we note that potential ramifications extend beyond South Africa itself. To the extent that it successfully pursues a liberal, export oriented policy that generates more rapid and equitable development, the outcome will be offer a compelling "demonstration effect" for the other countries of the region that will prove far more influential than constant donor admonishment within the more negative context of structural adjustment lending programs.

The other consequence pertains to an expanding role for the private sector, another major objective of structural adjustment programs. Aid, in the context of Lomé, entails transfers to or through *governments*. To the extent that such aid is a “trade-off with market access, it comprises a transfer of income that would otherwise have been earned, through increased exports, by private economic agents. Hence, expanded trade, even at the expense of aid, is more consistent with the stated aim of strengthening the private sector. The impact of this broader approach would be far greater than more targeted initiatives, often funnelled through government bureaucrats, purportedly aimed at “private sector development”. Indeed, a stronger private sector will gradually become an important source of pressure to improve management of the economy.

Longer term development, as we have stressed at several points, will entail more intensive utilisation of the region’s non-renewable and renewable natural resources. Prudent management of this resource base will be necessary to ensure “sustainable development” in its most literal sense. To our earlier observation of South African expertise we would add that of Sweden, in light of its pioneering efforts in environmental research and training in developing countries. How might such Swedish expertise and interest be applied in Southern Africa? There would appear to be three possible points of intervention. One is through formal regional structures, principally those of SADC. Such bodies may prove useful in terms of international protocols and exchanges of information among governments. In all likelihood, however, they will prove ineffectual in terms of actually managing the resource base in any meaningful way. Unfortunately, a similar observation applies to national agencies because of limited capacity, lack of government funds, and an unchallenging environment for professionals. A second point would be large scale projects, such as hydro-electric dams, because of their visibility and partial financing by multilateral donors. However, there will remain, as we noted earlier, a very significant gap comprising small scale farming, mining operations, processing plants etc. A possible solution may lie in the use of non-governmental agencies, both from within and outside the region. Interactive networking among them will generate information and facilitate monitoring. Indeed, we recall that such activity often preceded official actions and policy measures in industrialised countries.

Precisely how such networking could be initiated and sustained highlights another observation, namely the partially discernible but undoubtedly significant impact of the transformative technologies associated with informatics and telecommunications. With respect to the latter, we note that telecommunications development will not be constrained by a lack of finance, but rather by national policies, in particular those pertaining to deregulation and privatisation. Nonetheless, strategic planning for development assistance should focus primarily on the application of informatics in a wide range of activities. Of immediate consequence to the region’s development would be more efficient and accessible delivery systems for adult literacy, education, training and public information, to name but a few possibilities, in addition to our earlier mention of resource management. At issue is not merely marginal additions to an existing system, such as the placement of computers in a classroom, but a possible refashioning of the system itself, extending to changes in the actual providers themselves. In essence this change has sometimes occurred through necessity, in such sectors as health and social services, because of inadequate government capacity. In future, the compelling influence will not be exigency but the potential promise of a transformative technology.

A principal characteristic will be “networking”, where pioneering efforts such as the African Economic Research Consortium in the field of economic research and graduate education have already had a considerable impact. Networking entails more than electronic communication although the latter is clearly important as a medium for exchanging information and expertise. In essence, it implies a major change in current approaches to designing interventions. At present, these proceed from an identification of needs to the delivery of specified inputs of financial and human resources, together with complementary changes in institutions and regulatory regime. In future, the process itself may be reversed. It will begin with essential changes in policy and regulations e.g. in telecommunications policy, and proceed to the development of a general capacity. Specific interventions will emerge in a much more decentralised way, largely outside formal public structures, in response

to rapidly evolving needs. This approach is already occurring, for example, in adult education, where private providers in South Africa are introducing initiatives in advance of the government. A similar approach appears appropriate with respect to natural resource management, given incomplete knowledge of a wide range of needs that are locationally specific and a continuing weakness in government delivery mechanisms. In summary, Swedish strategy should anticipate that the traditional approach toward programming development assistance will become increasingly less relevant over the longer term.

Strengthening capacities involves interventions that invest in the full spectrum of human resources and use them more effectively. Regarding investment, it is evident that the bulk of this effort must come from domestic sources and will only be sustained through rapid economic growth. External involvement, we have noted, will shift increasingly from the provision of human and financial capital toward the design of sustainable delivery systems that take full advantage of emerging technology, especially in telecommunications and informatics.

Within this broad agenda, we highlight three areas pertinent to the achievement of more rapid economic growth. The first is better government. Progressive withdrawal of the state from direct engagement in economic activity will highlight its primary responsibility for sound management and overall regulation of the economy. Because the public service, in terms of its permanent establishment, will be proportionately smaller, it will need to draw upon a widening range of professional skills in the private sector. An adequate supply of the necessary skills and knowledge ultimately depends on a functioning system of research and higher education. However, it has collapsed in most African countries or, as in the case of South Africa, is being subjected to increased stress. Initiatives aimed at strengthening these systems should draw upon the lessons of past failures as well as rarer successes such as the African Economic Research Consortium, in conjunction with the opportunities provided by transformative technologies and closer collaboration across the region.

As essential as the “supply” of high level skills is their more effective utilisation in future through the careful nurturing of a “professionalising environment” that recognises and rewards excellence and expertise. To this end, development assistance can contribute in two ways. The first is to strengthen management in the public sector through carefully targeted interventions. The second is to advance professional norms in the local consulting industry, since the latter will have to supply an increasing range of essential skills and knowledge for both the public and private sectors.

A distinct advantage in focusing on longer term economic development is the ability to view immediate concerns, that have tended to dominate “strategic planning”, from a more balanced perspective. We refer in particular to “structural adjustment” and “macroeconomic management”, which have understandably dominated development assistance agenda in recent years. We acknowledge that in many respects, longer term outcomes are the product of shorter term policy measures. However, in retrospect we can also see that structural adjustment programs have been the consequence of a failed approach to development. Most African countries opted for a policy of growth through import substitution in spite of their tiny domestic markets. This policy became increasingly less tenable with adverse movement – for most – in their commodity terms of trade, lagging productivity, and increasing import elasticity. Governments resisted change and attempted to maintain consumption through deficit spending and external borrowing. This policy ultimately became non-sustainable. For some Southern African countries, the first part of “structural adjustment”, namely the implementation of harsh policy measures to gradual restore both internal and external balances will have been completed over the next five years. The other part, involving economic deregulation and liberalisation, along with rationalisation and reform of the public sector, will prove a more problematical and longer term process.

This observation implies that “aid” in its conventional sense will not be phased out quickly. However, more recent projections by the World Bank have concluded that for most countries the external debt, owed primarily

to multilateral lenders, is serviceable and will decline over the balance of this century. To the extent that the level of indebtedness can be reduced more quickly through "swaps" and other means, there is greater likelihood of the region moving toward a faster growth trajectory more rapidly since debt servicing constitutes an outward flow of income and savings. The exception is Zambia. As we noted earlier, its debt burden is unsustainable. The continuing use of bilateral aid to service it simply amounts to a transfer of these funds to multilateral lenders without any prospect of reducing it to a manageable level. For Zambia, the consequence is continuing economic stagnation and growing miserisation that is placing its nascent democratic structures at risk. A similar situation may also be emerging in Malawi. For these two countries, and certainly for Zambia, their "long run" could prove very short indeed.⁹

Whilst structural adjustment lending will continue, a change in the design of programs is desirable so that they enhance the credibility of national governments in terms of underscoring their commitment and reducing the likelihood of an abrupt reversal in policy. In this regard, Sweden's longstanding emphasis on strengthening public institutions will remain relevant, although the focus will change with further liberalisation of economic activity and restructuring of the public sector. However, the overall approach to structural adjustment lending should change so as to complement these other efforts aimed at strengthening government management of the economy. Rather than focusing on very short term aggregate targets, which are often impossible to achieve due to thin markets and extreme exposure to "exogenous shocks", these programs should be designed in a longer term time frame. They should reward success in achieving agreed targets and allow considerably more flexibility in terms of the choice and sequencing of specific policy instruments. The targets themselves might be expanded to include medium term growth that would be consistent with continued success in shorter term stabilisation. Consequently, the behaviour of private economic agents will be influenced increasingly by the policies of national governments and correspondingly less by the international donor community.¹⁰

⁹ The current policy toward Zambia's debt in fact displays a perverse logic in terms of its eventual resolution. To the extent that Zambia is increasingly perceived as the limiting and indeed unique example of indebtedness to multilateral institutions, forgiveness becomes more feasible, since it will not constitute a precedent for others and thereby pose a problem of "moral hazard". The danger, however, is that the terms may focus entirely on this concern and overlook the more important issue of relating future borrowing to the achievement of rapid economic growth.

¹⁰ See for example Collier, P. "The Domain of African Government" Paper prepared for SAREC International Colloquium on "New Directions in Development Economics – Growth, Equity and Sustainable Development" Revised June 1994

5. SOME CONCLUDING OBSERVATIONS

Our study has underscored the necessity of accelerating the rate of growth from its current level if the incidence of poverty is to be reduced through rapid expansion of productive employment. We have also concluded that this objective is both feasible and attainable through a development policy based on liberalised economic activity and export promotion. This policy is being pursued by South Africa. Its success, especially over the next five years, is critical for the rest of the region in terms of its immediate impact and as a powerful model that governments will find increasingly difficult to ignore.

This pattern will enhance prospects for regional collaboration, although those relating to closer *integration*, especially with respect to trade, are more limited. In contrast to earlier efforts, closer collaboration will be advanced increasingly by the private sector. National policies will be important in three respects: pursuit of a liberalised, export oriented growth strategy; sound macroeconomic management; and changes in the regulatory regime in certain key sectors, notably telecommunications and informatics. Growth will be accelerated through an intelligent co-ordination of effort, among governments and between them and private economic agents, in energy, water, telecommunications and economic infrastructure. Over time, co-ordination will be characterised by growing interaction outside official government channels.

For the immediate term, conventional types of development assistance will remain important for rehabilitation, strengthening government and governance, and following through on structural adjustment programs. The latter will need to be revisited, in the immediate term to address the intractable situations of Zambia and possibly Malawi, and over the medium term to design a more effective approach that strengthens both the credibility and political accountability of national governments.

Not surprisingly, an export oriented strategy will shift attention to trade as a key instrument for promoting economic development. In this regard, we have highlighted the critical importance of a likely revision of the Lomé Agreement. Although a new treaty is not required until 2000, early EU discussions are desirable in order to provide signals to potential investors, both domestic and foreign, and more generally, to encourage governments in their pursuit of a development strategy that reverses the course pursued by most of Sub-Saharan Africa over the past 30 years.

Finally, in highlighting the importance of natural resource management, we have also drawn attention to the far-reaching impact of transformative technologies in telecommunications and informatics. They create opportunities for a wholesale redesign of "delivery systems" for public goods, a fortuitous coincidence since government capacities in this regard will remain weak even as the plethora of needs grows quickly. The consequences extend to the actual programming of development assistance itself. The traditional sequence, which commences with a precise identification of needs and then proceeds to the design and implementation of a suitable "package" will be reversed. Development assistance will focus increasingly on creating appropriate circumstances within which enhanced local capabilities can respond to an expanding set of needs in new and exciting ways.

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When the new Sida was formed out of six former independent aid-agencies, five inquiries were undertaken to give the new Sida a common policy in vital areas and a coherent vision of the future. The inquiry into the future, Project 2015, consists of a series of studies and seminars aiming to review trends, problems and opinions which will have bearing on the environment within which Sida will be working 5-20 years from now. This volume is one of nine publications that presents the results from the 2015 project.

A number of regional studies have been undertaken. These have been designed in different manners depending on the development problems of the regions. Five authors with an extensive knowledge about Southern Africa and with different professional backgrounds have contributed to this volume: Barry Dalal-Clayton (on environment and ecology), Sandra Wallman (on socio-cultural development and the implications for Sida planning), Bertil Odén (on regional development in a 20 year perspective), Jeffrey Fine (on the economic development to 2015) and Lennart Wohlgemuth (on perspectives for the future with competence in focus).

Other publications from the 2015 project:

- Aid Dependency
- Aid Management
- Trends in Social Development
- North East Europe
- Latin America
- Asia
- East and West Africa
- Development cooperation in the 21:st century



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