

STATE OF ENVIRONMENT REPORT
FOR
SWAZILAND

March 2001

Chapter 1

NATIONAL CIRCUMSTANCES

Geography

The Kingdom of Swaziland is situated in South Eastern Africa between latitude 25° and 28° South and longitudes 31° and 32° East. It lies some 48 to 225 kilometers inland of the Indian Ocean littoral and hence physically landlocked. The country has a total surface of 17,360 sq km. It is bounded by the Republic of South Africa in the north, west and south and Mozambique in the east. Although small in size Swaziland is characterized by a great variation in landscape, geology and climate that make up the four physiographic regions.

Climate

Swaziland has a subtropical climate, with warm wet summers and cool dry winters. Climatic conditions vary from region to region. Mean annual rainfall ranges from 1500 mm in the highveld to 500mm in the lowveld. In the highveld temperatures vary between a maximum of 33°C in mid summer and 0°C at night in mid winter. In the lowveld diurnal temperature may rise to 39° C.

Population

Swaziland's population is estimated at 965 000 with an annual growth rate of 2.7%. The population of Swaziland may be divided into 76% rural and 24% urban. The high incidence of HIV could an impact on future population projections and socio-economic performances.

Economy

Swaziland has a small, but strongly export oriented economy. Over the years since 1968 when the country obtained its independence the country has experienced remarkable economic growth, social progress and human development

The historical economic environment of the country up to the 1980s was charecterised by positive growth and a notable surplus position. This trend reversed in the 1980s, impacting amongst others, the per capita income growth. The major causes of economic decline were the decline in foreign investments inflow, recurring drought, high population growth rates, also overall poor performances of economies in the region.

Table 1.0 below summarizes Swaziland's National Circumstances

Criteria	1981	1986	1990	1994	1999
GDP – Purchasers value (E)	497.8	1026.3	2224.0	3.787	2330.6
GDP per capita (E)			3002	4241	7900.0

Source: Central Statistics Office

Country Development Strategies

Through the National Development Strategy the Government of Swaziland addresses three main areas, i.e. good governance, a vibrant economy and human and social development.

Table 1.1 below shows the projections for average growth rates of GDP by sector for 1994 to 2030.

GDP per sector	1994-2000 (%)	2001-2010 (%)	2011-2020 (%)	2021-2030 (%)
Agriculture	11	15.2	14.9	13.7
Forestry	1.3	1.4	1.3	1.3
Mining	1.7	2.3	2.29	2.12
Industry/Manufacturing	37.57	29.28	29.6	32.15
Construction	3.7	3.6	3.8	3.7
Transport and Communication	6.5	6.3	6.4	6.4
Government Services	17.7	17.5	17.5	17.6
Overall GDP as well	3.2	4.66	5.29	5.0

Source: Ministry of Economic Planning

Chapter 2

LAND

INTRODUCTION

Swaziland is one of Africa's smallest states and has a landmass covering an area of 17,364 sq km. Land is often regarded as the most valuable resources a country has in terms of the other associated resources that are found in association with it e.g. soils, flora, fauna, surface water and minerals.

The country has six physiographic regions with their unique climate, geological, and associated soil characteristics, which determine the land-use and development patterns. The major economic activities include mining, forestry, agriculture (livestock and crop farming) and manufacturing.

Environmental issues associated with the land in Swaziland include land degradation, biodiversity loss, and unsustainable land-use and land management.

LAND DEGRADATION

Land degradation can be described as the decline or loss of productive capacity of a piece of land due to human activities and habitational patterns. This process often manifests itself in reduced vegetation cover, soil erosion and reduced soil fertility¹.

The magnitude of land degradation in Swaziland varies with the different land tenure types. There are three main categories of land tenure. These are:

- | | | |
|---|---------------------------------------|-----|
| - | Swazi Nation Land (SNL) Communal Land | 75% |
| - | Crown Land (Government holds title) | 1% |
| - | Private Freehold or Title Deed Land | 24% |

Swazi Nation Land occupies 75% of the total land area and this category suffers most degradation.

Land Degradation on Grazing Lands

Table 2.2 Land-use pattern for grazing crops 1966 to 1991 ('000 hectares).

	1966	1976	1988	1991
Grazing Land	1 268	1 206	1 149	1 032
Crop Land	136	165	180	219

Source: Central Statistical Bulletin 1991

Third National Development Plan 1978/79-1982/83

The increasing human population has exacerbated the land degradation problem. Increased human population means increased pressure on the Natural resource base to provide basic necessities such as shelter and food production. The population density increased from 21.6 people per sq km in 1966 to 39.2 people per sq km in 1986 and 55.6 people per sq km in 1997.

The result of this population pressure is the over exploitation of the Natural resources base and encroachment into virgin lands to meet the food production needs. By 1968 when the country attained its independence it was already recognised by government that the country is facing serious land degradation problems. By that time two National Structures were formed for the sole purpose of monitoring land utilisation and to stimulate public interest in the conservation and improvement of Natural Resources.

These structures were the Central Rural Development Board (CRDB) to oversee Communal Swazi Nation Land and the Natural Resources Board (NRB) to oversee private or Title Deed Land. However, despite having successfully alienated grazing land and putting in place new settlement patterns, the CRDB failed to make farmers reduce cattle number to ecologically sustainable levels. The Secretary of the Board in his annual report expressed his frustration by reporting that “ Despite verbal assurances when resettlement plans are made and agreed with communities, the Chiefs and their Councils have failed to control numbers of their cattle, instead populations continued to grow beyond carrying capacities causing overgrazing and soil degradation”⁵.

In 1970, the Rural Development Area Programme (RDAP) was established with funding from the United Kingdom. The Programme was extended in 1976 with bilateral aid from West Germany, Sweden and Canada and Multilateral aid from the World Bank, African Bank, European Economic Union and United Nations Development Programme. This programme was geared to improve the income and well being of the Swazi farmers by producing infrastructure,

fencing grazing areas, improving livestock management and land consolidation among other things. Soil conservation became prominent in the RDAP with the introduction of terraces to replace grass strips. According to Osunade only 20% of the planned conservation measures were achieved in the RDAP⁴.

In spite of these noble investments and noble objectives, very little seems to have been achieved with regards the reduction of stocking rates, protection of Natural resources and self-reliance of livestock producers⁷.

A new Agricultural Development Strategy was formulated in 1986, which focused on alleviating major constraints to agricultural development. Low livestock off-take was recognised as one of the major constraints. However, there were very few activities that appeared to have been put on the ground to address the low off-take problem.

A Livestock Development Policy was formulated as a follow up to the agricultural Strategy with clear objectives and activities to increase off-take from the overgrazed Swazi Nation Land and to institute cost recovery and instil a commercial attitude to farmers. It is sad to note that despite all these efforts society has shown a strong resistance towards commercialising cattle rearing and maintaining sustainable herds.

The strong cultural attachment of the Swazi people to cattle in particular and the long history of Government's subsidy on the cattle industry has worked negatively against ecological sustainability which is a key guiding principle in the Livestock Development Policy.

The subsidisation Policy of Government on dipping chemicals places a considerable burden on Government recurrent budget (E4.5 million annually) and exacerbates the deficit forecasted by the Ministry of Economic Planning and Development since 1994⁸.

A renewed vigour to push forward the principle of Sound Environmental Management has been necessitated through the implementation of Multilateral Environmental Agreements. The Government of Swaziland as an obligation to the Convention to Combat Desertification and mitigating the effects of drought has prepared a National Action Programme (NAP) which was endorsed by government in 1998. The NAP outlines clearly what actions government need to take to arrest the problems of Desertification and Land Degradation. The activities range from putting in place the proper institutional setting, awareness and capacity building strategies, technological support for reclamation and rehabilitation, and also putting in place appropriate policies for land utilisation, population growth and poverty alleviation.

A new Environment Management Policy is also in progress which will instil environmental responsibility, sustainable use, environmental rights and will further be supported by enhanced public awareness and participation, adopting precautionary and preventative approach and the polluter pays principle. A Comprehensive Environmental Act is also being formulated which seeks to provide an integrated framework for environmental management with an opportunity for establishing a National Environment Fund with a window for supporting activities that prevent land degradation in drought and poverty stricken areas of the country.

Land Degradation on Arable Land

Cropland in Swaziland covers a total area of 219 463 ha which is 12% of the total land area⁹.

According to the 1997 Statistical Bulletin 91 268 ha(42%) was farmed on various crops in Swazi Nation land while 68 077 ha (31%) was cropped under individual tenure land. The rest (27%) was fallow Land.

In Swazi Nation Land (SNL) a majority of rural Swazis are subsistence farmers, with comparatively small land holdings. There is low technological and capital input into farming yet the continuous cultivation of the soil restricts the regeneration of nutrients and structure. Incidents of inappropriate cropping and farming practices as well as poor soil/land management system are prevalent. Likewise, problems of land degradation have been recorded among farming communities on Title Deed Land (TDL), whereby incidents of improper application of fertiliser, herbicides and insecticides have been documented in all farming systems in the country together with their adverse effects on the soil nutrient composition and structure¹.

Soil Conservation Measures

Measures to control soil erosion within arable areas have a long and rich history in Swaziland. The control of soil erosion within arable lands started in the 1940s with the introduction of grass strips by extension workers. A grass strip is an unploughed 2-5metre piece of land at the down slope hedge of a ploughed field or between two or more ploughed fields created on contours and covered with propagated plants, or naturally grown grasses or any other plant covers. The critical design factor is the grass strip spacing which is computed the same way as terrace construction.

A total of 113 780 KM of grass strips were laid out by extension workers between 1940 and 1960. This system of soil conservation enjoyed over a decade of active promotion by the government, between 1944 and 1960 and thereafter, it has survived expanded and has become “a way” of Swazi farming culture⁴.

Another method which was also chiefly motivated by government through the RDAP was the

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