

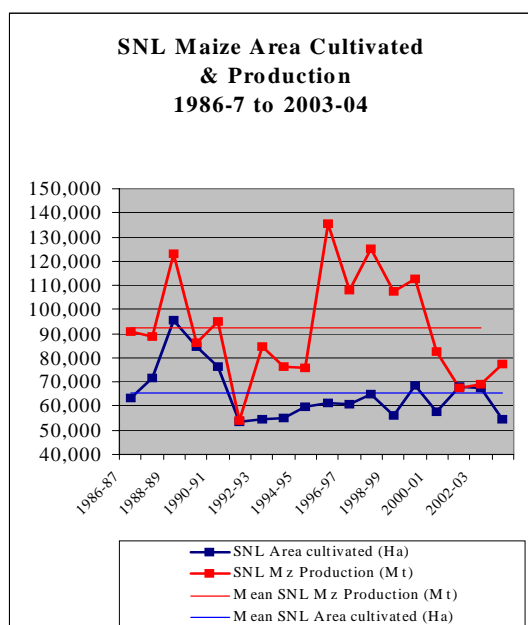
## Chapter 3: Hazards and Shocks Affecting Livelihoods – National Trends and Current Year Analysis

### Production and Supply Changes

#### Crop Production and Rainfall

The National Early Warning Unit (NEWU) figures for March 2004 forecast maize production in Swazi Nation Land (SNL) to be 77,540 MT. This year will be the fourth year in a row that maize production will fall below the long term mean of 92,262 MT (source CSO and NEWU). This figure is presented in Figure 2 below as the last in an eighteen-year series. The harvest represents some modest improvement over the 2001/02 and 2002/03 ‘crisis’ seasons and is also less than the ‘poor’ 2000/01 season. Hopes for an agricultural recovery in 2003/04 to support an economic recovery after the cumulative impacts of the three previous years of poor production have been dashed. This year the continuing poor level of maize production will further impact on the livelihoods of rural Swazis who make up 75-80% of the population.<sup>7</sup> The estimate of the area of crop production is one of the lowest in recent times and is less than last year. A total of 54,470 hectares is estimated with 17,236 ha in the Highveld, 23,642 ha in the Middleveld, 11,064 ha in the Lowveld and 2,528 ha on the Lubombo Plateau.

**Figure 2: Area of Maize Cultivated and Maize Production on SNL 1986/7 to 2003/4**



There is still some uncertainty about the final outcome for national maize production in 2003/04. The uncertainties centre on:

- The unknown extent of maize cultivation in the Lowveld following the January and February rains.
- How much of it will mature and the possible impact of cob-rot in the Highveld and Middleveld due to very wet and humid conditions in March and April.

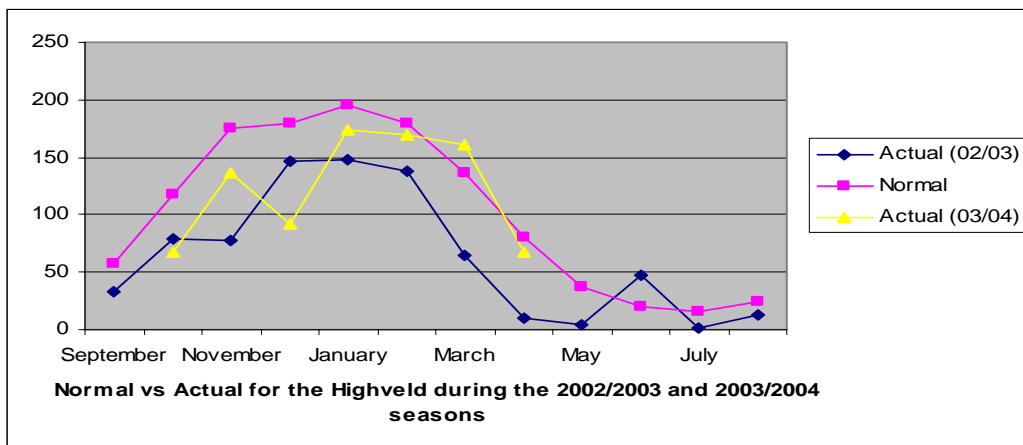
An analysis of rainfall patterns is essential if we are to gain a strong understanding of how the current season compares with previous years and the long-term average. The spatial nature of rainfall determines its effectiveness for agricultural production and is just as important as the overall level. A review of the four rainfall charts below will help analysis.

In the Highveld, figure 3 clearly shows that rainfall this season has been erratic and overall well below normal. A consistent rainfall pattern between October and December is very important for successful germination and early growth of crops. In 2003 rainfall in this period was very low with distinct dry periods in November and December. Maize production was detrimentally affected with farmers being forced to re-plant several times (if they had the resources). The heralded grand return of the rainfall in January and February, though providing a respite, did not even reach the long term normal until March. However, in March and April much of the maize (which had been sown in

<sup>7</sup> The production figure for 2003-04 is a NEWU forecast estimate. The CSO produced a low figure for area cultivated reflecting the poor conditions for crop establishment (Oct-Dec). It does not account for additional late-planted land brought under cultivation in January as a consequence of the heavy January rainfall.

November and December despite the difficult conditions) required minimal rainfall as maize cobs were entering the drying phase. Above normal rainfall is not helpful for maize yields during this period. In general farmers in the Highveld did not engage in renewed maize cultivation when the rains came in January and February because the season was too far advanced with cool autumn temperatures approaching. In addition, meteorological forecasts warned of below normal rainfall between January and March 2004.

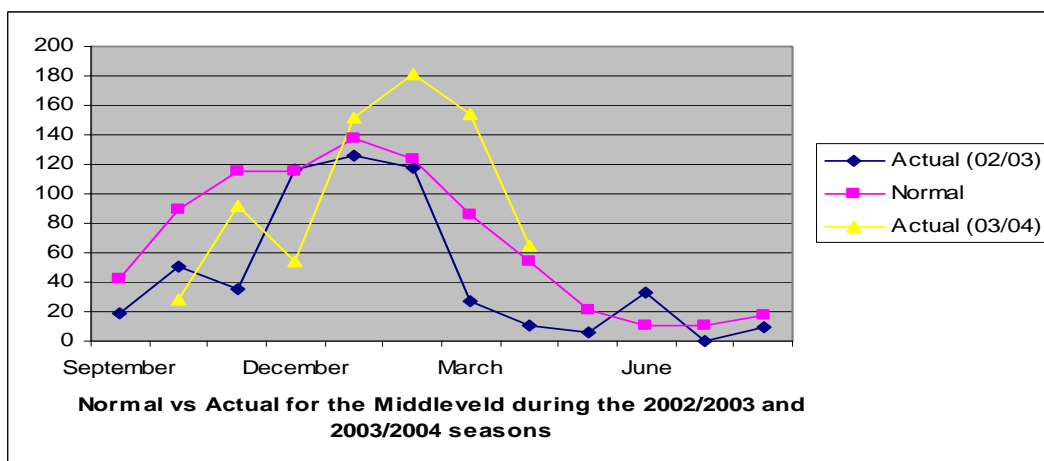
**Figure 3: Rainfall in Highveld 2003/4**



(Source: MoAC/NEWU)

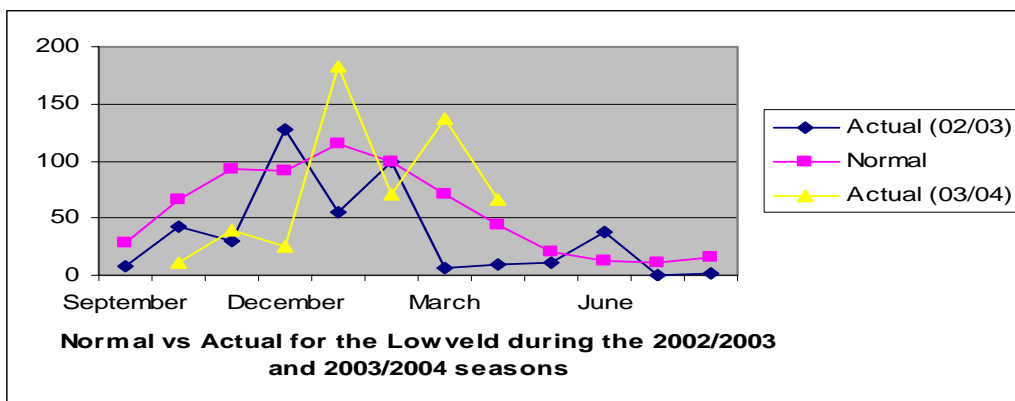
Figure 4 shows that similar situations were experienced by Middleveld communities as those in the Highveld. Rainfall was well below normal levels until January from whence it rapidly went above normal and has continued to be above normal in March and April resulting in some damage of crops predominantly by cob rot.

**Figure 4: Rainfall in Middleveld 2003/4**



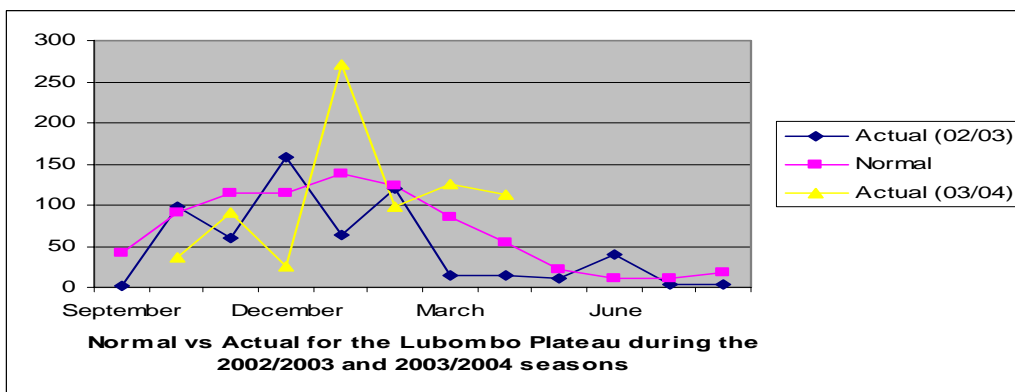
(Source: MoAC/NEWU)

Rainfall in the Lowveld (see figure below) has been highly variable throughout the season. While grazing has improved, maize production has been affected by the regular dry periods in November and December. Far below normal rainfall was experienced up to the end of December. The relatively huge rainfall levels in January provided cultivation possibilities for Lowveld communities because temperatures remain much warmer throughout the autumn than in the Middleveld or Highveld. While cultivation may have been good for some families, many other families failed to cultivate because conditions were so poor up until December and re-planting was not a viable option or economic possibility when the rains came in January and February.

**Figure 5: Rainfall in Lowveld 2003/4**

(Source: MoAC/NEWU)

A similar pattern has been experienced by communities on the Lubombo Plateau (see figure 6). The temporal variations in rainfall have made agricultural production difficult and below normal harvests are expected in all Livelihood Zones. However, higher overall levels of rainfall on the plateau have meant that the food crop situation is better than in the Lowveld.

**Figure 6: Rainfall in Lubombo Plateau 2003/4**

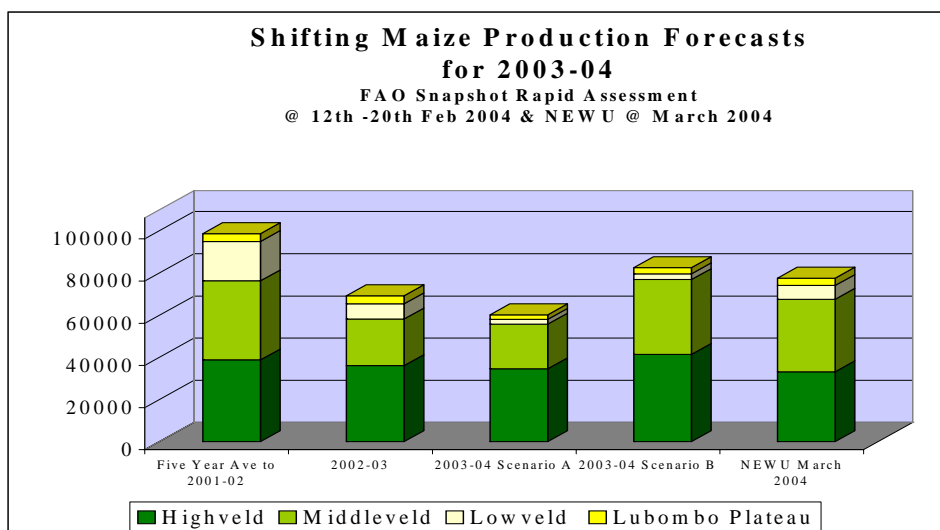
(Source: MoAC/NEWU)

Maize production estimates are very important if vulnerability levels are to be accurately assessed. Maize production estimates tabled between February and March 2004 are shown in the figure 7 below. The February (rapid snapshot) scenarios A and B<sup>8</sup> and the NEWU March forecast are compared with the five year average to 2001/2002 and with production achieved in the agricultural year of 2002/2003. The three forecasts are significantly below the recent five-year average.

- **Scenario A** presumed a tail-off of good rainfall patterns experienced in February, resulting in maize production that would be worse than last years 'poor' performance.
- **Scenario B** assumed that the rains being experienced in February would continue and be favourable for maize production into March throughout the country. The season has more or less followed the outline for Scenario B.
- **The National Early Warning Unit and National Meteorological Services forecast** (based on area cultivated and Water Requirement Satisfaction Index (WRSI)) predicts 77,540 MT production including an improvement in the likely levels of production in the Lowveld.

<sup>8</sup> These two scenarios result from the collaborative crop forecasting assessment report (draft) between FAO and MoAC in February 2004.

Figure 7: Maize Production Forecasts, 2003/4



Current expectations are that the 2003/2004 growing season will secure a maize harvest above last year's production but one that will still be well below the five-year average to 2001/2002.

### National Cereal Balance Sheet – 2004/5 Marketing Year

Figure 8: National cereal balance sheet for the 2004/5 marketing year (as at 30<sup>th</sup> April)

	Maize	Wheat	Rice	Total
<b>A. Domestic Availability</b>	85.4	10.3	0.2	95.9
<b>A.1 Anticipated Opening Stocks (as at 1/4/04)</b>	7.9	10.3	0.1	18.3
Formal (monitored)	1.7	10.3	0.1	12.0
On Farm (unmonitored)*	1.4	0.0	0.0	1.4
WFP Stock	4.9	0.0	0.0	4.9
<b>A.2 Forecast Gross Harvest</b>	77.5	0.0	0.1	77.6
<b>B. Total Requirements</b>	160.7	51.9	15.5	228.0
<b>B.1 Domestic Consumption Requirements: Food Use</b>	142.8	44.9	15.0	202.7
<b>B.2 Desired Minimum Stock Requirements</b>	3.0	7.0	0.5	10.5
<b>B.3 Unofficial Exports</b>	2.0	0.0	0.0	2.0
<b>B.4 Seed Use</b>	1.2	0.0	0.0	1.2
<b>B.5 Losses and Other Uses**</b>	11.6	0.0	0.0	11.6
<b>C. Domestic Shortfall/Surplus</b>	-75.2	-41.6	-15.3	-132.1
<b>E. Total Planned Imports</b>	26.4	44.0	4.0	74.4
(Commercial)	22.5	44.0	4.0	70.5
(Food Aid)	3.9	0.0	0.0	3.9
<b>E.1 Received</b>	4.3	5.0	0.9	10.2
(Commercial)	2.5	5.0	0.9	8.5
(Food Aid)	1.8	0.0	0.0	1.8
<b>E.2 Expected</b>	22.1	39.0	3.1	64.2
(Commercial)	18.2	39.0	3.1	60.3
(Food Aid)	2.1	0.0	0.0	2.1
<b>F. Exports</b>	0.0	0.0	0.0	0.0
Planned Exports	0.0	1.0	0.0	1.0
Unofficial Exports	2.0	0.0	0.0	2.0
Exports Completed	0.0	0.8	0.0	0.8
<b>G. Uncovered Gap / Unallocated Surplus</b>	-48.8	2.4	-11.3	-57.7
<b>G. Closing Stocks as at 30th April 2004</b>	1.4	6.4	0.0	7.8

## Cereal Supply

The total cereal requirement for the 2004/2005 marketing year<sup>9</sup> stands at 228,000 tonnes, which is 5.8% higher than last year's figure of 215,500 tonnes. Meanwhile, the total domestic cereal availability is 95,900 tonnes, meaning that at least 132,100 tonnes of cereals have to be imported to cover the domestic shortfall. Total planned cereal imports by the major grain handlers during this marketing year stand at 74,400 tonnes comprising of 26,400 tonnes of maize (22,500 tonnes by NMC and 3,900 tonnes by WFP), 44,000 tonnes of wheat and 4,000 tonnes of rice). This will reduce the **deficit to 57,700 tonnes**. This will be further reduced as WFP is still to avail her planned imports for the period up to the end of this year. However, this will not cover the entire gap and the government will have to decide on other means of covering the significant gap that is likely to remain.

## Maize

Total domestic maize availability for the 2004/2005 marketing year is estimated at 85,400 tonnes, comprising of a production forecast of 77,500 tonnes and 7,900 tonnes of opening stock held by traders as at the first of April 2004 (formal/monitored stocks of 1,700 tonnes, on farm/unmonitored stocks and stock held by WFP). Meanwhile, the total maize requirement for the country stands at 160,700 tonnes, comprising of 142,800 tonnes of domestic consumption requirements, 3,000 tonnes of desired minimum stock, 2,000 tonnes of unofficial exports, 1,200 tonnes of seed use and 11,600 tonnes of losses and other uses. A domestic **shortfall of 75,200 tonnes of maize** is therefore projected. The NMC will import at least 22,500 tonnes of maize over the 2004/2005 marketing year. This will bring down the **shortfall to 48,800 tonnes**.

## Wheat

Total domestic wheat availability for the 2004/2005 marketing year is estimated at 10,300 tonnes, comprising solely of opening stock held by Ngwane Mills as at the first April 2003. Meanwhile, total wheat requirements for the 2004/2005 marketing year are estimated to be 51,900 tonnes, comprising 44,900 tonnes of consumption requirements and 7,000 tonnes of desired minimum stock<sup>10</sup>. A domestic shortfall of 41,600 tonnes is therefore projected for the 2004/2005 marketing year. Total wheat import plans by Ngwane Mills amount to 44,000 tonnes. This will reduce the shortfall to 900 tonnes. On the other hand, total planned wheat flour exports for the 2004/2005 marketing year are estimated at 1,000 tonnes.

## Rice

Domestic rice availability for the 2004/2005 marketing year is estimated to be 100 tonnes, wholly comprising of forecasted gross harvest. Meanwhile, total rice requirement is estimated to be 15,500 tonnes comprising of 15,000 tonnes of domestic consumption requirements and 500 tonnes of minimum stock requirements. A domestic shortfall for rice of 15,400 tonnes is therefore projected. Total planned imports for rice are estimated to be 4,000 tonnes which will reduce the gap to 11,400 tonnes.

Analysis of the cereal balance sheet has led observers to conclude that further scrutiny of methods is required because regular, increasingly large annual cereal deficits have not led to malnutrition and food shortages in Swaziland. The current maize deficit is approximately 63% of national maize production for the current year. Either the estimation of cereal requirement is too high or measurements for national crop production underestimate total maize production or a combination of the two results in a gap that cannot be fully explained. NEWU plans to hold a workshop to analyse the approaches used to ensure that the cereal balance sheet becomes as accurate as possible in future and can be used as a credible tool to warn of possible food shortages.

<sup>9</sup> The marketing year starts on 1<sup>st</sup> April and ends on 31<sup>st</sup> March of the following year.

<sup>10</sup> Desired minimum stock requirements for wheat and rice are set at providing consumption cover for two months and one month respectively.

## Livestock and Grazing Conditions

The Swazi VAC has attempted to redress the poor monitoring of the livestock production as a part of its livelihood and vulnerability assessments in Swazi Nation Land following the rezoning of the Middleveld into its wet and dry components that was carried out in December 2003.<sup>11</sup> Livestock plays a strong role in vulnerability analysis because the level of assets held by households is one major factor deciding their vulnerability. In times of stress it is common for households to sell livestock to maintain food security and other basic livelihood or household items. Grazing condition is implicit within the following discussion. Rainfall levels, proliferation of weeds, nutritive value of the various forms of grazing and access to grazing lands and veterinary services are all important issues that play a role in livestock condition and productivity. Veld conditions in the north-east of the country (Lomahasha, Lubombo and Lowveld LZs) have been seriously affected by the rapid spread of the Chromolena Odorata (Sandanezwe) weed. In other areas of the country a more long-standing weed (Lantana Camara) is reducing grass availability and quality for livestock grazing. The figures summarized below enable one to better assess current conditions in relation to historical trends. Tables 2-4 and Figures 9-14 summarise trends in cattle, goats and sheep numbers by agro-ecological zone<sup>12</sup>.

### Cattle

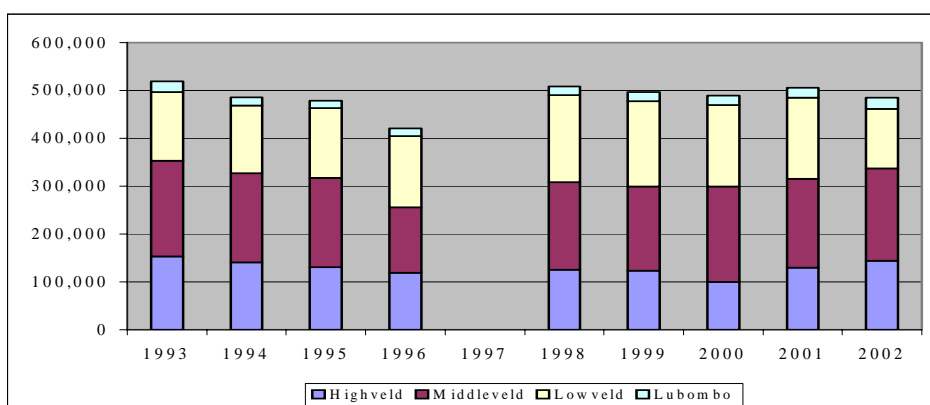
The figures in table 2 and figure 9 indicate that the Lowveld has experienced significant reduction in the cattle numbers in 2002 – a loss of approximately 46,000 head which represents a 27% reduction the Lowveld herd. This is a major loss of wealth and production. Critically, drought conditions in 2003 and 2004 may have further reduced cattle numbers through loss of stock to death by starvation and by accelerated sales of cattle as a coping mechanism.

**Table 2: Cattle Population Estimates 1993-2002 (SNL)**

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
<i>Highveld</i>	153,403	140,594	130,585	118,946	n/a	125,151	123,679	99,587	129,931	144,463
<i>Middleveld</i>	199,620	186,301	186,150	136,827	n/a	183,356	175,667	199,083	184,956	192,377
<i>Lowveld</i>	143,587	141,997	146,520	148,683	n/a	182,017	178,133	170,665	170,085	124,248
<i>Lubombo</i>	22,028	16,380	15,075	16,344	n/a	17,378	18,718	20,229	20,369	23,717

Source: MoAC Livestock Section Statistics

**Figure 9: Cattle Population, 1993-2002 by Agro-Ecological Zone (SNL)**



<sup>11</sup> NB Arable land only occupies about 11% of the total surface area in the Swazi mixed farming system, many assets and rural livelihoods are based around hundreds of thousands of cattle, goats and sheep

<sup>12</sup> Figures for 1997 are not available from the Livestock Department, MoAC

Analysis of information from cattle auction records provides some insight on a number of indicators – average monthly weight of cattle, monthly cattle prices per kilogram and total monthly off-take figures.

**Figure 10: Cattle Condition – Average monthly Weight in KG – 1995-2003 (Sale Records)**

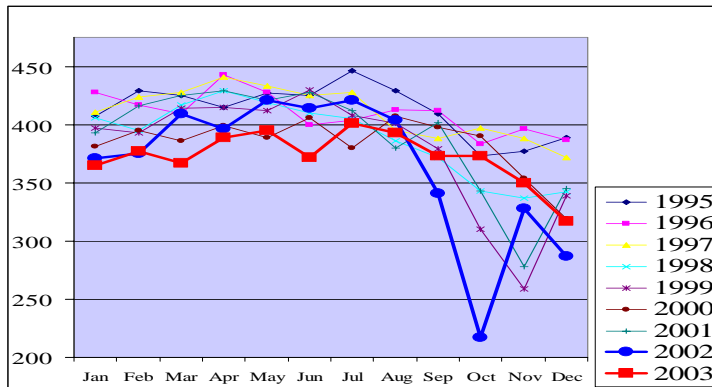


Figure 10 corroborates the ‘starvation grazing conditions’ in the dryer parts of the country between August 2003 and January 2004 with cattle condition dropping to the second lowest record in December. The evidence indicates that the late dry season and early rainy season normally coincides with the period of lowest body mass. In December 2003 the situation became critical. Reports confirmed that 4,260 head

of cattle had died by January 2004. Veterinary Department reports depicted a serious situation for the surviving herd – "many starving, emaciated cows would abort, die during calving, suffer uterine prolapse or fail to nurse calves. In addition, feeble and weak animals were hampering the dipping process. Many had to be manually hauled out of dip tanks". Clearly the conditions had a major impact of productivity of the livestock herd. For farmers who could afford the costs, the MoAC supplied a modest supply of hay bales from South Africa.

Up to January 2004, accounts of grazing and cattle condition in the Lowveld, Dry Middleveld and Lubombo were therefore very depressed and conditions were assumed to have seriously affected productivity and income from livestock and livestock products in the first half of 2003-2004. Added to the problems of drought was the issue of widespread stock theft. Since December the improved rainfall situation turned a desperate situation around. Despite the earlier stock losses, it is now suggested that cattle farmers feel comfortable about carrying their stock through the approaching winter/dry season and the grazing situation for the surviving animals has improved considerably in all parts of the country.

**Figure 11: Cattle Sales – Off Take KGs, 1995-2003**

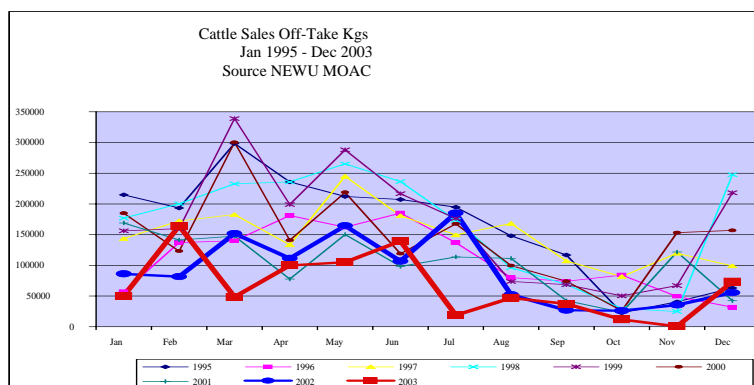


Figure 11 indicates that cattle off-take between August 2002 and June 2003 is the lowest in the data series. It provides some indicators for the estimates of ‘poor’ to ‘very poor’ levels of livestock production likely in the 2003/2004 season. Cattle condition and off-take trends perhaps highlight the significance of the cumulative

impact of several years of poor conditions on this component of livelihoods.

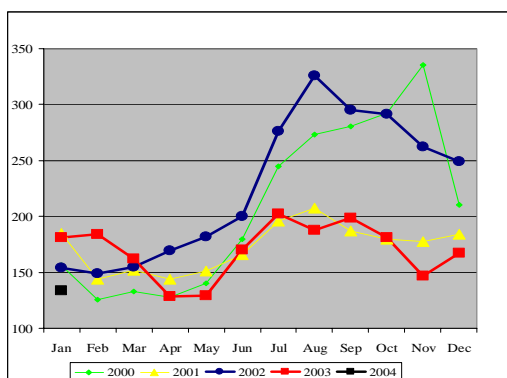


Figure 12 provides an additional indicator of the negative impact of the grazing conditions (July 2003 to Jan 2004) on total milk deliveries to Parmalat Swaziland. While not directly comparable, it is highly likely that milk production on even quite favourable SNL could be 40-60% of normal and much less in the drought affected areas.

**Figure 12: Milk Deliveries (Litres) 2000 to 2004**

This information plus the judgements of Swazi VAC members have been used to factor in ‘slightly depressed grazing conditions’ as a current

hazard/shock likely to affect access to income and food among rural livelihoods in 2004/5. While meat and milk prices have gradually increased over the years, the increases have been modest. Prices have not altered much in relation to the massive variability in supply.

### Goats

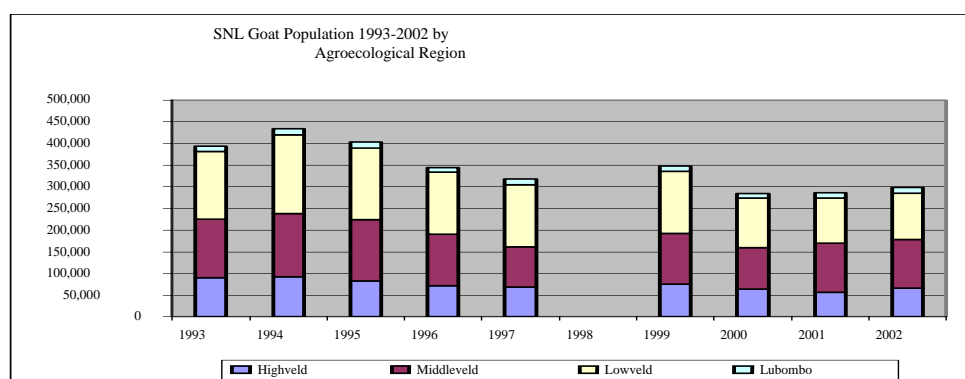
Table 3 and figure13 indicate that the number of goats found in the SNL in all agro-ecological zones has declined significantly since the mid 1990s. Goat herd numbers have fallen by about 100-130,000 head. The Lowveld has carried a large part of the overall decline registering a 30,000 fall in numbers of between 1999 and 2000. Declines are seen in all zones apart from the Lubombo Plateau.

**Table 3: Goat Population Estimates 1993-2002**

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
<i>Highveld</i>	90,470	92,462	83,608	72,121	69,500	nd	75,363	64,537	57,242	66,214
<i>Middleveld</i>	135,123	145,510	140,284	118,475	92,391	nd	117,590	95,696	112,966	112,513
<i>Lowveld</i>	155,963	181,343	164,628	143,494	143,003	nd	142,192	113,384	103,800	106,515
<i>Lubombo</i>	11,770	14,592	14,192	9,972	12,801	nd	12,798	10,202	12,318	13,107

Source: MoAC Livestock Section Statistics

**Figure 13: Goat Population, 1993-2002 by Agro-Ecological Zone (SNL)**



### Sheep

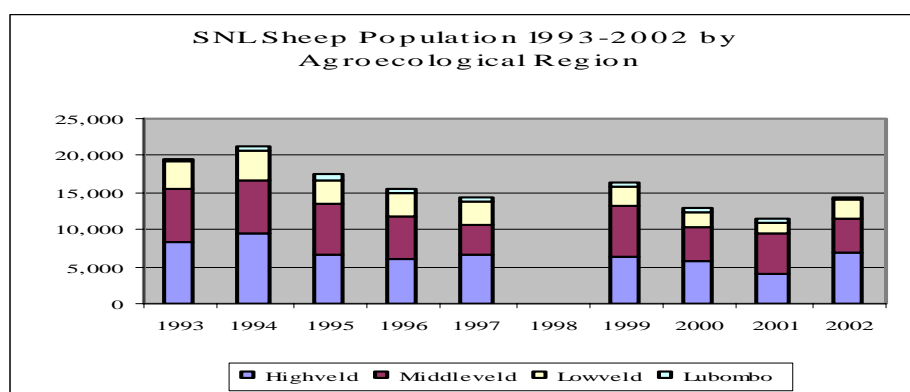
Table 4 and Figure 14 below indicate that the number of sheep found in the SNL has also declined since the mid 1990s. The total numbers of sheep are much smaller with declines in all agro-ecological zones.



**Table 4: Sheep Population Estimates 1993-2002 by Agro-Ecological Zone**

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
<i>Highveld</i>	8,461	9,438	6,679	6,049	6,575	nd	6,462	5,780	3,957	6,810
<i>Middleveld</i>	7,152	7,247	6,732	5,675	3,949	nd	6,747	4,482	5,472	4,769
<i>Lowveld</i>	3,523	3,971	3,361	3,280	3,163	nd	2,714	2,164	1,501	2,400
<i>Lubombo</i>	529	676	705	448	612	nd	553	489	450	473

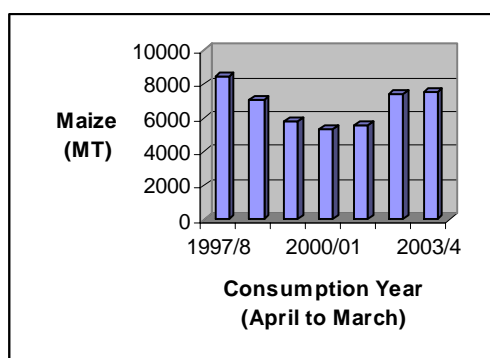
Source: MoAC Livestock Section Statistics

**Figure 14: Sheep Population, 1993-2002 by Agro-Ecological Zone (SNL)**

## Cash Crops

### Maize

Official national maize purchases as a cash crop in Swaziland have always been low. The figure below demonstrates that official maize purchase by the National Maize Corporation normally oscillates between 5,500 MT and 8,000 MT of maize per annum.

**Figure 15: Annual Total Purchases of Maize by NMC From Swazi Farmers**

In 2003/4 consumption year the quantity of maize purchased in Swaziland by NMC (and sold to millers for retail) accounts for only 5% of the total maize requirement for the country and approximately 10% of total maize purchased by households in Swaziland<sup>13</sup>. It is clear that the informal maize market is very important accounting for much higher levels of sale and purchase. Closer analysis is important if we are to have a fuller understanding of how poor people access food, particularly with a view to comprehending the impact of price changes.

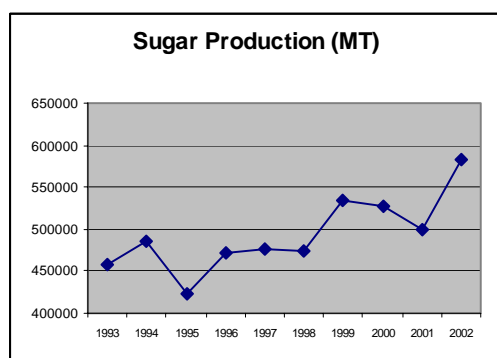
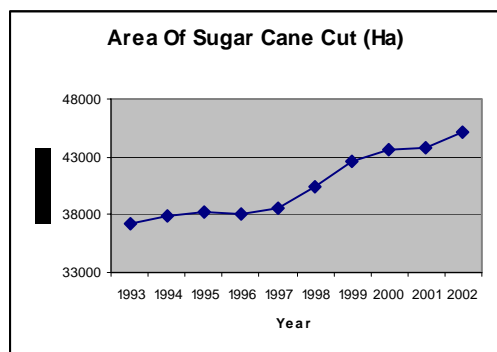
### Sugar Cane

The sugar cane industry continues to be very important in the rural economy of Swaziland. Sugar cane production both in terms of land cultivated and metric tonnes of sugar have increased virtually year on year since the 1960s. However, there has been a marked increase in recent years with sugar cane production presently covering 45,126 hectares of land. The 2002 season (one of below normal

<sup>13</sup> If we assume that 50% of the (NEWU) maize requirement for the country is purchased (rather than grown) because we know from the VAC livelihood baselines that 50%-60% of households countrywide access their food through purchase rather than through their own cultivation.

rainfall) produced the best quality cane yield in the previous five years.

**Figure 16: Area of Sugar Cane Cut (Ha)**

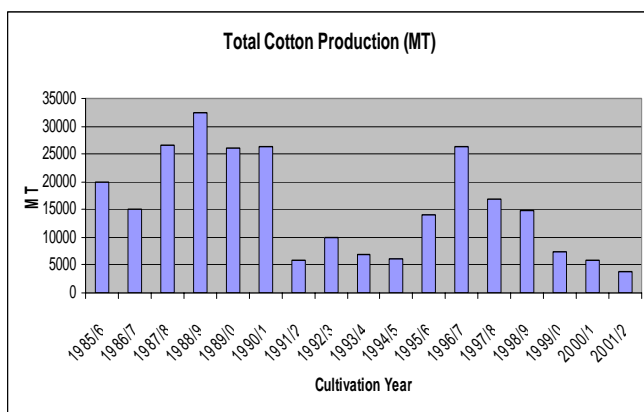


Sugar cane production is rapidly catching up the falling maize production when comparing land coverage in Swaziland. Small holder cultivation of sugar cane increased in 2002/3 to 2,718 hectares producing 259,612 MT of cane, however this only accounts for 5.6% of total production. Heavy use of water in the Lowveld by the sugar cane industry does mean that there are some significant trade-offs or opportunity costs. Other crops such as cotton or maize have received nothing like the level of production support. The comparative advantages of sugar cane should be exploited by Swazi growers but monoculture of one cash crops leaves communities and companies (and Government tax revenue) vulnerable to shocks, particularly if there is upheaval in global sugar markets. Furthermore, local casual employment level created by the sugar industry is important but employment creation by sugar cane may not be as high as other cash crops e.g. labour intensive cotton production. Local casual employment provides essential rural incomes in rural areas, and can make the difference for a household between poverty and improving living conditions.

**Figure 17: Sugar Production (MT)**

### Cotton

Cotton production has been a significant source of income for many families in the Lowveld and Lowveld margins during the past 20 years (see figure 18). At its height, in the late 1980s and early 1990s, it is estimated that 16,000 families were directly involved in growing the crop. Given the labour intensive nature of production it provided piecework employment and income to approximately 15-20% of the rural work force. Production was land extensive up to 10-15 hectares



per grower. Yields have varied between seasons commonly undulating between 800 and 1000 KG per hectare.

**Figure 18: Cotton Production (MT)**

(Source: Swaziland Cotton Board)

The industry has been in a very serious decline since 1998/1999. The worst year was probably 2002/2003 when only 57 MT of cotton seeds were purchased and production was only 1,221 MT. The ‘depressed’ status of the cotton industry has undermined livelihoods in the

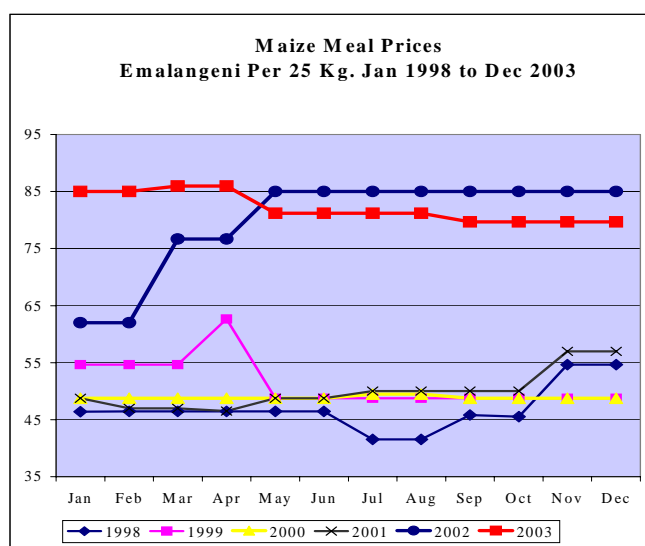
Lowveld, dry Middleveld, and Lomahasha areas by significantly reducing household income over the past 5 years. Yet, cotton is one of the few crops that will grow in the drier areas of the country without irrigation and farmers appear keen to grow if prevailing marketing conditions are good. There are some signs that there is likely to be a slight recovery in 2003/2004 cultivation season which could be built on given new marketing and ginnery ownership arrangements.

This year the supply of cotton seed has doubled (130.7 MT) compared to last year and it is estimated that 3,500 households have approximately 6,535 hectares under cultivation. Production this year is however characterised by late plantings and yield estimates Kg/Ha are unavailable. Farmers have received support with agro-chemicals for pest control from the Swazi Cotton Board. However, many farmers remain in debt to banks, Vunisa or the Cotton Board following failed production and credit repayments in the last few years making future production difficult. Due to late planting (in January and February) there is now the additional threat of cattle damage to unfenced crops. The crop is expected to yield a total delivery of 4,000-5,000 MT – which despite the increase compared to last year, would represent the fifth lowest level of production on record. Production will be purchased by a new partnership company (Sikhulile) made up of the Swazi cotton Board and two South African companies at a current price estimate of E3.10/Kg for deliveries made to the ginnery at Big Bend. Total deliveries are unlikely to be sufficient to justify the reopening of the ginnery this year as a threshold of 5,000-6,000 MT is the minimum delivery level for cost effective production.

## Market Price Changes

### Food

The upward shift in maize prices continues to undermine overall welfare and household level food access. The monitoring of maize meal prices between January 1998 and December 2003 indicates that consumers have had to face a sustained 45% increase in the price of the staple food since February 2002. The national food balance figures and the Swazi VAC livelihood profiles confirm that most rural families purchase (rather than grow) the majority of the total maize meal they consume. Much of their normal pattern of access to staple food is via purchases. The current maize meal price (2003/2004) therefore continues to seriously erode the cash income-to-staple food exchange ratio making it increasingly difficult to afford their daily maize based meal as their income to purchase the food is declining in relative terms. This situation has been factored in as a food price shock affecting household food access in the production year 2003/2004.



**Figure 19: Official Maize Meal Prices, 1998-2003**

Figure 19 presents an overview of maize meal prices over the past few years. Maize meal prices in 2002/2003 and 2003/2004 have been 45% above the five-year average (1998-2002). Communities received a major shock when there was a major increase in the maize meal price between February and May 2002. Moreover the current field assessments indicate that over the past twelve months food price inflation (maize/maize-meal, beans and cooking oil) has been about 15%. This continuing but reduced level of inflation in 2003/2004 none the less

further erodes the purchasing power of poor households, increases vulnerability and is likely to reduce access to food or (for wealthier households) increase asset sale to ensure food access.

Securing Swaziland's overall food balance situation has long required significant levels of maize, wheat and rice imports. Given the scenarios mapped out in the 'snap-shot' assessment it was a major concern to see maize prices on the South Africa Futures Exchange (SAFEX) go up from R900 in December 2003 to R1,400 in January and February as fears grew and speculation

heightened about the potential effects of the emerging drought situation in the Southern Africa Region. However, rainfall between late January and April has seen considerable softening of the effects of the drought in Swaziland and in other parts of the region. Critically, the improved outlook of the South African production forecast and the revised opening stock levels has seen the SAFEX maize price fall to R1,100 in April and to below R1,000 in May. The regional food availability picture suggests that, South Africa will be in a position to meet the anticipated levels of commercial cereal exports to meet the needs of Botswana, Lesotho, Namibia, and Swaziland in 2004/2005. However, the probable high levels of importation required to sustain food security in Zimbabwe means that regional shortages remain a possibility.

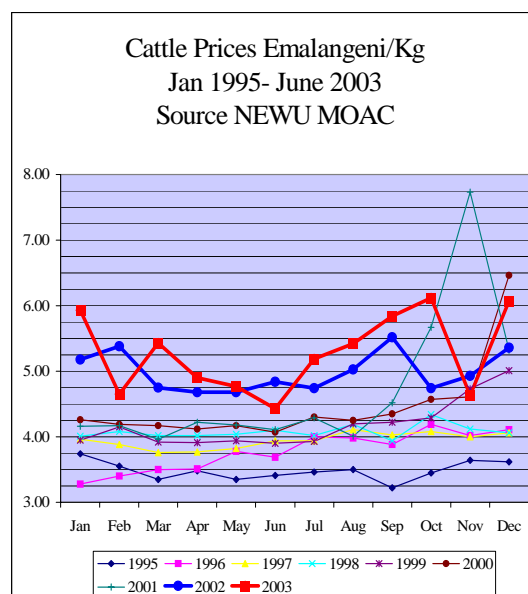
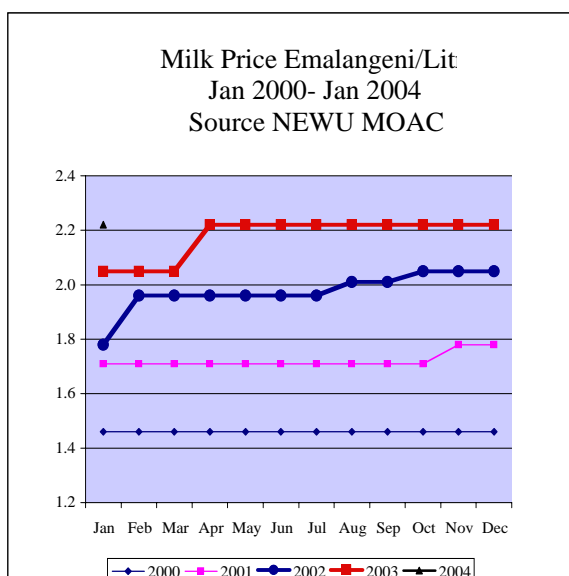
The Swazi government minimum producer price for maize in 2003/04 was E950 per 1MT. The National Maize Corporation has been buying and selling maize at E1,300 and E1,590 respectively. This is however significantly below the March 2004 prices observed in the informal sale of maize monitored by the NEWU in the four main agro-ecological regions of the country. Informal sector prices for maize are much higher partly because many households purchase in small quantities and are unable to secure economies of scale (Highveld E1800-2140, Middleveld E2140-2400, Lowveld E2860-3200 and Plateau E2200-2400). These figures support the VAC field reports that farmers with maize stocks have been reluctant to sell to the NMC because of low official prices. The other important feature to note is that the areas with the highest food prices coincide with the areas most affected during the past three years of adverse production. Informal maize prices are reported to be high in the Lowveld so that maize vendors can make up the shortfall of sale during the final week of each month (when food aid has been consumed by households). The figures also suggest that staple maize price inflation in the informal markets may be much higher than indicated in figure 19 which is based on NMC records. A more careful monitoring of informal maize markets is required.

### Milk and Meat

Milk and cattle prices (see below) indicate that there have been significant increases in prices of the main livestock products of meat and milk. This has certainly acted as a cushion against inflation for those relatively better-off wealth groups selling these products. For consumers however, these meat and milk price trends contribute to the overall erosion of food access at the household level.

**Figure 20: Milk Prices (Emalangeni) 2000 - 2004**

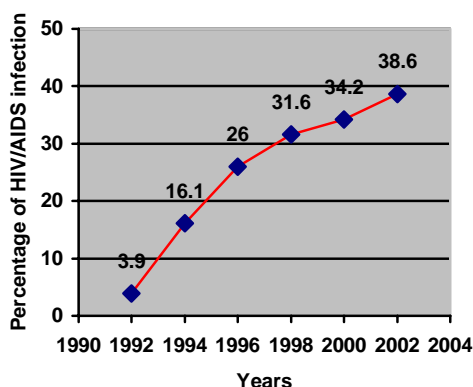
**Figure 21: Cattle Prices (Emalangeni), 1995 - 2003**



## HIV/AIDS Pandemic

The current impact of the HIV/AIDS pandemic is exacting a very heavy burden on the population and the economy<sup>14</sup>. The prevalence rate of HIV/AIDS is now the highest in the world in 2002 – and a rapid drop in the prevalence rate is not anticipated in the near future. Increasing rates of morbidity and mortality are exacting a huge toll on the ability of households to produce food and earn income while at the same time increasing household expenditure on health and related costs. Few HIV/AIDS sufferers are able to access ante-retroviral support either because they are not available or because access/cost is prohibitive. Children are particularly affected by HIV/AIDS with an increasing number of orphans and very vulnerable child headed households resulting from the over extended kinship networks. The cost to average household income of chronic illness has not been determined in Swaziland.<sup>15</sup> The ability of Government services to respond to the problems has been eroded by illness and mortality of Government and private sector staff<sup>16</sup>.

**Figure 22: HIV/AIDS Prevalence Rates, 1992-1994 (ante-natal clinic data)<sup>17</sup>**



The 2003 HIV/AIDS, demographic and livelihoods VAC survey<sup>18</sup> in *rural* Swaziland confirmed that rates of natural increase have lessened in rural areas down to approximately 2.0% growth per annum. This reduction was not solely the result of the long-term trend of declining fertility rates in Swaziland. The death rate among the rural population was found to be high and increasing. In addition, a fair proportion of these young and normally unexpected deaths occurred after a bout of chronic illness, some indication that AIDS related complications play a determining role in the increasing death rate. These results should be seen against a backdrop of rising HIV prevalence rates as measured at selected ante-natal clinics in the country.

The survey confirmed the presence of relatively high rates of chronic illness among the rural population, even in age groups where one would normally not expect this to occur. The 2003 VAC survey in Swaziland found high rates of orphanhood among children below the age of 15 years. At present, 6% of children (totalling 19,206) aged 0-14 years are the predicted course of the epidemic, characterised by deaths among young adults, the proportion of orphaned children is set to rise in the coming years. This will have numerous social and economic implications, both on care-giving households, as well as the country as a whole. Access to education for these orphans is one determinant of whether they will be in a position to actively contribute to Swaziland society and economy as they grow older. It is important to monitor how many of these orphans are indeed regularly accessing education and build on current initiatives (by NERCHA, UNICEF and other NGOs etc.) to ensure education and health provision for these often vulnerable children.

One of the pre-survey expectations was that the study would show higher age dependency ratios at the national and sub-national levels, as a result of increasing deaths among adults. However, the

<sup>14</sup> The National Emergency Response Committee on HIV/AIDS projects that out of a population of about 900,000, as many as 120,000 children under the age of 15 (or 16.7% of the total population) will have lost both parents. As a result of concerns by stakeholders the Swazi VAC has undertaken a national statistically based survey since June 2003 to analyse the impact of HIV/AIDS on the demography of the rural population and their livelihoods (see sources). This should be forthcoming in a matter of weeks.

<sup>15</sup> The Swazi VAC plans to do a case study survey in the Lowveld to analyse the economic costs of HIV/AIDS on income levels.

<sup>16</sup> A study (by MoAC et al 2002) portrays the impact of the disease on the Agricultural and Private Sector in Swaziland.

<sup>17</sup> 8<sup>th</sup> HIV Sentinel Serosurveillance Report, Ministry of Health and Social Welfare, 2002

<sup>18</sup> Available at: [www.sarpn.org.za/documents/d0000784/index.php](http://www.sarpn.org.za/documents/d0000784/index.php)

results of the survey indicate that changes in the age structure, as a result of declining fertility, more than compensated for deaths among those in the most productive age groups. When taking into account household members who reported bouts of chronic illness, and thus are not likely to be productive (income earners/home makers etc.) in the usual sense, the Swaziland VAC survey found that the “effective dependency ratio” in rural Swaziland was between 20% and 35% higher than the standard dependency ratio. The effective dependency ratio will, of course, vary by area and household. Therefore individual households who lost productive members, or who took in orphans from households that have dissolved, or who have ill members, may be faced by a “dependency” crisis: children, sick members and elderly persons depending on fewer or no productive adults that may bring food and/or income into the household.

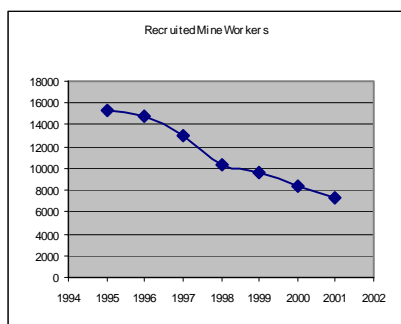
The VAC survey highlights a strong need for a demographic and health survey in Swaziland. Besides generating accurate fertility and infant mortality data, such a survey should investigate other reproductive health matters, not the least is the current use of barrier methods. This will indicate how successful current information, education and communication (IEC) campaigns are in convincing the population of Swaziland to change behaviour patterns in order to stop the epidemic from spreading any further.

Another aspect to note is the need for accurate population-based HIV prevalence data. Recent population-based surveys conducted in Zambia, Kenya and South Africa found that surveillance data may over-estimate the HIV prevalence rate in the population (ORCMacro, 2003; Shisana, et al 2003). Stronger statistical prevalence data will give more credibility to the outputs of models predicting the course of the epidemic as well as population projections.

In combination with the above shocks and hazards and the fact that this year will be the fourth in a series of bad years there are concerns about a growing and cumulative ‘humanitarian crisis’ in the worst affected areas in the country where many households are unable to sustain viable livelihoods in the face of cumulative shocks. Swaziland’s high level of income inequality ensures that a high proportion of the population is poor and constantly vulnerable to shocks. The levels of vulnerability have considerably worsened given three years of depressed food production and rural incomes<sup>19</sup>.

## Employment

Employment and remittances have played a vital role sustaining rural and urban livelihoods in Swaziland and indeed are more important than many other forms of food access and income such as crop production. National employment levels have been virtually static in the public and private sectors in Swaziland. The average annual growth rate of employment in the private sector was 0.7% between 1994 and 2000 and for the same period was 1.4% for the public sector. Private and public sector employment post 2000 were predicted to decline slightly resulting in 63,201 private sector jobs and 28,646 public sector jobs in 2004. While it is difficult to obtain up to date statistics



on employment, particularly on the informal sector, it is clear that employment opportunities, while desperately important for livelihoods throughout Swaziland, have been depressed. Plans to curtail the civil service payroll are likely to reduce employment levels and remittances to rural areas further.

**Figure 23: Swazis employed in SA mines**

(Source: Bureau of Labour, Employment Statistics Unit, Ministry of Finance)

Employment opportunities for Swazis in South Africa have been consistently declining with far fewer Swazis employed in

<sup>19</sup> GDP figures, at constant prices, for SNL Agricultural Crops indicate real contributions of crops 2000-2002 being 33% below their contributions 1996-98.

the South African mines. Between 1995 and 2001 there was a drop of employment by 54% and the trend has continued since 2001. As a result incomes arriving in Swazi homesteads throughout the Kingdom have been declining as miners have been retrenched. In most cases these miners have not been re-skilled and re-employed and in some cases have become a drain on household resources. Many are waiting for further (disputed) outstanding financial settlements that may or may not come.

Informal employment opportunities for rural households, most commonly as off-shoots from agricultural production (both for subsistence maize production and cash crop production such as maize, sugar cane and cotton), have been depressed. It is almost impossible to quantify informal employment opportunities in a statistical sense. However, our field studies show that four years of below normal cereal production and a collapse of the cotton industry has meant that local employment opportunities that usually ensure food security by providing income for food purchase are far fewer than they used to be. Furthermore, in many communities the wealthy households, commonly those that received remittances from miners or other labourers working in South Africa or Swaziland towns, have less disposable income to perform the role that they used to – that of employing poorer households to do agricultural weeding, herding, domestic work, purchase of mats, and many more piece-meal jobs that sustained poorer households.