

# **Mpumalanga Provincial Government**



## **Department of Agriculture and Land Administration**

### **Integrated Resource Information Report**

**Steve Tshwete**

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**RESOURCE MANAGEMENT AND LAND USE PLANNING  
PRIVATE BAG X9019, ERMELO, 2350 TEL: (017) 8115811 FAX: (017) 810 1223**

# Steve Tshwete

## Summary

Middelburg is situated in the central part of Mpumalanga on the highveld. Major towns in the area are Middelburg and Hendrina. Moderate summers and cold winters characterize the climate of the area. The annual rainfall, which falls mainly during summer, varies between 550 and 750 mm. The area of 3 977 km<sup>2</sup> is covered mainly by grassland, with small patches of savanna in the north. Mixed farming is practiced in the area. Cattle (beef and dairy), sheep, maize, wheat, tobacco, vegetables, beans and potatoes are produced. Industrial development is closely associated with the rich coal reserves in the area. Three power stations, Arnot, Hendrina and Komati are supplied with coal by various mines. Other industries include a stainless steel plant at Middelburg.

## GENERAL INFORMATION

Common Name(s)	Middelburg
Area	397,725.0 ha
Coordinates	29°9'36"E 25°23'59"S 29°52'47"E 26°15'0"S
District Municipality	Nkangala District Municipality
Region	Nkangala Region

## Towns

### Name

Arnot  
Hendrina  
Hendrinakrag  
Middelburg

## Neighbouring Municipalities

### Name

Albert Luthuli  
Emakhazeni  
Emalahleni  
Govan Mbeki

Groblersdal  
Msukaligwa  
Thembisile

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## Natural Resources

### Climate

#### Rainfall

Rainfall Range 550 to 750 mm per year

#### Temperature

Temperature Zone 46/14

	DJF	Mar	Apr	May	JJA	Sep	Oct	Nov
T	17.3	16.2	13.4	9.5	7.4	11.3	14.9	16.3
Tn	12.8	11.7	8.6	4.7	2.8	6.7	10.2	11.8
Td	21.8	20.7	18.2	14.3	12	15.9	19.6	20.8
Tmax	24.4	23.3	20.9	17	14.6	22.3	22.3	23.4
Tmin	10.2	9.1	5.8	2	1.7	4.1	7.5	9.2

Temperature Zone 57/14

	DJF	Mar	Apr	May	JJA	Sep	Oct	Nov
T	20	17.5	13.8	10	7.4	13.9	17.6	18.9
Tn	17.6	14.8	10.1	5.6	2.7	10.2	14.9	16.2
Td	22.4	20.2	17.5	14.4	12.1	17.6	20.3	21.6
Tmax	23.8	21.7	19.6	16.9	14.8	19.7	21.8	23.2
Tmin	16.2	13.3	8	3.1	0	8.1	13.7	14.7

Temperature Zone 77/25

	DJF	Mar	Apr	May	JJA	Sep	Oct	Nov
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T	23.5	20.9	17.5	14.2	12	17.6	21	22.2
Tn	17.8	15.4	12.4	9.5	7.2	12.5	15.5	16.9
Td	29.2	26.4	22.6	18.9	16.8	22.7	26.5	27.5
Tmax	32.5	29.5	25.5	21.6	19.5	25.6	29.6	30.5
Tmin	14.5	12.3	9.5	6.8	4.5	9.6	12.4	13.9

Temperature Zone 77/35

	DJF	Mar	Apr	May	JJA	Sep	Oct	Nov
T	23.6	21.8	18.9	16	14.3	18.9	21.9	22.6
Tn	17.6	15.8	12.7	9.4	7.5	12.8	15.9	16.8
Td	29.6	27.8	25.1	22.6	21.1	25	27.9	28.4
Tmax	33	31.2	28.6	26.4	25	28.5	31.3	31.4
Tmin	14.2	12.4	9.2	5.6	3.6	9.5	12.4	13.5

T - Average Temperature

Tn - Average Night Temperature

Td - Average Daily Temperature

Tmax - Average Maximum Temperature

Tmin - Average Minimum Temperature

## Soils

### Land Types

Land Type	Area (ha)	%
Dystrophic and/or mesotrophic; red soils not widespread (Bb)	127,877.9	32.2
Dystrophic and/or mesotrophic; red soils widespread (Ba)	229,898.4	57.8
Eutrophic; red soils widespread (Bc)	4,069.4	1.0
Exposed rock areas with miscellaneous soils (Ib)	33,584.6	8.4
Pedologically young soils (lime rare or absent) (Fa)	1,187.3	0.3
Vertic, melanic, and/or red structured diagnostic horizons (Ea)	1,107.0	0.3

### Soil Clay Contents

<b>ClayClass</b>	<b>Area (ha)</b>	<b>%</b>
Clay	4,008.2	1.0
Clayey	10,513.8	2.6
Loam	74,534.6	18.7
Loam & Clay	42,314.4	10.6
Loamy Sand	76,179.2	19.2
Non-perennial pans	1,745.5	0.4
Sandy	10,112.2	2.5
Sandy Loam	154,523.8	38.9
Very Clayey	478.8	0.1
Very Sandy	18,177.9	4.6
Waterbodies	5,136.2	1.3

#### Soil Depth

<b>Soil Depth Class</b>	<b>Area (ha)</b>	<b>%</b>
Deep	151,293.4	38.0
Medium Deep	19,925.6	5.0
Medium Shallow	9,408.6	2.4
Non-perennial pans	1,745.5	0.4
Shallow	12,271.0	3.1
Steep Slopes	16,883.4	4.2
Very Deep	134,185.4	33.7
Very Shallow	45,121.0	11.3
Very Steep Slopes	1,754.2	0.4
Waterbodies	5,136.2	1.3

#### Soil Form Association

<b>Soil Form Association Class</b>	<b>Area (ha)</b>	<b>%</b>
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Ar, My, Va	2,222.1	0.6
Ar-dominant	3,139.7	0.8
Av, Gc, We, Cv	66,648.9	16.8
Hu (30%), Sd (30%)	1,121.5	0.3
Hu, Av, Cv, Gc	179,263.4	45.1
Hu, Sd, Sw, Gs	12,573.9	3.2
Hu-dominant	2,725.4	0.7
Lithosols, Cv, Gc, Hu	34,544.7	8.7
Lithosols, Cv, Va	24,785.7	6.2
Lithosols, Hu, Cv, Gc	6,478.2	1.6
Lithosols, Hu, Cv, Sd, Sw	33,866.2	8.5
Non-perennial pans	1,745.5	0.4
Rg, Ar	22,817.8	5.7
Sd, Bo, My, Ar, Hu	655.3	0.2
Waterbodies	5,136.2	1.3

## Topography

### Elevation

Range (m)	Area (ha)	%
901 - 1000	1,263	0.3
1001 - 1100	0	0.0
1101 - 1200	2,525	0.6
1201 - 1300	5,050	1.3
1301 - 1400	8,838	2.2
1401 - 1500	29,040	7.3
1501 - 1600	156,565	39.4
1601 - 1700	190,655	47.9

1701 - 1800 3,788 1.0

Slope

Class	Area (ha)	%
Level (0 - 3%)	220,587	55.5
Moderate (4 - 15%)	155,971	39.2
Steep (16 - 25%)	8,913	2.2
Very Steep (25+%)	12,255	3.1

Vegetation

Acocks Veld Type (1975)

Acocks Veld Type	Area (ha)	%
Bankenveld (61)	337,497	84.9
Mixed Bushveld (18)	14,605	3.7
North-eastern Sandy Highveld (57)	728	0.2
Sourish Mixed Bushveld (19)	43,041	10.8
Themeda Veld or Turf Highveld (52)	1,853	0.5

Water Resources

Dams

Dam	Primary Drainage Region	River	Capacity
Loskop	Olifants		362.0
Middelburg	Olifants		48.1

Drainage Regions

Drainage Region / Catchment			Area	%
Primary	Secondary	Tertiary		
Komati	Komati	Upper Komati	534.5	0.1

Elands	Elands	Moses River	74,252.5	18.7
Olifants	Olifants	Klein Olifants River	220,809.1	55.5
Olifants	Olifants	Upper Olifants River	94,608.4	23.8
Steelpoort	Steelpoort	Steelpoort River	7,519.9	1.9

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## Land Utilisation

### Land Cover (1995)

<b>Class</b>	<b>Area (ha)</b>	<b>%</b>
Cultivated: temporary - commercial dryland	143,032.7	36.0
Cultivated: temporary - commercial irrigated	1,064.3	0.3
Forest and Woodland	14,204.4	3.6
Forest plantations	15,274.4	3.8
Improved grassland	1,073.9	0.3
Mines & quarries	17,845.5	4.5
Thicket & bushland (etc)	14,972.3	3.8
Unimproved grassland	180,408.5	45.4
Urban / built-up land: commercial	48.6	0.0
Urban / built-up land: industrial / transport	657.2	0.2
Urban / built-up land: residential	3,831.8	1.0
Waterbodies	4,261.6	1.1
Wetlands	1,049.2	0.3

### Silos

<b>Silo</b>	<b>Owner</b>	<b>Commodities</b>	<b>Capacity (Ton)</b>
Arnot	OTK	Maize (White & Yellow)	22,846
Driefontein	OTK	Maize (White & Yellow), Soya beans, Sunflower, Wheat	98,858
Middelburg	OTK	Maize (White & Yellow), Soya beans	58,615
Pan	OTK	Maize (White & Yellow), Soya beans, Sunflower	150,004

### Co-operatives

<b>Location</b>	<b>Co-operative</b>
Hendrina	OTK
Middelburg	OTK

### Conservation Areas

<b>Name</b>	<b>Authority</b>	<b>Area (ha)</b>
RESOURCE MANAGEMENT AND LAND USE PLANNING PRIVATE BAG X9019, ERMELO, 2350 TEL: (017) 8115811 FAX: (017) 810 1223		



## Demographic Information

### Population Distribution and Dynamics

#### Population Group (Dominant)

	2001	1996
African	114,371	91,224
Coloured	3,547	3,530
Indian	1,313	1,900
White	23,541	37,747
Total	142,772	135,412

#### Home Language (Dominant)

	2001	1996
Afrikaans	24,164	37,136
English	4,895	6,673
IsiNdebele	25,785	18,437
IsiXhosa	3,653	1,861
IsiZulu	45,853	40,484
Sepedi	17,394	14,301
Sesotho	7,236	5,005
Setswana	1,427	742
SiSwati	10,045	7,339
Tshivenda	252	129
Xitsonga	1,729	1,284
Other	340	820

#### Place of Birth

	2001	1996
RSA	140,584	

SADC (Excluding RSA)	1,616
RestAfrica	69
Europe	439
Asia	33
North America	10
Central/South America	16
Australia/New Zealand	5

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### Citizenship

	2001	1996
RSA	142,251	134,403
SADC (Excluding RSA)	321	479
Rest of Africa	25	14
Europe	155	209
Asia	33	20
North America	6	1
Central/South America	0	85
Australia/New Zealand	1	5

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### Demographic Characteristics

#### Age

	2001	1996
Age 0 - 4	13,760	12,696
Age 5 - 14	28,525	26,876
Age 15 - 34	54,557	51,911
Age 35 - 64	41,163	36,344
Age 65+	4,767	4,562

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#### Gender

	<b>Males</b>		<b>Females</b>	
	<b>2001</b>	<b>1996</b>	<b>2001</b>	
0 to 4	6,866	6,256	0 to 4	6,894
5 to 14	14,102	13,338	5 to 14	14,423
15 to 34	26,589	26,134	15 to 34	27,969
35 to 64	21,159	19,297	35 to 64	20,004
Over 65	1,878	1,875	Over 65	2,889
<b>Total</b>	<b>70,594</b>	<b>66,900</b>	<b>Total</b>	<b>72,179</b>

#### Persons with Disabilities

	<b>2001</b>	<b>1996</b>
Sight	2,177	4,356
Hearing	1,448	1,119
Communication	278	
Physical	1,278	1,073
Intellectual	702	440
Emotional	766	
Multiple	1,168	376

#### Socio-Economic

##### Highest Level of Education

	<b>2001</b>	<b>1996</b>
None	15,281	13,178
Some Primary	10,818	9,266
Complete Primary	5,077	4,979
Secondary	26,156	25,756
Grade12	20,942	15,415
Higher	7,474	7,757

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Persons Attending Education Institutions

<b>Institution</b>	<b>2001</b>	<b>1996</b>
None	21,342	
Pre-school	2,063	
School	37,243	
College	958	
Technikon	319	
University	226	
Adult Education Centre	48	
Other	132	

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Economic Active Population

	<b>2001</b>	<b>1996</b>
Employed	41,678	47,423
Unemployed	22,798	11,574
No Economical Active	31,619	
Total Labour Force	64,476	

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Industry

	<b>2001</b>	<b>1996</b>
Agriculture/Forestry/Fishing	3,586	5,072
Community/Social/Personal	5,938	5,872
Construction	2,448	2,688
Electricity/Gas/Water	1,419	3,139
Financial/Insurance/Real Estate/Business	2,592	1,993
Manufacturing	4,661	5,628
Mining/Quarrying	6,166	5,152
Other	3	

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Private Households	4,609	5,634
Transport/Storage/Communication	1,150	1,626
Undetermined	3,226	5,170
Wholesale/Retail	5,881	5,525

### Occupation

	2001	1996
Clerks	3,999	3,483
Craft/Trade	8,250	8,668
Elementary	10,111	11,245
Legislators/Senior Officials	1,707	2,375
Unspecified/Not Economically Classified	0	
Plant/Machine Operators	5,109	5,085
Professionals	2,179	3,502
Service Workers	3,755	4,280
Agricultural/Fishery	1,059	
Technicians	3,019	2,635
Undetermined	2,495	

### Individual Monthly Income

	2001	1996
None	91,608	54,806
R 1 to R 400	6,258	3,586
R 401 to R 800	13,100	17,642
R 801 to R 1,600	9,897	6,257
R 1,601 to R 3,200	9,888	6,057
R 3,201 to R 6,400	6,723	9,666
R 6,401 to R 12,800	3,593	2,957
R 12,801 to R 25,600	1,177	624

R 25,601 to R 51,200	278	285
R 51,201 to R 102,400	135	93
R 102,401 to R 204,800	90	
R 204,801+	25	

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#### Travel to work

	2001	1996
Bicycle	1,764	
Bus	10,500	
Car Driver	9,339	
Car Passenger	8,950	
Minibus/Taxi	10,804	
Motorcycle	384	
Train	219	
NA	60,394	
Foot	39,798	
Other	619	

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#### Households and Housing

##### Household Size (Average)

Household Size	2001	1996
1	6,337	
2	6,830	
3	5,868	
4	6,087	
5	4,173	
6	2,630	
7	1,677	
8	1,057	

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9	609
10+	960

#### Dwelling Type (Dominant)

	2001	1996
Formal	26,776	24,762
Informal	5,863	5,171
Traditional	3,516	3,169
Other	74	241

#### Rooms per Household (Average)

Room(s)	2001	1996
1	5,124	5,228
2	5,299	2,943
3	4,936	3,274
4	7,484	6,439
5	4,295	4,113
6	4,078	5,637
7	2,263	2,542
8	1,418	1,311
9	633	913
10 +	699	743

#### Household Income

	2001	1996
None	5,578	1,691
R 1 to R 4,800	2,163	929
R 4,801 to R 9,600	5,068	3,122

R 9,601 to R 19,200	6,397	5,417
R 19,201 to R 38,400	6,705	4,740
R 38,401 to R 76,800	5,008	3,269
R 76,801 to R 153,600	3,604	2,947
R 153,601 to R 307,200	1,784	1,563
R 307,201 to R 614,400	479	113
R 614,401 to R 1,228,800	123	
R 1,228,801 to R 2,457,600	95	
R 2,457,600+	39	

Energy Source for Cooking (Dominant)

	2001	1996
Electricity	19,049	
Gas	455	
Paraffin	6,510	
Wood	1,849	
Coal	8,043	
Animal Dung	93	
Solar	108	
Other	122	

Energy Source for Lighting (Dominant)

	2001	1996
Electricity	27,059	23,757
Gas	55	203
Paraffin	624	1,286
Candles	8,331	8,156
Solar	66	
Other	95	1

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**Access to Piped Water (% Households)**

	<b>2001</b>	<b>1996</b>
Dwelling	13,177	22,657
Inside Yard	14,917	4,601
Communal Stand	3,432	2,491
Communal Stand 200m+	3,211	
Borehole	271	1,486
Spring	60	737
Rain Tank	207	303
Dam/Pool/Stagnant Water	115	
River/Stream	152	
Water Vendor	61	
Other	625	1,193

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**Toilet Facilities (% Households)**

	<b>2001</b>	<b>1996</b>
Flush Toilet	27,473	26,685
Flush Septic Tank	346	
Chemical Toilet	1,773	
VIP	1,354	
Pit Latrine	2,418	4,103
Bucket Latrine	439	548
None	2,425	2,166

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**Telephone Facilities (% Households)**

	<b>2001</b>	<b>1996</b>
Telephone and Cellphone	6,313	
Telephone	3,753	14,315
Cellphone	8,886	

Neighbour	1,224	979
Public Telephone	13,717	12,463
Other Nearby	454	2,148
Other Not Nearby	660	512
No Access	1,222	3,024

Refuse Removal (% Households)

	2001	1996
Municipal Weekly	30,066	24,893
Municipal Other	824	541
Communal Dump	251	1,217
Own Dump	4,140	5,472
No Disposal	949	1,196

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