

Mpumalanga Provincial Government



Department of Agriculture and Land Administration

Integrated Resource Information Report

Mbombela

06 May 2005

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

Mbombela

Summary

Mbombela is situated in the eastern part of Mpumalanga on the transition between the escarpment and the lowveld. Major towns in the area are Nelspruit, White River and Hazyview. Nelspruit is the capital city of Mpumalanga. Warm subtropical summers and moderate winters characterize the climate of the area. The annual rainfall of the area is between 500 and 1 600 mm. The area of 3 410 km² is covered by savanna and bushveld vegetation. The sub-tropical climate of the area ensures the production of a wide variety of crops. Agricultural products from this area includes maize, wheat, groundnuts, dry beans, sugarcane, tobacco, vegetables, citrus, sub-tropical fruits (mangoes, litchis, avocados, bananas), deciduous fruit (peaches and plums), coffee, nuts and tea. The Agricultural Research Council's Research Institute for Tropical and Subtropical Crops is situated here. The Lowveld Agricultural College is situated here. Exotic forest plantations cover a large part of the area. The SAPPI integrated pulp and paper plant at Ngodwana is the largest of its type in Southern Africa.

GENERAL INFORMATION

Common Name(s)	Nelspruit / Nsikazi / White River
Area	341,045.0 ha
Coordinates	30°26'24"E 24°58'48"S 31°22'12"E 25°44'23"S
District Municipality	Ehlanzeni District Municipality
Region	Ehlanzeni Region

Towns

Name

Knyamazaneni
Matsulu
Nelspruit
Ngodini
Witrivier

Neighbouring Municipalities

Name

Emakhazeni

Kruger National Park
Nkomazi
Thaba Chweu
Umjindi

Natural Resources

Climate

Rainfall

Rainfall Range 500 to 1,600 mm per year

Temperature

Temperature Zone 35/14

	DJF	Mar	Apr	May	JJA	Sep	Oct	Nov
T	14.2	13.8	10.8	8.9	7.4	10.9	13.9	13.5
Tn	7.5	6.5	4.9	3.6	2.8	5	6.6	7.1
Td	20.9	21.1	16.7	15.2	12	16.9	21.2	19.9
Tmax	24.7	25.3	21.2	17.2	14.6	20.2	25.4	23.6
Tmin	3.2	2.3	1.5	0.6	0.2	1.6	2.4	3.1

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 46/25

	DJF	Mar	Apr	May	JJA	Sep	Oct	Nov
--	-----	-----	-----	-----	-----	-----	-----	-----

T	17.3	16.7	15.3	13.1	11.9	14	15.9	16.8
Tn	12.8	12.1	10.5	8.4	7.2	9.5	11.5	12.2
Td	21.8	21.3	20.1	17.8	16.6	18.5	20.3	21.4
Tmax	24.4	23.9	22.8	20.5	19.3	21	22.8	24
Tmin	10.2	9.5	7.8	5.7	4.5	6.3	9	9.6

Temperature Zone 57/25

	DJF	Mar	Apr	May	JJA	Sep	Oct	Nov
T	20	19.2	16.9	13.8	11.9	15.7	18	19.3
Tn	17.6	16.5	13.4	9.5	7.2	11.5	15.2	16.6
Td	22.4	21.9	26.4	18.1	16.6	19.9	26.8	22
Tmax	23.8	23.4	22.4	26.6	14.3	22.3	22.4	23.5
Tmin	16.2	14.9	11.4	7.1	4.5	9.1	13.8	15.1

Temperature Zone 57/35

	DJF	Mar	Apr	May	JJA	Sep	Oct	Nov
T	20	14.3	17.9	15.5	14.2	16.6	18.7	19.4
Tn	17.6	16.5	13.8	9.5	7.4	11.8	15.2	16.6
Td	22.4	21.1	22	21.5	21	21.4	22.2	22.2
Tmax	23.8	23.7	24.3	24.9	24.9	24.1	24.2	23.8
Tmin	16.2	14.9	11.5	6.1	3.5	9.1	13.2	5

Temperature Zone 57A/25

	DJF	Mar	Apr	May	JJA	Sep	Oct	Nov
--	-----	-----	-----	-----	-----	-----	-----	-----

T	20	19.2	16.9	15.8	11.9	15.7	18	19.3
Tn	17.6	16.5	13.4	9.5	7.2	11.5	15.2	16.6
Td	22.4	21.9	26.4	18.1	16.6	19.9	26.8	22
Tmax	23.8	23.4	22.4	26.6	14.3	22.3	22.4	23.5
Tmin	16.2	14.9	11.4	7.1	4.5	9.1	13.6	15.1

Temperature Zone 57A/35

	DJF	Mar	Apr	May	JJA	Sep	Oct	Nov
T	20	18.9	17	15.4	14.2	17.1	19	19.4
Tn	17.5	15.6	12.5	9.3	7.4	12.6	15.7	16.6
Td	22.5	22.2	21.5	21.5	21	21.6	22.3	22.2
Tmax	23.9	24.1	24.1	24.9	24.9	24.2	24.2	23.8
Tmin	16.1	13.7	9.9	5.8	3.5	10	13.8	15

Temperature Zone 67A/35

	DJF	Mar	Apr	May	JJA	Sep	Oct	Nov
T	21.5	20	17.9	15.6	14.2	18	20.1	20.8
Tn	17.5	15.5	12.6	9.4	7.4	12.7	15.6	16.6
Td	25.5	24.5	23.2	21.8	21	23.7	24.6	25
Tmax	27.8	27.1	26.2	25.3	24.9	26.3	27.2	27.4
Tmin	15.2	12.9	9.6	5.9	3.5	9.7	13	14

Temperature Zone 77A/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	31.7
Tmin	14.2	12.4	9.2	5.6	3.6	9.5	12.4	13.5

Temperature Zone 77B/46

	DJF	Mar	Apr	May	JJA	Sep	Oct	Nov
T	23.5	22.2	20.4	18.5	17.1	20.6	22.3	22.9
Tn	17.5	16.6	15.1	13.6	12.6	15.2	16.8	17.4
Td	29.5	27.8	25.7	23.4	21.6	26	27.8	28.4
Tmax	33.9	31	28.7	26.2	24.2	29.1	30.9	31.5
Tmin	14.1	13.4	12.1	10.8	10	12.1	13.7	14.3

Temperature Zone 88B/46

	DJF	Mar	Apr	May	JJA	Sep	Oct	Nov
T	26	24.2	21.6	18.9	17.2	21.8	24.4	25.1
Tn	22.5	21.2	18	14.8	12.9	18.1	21.4	22.7
Td	29.5	27.2	25.2	23	21.5	25.5	27.4	28.3
Tmax	31.5	28.9	27.3	25.3	24	27.6	29.1	29.9
Tmin	20.5	19.5	15.9	14.5	10.4	16	19.8	21.1

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)	%
-----------	-----------	---

Duplex soils with red B horizons (Da)	222.5	0.1
Dystrophic and/or mesotrophic; red soils widespread (Ba)	22,898.4	6.7
Exposed rock areas with miscellaneous soils (Ib)	7,756.2	2.3
Pedologically young soils (lime occurs regularly) (Fb)	17,653.3	5.2
Pedologically young soils (lime rare or absent) (Fa)	113,917.8	33.4
Red and yellow dystrophic and/or mesotrophic (Ac)	5,759.7	1.7
Red, dystrophic and/or mesotrophic (Ab)	137,411.7	40.3
Red, high base status > 300 mm deep (no dunes) (Ae)	30,431.1	8.9
Vertic, melanic, and/or red structured diagnostic horizons (Ea)	3,630.6	1.1

Soil Clay Contents

ClayClass	Area (ha)	%
Clay	197.3	0.1
Clayey	3,742.0	1.1
Loam	85,387.7	25.0
Loam & Clay	50,998.8	15.0
Loamy Sand	51,231.3	15.0
Sandy	44,053.8	12.9
Sandy Loam	6,307.3	1.8
Very Sandy	98,310.2	28.8
Waterbodies	816.2	0.2

Soil Depth

Soil Depth Class	Area (ha)	%
Deep	2,781.1	0.8
Medium Deep	9,595.0	2.8
Medium Shallow	68,004.2	19.9
Shallow	8,545.3	2.5
Steep Slopes	154,114.3	45.2

Very Deep	80,234.1	23.5
Very Shallow	13,969.7	4.1
Very Steep Slopes	2,984.7	0.9
Waterbodies	816.2	0.2

Soil Form Association

Soil Form Association Class	Area (ha)	%
Ar, My, Va	1,677.7	0.5
Es, Gs, Cf	25,441.9	7.5
Gs, Cf, Es	90,902.5	26.7
Hu (30%), Sd (30%)	6,858.5	2.0
Hu, Sd, Sw, Gs	19,343.1	5.7
Hu-dominant	105,794.2	31.0
Lithosols, Cv, Va	1,230.9	0.4
Lithosols, Hu, Cv, Gc	62,224.6	18.2
Lithosols, Hu, Cv, Sd, Sw	24,067.8	7.1
Sd, Bo, My, Ar, Hu	2,687.0	0.8
Waterbodies	816.2	0.2

Topography

Elevation

Range (m)	Area (ha)	%
401 - 500	12,538	3.7
501 - 600	27,585	8.1
601 - 700	40,123	11.8
701 - 800	55,169	16.2
801 - 900	55,169	16.2

901 - 1000	45,138	13.2
1001 - 1100	37,615	11.0
1101 - 1200	20,061	5.9
1201 - 1300	12,538	3.7
1301 - 1400	12,538	3.7
1401 - 1500	12,538	3.7
1501 - 1600	5,015	1.5
1601 - 1700	5,015	1.5

Slope

Class	Area (ha)	%
Level (0 - 3%)	34,664	10.2
Moderate (4 - 15%)	143,127	42.
Steep (16 - 25%)	70,445	20.7
Very Steep (25+%)	92,809	27.2

Vegetation

Acocks Veld Type (1975)

Acocks Veld Type	Area (ha)	%
Lowveld (10)	186,784	54.8
Lowveld Sour Bushveld (9)	135,298	39.7
North-eastern Mountain Sourveld (8)	12,331	3.6
North-eastern Sandy Highveld (57)	4,387	1.3
Piet Retief Sourveld (63)	2,246	0.7

Water Resources

Dams

Dam	Primary Drainage Region	River	Capacity
Da Gama	Crocodile/Komati		13.5
Klipkopjes	Crocodile/Komati		11.8
Longmere	Crocodile/Komati		4.2
Primkop	Crocodile/Komati		2.0

Drainage Regions

Drainage Region / Catchment				
Primary	Secondary	Tertiary	Area	%
Elands	Elands	Crocodile River	57,917.2	17.0
Elands	Elands	Elands River	70,364.0	20.6
Elands	Elands	Nels River	153,736.4	45.1
Elands	Elands	Shiyalongube River	14,468.3	4.2
Sabi	Sabi	Sabie River	44,559.0	13.1

Land Utilisation

Land Cover (1995)

Class	Area (ha)	%
Barren rock	350.4	0.1
Cultivated: permanent - commercial dryland	6,085.8	1.8
Cultivated: permanent - commercial irrigated	8,151.7	2.4
Cultivated: temporary - commercial dryland	6,731.0	2.0
Cultivated: temporary - commercial irrigated	15,018.7	4.4
Cultivated: temporary - semi-commercial/subsistence dryland	6,705.5	2.0
Degraded: forest and woodland	26,543.1	7.8
Degraded: thicket & bushland (etc)	5,842.4	1.7
Forest	6,840.9	2.0
Forest and Woodland	17,752.3	5.2
Forest plantations	62,125.1	18.2
Improved grassland	37.3	0.0
Mines & quarries	7.2	0.0
Thicket & bushland (etc)	134,390.9	39.4
Unimproved grassland	33,528.9	9.8
Urban / built-up land: commercial	413.4	0.1
Urban / built-up land: industrial / transport	153.4	0.0
Urban / built-up land: residential	9,645.4	2.8
Waterbodies	657.9	0.2
Wetlands	63.3	0.0

Silos

Co-operatives

Location	Co-operative
Kiepersol	Laeveld Korporasie (LK)
Low's Creek	Laeveld Korporasie (LK)
Nelspruit	Laeveld Korporasie (LK)

Conservation Areas

Name	Authority	Area (ha)
Barberton Nature Reserve		
Hall Nature Reserve		
Lomshiyo Cattle/Game Project	Mpumalanga Parks Board/Commu	1504
Mthethomusha Nature Reserve	Mpumalanga Parks Board/Commu	7117
Starvation Creek		
Witwater Forest Reserve		

Demographic Information

Population Distribution and Dynamics

Population Group (Dominant)

	2001	1996
African	441,866	385,877
Coloured	3,810	3,120
Indian	1,539	1,713
White	27,591	32,544
Total	474,806	425,663

Home Language (Dominant)

	2001	1996
Afrikaans	21,390	24,013
English	12,611	12,494
IsiNdebele	594	287
IsiXhosa	1,125	444
IsiZulu	7,407	6,524
Sepedi	4,538	4,265
Sesotho	9,404	5,883
Setswana	2,043	245
SiSwati	392,559	351,890
Tshivenda	335	159
Xitsonga	21,572	14,447
Other	1,228	1,223

Place of Birth

	2001	1996
RSA	459,320	

SADC (Excluding RSA)	13,979
RestAfrica	237
Europe	903
Asia	206
North America	66
Central/South America	69
Australia/New Zealand	26

Citizenship

	2001	1996
RSA	469,547	421,124
SADC (Excluding RSA)	4,625	2,759
Rest of Africa	81	180
Europe	358	680
Asia	206	104
North America	40	83
Central/South America	31	155
Australia/New Zealand	21	26

Demographic Characteristics

Age

	2001	1996
Age 0 - 4	51,934	50,371
Age 5 - 14	112,153	104,424
Age 15 - 34	183,886	157,568
Age 35 - 64	108,023	85,825
Age 65+	18,810	16,729

Gender

	Males		Females	
	2001	1996	2001	
0 to 4	25,856	24,766	0 to 4	26,078
5 to 14	55,256	51,781	5 to 14	56,897
15 to 34	87,678	74,431	15 to 34	96,208
35 to 64	50,503	41,349	35 to 64	57,520
Over 65	7,361	7,083	Over 65	11,449
Total	226,654	199,410	Total	248,152

Persons with Disabilities

	2001	1996
Sight	6,549	11,595
Hearing	3,815	4,191
Communication	803	
Physical	6,101	6,488
Intellectual	1,808	1,531
Emotional	2,787	
Multiple	3,409	1,036

Socio-Economic

Highest Level of Education

	2001	1996
None	62,872	58,180
Some Primary	39,052	30,240
Complete Primary	14,917	14,238
Secondary	62,598	55,734
Grade12	54,824	35,298
Higher	19,352	12,721

Persons Attending Education Institutions

Institution	2001	1996
None	15,769	
Pre-school	7,159	
School	148,802	
College	1,396	
Technikon	1,354	
University	261	
Adult Education Centre	258	
Other	302	

Economic Active Population

	2001	1996
Employed	108,034	99,736
Unemployed	65,451	39,886
No Economical Active	119,965	
Total Labour Force	173,485	

Industry

	2001	1996
Agriculture/Forestry/Fishing	16,051	12,896
Community/Social/Personal	19,271	16,322
Construction	8,725	8,819
Electricity/Gas/Water	1,101	1,804
Financial/Insurance/Real Estate/Business	8,059	5,483
Manufacturing	11,934	9,688
Mining/Quarrying	764	1,631
Other	16	

Private Households	11,739	11,717
Transport/Storage/Communication	4,495	5,057
Undetermined	5,955	10,406
Wholesale/Retail	19,925	16,313

Occupation

	2001	1996
Clerks	10,086	6,544
Craft/Trade	13,695	17,093
Elementary	36,462	27,513
Legislators/Senior Officials	5,103	4,402
Unspecified/Not Economically Classified	0	
Plant/Machine Operators	8,209	7,979
Professionals	5,715	8,520
Service Workers	11,843	10,903
Agricultural/Fishery	3,470	
Technicians	9,185	5,031
Undetermined	4,271	

Individual Monthly Income

	2001	1996
None	311,083	238,660
R 1 to R 400	48,968	13,165
R 401 to R 800	53,197	62,010
R 801 to R 1,600	24,219	14,228
R 1,601 to R 3,200	16,512	10,939
R 3,201 to R 6,400	11,570	14,125
R 6,401 to R 12,800	5,943	3,222
R 12,801 to R 25,600	1,956	737

R 25,601 to R 51,200	710	423
R 51,201 to R 102,400	343	142
R 102,401 to R 204,800	217	
R 204,801+	86	

Travel to work

	2001	1996
Bicycle	909	
Bus	41,246	
Car Driver	16,899	
Car Passenger	14,568	
Minibus/Taxi	18,687	
Motorcycle	790	
Train	696	
NA	210,186	
Foot	169,243	
Other	1,584	

Households and Housing

Household Size (Average)

Household Size	2001	1996
1	20,021	
2	18,394	
3	17,007	
4	16,450	
5	12,944	
6	9,307	
7	6,257	
8	4,296	

9	2,819
10+	4,320

Dwelling Type (Dominant)

	2001	1996
Formal	94,716	68,927
Informal	9,990	7,181
Traditional	6,870	14,008
Other	238	251

Rooms per Household (Average)

Room(s)	2001	1996
1	19,058	14,592
2	21,918	17,120
3	16,556	13,615
4	19,829	17,316
5	11,341	8,674
6	9,821	8,121
7	5,904	4,906
8	3,624	3,147
9	1,686	1,676
10 +	2,078	1,736

Household Income

	2001	1996
None	18,610	8,556
R 1 to R 4,800	16,722	6,800
R 4,801 to R 9,600	27,636	16,440

R 9,601 to R 19,200	24,169	23,408
R 19,201 to R 38,400	15,951	10,788
R 38,401 to R 76,800	8,444	4,930
R 76,801 to R 153,600	5,632	3,837
R 153,601 to R 307,200	3,198	2,040
R 307,201 to R 614,400	1,005	209
R 614,401 to R 1,228,800	266	
R 1,228,801 to R 2,457,600	188	
R 2,457,600+	125	

Energy Source for Cooking (Dominant)

	2001	1996
Electricity	59,143	
Gas	2,922	
Paraffin	26,585	
Wood	21,761	
Coal	457	
Animal Dung	298	
Solar	293	
Other	356	

Energy Source for Lighting (Dominant)

	2001	1996
Electricity	80,782	44,825
Gas	309	620
Paraffin	9,374	22,848
Candles	20,860	22,460
Solar	169	
Other	321	24

Access to Piped Water (% Households)

	2001	1996
Dwelling	23,226	36,753
Inside Yard	37,461	22,618
Communal Stand	13,949	17,460
Communal Stand 200m+	21,996	
Borehole	2,850	4,042
Spring	1,447	2,452
Rain Tank	1,243	4,980
Dam/Pool/Stagnant Water	693	
River/Stream	2,101	
Water Vendor	658	
Other	6,190	2,694

Toilet Facilities (% Households)

	2001	1996
Flush Toilet	25,486	24,428
Flush Septic Tank	2,757	
Chemical Toilet	1,872	
VIP	12,059	
Pit Latrine	57,232	60,287
Bucket Latrine	807	300
None	11,601	6,022

Telephone Facilities (% Households)

	2001	1996
Telephone and Cellphone	10,260	
Telephone	4,590	13,974
Cellphone	29,314	

Neighbour	3,266	2,114
Public Telephone	53,951	44,843
Other Nearby	3,731	8,571
Other Not Nearby	2,662	7,402
No Access	4,040	13,898

Refuse Removal (% Households)

	2001	1996
Municipal Weekly	28,539	22,154
Municipal Other	1,153	989
Communal Dump	1,104	1,741
Own Dump	72,913	58,136
No Disposal	8,105	6,931

DISCLAIMER

Whilst all possible care and attention has been taken in the production of this report, the Department of Agriculture and Land Administration, or any of their representatives, do not accept any liability what-so-ever for any perceived inaccuracies or misinterpretations of the information presented within the digital data or accompanying report. Any boundaries either implied or inferred within the report do not have any legal status what-so-ever.

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