1. SOCIO-ECONOMIC PROFILE

The ZDM is the Water Services Authority (WSA) for the entire district in terms of Section 1 of the Water Services Act, 1997[1]. In order to efficiently plan the development of water services in the DM's jurisdictional area it is necessary to determine the existing or current situation with respect to water and sanitation supply. This Section presents and identifies, both visually and statistically, the physical and consumer profile within the DM.

1.1 Demographics

The current consumer profile of the district is indicated in Table 1.1 (a) below:

Table 1.1 (a): Current consumer profile (units)

LOCAL MUNICIPALITIES	DOMESTIC	INDUSTRIAL/ BUSINESS	FARM HOUSES	TOTAL
AbaQulusi	20 193	157	0	20 350
eDumbe	6 108	54	0	6 162
Nongoma	735	222	0	957
Ulundi	6 691	289	0	6 980
uPhongolo	3 903	232	0	4 135
Total (urban)	**37 630**	**954**	**0**	**38 584**
AbaQulusi	15 681	1	37	15 719
eDumbe	8 705	0	144	8 849
Nongoma	33 098	0	1	33 099
Ulundi	28 285	2	42	28 329
uPhongolo	17 637	0	326	17 963
Total (rural)	**103 406**	**3**	**550**	**103 959**
Total	**141 036**	**957**	**550**	**142 543**

Present population and projected population growth rates:

Population and economic growth rates are used to determine future developmental requirements within the ZDM. This determines the required increase or decrease in water services. Non-domestic consumer unit growth, particularly commercial, industrial and agricultural growth, also gives an indication of the expected increase in water demand and associated wastewater flow discharges. Factors that affect population growth rate include:
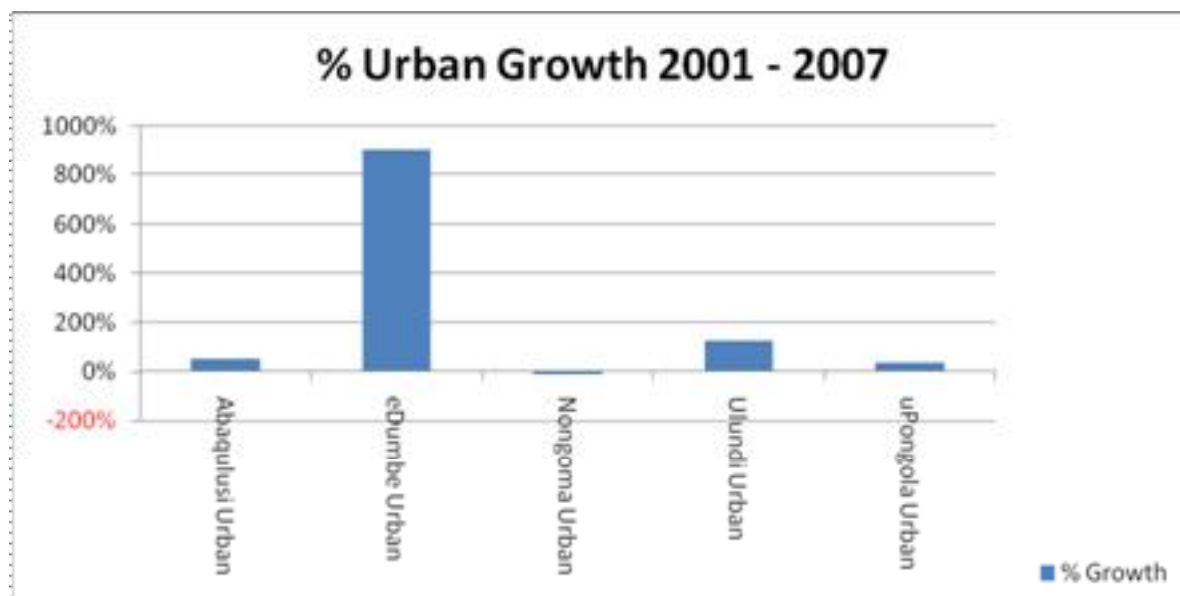
- Immigration due to displaced farm labour, land restitution and declining job opportunities in neighbouring provinces;

---

[1] Act 108 of 1997 as amended.

- Emigration to urban centres or outward migration from the region in search of job opportunities; and

- The HIV/AIDS epidemic that is predicted to seriously affect economically active persons (18-45 years). Full-blown AIDS sufferers who are unable to continue working may return home to the rural areas. This may be an internal urban/rural shift, or migration from urban areas outside the DM. With the prevalence of HIV/AIDS, especially in KZN, it is important to ensure adequate water services provision in the rural areas.
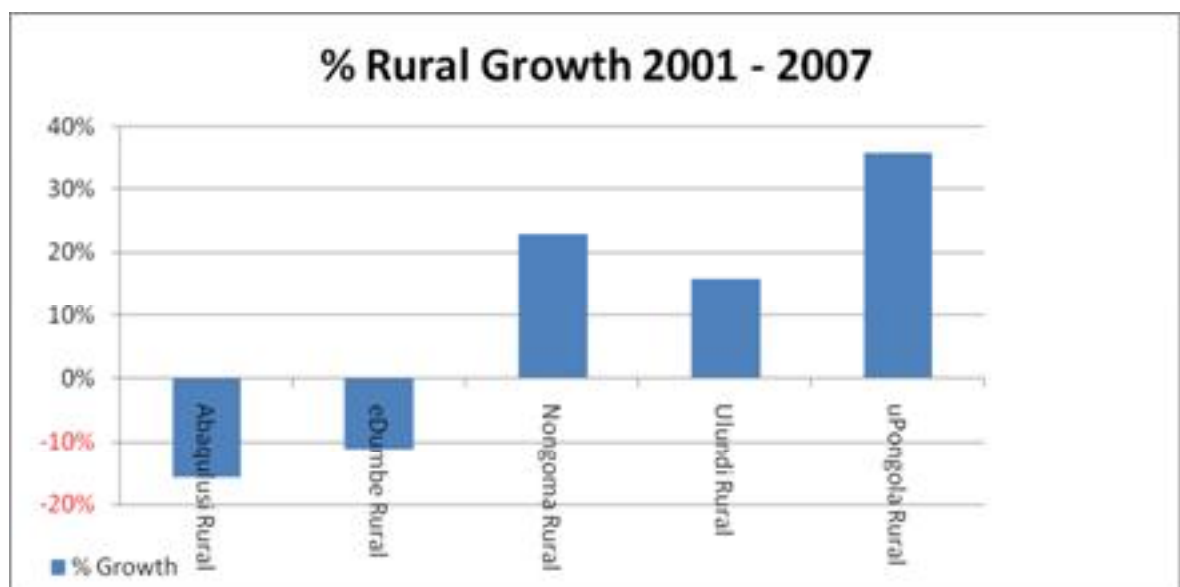
The following two graphs show urban and rural percentage household growth per LM in the district between 2001 and 2007.

Figure 1.1 (a): % Urban Household Growth per Local Municipality

Data derived from 2001 Census and 2007 Aerial Photography

Figure 1.1 (b): % Rural Household Growth per Local Municipality

Data derived from 2001 Census and 2007 Aerial Photography

The two figures shown above illustrate a tendency for a reduction in the rural population in Abaqulusi and eDumbe with significant growth in the urban areas. The other municipalities have all experienced rural growth with only Ulundi showing significant urban growth as well.

The population growth rates are based on a DBSA Report[2] that provides estimated growth rates per province over five-year intervals, taking account of the impact of HIV/AIDS. Although the impact of HIV/AIDS is known to have a skewed effect on the age, gender and household structure of the population, there is currently limited statistical data on these factors. Therefore the growth rates for KZN have been applied to the ZDM population, as represented in Table 1.1 (b) below:

Table 1.1 (b): Population growth rate projections for the ZDM (2000 – 2020)

Period	% Growth rate	Growth factor	Population
2001-2005	1.44%	1.074	711,607
2001-2004		1.059	822,732
2004-2005		1.015	943,715
2006-2010	0.96%	1.049	957,701
2011-2015	0.58%	1.029	1,004,561
2016-2020	0.08%	1.004	1,034,035
2004-2020		**1.100**	**1,038,181**

Source: DBSA (2000).

Demographic trends and migration patterns:

Demographic trends and migration patterns are difficult to predict but when comparing household data from aerial photography in 2001 to aerial photography in 2007 there appears to be some migration from rural households to the various urban centers in the district, which is consistent with the reality that can be seen in the field. The map attached below (Figure 1.1(c)) illustrates the migration of households between 2001 and 2007, as was seen from the different sets of aerial photography.

ZDM is currently in the process of revising the demographic details based on 2009/2010 aerial photography obtained from NGI in Cape Town. This will further assist the ZDM to analyse demographic trends and growth. The 2011 Census details is said to be available during 2013. This will allow the ZDM to compare its demographic analysis with that of the 2011 Census, especially in terms of actual population trends, which cannot be obtained from aerial photography.
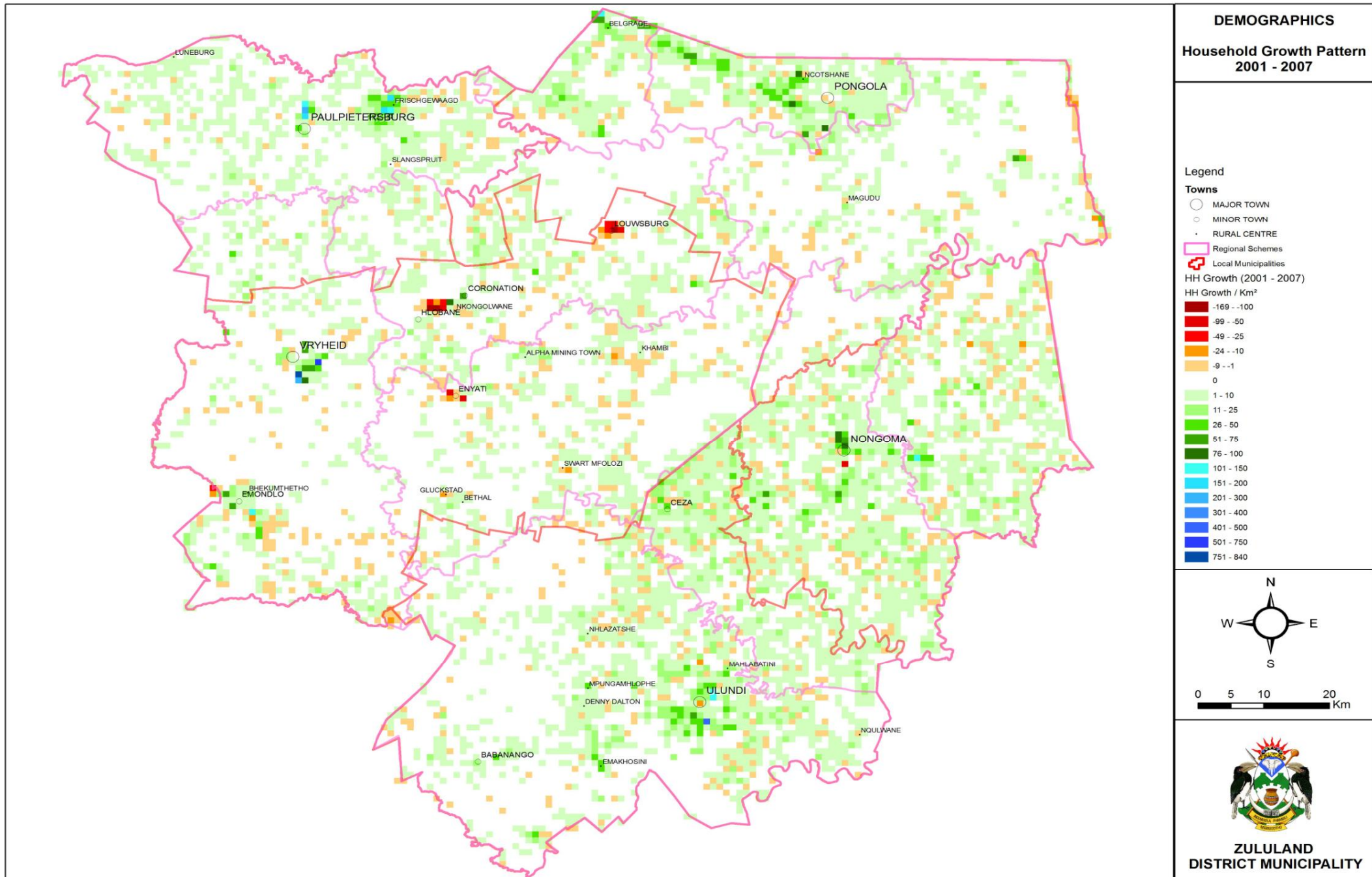
Settlement types as indicated in the provincial WSDP guidelines is summarised in the table below. These details will also be updated once the demographic verification process is completed:

---

[2] DBSA (2000).

Table 1.1 (c): Settlement Types for ZDM

Class	Settlement Type	Nr of Settlements	Households 2007	Population 2007
Urban	Urban - Formal Town	4	4,920	33,274
	Urban - Ex Homeland Town	13	9,292	62,842
	Urban - Former Township	4	14,024	94,845
	Urban - Working Town	6	1,286	8,697
	Urban - Service Centre	11	1,456	9,806
	Urban - Squatter Camp	1	323	969
Rural	Urban Fringe - Informal Settlement	19	8,798	64,336
	Per-Urban - Squatter Camp	1	116	348
	Rural - Formal Dense >5000	2	2,595	17,550
	Rural - Formal Dense <5000	35	8,826	59,689
	Rural - Scattered Dense	6	1,928	13,038
	Rural - Scattered Low Density	49	6,926	46,840
	Rural - Scattered Very Low Density	969	73,659	498,202

Figure 1.1 (c): Demographic trends and migration patterns

DEMOGRAPHICS

**Household Growth Pattern
2001 - 2007**

Legend

Towns

◯ MAJOR TOWN
◦ MINOR TOWN
· RURAL CENTRE
—— Regional Schemes
—— Local Municipalities

HH Growth (2001 - 2007)

HH Growth / Km²

- -169 - -100
- -99 - -50
- -49 - -25
- -24 - -10
- -9 - -1
- 0
- 1 - 10
- 11 - 25
- 26 - 50
- 51 - 75
- 76 - 100
- 101 - 150
- 151 - 200
- 201 - 300
- 301 - 400
- 401 - 500
- 501 - 750
- 751 - 840

0 5 10 20 Km

**ZULULAND
DISTRICT MUNICIPALITY**

Age and gender profile:

The age characteristics of the District's population are shown in the table hereunder:

Table 1.1 (c): Percentage Age Breakdown

Age Breakdown for the ZDM (2001 census)	%
Age: 0 – 4 years	14%
Age: 5 – 9 years	15%
Age: 10 – 14 years	15%
Age: 15 – 19 years	12%
Age: 20 – 24 years	9%
Age: 25 – 29 years	6%
Age: 30 – 34 years	5%
Age: 35 – 39 years	5%
Age: 40 – 44 years	4%
Age: 45 – 49 years	3%
Age: 50 – 54 years	2%
Age: 55 – 59 years	2%
Age: 60 – 64 years	2%
Age: 65 – 69 years	2%
Age: 70 – 74 years	1%
Age: 75 – 79 years	1%
Age: 80 – 84 years	0%
Age: 85+ years	0%
Age: unspecified	1%

Source: 2001 Census

The female population (54%) is significantly higher than the male population (46%) which could be attributed to migration patterns in the province in general.

1.2   Health

Water is the essence of life. A person requires a sufficient quantity of good quality water to maintain a state of good health; therefore the provision and quality of water services is required to ensure a sufficient standard of health and hygiene. The quality of water supplied must be sufficient to maintain good health, and sanitation services must provide households with hygienic conditions that will not harbour disease. Figure 1.2 (a) and Figure 1.2 (b) below indicate the current status of water and sanitation services at hospitals and clinics in the district:

Figure 1.2 (a): Current status of water services at clinics and hospitals in the district
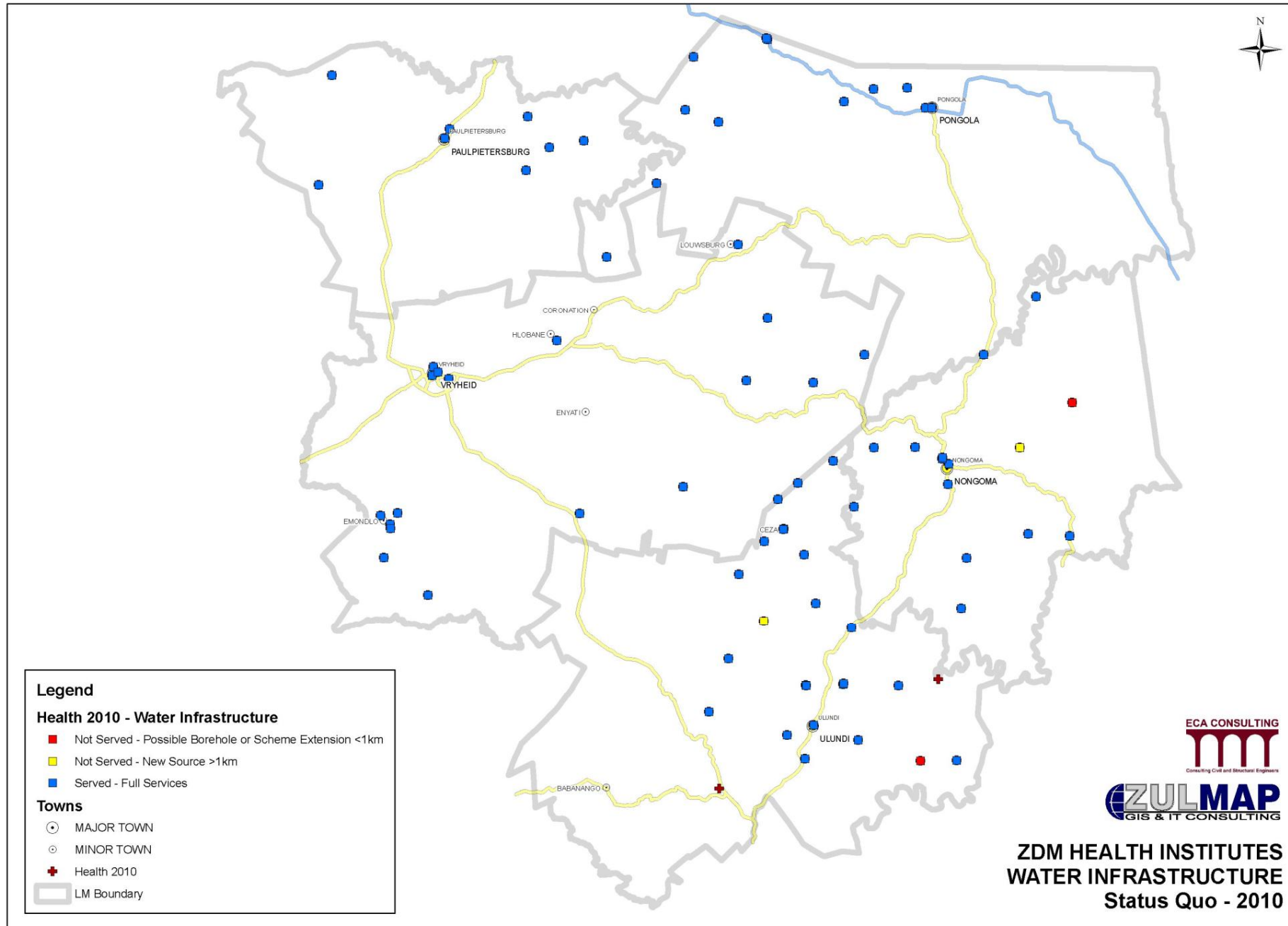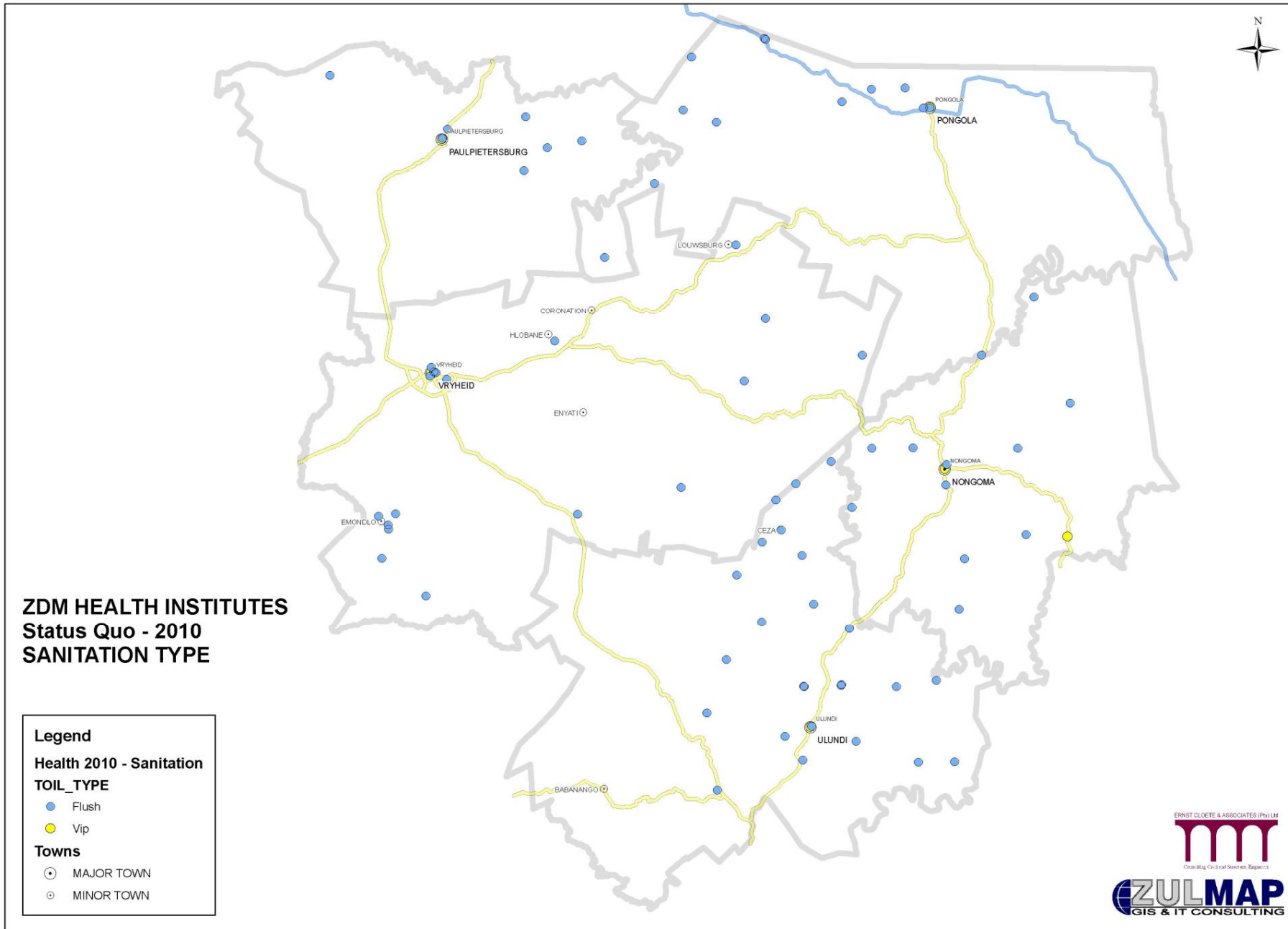

Legend

Health 2010 - Water Infrastructure

- ■ Not Served - Possible Borehole or Scheme Extension <1km
- ■ Not Served - New Source >1km
- ■ Served - Full Services

Towns

- ⊙ MAJOR TOWN
- ⊙ MINOR TOWN
- ✚ Health 2010
- ▭ LM Boundary

ECA CONSULTING
Consulting Civil and Structural Engineers

ZULMAP
GIS & IT CONSULTING

ZDM HEALTH INSTITUTES
WATER INFRASTRUCTURE
Status Quo - 2010

Figure 1.2 (b): Current status of sanitation services at clinics and hospitals in the district

ZDM HEALTH INSTITUTES
Status Quo - 2010
SANITATION TYPE

Legend

Health 2010 - Sanitation

TOIL_TYPE
- Flush
- Vip

Towns
- MAJOR TOWN
- MINOR TOWN

It is very important to consider the prevalence of **HIV/Aids** and the impact it has on the socio-economic conditions of the District. HIV/Aids will have a significant negative impact on the whole South African society and with Zululand being no exception. The implications are as follows:

KwaZulu-Natal's present share of the South African population is about 21%. This is expected to remain constant over the next 20 years under a "low impact" HIV/AIDS scenario, according to the DBSA. However, KZN had the highest recorded HIV-positive rate in the country between 1997 and 1999, indicating that the impact is likely to be more severe than in the rest of South Africa, rather than less so. The Department of Health national statistics estimated KZN's HIV prevalence rate at 32,5% in 1999. The KZN's Office of the Premier reports that 'the prevalence appears to be higher among women than among men. Women are infected considerably earlier than men. Among women, prevalence rises sharply from about 15 years, reaches a peak at 25-30 years then begins to taper off. Among men, it rises sharply from about 20 years then peaks from about 35-40. This suggests that older boys and men are infecting large numbers of young women and girls. There is also survey evidence that, for a significant percentage of youth, sexual activity commences at very young ages.' In geographic terms, the highest prevalence rates in KZN were found in Pietermaritzburg (35%), Durban (34,8%), Jozini (32,7), **Ulundi** (32,3) and Ladysmith (31,8%).

1.3   Employment and income

The following table and figure provides a comparative breakdown of the annual household income in the Zululand District Municipality.

Table 1.3 (a): Household Income Breakdown for the ZDM

Household Income Breakdown for the ZDM		
Derived household income: none	21%	22709
Derived household income: R1 – R2 400	12%	12358
Derived household income: R2 401 – R6 000	22%	23222
Derived household income: R6 001 – R12 000	14%	15086
Derived household income: R12 001 – R18 000	7%	7618
Derived household income: R18 001 – R30 000	6%	6532
Derived household income: R30 001 – R42 000	3%	3186
Derived household income: R42 001 – R54 000	2%	2207
Derived household income: R54 001 – R72 000	2%	1941
Derived household income: R72 001 – R96 000	1%	1319
Derived household income: R96 001 – R132 000	1%	1005
Derived household income: R132 001 – R192 000	0%	520
Derived household income: R192 001 – R360 000	0%	304
Derived household income: R360 001 or more	0%	150
Derived household income: n/a: institution/hostel	0%	328
Derived household income: unspecified/dummy	8%	8547

Source: 2001 Census
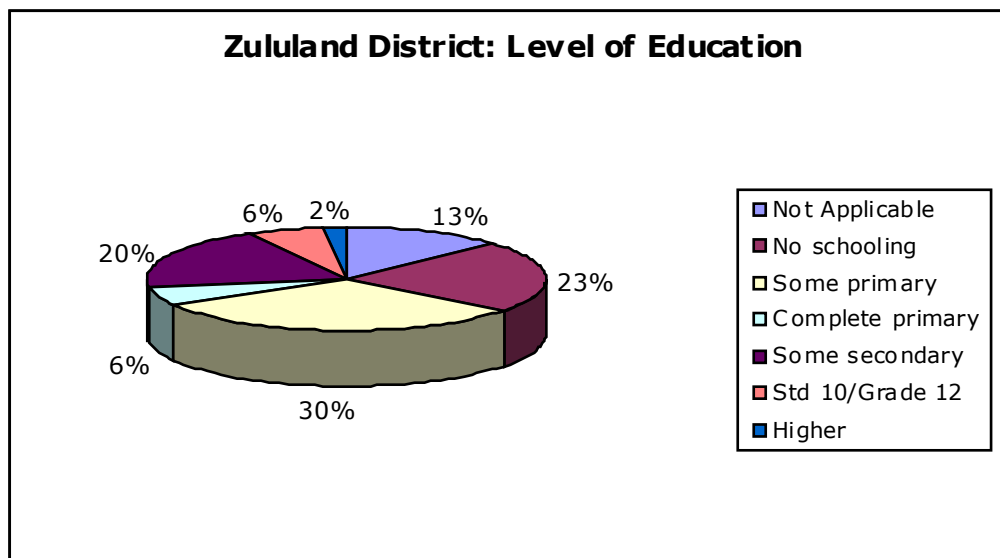
Employment levels are shown in the following table:

Table 1.3 (b): Levels of Employment

Employment Breakdown for the ZDM (2001 census)	
Employment status: employed	38%
Employment status: unemployed, looking for work	47%
Employment status: not working – not looking for work	13%
Employment status: unspecified	1%
	100%

Source: Census 2001

At overleaf, a graph is attached that represent the education levels of the Zululand population. There is a correlation between income, employment and education levels as can be seen from the tables and graphs referred to.

Figure 1.3 (a): Levels of education

Poor household definition

The definition of a poor household in terms of water services is required to assist the ZDM in the implementation of free basic water and sanitation, and the efficient, effective and sustainable use of the equitable share. The poor household definition relates to income poverty, or the lack of sufficient income to satisfy basic and essential needs such as food, clothing, energy and shelter. This definition therefore should be in line with the ZDM's Indigent Policy that is used for all free basic services, and usually relates to the total monthly household income.

In terms of a National Government policy, free basic water relates to a level of water supply derived from the World Health Organisation standard (25 litres per person per day) that is sufficient to promote a healthy living.

Based on an average household of 8 persons, this amounts to 6,000 litres (or 6 kl) per household per month. As part of free basic sanitation, the National policy deals with level of service only. However, the long-term O&M component still requires clarification. Although a broad national policy commitment exists to extend free basic services to all households, poor households, for whom free basic services represent a significant poverty alleviation measure, are the primary targets. In addition, the ZDM must ensure long-term sustainability in the implementation of these policies. Taking into account the socio-economic standing of persons living within the ZDM area of jurisdiction, the potential income and expenditure for water services, and the contribution of equitable share, the ZDM poor household definition is set out below.

Proposed definition of poor household by the municipality:
All households earning a combined income of less than R 800 per month.

1.4 Economic sectors, GGP contribution and employment

The ZDM constitutes 16% of the area and ±8.5% of the population of KZN. The contribution to the Gross Geographic Product (GGP) of the province and that of individual sectors to the current local GGP still needs to be assessed. The relative contribution of each sector during the 1990s, highlight the dominance of mining and quarrying. However, owing to the effects of open market policy on coal mining and agriculture the ZDM experienced an economic decline in these sectors during the late 1990s. Nevertheless, over this period agriculture, social services and trade have increased their contribution to employment, whereas manufacturing has decrease its contribution and mining has remained the same.

Table 1.4 (a): Economic sector contribution to GGP.

Economic sector	Total no. of employees	No. of local employees
Government	Unknown	Unknown
Manufacturing	3 223	3 223
Retail/Trade (incl. Tourism)	7 539	7 539
Farming/Agriculture	11 276	11 276
Utilities (power & water supply)	391	391
Mining	1 673	1 673
Social services	18 211	18 211
Finance	3 292	3 292
Transport & communications	2 838	2 838
Construction	2 727	2 727
Total*	**51 170**	**51 170**

*These values do not include the person employed within private households or undetermined categories – Census 2001.

Table 1.4 (b): GGP and employment by type of economic activity (1994 and 1996).

		% of GGP 1994	% of Employment 1996	% of Employment 2001
Primary Sector	Agriculture, forestry, fishing	12,4	12.1	16.9
	Mining & quarrying	31,8	2.5	2.5
Secondary Sector	Manufacturing	4,2	17.1	4.8
	Utilities (power & water supply)	0,2	0.7	0.6
	Construction	2,0	4.2	4.1
Tertiary Sector	Retail/Trade	12,9	9.7	11.3
	Transport & communications	13,9	5.5	4.2
	Finance	7,0	4.8	4.9
	Government & social services	15,6	17.1	27.2
	Private households	N.A	8.8	9.7
	Unspecified/unknown	N.A	17.5	13.8
TOTAL		**100,0**	**100,0**	**100,0**

1.5   Economic trends

Up to the early 1990s, the ZDM's economic base depended heavily on coal mining, supported by agriculture, transport trade and government services. Formal economic activity was strongly concentrated in the then Vryheid magisterial district, from which no less that 73% of GGP was generated. Administrative and government services were concentrated in Ulundi and Vryheid. A significant weakness was, and remains, the reliance on the primary sector (44,4% of GGP), and the underdeveloped secondary sector which contributed only 6,4% of GGP.

By the late 1990s the ZDM had experienced an economic decline owing to the effects of open market policy on coal mining and agriculture. By 2000 all but one of the large-scale mining operations (Zululand Anthracite Colliery) had closed. Although tourism has started to play a larger role, this by no means fills the gap caused by the closing of the mines that had a knock-on impact for all economic sectors and has been felt particularly in Vryheid and surrounding areas.

A number of recent economic studies and reports from the business sector suggest that the contribution of mining and quarrying have fallen to a low level, with little contribution from manufacturing activities, and that some increase is evident in transport (in support of forestry activities), trade and catering (on account of tourism). The informal sector, mainly petty commodity trading, has grown considerably over the last decade, but is constrained by the slump in primary and secondary sectors of the formal economy. The potential for economic growth in Zululand lies in tourism and agriculture.