

1. SOCIO-ECONOMIC PROFILE

The ZDM is the Water Services Authority (WSA) and Water Services Provider (WSP) for the entire district in terms of Section 1 of the Water Services Act, 1997¹. The only exclusion is the urban areas within AbaQulusi LM for which AbaQulusi LM is currently the WSP.

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 / BUSINESSES	FARM HOUSES	TOTAL
AbaQulusi	16 000	1 794	-	17 794
eDumbe	5 458	218	-	5 676
Nongoma	632	321	-	953
Ulundi	5 912	533	-	6 445
uPhongolo	4 009	456	-	4 465
Total (urban)	32 011	3 322	-	35 333
AbaQulusi	30 702	390	417	31 509
eDumbe	11 926	113	257	12 296
Nongoma	43 743	79	1	43 823
Ulundi	39 030	209	45	39 284
uPhongolo	25 173	333	337	25 843
Total (rural)	150 574	1 124	1 057	152 755
Total	182 585	4 446	1 057	188 088

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;
- 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

¹ Act 108 of 1997 as amended.

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 current consumer profile of the district reflect an updated household count which was done by ZDM from aerial photography taken in 2016 by National Geo-spatial Information (NGI). A total of **182 585 households** and **1 057 farm houses** were captured, bringing the total dwellings in ZDM to **183 642**.

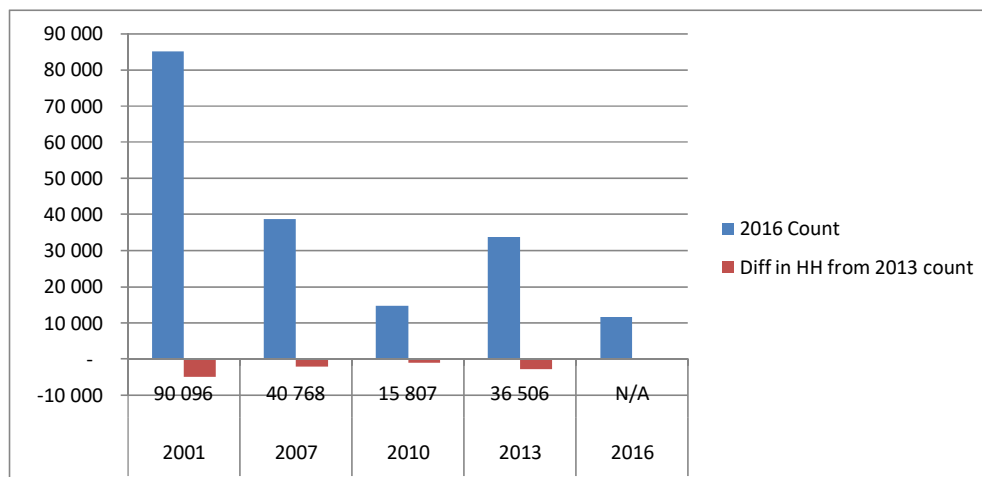
Although this is only 465 households more than what the total household count was for 2013, there were many household ruins in the rural areas where dwellings were either abandoned or people have relocated. A comparison between the various households counts since 2001 is shown in the table below. This indicates the reduction in households over the past 17 years.

Table 1.1 (b): Household Count Analysis Table (2001-2016)

YEAR FLOWN	2013 Count	2016 Count	Diff in HH from 2013 count
2001	90 096	85 091	-5 005
2007	40 768	38 607	-2 161
2010	15 807	14 717	-1 090
2013	36 506	33 666	-2 840
2016	N/A	11 561	-
Overall increase in HH from 2013 count			465

The above table can be reviewed in graph format in the following chart.

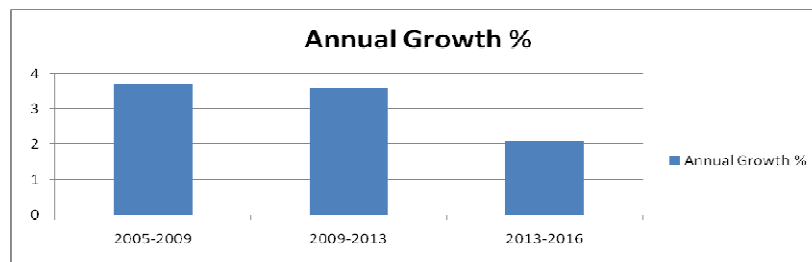
Figure 1.1: Household Count Analysis Graph (2001-2016)



From a spatial perspective, the following map indicates the number of households per square kilometer for 2016 compared with the number of households from 2013. The yellow and light green areas shows a strong decline in dwellings, whereas blue indicates a strong increase in households.

When the new household count of 11 561 from 2013 to 2016 is considered, it represents an increase in the number of households of 6.31% over 3 years. An **annual average household growth of 2.1%** is therefore evident over the period from 2013 to 2016, which is less than the 3.6% increase from the period 2009-2013. The period from 2005/2006 to 2009 shows an average annual household growth of 3.7%. There is therefore a slight decreasing trend in the household growth over the past 10 years in ZDM.

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



Due to the spatial analysis requirements for water and sanitation provision at household level, ZDM uses its own household data set which contains actual household positions as opposed to numerical values provided by STATSSA per enumeration area. Households and defined by and projects are implement per local settlement areas as defined by the ward councillors, and these settlements areas don't always coincide with the enumeration area boundaries of STATSSA. It is therefore impossible to correlate the enumeration areas with settlement areas and derive household statistics between the two data sets.

STATSSA has released the interim 2016 Community Survey statistics per local municipality, and the estimated number of households for the 2016 community survey is slightly higher than the spatial household count for ZDM. A comparison table between the 2011 census data and the 2016 community survey details can be seen in Table 1.1 (a) below.

Table 1.1 (d): STATSSA 2016 Community Survey

Local Municipality	HOUSEHOLDS		POPULATION		Ave Households Size	
	2011	2016	2011	2016	2011	2016
AbaQulusi	43 299	51 472	224 998	241 196	4.90	4.70
eDumbe	16 138	17 415	85 022	89 614	5.10	5.10
Nongoma	34 341	36 409	200 948	211 892	5.70	5.80
Ulundi	35 198	38 553	264 765	205 762	5.40	5.30
uPongolo	28 772	34 667	153 727	143 845	4.40	4.10
Total	157 748	178 516	929 461	892 310	5.10	5.00

For population analysis, the 2011 Census figures will however be applied to the ZDM household count as per local municipality.

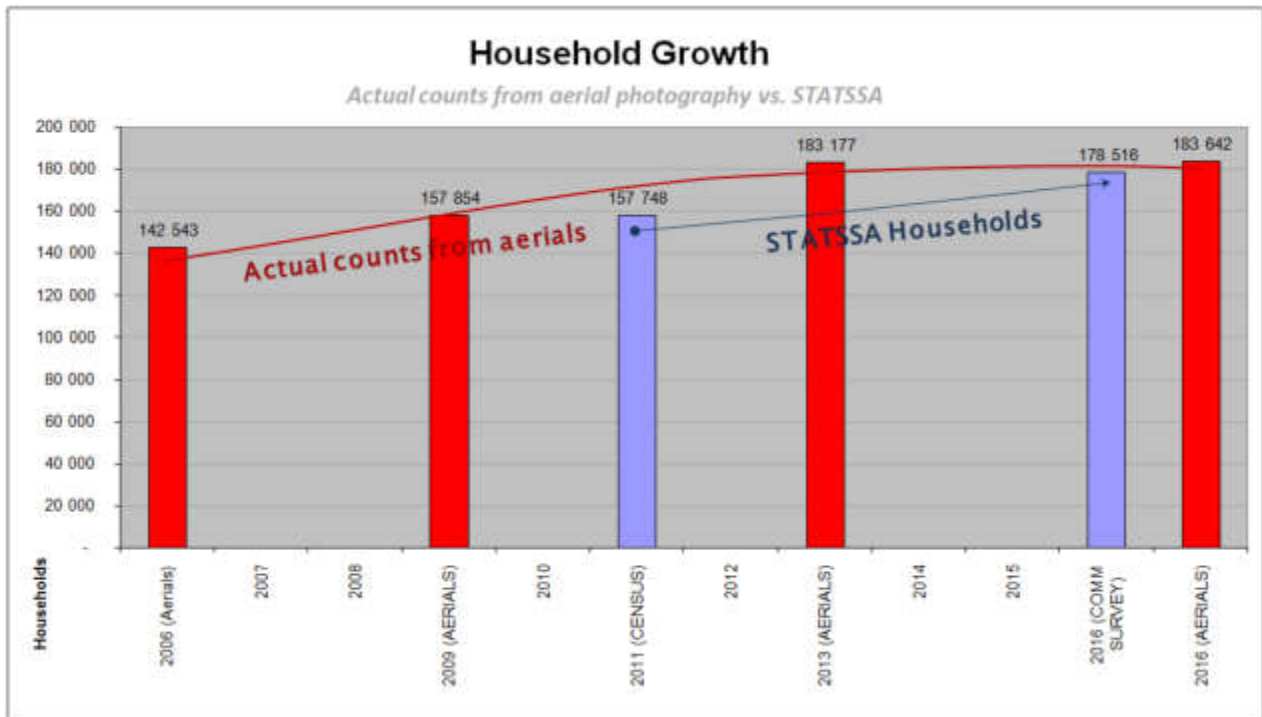
A comparison table between households captured from 2009, 2013 and the 2016 aerial photography can be reviewed in Table 1.1(b) and Figure 1.1 (a):

Table 1.1 (e): Household and Population Figures

Actual Household Statistics (Captured from aerial photography over 4 consecutive periods) vs CENSUS Data													
Local Municipality	2006	2009 (AERIALS)	2010	2011 (CENSUS)	2012	2013 (AERIALS)	2014	2015	2016 (COMM SURVEY)	2016 (AERIALS)	Annual household growth rate	Average Population per household	Total Population (ZDM)
AbaQulusi	36 069	40 302				45 918				47 119	0.9%	4.90	230 883
eDumbe	15 011	16 880				16 671				17 641	1.9%	5.10	89 969
Nongoma	34 056	38 171				45 670				44 376	-0.9%	4.40	195 254
Ulundi	35 309	37 365				46 450				44 987	-1.1%	5.70	256 426
uPongolo	22 098	25 136				28 468				29 519	1.2%	5.40	159 403
Total	142 543	157 854		157 748		183 177			178 516	183 642	0.41%	5.10	931 935

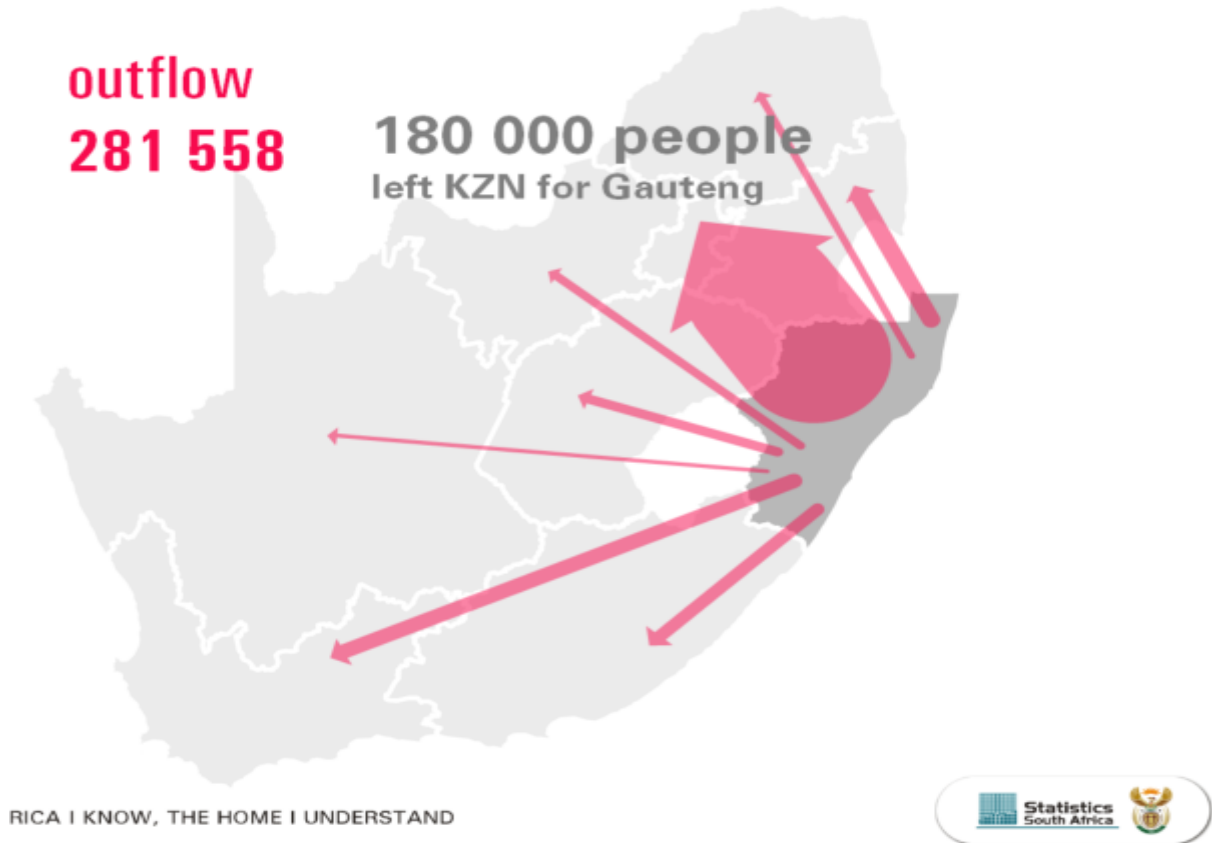
To summarise the above outcomes, the current household count for ZDM taken from the 2016 household count, is 183 642, with a total population count of 931 935 when STATSSA population per household is applied.

Figure 1.1 (f): Household growth (2013 - 2016)



According to Census 2011, the population growth rate for ZDM from 2001 to 2011 is only 0.3%. This may either be contributed to the negative influence that illnesses such as HIV/AIDS has, or it may be the result of migration where younger persons are leaving rural homes and living on their own in cities where they study, or in more urbanised areas away from their rural homes where job opportunities are more readily available. The migration factor can be seen in the STATSSA's statistical release document, where a strong tendency exist specifically towards migrating from KZN to Gauteng:

Figure 1.1 (g): Migration trends for KZN (Source: STATSSA)



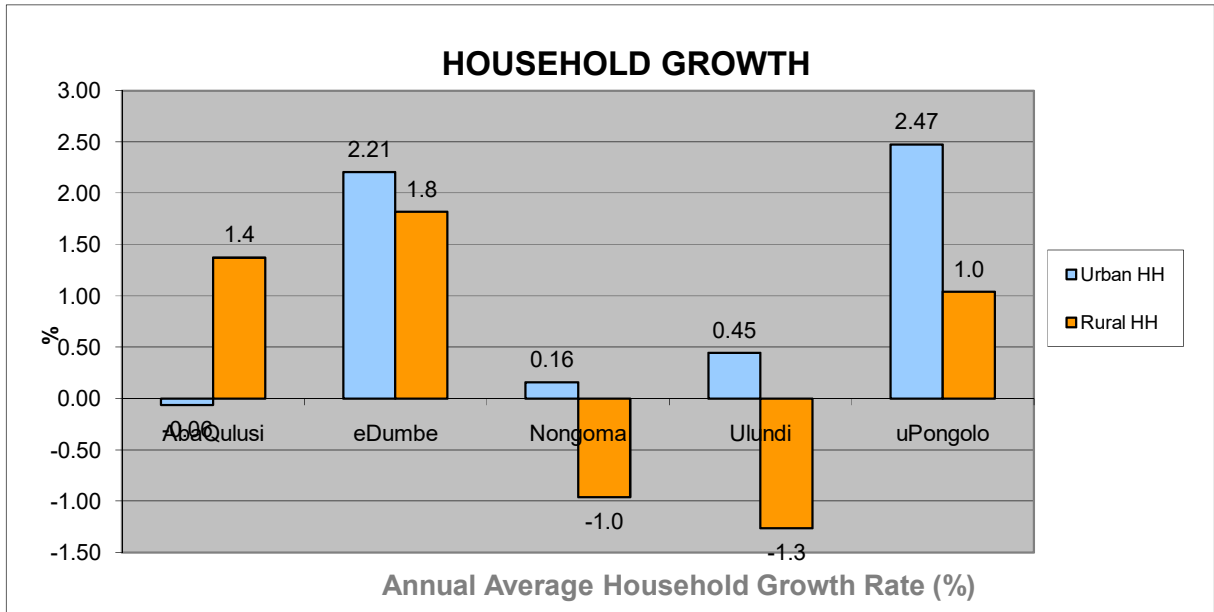
Demographic trends and migration patterns:

Demographic trends and migration patterns are difficult to predict, but when comparing household data from 2013 to 2016, there appears to be some migration from rural areas to the various urban centers in the district, as well as areas where infrastructure is provided. This is consistent with the reality that can be seen in the field, where in some rural areas up to 30% of traditional dwellings are abandoned and people have moved to areas where services are provided.

The following graph show urban and rural percentage household growth per LM in the district over a 3 year period between 2013 to 2016.

Very little growth has taken place in the urban areas, with most of the growth taken place in the rural areas.

Figure 1.1 (h): Annual Urban and Rural Household Growth per Local Municipality



Data derived from 2013 and 2016 Aerial Photography (NGI)

The 2011 Enumerated Area (EA) Census details allows 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. According to an overview on KZN done by STATSSA, rural-urban migration remains a "growing phenomena".

In Figure 1.1(h) the 2013 household count per square kilometer was compared with the latest 2016 household count. This clearly confirms the above statement from STATSSA that there is a strong migration from rural areas to urban areas (especially former township areas), or areas where infrastructure are available.

Growth trends per local municipality can be summarised as follows:

- AbaQulusi**
 High growth in the surrounding eMondlo town areas as well as in Nkongolwane. There is a substantial growth in the Kwa Shoba & Tinta's Drift areas, with a high decrease in rural households surrounding Vryheid town.
- eDumbe**
 Strong positive growth in eDumbe, Frischgewaagd & Bilanyoni.
- uPhongolo**
 High growth in Ncotshane as well as settlements all along the N2 going west towards Belgrade.
- Nongoma**
 Positive growth along the Nongoma/Hlabisa road, with an overall slight negative growth in most of the rural areas.

- **Ulundi**

Positive growth surrounding Ulundi town areas, with an overall slight negative growth in most of the rural areas between Ulundi and Nongoma.

Figure 1.1 (i): Demographic trends in household growth between 2013 and 2016



Figure 1.1 (i): Household growth percentage per settlement between 2013 and 2016

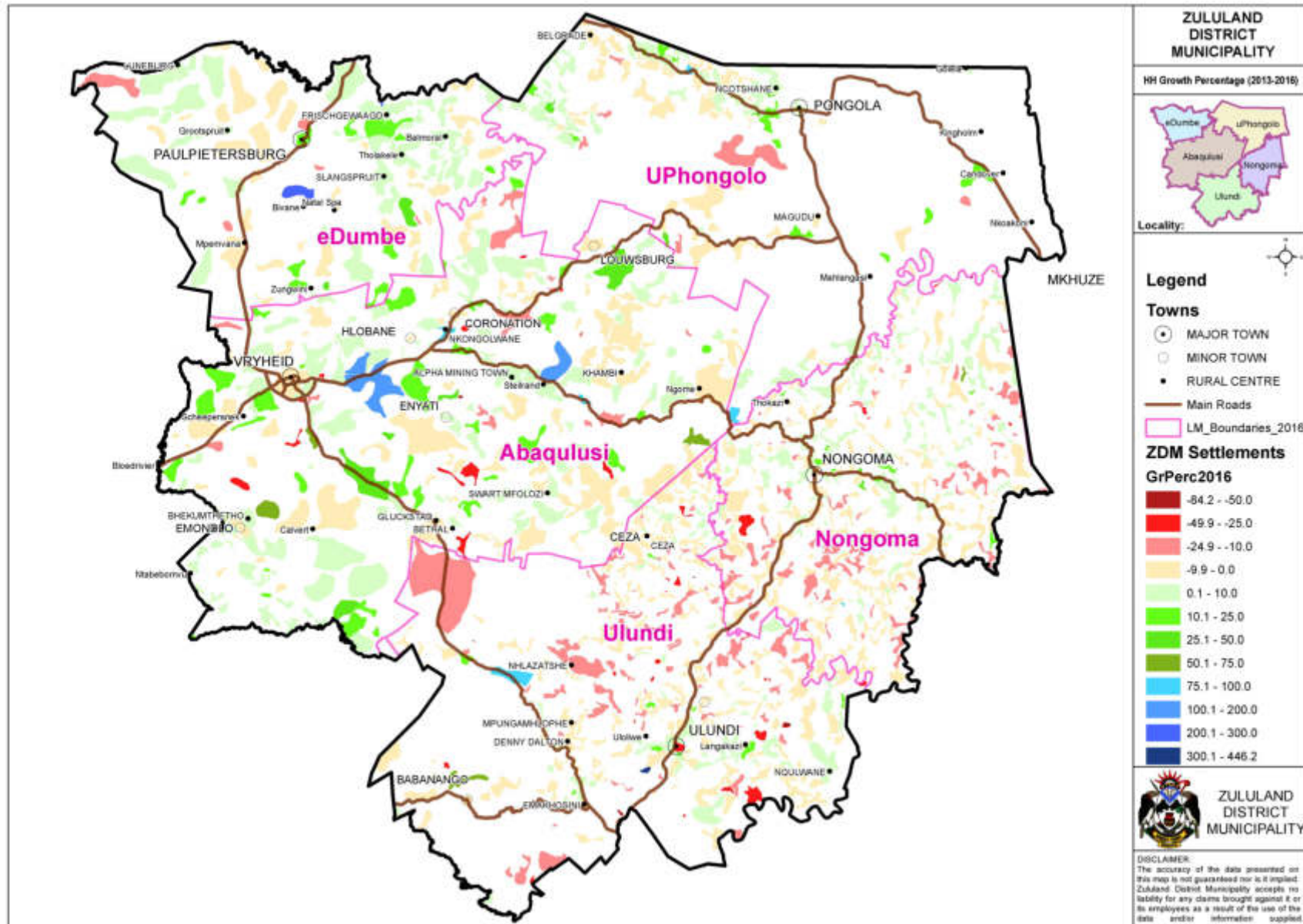
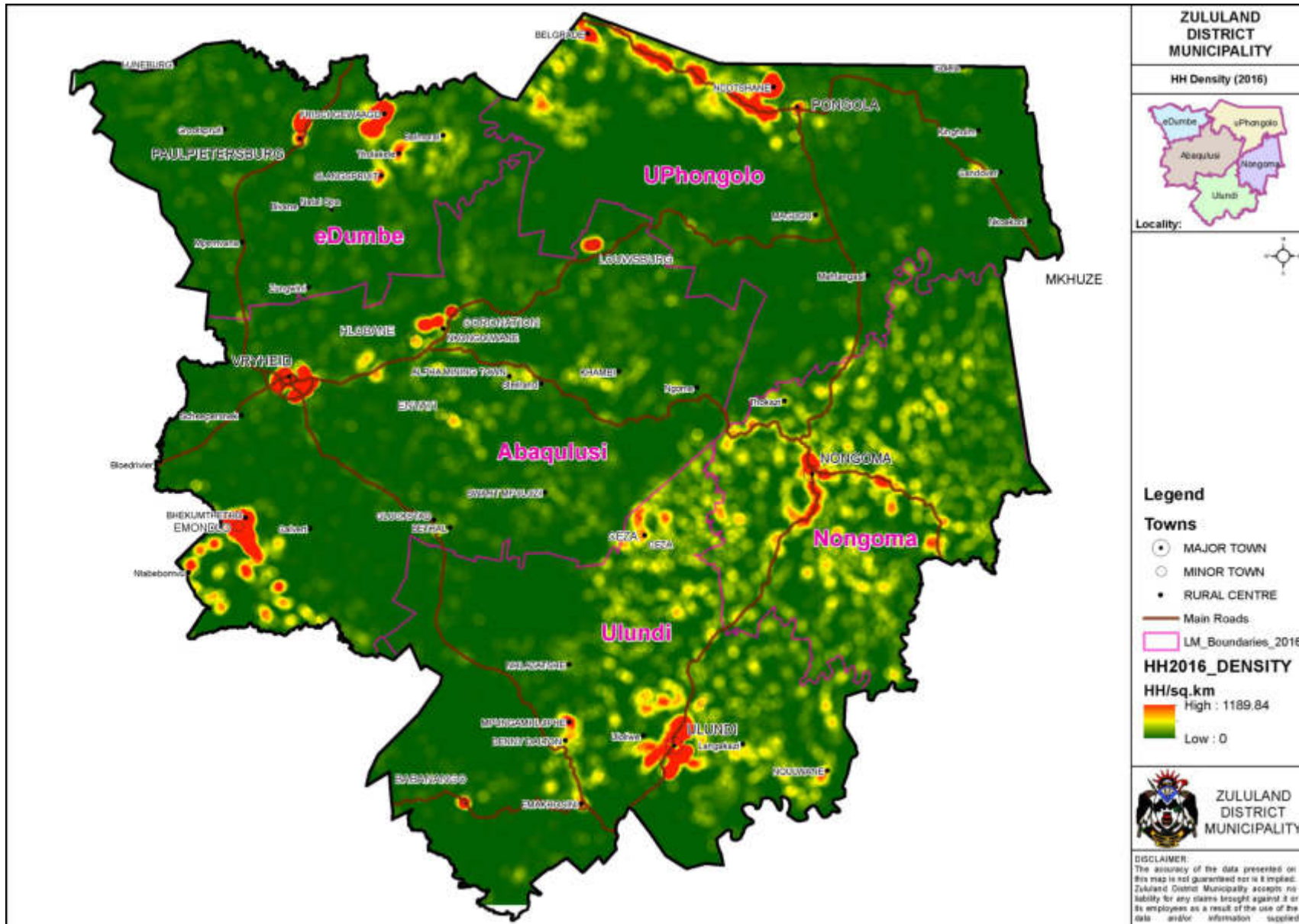


Figure 1.1 (j): Household density map for households per square km



Settlement types:

Existing settlement types as indicated in the provincial WSDP guidelines is summarised in the table below.

Table 1.1 (j): Settlement Types for ZDM

Class	Settlement Type	Nr of Settlements	Total households
URBAN	Urban - Formal Town	4	6 425
	Urban - Former Township	5	14 675
	Urban - Ex Township	13	10 233
	Urban - Working town	6	1 335
	Urban - Service Centre	8	1 549
	Urban - Squatter Camp	1	115
RURAL	Urban Fringe - Informal Settlement	19	8 906
	Peri-Urban - Squatter Camp	1	284
	Rural - Formal Dense >5000	2	3 046
	Rural - Formal Dense <5000	35	10 310
	Rural - Scattered Dense	5	2 612
	Rural - Scattered Medium Density	5	223
	Rural - Scattered Low Density	59	10 732
	Rural - Scattered Very Low Density	1 106	107 422
	Rural - Scattered households	N/A	5 775
TOTAL		1 269	183 642

The following provides details of the urban areas situated within ZDM:

LM	CLASSIFICATION	Z-NR	AREA
AbaQulusi	Urban - Formal Town	Town9	Louwsburg
		Town27a	Vryheid Town
	Urban - Former Township	Town27b	Bhekuzulu
		Town16a	Emondlo town
		Town27c	Lakeside
	Urban - Service Centre	ZNew180	Kandaspunt
		Z846	Mountain view
		ZPM12	Rietvlei
	Urban - Squatter Camp	ZMAP122	Vryheid Dump Site
		Urban - Working Town	ZHC5
	Z932		Coronation
Z934	Enyathi		
Z938	Hlobane		
ZHC4	Thutukani		
eDumbe	Urban - Ex Homeland Town	Z937	Frischgewaagd
	Urban - Formal Town	Town8a	Paulpietersburg Town
	Urban - Former Township	Town8b	Edumbe Township
Nongoma	Urban - Ex Homeland Town	Z928	Luneburg
		Town22	Nongoma Town
Ulundi	Urban - Ex Homeland Town	ZMAP26	White City
		Z741	Kwazondela
		Z931	Mahlabathini
		Town18-A	Ulundi Unit A
		Town18-B	Ulundi Unit B
		Town18	Ulundi Unit B1
		Town18-BA	Ulundi Unit BA
		Town18-C	Ulundi Unit C
	Town18-D	Ulundi Unit D	
	Town18-L	Ulundi Unit L	
Urban - Service Centre	Z940	Babanango	
uPhongolo	Urban - Ex Homeland Town	Z459	Belgrade
	Urban - Formal Town	Town15a	Pongola Town
	Urban - Former Township	Town15b	Ncotshane Township
	Urban - Service Centre	ZMAP124	Golela Border Post
		Z936	Magudu
	Town15c	Pongola Town (Sugar Refinery)	

ZDM has undertaken a settlement verification process to verify settlement names, boundaries settlement extensions as well as water and sanitation level of service on household level. This process was completed in April 2013, and details were incorporated in this WSDP 5-year review. Table 1.1k summarises the location of all settlements:

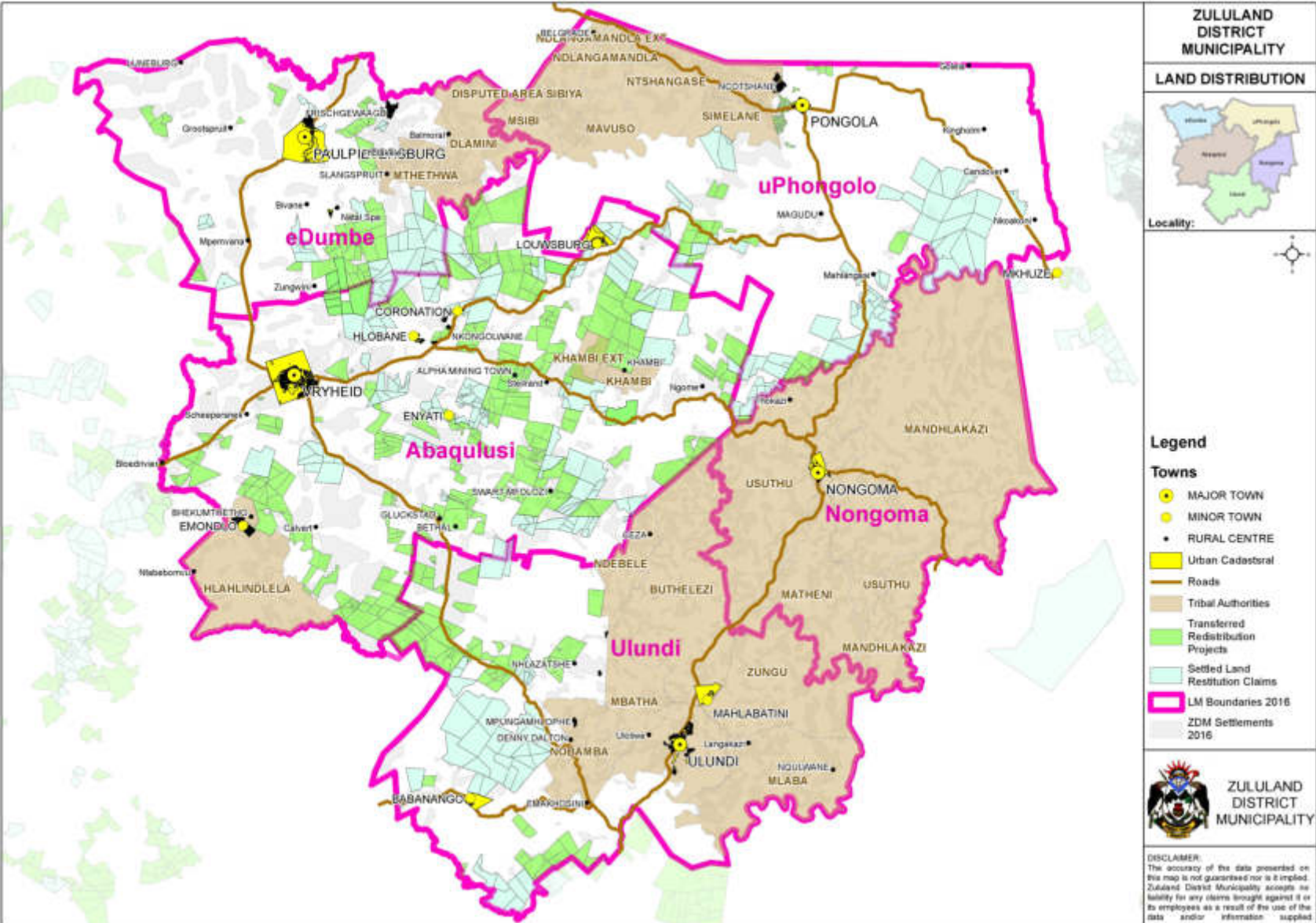
Table 1.1 (k): Settlement Types for ZDM

Settlement Location	Nr of Settlements
Urban Towns	27
Communal Property	27
Land Reform Areas	75
State-owned	26
Tribal Areas	857
Private Land	257
TOTAL	1 269

A comparison map showing settlement areas in relation to land ownership can be reviewed in Figure 1.1i. A total of 170 new settlements were incorporated and prioritised into the WSDP details for rollout purposes. These include:

- **Expansion of existing settlements**
- **New settlements**
- **Additional Land Reform areas not previously catered for in the rollout programmes.**

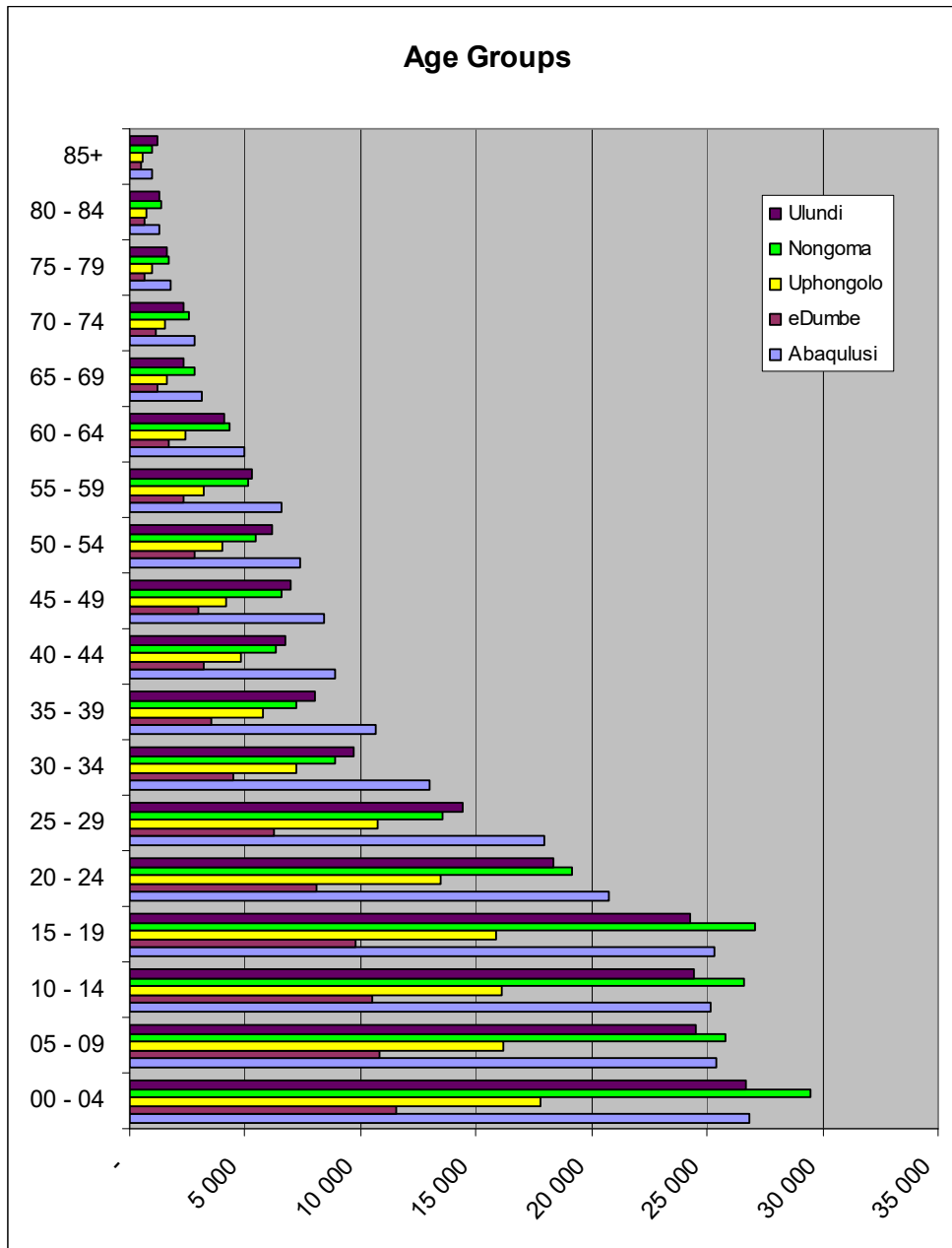
Figure 1.1(k) Settlement Map



Age and gender profile:

The age characteristics of the District's population are shown in the table hereunder (STATSSA 2011):

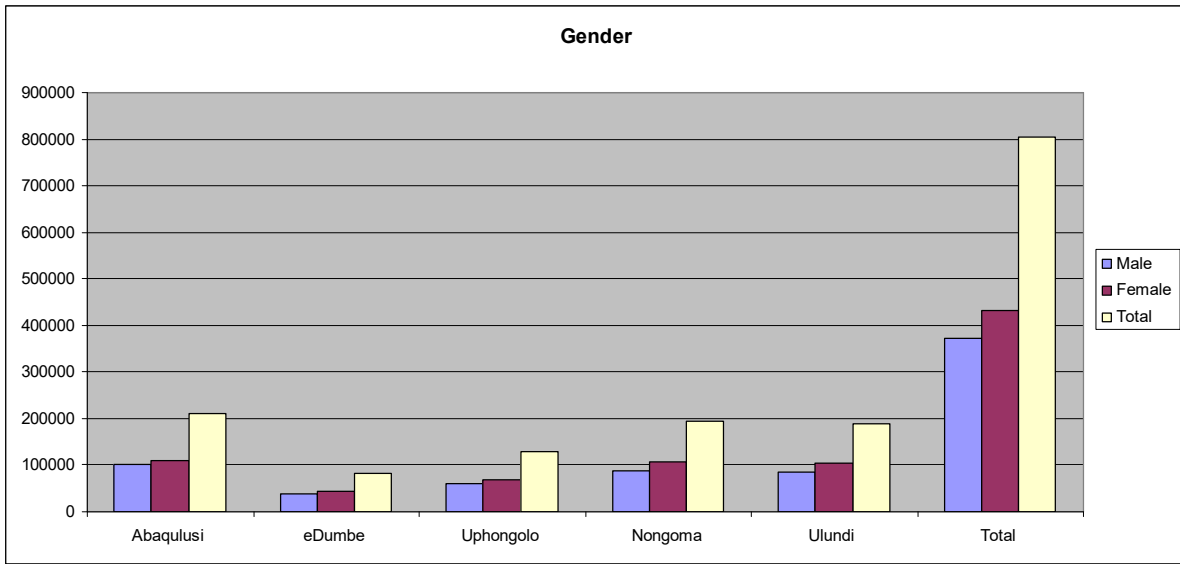
Figure 1.1 (I): Age Groups Breakdown



Source: Census 2011

It is evitable that the majority of population is between the age of 0 to 19. This may be contributed to school students leaving their homes to study or look for work opportunities.

Figure 1.1 (m): Gender Breakdown



Source: Census 2011

The male and female population is very close to one another, with the biggest difference in Nongoma and Ulundi.

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.

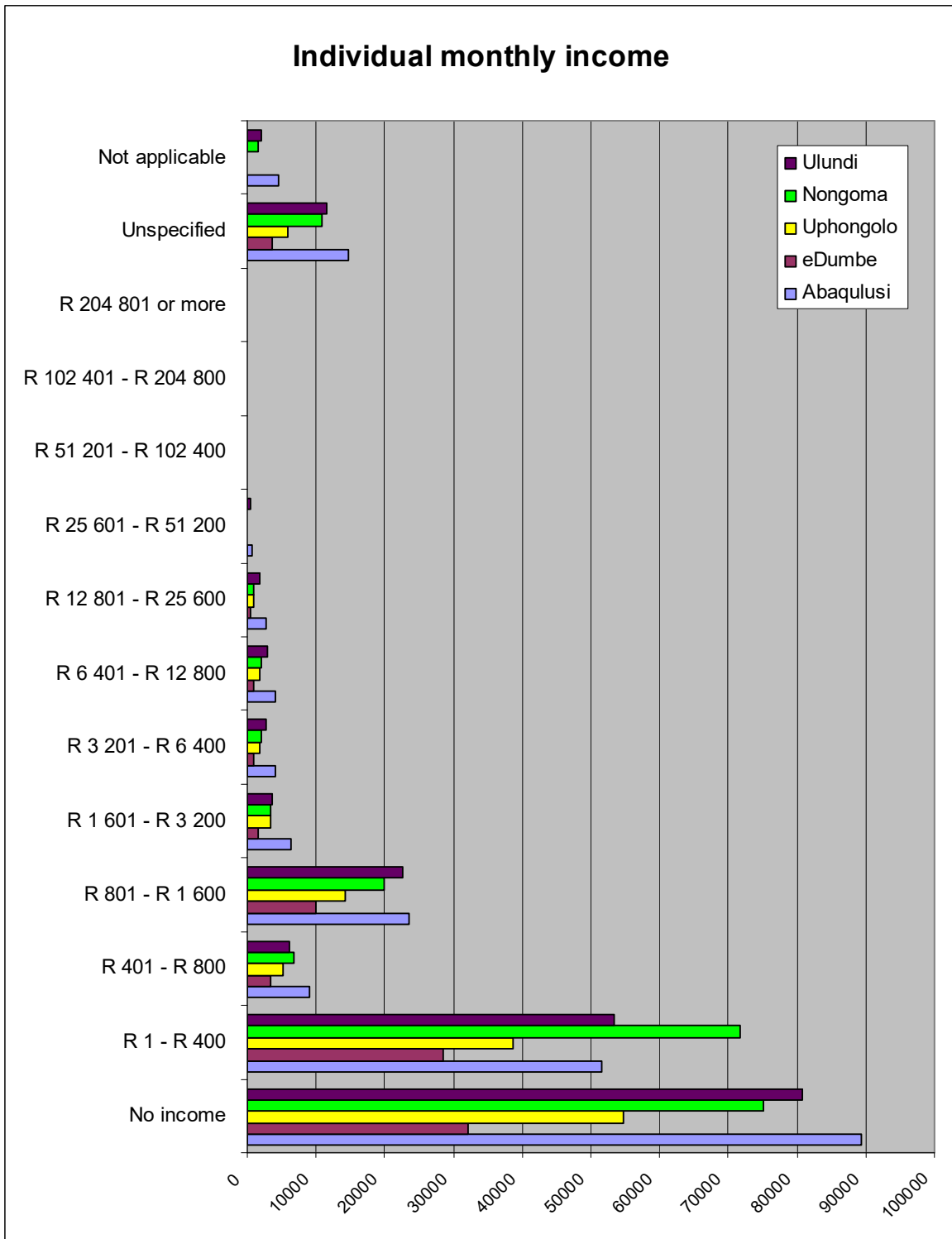
It is very important to consider the prevalence of **HIV/Aids** and the impact it has on the socio-economic conditions of the District. HIV/Aids will have a significant negative impact on the whole South African society and with Zululand being no exception. The implications are as follows:

- 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. From the chart it is clear that the majority of people earn less than R400 per month, with a small percentage earning up to R1600.

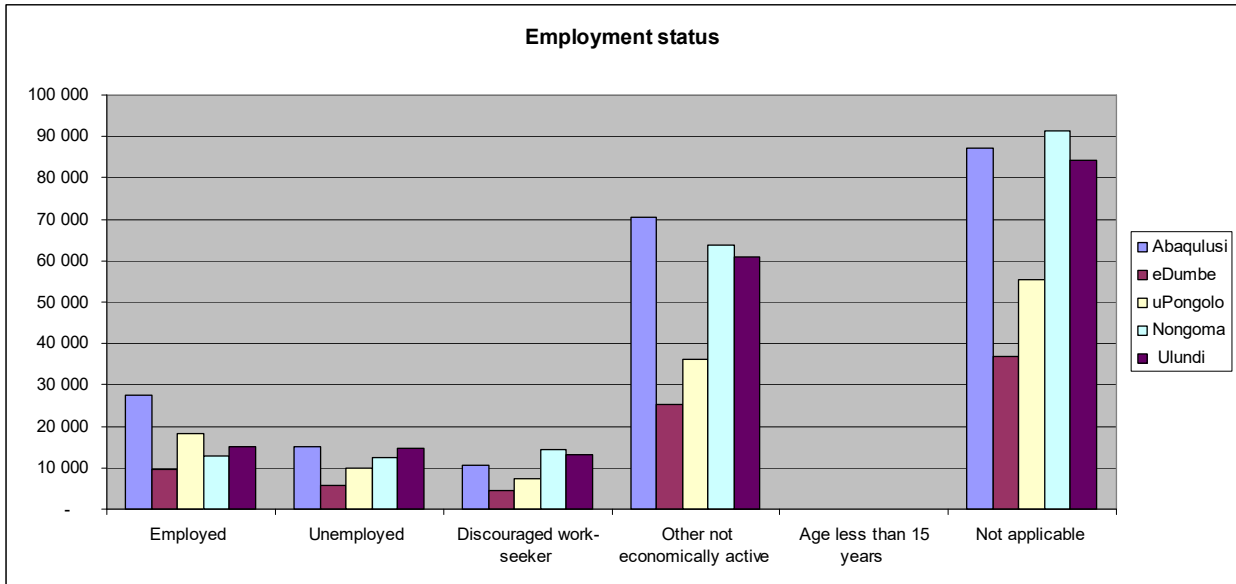
Figure 1.3 (a): Household Income Breakdown for the ZDM



Source: Census 2011

Employment levels are shown in the following table. A high percentage of population has no schooling.

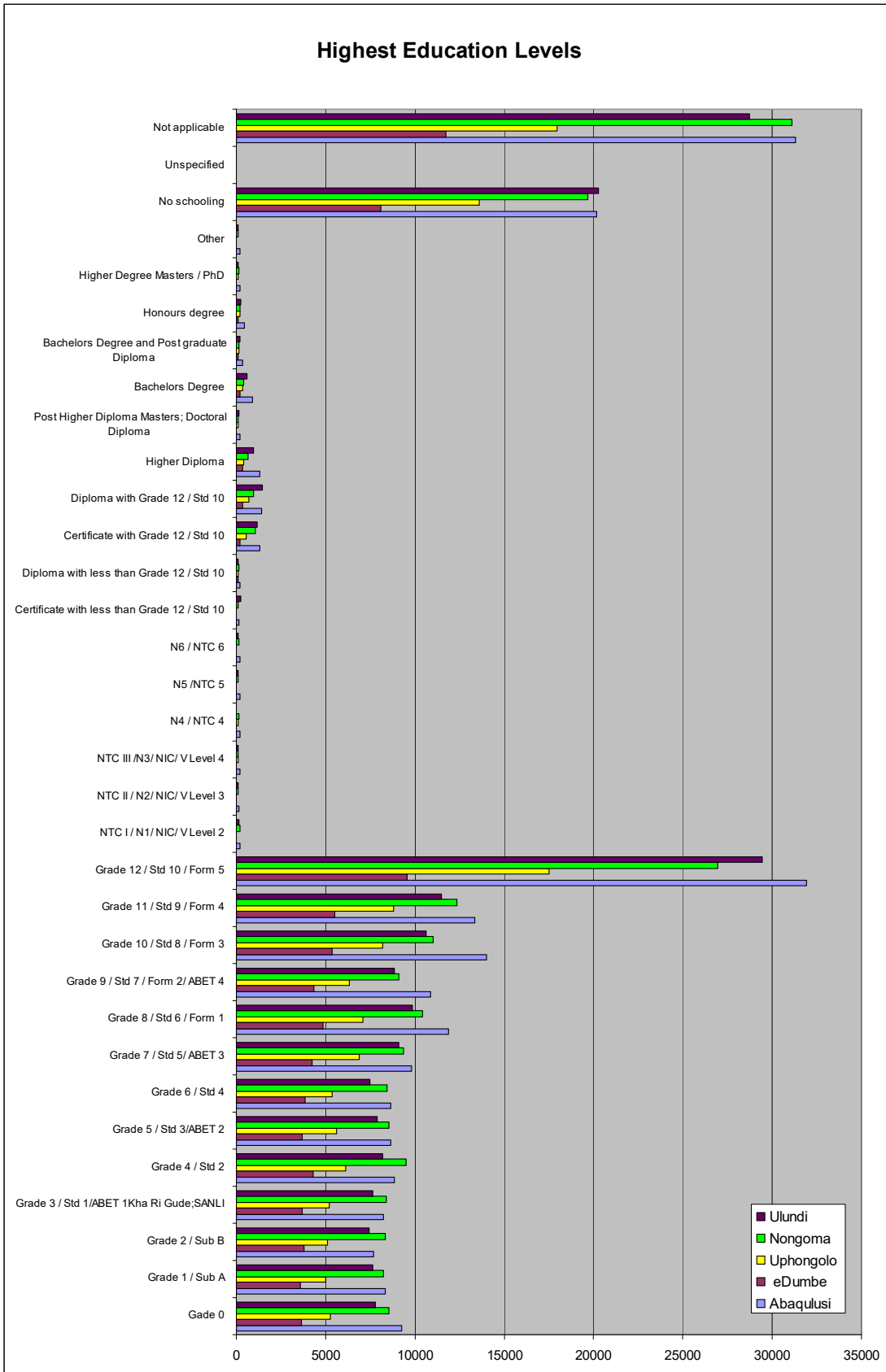
Figure 1.3 (b): Levels of Employment



Source: Census 2011

A very small percentage of the total population has full-time employment. This, together with very low income per person, as well as a high percentage of people with their highest level of education below Grade 12, contribute to a poor socio-economic standing for the ZDM area.

Figure 1.3 (c): Levels of education



Source: Census 2011

Definition of a poor (indigent) household

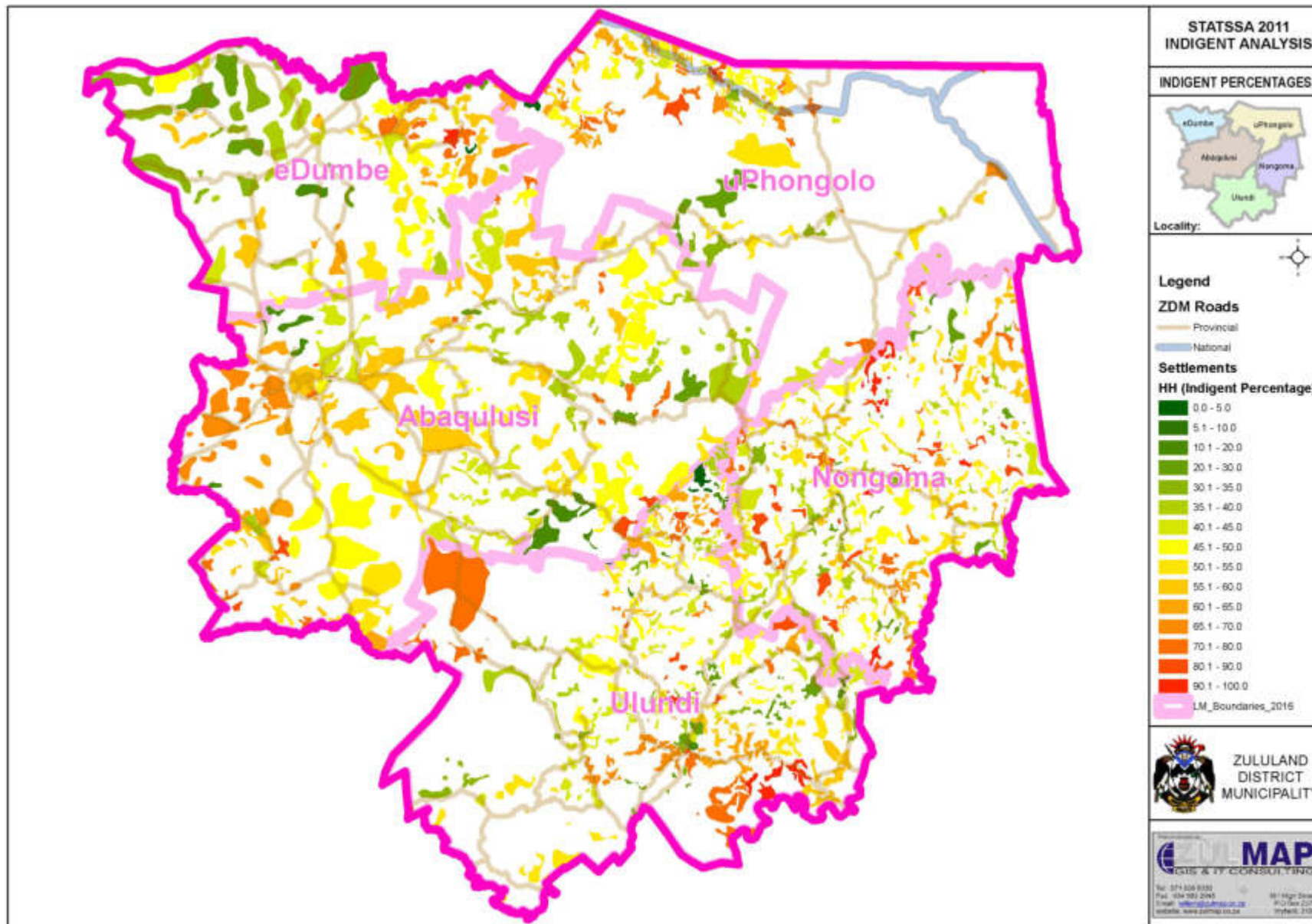
The definition of a poor household in terms of water services is required to assist the ZDM in the implementation of free basic water and sanitation, and the efficient, effective and sustainable use of the equitable share. The poor household definition relates to income poverty, or the lack of sufficient 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 (indigent) by the municipality:
All households earning a combined income of less than R 1 600 per month.

The following map depicts an overview of the approximate percentage indigent households per community within ZDM. The 2011 STATSSA Census income statistics were used to derive a percentage indigent households per Small Area (SAL). These figures were interpolated over to the local communities within each SAL. Shortcomings with this methodology include community boundaries expanding across more than one SAL area and also more than one SAL area within a single community. The outcomes therefore do not always represent a 100% reflection of the desired outcome, but is mostly prevalent within the urban town areas. Areas in question have been adapted as far as possible to compensate for this shortcoming.

Figure 1.3 (c): Percentage Indigent Households per Community



1.4 Economic sectors, GGP contribution and employment

The ZDM constitutes 16% of the area and $\pm 8.5\%$ 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 than 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.