

3. PHYSICAL AND 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, 1997¹. 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.

3.1 Map – Current situation

The ZDM experiences high levels of poverty, poor access to basic facilities and services, and a high incidence of HIV/AIDS infection. Water services provision tends to follow community distribution, with dense formal settlements often receiving higher service levels, as they are more economically viable. Settlements within the ZDM vary between formal urban layouts and scattered rural homesteads. The most significant areas of relative need are the traditional authority areas that are characterized by few employment opportunities, inadequate services and poor agricultural potential. There are some exceptions, as well as wide disparities between the service levels and degree of accessibility of different rural settlements in these areas. Other areas with similar problems are pockets of settlements in the commercial farming areas. The current situation in the ZDM with regard to population and water services distribution is spatially represented in Figure 3.1, based on water schemes in the area. These are similar to that of the sanitation provision. Water schemes are divided into bulk (i.e. receive treated water from a plant) or stand-alone reticulation (i.e. a closed network sourcing water from boreholes, springs and rivers), whereas sanitation schemes include households that are linked to a treatment works or stand-alone house “connections” such as septic tanks and ventilated improved pit (VIP) latrines.

Although the current situation with regard to water services and land use is spatially represent in Figure 3.1, a description and the impact of this on water services planning are discussed in the sections that follow.

¹ Act 108 of 1997 as amended.

Figure 3.1: Current spatial and water services situation in Zululand District Municipality.

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3.2 Map – Future situation

Planning of water services in the ZDM is governed primarily by the physical characteristics and profile of the region. A large number of the UDM population reside in rural land that falls under the Ingonyama Trust and many of these persons are currently without adequate water services. Therefore, most of the planning is in alleviating the water services backlog (Figure 3.2 and Figure 12.1).

Future spatial development within ZDM will be influenced by new administrative and organizational arrangements. The administrative capitals within the district include:

- ZDM: Ulundi.
- eDumbe LM: Paulpietersburg.
- uPhongolo LM: Pongola.
- Abaqulusi LM: Vryheid.
- Nongoma LM: Nongoma.
- Ulundi LM: Ulundi.

These administrative centres serve as the focus of spatial development within the ZDM with potential for growth in two sectors, namely tourism and agriculture (IDP March 2004; Figure 3.3). Tourism has development potential as the ZDM has significant eco-cultural tourism attractions. At a provincial level, the currently proposed tourism corridors split Zululand, linking Ulundi and surrounds to the coastal corridor, and Vryheid/Paulpietersburg and environs to Newcastle and Utrecht. Most of the eco-tourist facilities are located in the north and northeast (including Ithala Game Reserve, the Pongolapoort Dam and Biosphere, and the new Paris dam), with fewer south of Ulundi (Ophathe Game Reserve). In addition, the Hluhluwe-Umfolozi Game Reserve flanks the ZDM on the east border. Cultural and historical tourism attractions abound in and around Ulundi and the eMakhosini (Valley of the Zulu Kings). In a recent development eMakhosini and Ophathe are in the process of being jointly proclaimed under conservation and heritage legislation. The combined area of some 24,000 ha is being developed as eMakhosini Heritage Park – the only combined game reserve and Heritage Park in Africa. Other important tourist areas relate to the battlefields around Vryheid and Babanango, extending beyond the Zululand District. In addition, the towns and settlements located along, or close to the main transport routes that traverse the district have development potential. The most notable are along the R34 from Richards Bay through to Vryheid and the R33 to Paulpietersburg, and to a lesser extent, along the R66 from the R34 through Ulundi and Nongoma to Pongola, along the R69 from Vryheid to Magudu, and along sections of the N2 in the north of the district.

Cognisance needs to be taken of potential development in these areas, in association with water requirements. Although the DM is focusing on alleviating the backlog, this is not done in isolation of the urban and industrial upgrade requirements. Water requirements for disaster management – e.g. fires, droughts and floods, also need to be addressed. Planning long-term water services provision is complex, and requires the input from all departments within the planning sector.

The information used to formulate the long-term strategic plan is provided in the subsections that follow.

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Figure 3.2: Planned water supply for the Zululand District Municipality (Phase 1).

This figure still requires drafting – the projected backlog rollout for water services still needs to be determined in order to develop this figure.

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Figure 3.3: Zululand District Municipality spatial framework.

An A3 copy of the Spatial Framework Plan from the IDP needs to be inserted here.

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3.3 Physical profile

The ZDM is situated in northern KwaZulu-Natal (KZN). It covers an area of 14,808 km² and is divided into five local municipalities (LMs), namely eDumbe (KZ261), uPhongolo (KZ262), Abaqulusi (KZ263), Nongoma (KZ265), and Ulundi (KZ266; Figure 1.1). The district is predominantly rural with commercial farmland interspersed by protected areas, towns, and dense to scattered rural settlements within traditional authority areas. The majority of these rural settlements are small, making service delivery to these remote areas extremely costly. The ZDM comprises 1,022 settlements divided into 15 urban areas, 64 dense settlements, 290 villages, 547 scattered settlements and 106 farm settlements. Details of these settlements are given in Appendix 5.

Land use in the ZDM is linked primarily to tenure and the land with the highest agricultural potential is in private ownership and is mostly used for commercial farming or conservation, with low settlement densities (Figure 3.1). Private farmlands constitute a large portion of the ZDM's land area. The land use potential (indicated by the bioresource groups) vary throughout the district, but are predominantly varieties of grassveld and thornveld. Agricultural activities are mainly forestry (eDumbe, Abaqulusi and around Babanango), sugar cane (uPhongolo), livestock (throughout the district), maize, soya beans, wheat, groundnuts, sorghum, vegetables and sub-tropical fruit. These commercial farms mostly have well developed infrastructure and farming systems. The difficulties they experience relate more to broader economic factors than spatial factors and linkages in the ZDM. In recent years, a number of cattle farms throughout the ZDM have been converted into game farms. These may be linked to tourism and conservation in the district.

In contrast, the non-arable land and land with severe limitations to agriculture, fall into the traditional authority areas and are densely settled. These Ingonyama Trust areas support settlement and subsistence agriculture (there is moderate to restricted agricultural potential), with the Traditional Authorities (TAs) for each LM being divided as follows:

- eDumbe LM: Dlamini TA and Mtetwa TA.
- uPhongolo LM: Masidla TA, Msibi TA, Ntshangase TA and Simelane TA.
- Abaqulusi LM: Hlahlindhlela TA and Kambi TA.
- Nongoma LM: Mandhlakazi TA, Matheni TA and Usuthu TA.
- Ulundi LM: Empetempithini TA, Mbata TA, Mpungose TA, Ndebele TA, Nobamba TA, Ximba TA and Zungu TA.

The natural environment profile varies across the ZDM (Figure 3.1), with detailed descriptions and maps, as well as a generic environmental management plan (EMP), attached in Appendix 4. This data indicates the overall land use potential, transformation potential, ecosystem sensitivity, and impacts on future development within the ZDM, as well as the design and construction of water services infrastructure. These factors were taken into account when determining spatial development and designing the water services infrastructure within the ZDM.

In addition to the land use classifications, the type, number and distribution of public facilities such as schools, police stations, hospitals and clinics will impact on the water services sector. Lists of individual public

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consumer units are given in Appendix 5. However, an overall summary of the physical characteristics of the Zululand District is given in Table 3.3.

Table 3.3: Physical characteristics of the Zululand District Municipality.

Description	No. of each type	Size (km ²)	% of total municipal area	Indicate for any (Y/N)		
				Water resource impact	Water user	Waste water return
Residential settlements: urban	15	52.5	0.4%	Y	Y	Y
Residential settlements: rural	1,007		0.0%	Y	Y	Y & N
Commercial areas	1	0.6	0.0%	Y	Y	Y
Industries	10	6.6	0.0%	Y	Y	Y
Mining	23	17.2	0.1%	Y	Y	Y
Magisterial offices	5	-	-	Y	Y	Y
Police Stations	14	-	-	Y	Y	Y
Schools	719	-	-	Y	Y	Y
Clinics*	68	-	-	Y & N	Y	Y
Hospitals	10	-	-	Y	Y	Y
Agriculture: forestry	512	914.3	6.2%	Y	Y	N
Agriculture: irrigation	32	29.3	0.2%	Y	Y	N
Agriculture: dryland	453	420.7	2.8%	Y	Y	N
Agriculture: sugar cane	18	210.5	1.4%	Y	Y	N
Agriculture: subsistence dryland	338	1,609.8	10.9%	Y	Y	N
Resorts/tourism	-		0.0%	Y	Y	N
Conservation areas	328	3,400.5	23.0%	N	N	N

Source: Data obtained from the IDP and the ZDM GIS.

*In addition there are mobile clinics that provide a further 17 points.

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3.4 Topographical profile

The area forms part of the Pongola, Mkuze and Mfolozi River Catchments of the Usuthu/Mhlathuze Water Management Area that extends from the high lying areas in the north and west to the Indian Ocean in the east. The northern and western edges of the ZDM are characterised by steep terrain. The Skurweberg and Elandsberg Mountains on the Western side of the ZDM are approximately 1,700 m above sea level. In the northeast there are the Lebombo Mountains. In general the topography slopes and gets less steep from west to east, as well as from north to south, consequently all the main rivers flow in this direction. There are some large relatively flat areas between 200 m and 300 m around the town of Pongola, as well as on the lower reaches of the Mfolozi River.

Climatic conditions vary significantly from the northern highlands to the eastern low-lying areas around the town of Pongola. Rainfall is strongly seasonal with more than 80% occurring as thunderstorms between October and March, with the peak months being December to February in the inland areas. Rainfall varies from over 1,000 mm in the north and west, dropping to below 600 mm in the central area around Pongola. The resultant Mean Annual Runoff (MAR) ranges from above 200 mm in the north and west, to below 100 mm in the central areas. Overall the Mean Annual Precipitation (MAP) is 840 mm, and the corresponding MAR 102 mm (12 % of MAP). Annual variability of rainfall is indicated by the historic coefficient of variation of the rainfall record, which ranges from (20 % to 25 %) in the west to greater than 35 % in the Pongola area. In accordance with the rainfall pattern the relative humidity is higher in summer than in winter. Potential mean annual gross evaporation ranges from 1400mm in the west to 1600 mm in the lowveld. The highest mean monthly evaporation is in December and the lowest mean monthly evaporation in June. One strategic dam, namely Pongolapoort/Jozini, has been developed. There is a vast amount of water in the area with both surface resources, as well as good ground water potential. Therefore, there is no climatic condition or physical reason why the ZDM population is without water.

Topography type	Percentage of total municipal area
Mountainous	30%
Rolling	70%
Flat	0%
Coastal	0%

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3.5 Current consumer profile

There are two main data sets pertaining to population and consumer profiles within the ZDM. The first is the National database derived from the Census 2001 survey (Statistics South Africa). According to this data set the estimated population within the ZDM is 804,320 divided per LM as given in Table 3.5a. The second data set is based on a recent population survey by the ZDM that indicates a population of 1,155,000 people with the distribution per local municipality indicated in Table 3.5a. Both these values, however, include the population residing in the area that was recently transferred to uMzinyathi DM.

Table 3.5a: Population distribution figures per LM within the ZDM.

LM	LM Ref Number	Area (km ²)	Settlements	Population (Census 2001)	Households (Census 2001)	Household size (Census)	Population (DM survey)	Households (DM survey)	% ZDM
eDumbe	KZ261	1,947	49	82,200	15,109	5.4	72,387		6.3
uPhongolo	KZ262	3,235	105	119,780	24,816	4.8	128,284		11.1
Abaqulusi	KZ263	4,184	111	191,022	35,911	5.3	235,410		20.4
Nongoma	KZ265	2,185	398	198,381	31,582	6.3	303,947		26.3
Ulundi	KZ266	3,754	387	212,937	37,537	5.7	414,547		35.9
	Total	15,305	1,050	804,320	144,955	5.5	1,154,575		100

It is evident from Table 3.5a that the overall population from the ZDM survey is much higher than that indicated by the national 2001 Census. To alleviate this discrepancy, the ZDM and Statistics South Africa have recalculated the population for the area, less those persons residing in the area that has been transferred to uMzinyathi DM, to determine a population for the base year 2004. The 2004 base figures were obtained by projecting the growth factor between 1996 and 2001 onto the 2001 figures. It was agreed that the DBSA growth projections could then be applied (see Section 3.6). Therefore, at base year 2004 the population figures are as follows:

- **Population** **943,715**
- **Households** **165,564**

The current consumer profile is divided into 1,022 settlements of various sizes primarily split between rural and urban settlements². The rural areas are further divided into Ingonyama Trust land, Land Reform areas and private farmlands. In addition, these areas may be divided into settlement types based on population numbers and density. Much of the farm and town data has been derived and it is has been assumed that farmers and farm workers not accounted for will not significantly impact planning in the WSDP. This data is currently used as a base for planning in the ZDM and the five LMs.

Classification of these communities into settlement type is generally based on population number and household density, and as such the settlements within the ZDM have been classified according to the five

² Demographic studies based on fieldwork, interviews and a verification exercise were undertaken as part of the WSDP during 2000 and 2002 to produce an estimated population for every rural settlement in the Traditional Authority areas and the entire ZDM (including the farms). Detailed data is available on the WSDP Viewer.

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categories listed in Table 3.5b. The division of the ZDM population according to these settlement types is given in Table 3.5c, and represented in Figures 3.4 and 3.5. It is evident that a large number of persons live in the rural areas of ZDM, especially the within Village settlements. These consumers are also the most inadequately served in terms of water services. This settlement pattern imposes high costs on service delivery, a factor that is exacerbated by the broken terrain and poor access roads. It also means that many settlements lack adequate thresholds for economic development initiatives. However, It is important to note that about 91% of the population live in communities of less than 1,500 people per km². This equates to approximately 200 households per km² or one household per 5,000 m². To supply these communities to the basic national standards (see Section 4) will be costly and this may require short-term solutions to ensure that there is some for all rather than all for some.

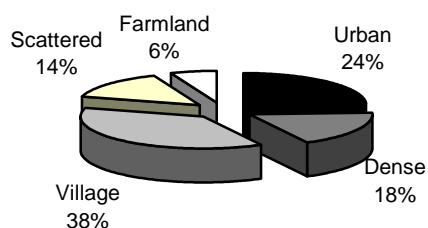
Table 3.5b: Settlement classification criteria.

Settlement Classification	Description	Number of settlements
Urban	Built-up areas i.e. Former TLC and R293 towns & formal settlements with erven less than 2,500 m ² .	15
Dense	Formal or informal settlements with a population of at least 5,000 and a household density of five or more households per hectare.	64
Village	Formal or informal settlements with a population of between 500 and 5,000 and a household density between 0.5 and 5 households per hectare.	290
Scattered	Any settlement that has a population of less than 500 and a density around 0.5 households per hectare.	547
Farmlands	Communities living outside traditional authority areas on private farmlands.	106

Table 3.5c: Current consumer profile in settlement types

DM	Urban	Dense	Village	Scattered	Farmland	Total
Population	228,767	170,214	351,851	135,693	57,190	943,715
Households	40,135	29,862	61,728	23,806	10,033	165,564
Dry industrial	-	-	-	-	-	0
Wet industrial	-	-	-	-	-	0
Commercial	-	-	-	-	-	0
Total DM	40,135	29,862	61,728	23,806	10,033	165,564

Figure 3.4: Population distribution per settlement type.



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Figure 3.5: Settlement type distribution over Zululand District Municipality.

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3.6 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 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 population growth rates are based on a DBSA Report³ 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 rates for KZN have been applied to the ZDM population, as represented in Table 3.6a. Overall, within the ZDM the internal shift from rural to urban areas is not predicted over the long term, therefore the DBSA growth rates have been applied to each settlement type (Table 3.6c).

Table 3.6a: Population growth rate projections for the ZDM (2000 – 2020).

Period	% Growth rate	Growth factor	Year	Households	Population	Persons/household
2001-2005	1.44%	1.074	1996 Census	108,964	711,607	6.5
2001-2004		1.059	2001 Census	144,339	822,732	5.7
2004-2005		1.015	2004 base data	165,564	943,715	5.7
2006-2010	0.96%	1.049	2005	168,018	957,701	5.7
2011-2015	0.58%	1.029	2010	176,239	1,004,561	5.7
2016-2020	0.08%	1.004	2015	181,410	1,034,035	5.7
2004-2020		1.100	2020	182,137	1,038,181	5.7

Source: DBSA (2000).

Table 3.6b: Projected population growth rates per settlement for the ZDM.

Settlement Type	No. of Households	Current Population	Effective population growth rate (%/a)				
			2004	2005	2006	2007	2008
Urban	40,135	228,767	1.44%	1.44%	0.96%	0.96%	0.96%
Dense	29,862	170,214	1.44%	1.44%	0.96%	0.96%	0.96%
Village	61,728	351,851	1.44%	1.44%	0.96%	0.96%	0.96%
Scattered	23,806	135,693	1.44%	1.44%	0.96%	0.96%	0.96%
Farmland	10,033	57,190	1.44%	1.44%	0.96%	0.96%	0.96%
Total	165,564	943,715	1.44%	1.44%	0.96%	0.96%	0.96%

³ DBSA (2000).

3.7 Demographic trends and migration patterns

The IDP does not address the issue of migration patterns; therefore it would appear that in general no large-scale labour migration occurs to and from ZDM (Table 3.7a). In the past gender ratios were used as an indicator of outward migration from a region – i.e. male migrant labourers usually went to work on mines and industry in the Witwatersrand. However, with the abolishment of group areas, and an increase in opportunities closer to home the pull of temporary migrant labour has decreased. Overall, South Africa is 48% male and 52% female; KZN is 47% male 53% female; and the ZDM is 46% male and 54% female. The difference between the DM and SA as a whole may relate to males migrating from the region in search of employment, however this difference is not significant in terms of water services provision (probably less than 20,000 persons). Although no large-scale labour migration seems to occur to and from the district, migration between and within the LMs may occur. This was probably especially true when the mines within the district were still functioning optimally.

According to Census 2001 data, the most utilised mode of travel to school or work is by foot (35%) and a further 54% do not travel to school or work (Table 3.7b and Figure 3.6). Therefore, less than 12% of the population utilise “mechanised” means to convey them to their destination. Of these means, the majority use cars with 1.4% as driver and 5% as passengers (at an average of 3.5 persons per vehicle). It is evident therefore that most of the population do not migrate within the district, and that the migration that does occur is primarily within the district rather than to and from the district. However, migration patterns and trends from outside the district require analysis, and the specific, detailed data required to fill in Table 3.7a is not currently available for ZDM. In addition, the impact of migration patterns relating to HIV-AIDs for the UDM need to be studied. It is thought that permanent migration trends within the DM, especially into the rural areas, may become evident as full-blown AIDS sufferers who are unable to continue working return to their family homes. This may be an internal urban/rural shift, or migration from urban areas outside the DM.

Table 3.7a: Demographic trends and migration patterns within ZDM.

Settlement type	Permanent population	Peak daily labour migration (-) out / (+) in	Peak long-term labour migration (-) out / (+) in	Permanent population changes (-) out / (+) in	Holiday population
Urban	204,432	TBD	TBD	TBD	TBD
Dense	178,488	TBD	TBD	TBD	TBD
Village	363,257	TBD	TBD	TBD	TBD
Scattered	140,348	TBD	TBD	TBD	TBD
Farmland	57,190	TBD	TBD	TBD	TBD
Total	943,715	TBD	TBD	TBD	TBD

Although currently not that well developed or fully utilised, the tourism potential of the region is good with the eMakhosini Ophathe Heritage Park, the uPhongola Biosphere Reserve and the Thangami Private Game Park having been identified as focal development areas (IDP March 2004). These projects aim to attract tourists to the ZDM primarily through the natural environment and game farms with associated fringe local economic development (LED) projects in terms of craft and cultural centres. Therefore, the water services demand for tourism are not extensive, concentrating more on domestic use (lodges) than large scale water uses.

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Figure 3.6: Mode of travel to school or work within the ZDM (Census 2001).

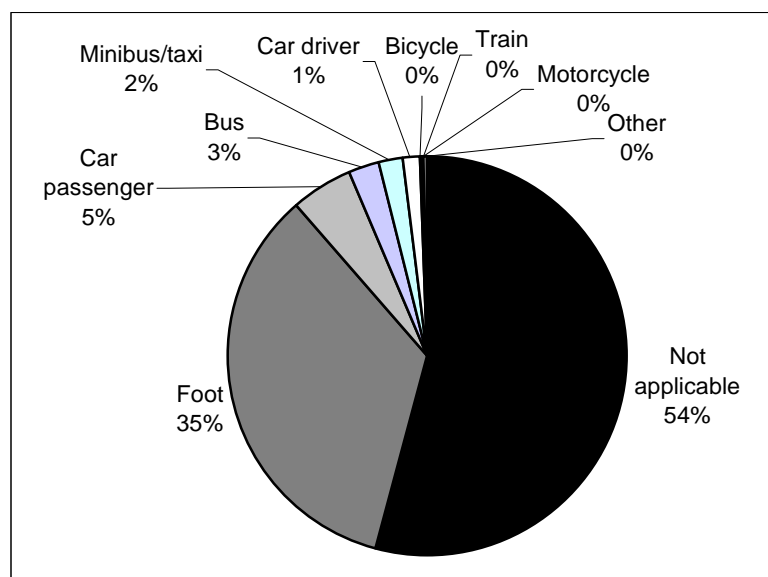


Table 3.7b: Mode of travel within the ZDM (Census 2001).

	Not applicable	Foot	Car passenger	Bus	Minibus/taxi	Car driver	Bicycle	Motorcycle	Train	Other
eDumbe LM										
Male	49,844	33,255	8,586	4,149	5,039	2,970	513	268	165	182
Female	65,652	31,656	12,024	4,669	2,091	3,746	186	165	175	126
Total #	115,496	64,911	20,610	8,818	7,130	6,716	699	433	340	308
% LM	51.23%	28.79%	9.14%	3.91%	3.16%	2.98%	0.31%	0.19%	0.15%	0.14%
%DM	17.58%	9.88%	3.14%	1.34%	1.09%	1.02%	0.11%	0.07%	0.05%	0.05%
%Industry	32.45%	28.60%	63.97%	53.48%	59.38%	73.62%	40.90%	41.32%	39.13%	43.20%
uPongolo LM										
Male	25,372	23,317	408	252	264	391	105	47	66	27
Female	39,402	22,678	442	258	66	333	53	42	50	72
Total #	64,774	45,995	850	510	330	724	158	89	116	99
% LM	57.00%	40.47%	0.75%	0.45%	0.29%	0.64%	0.14%	0.08%	0.10%	0.09%
%DM	9.86%	7.00%	0.13%	0.08%	0.05%	0.11%	0.02%	0.01%	0.02%	0.02%
%Industry	18.20%	20.27%	2.64%	3.09%	2.75%	7.94%	9.25%	8.49%	13.35%	13.88%
Abaqulusi LM										
Male	13,942	8,732	1,946	1,511	1,773	318	149	63	55	52
Female	19,011	7,386	2,182	1,578	739	297	64	46	46	30
Total #	32,953	16,118	4,128	3,089	2,512	615	213	109	101	82
% LM	54.99%	26.90%	6.89%	5.16%	4.19%	1.03%	0.36%	0.18%	0.17%	0.14%
%DM	5.02%	2.45%	0.63%	0.47%	0.38%	0.09%	0.03%	0.02%	0.02%	0.01%
%Industry	9.26%	7.10%	12.81%	18.73%	20.92%	6.74%	12.46%	10.40%	11.62%	11.50%
Nongoma LM										
Male	31,015	28,345	1,215	1,146	1,064	325	288	138	98	109
Female	44,372	25,796	1,322	1,169	461	297	101	103	106	56
Total #	75,387	54,141	2,537	2,315	1,525	622	389	241	204	165
% LM	54.82%	39.37%	1.84%	1.68%	1.11%	0.45%	0.28%	0.18%	0.15%	0.12%
%DM	11.47%	8.24%	0.39%	0.35%	0.23%	0.09%	0.06%	0.04%	0.03%	0.03%
%Industry	21.18%	23.86%	7.87%	14.04%	12.70%	6.82%	22.76%	23.00%	23.48%	23.14%
Ulundi LM										
Male	27,060	23,022	2,076	878	390	222	160	97	49	30
Female	40,034	22,550	2,018	828	71	224	66	70	53	26
Total #	67,094	45,572	4,094	1,706	461	446	226	167	102	56
% LM	55.95%	38.00%	3.41%	1.42%	0.38%	0.37%	0.19%	0.14%	0.09%	0.05%
%DM	10.21%	6.94%	0.62%	0.26%	0.07%	0.07%	0.03%	0.03%	0.02%	0.01%
%Industry	18.85%	20.08%	12.71%	10.35%	3.84%	4.89%	13.22%	15.94%	11.74%	7.85%
ZDM										
Male	147,327	116,827	14,231	7,971	8,557	4,226	1,221	619	433	403
Female	208,550	110,107	17,988	8,517	3,451	4,897	488	429	436	310
Total #	355,877	226,934	32,219	16,488	12,008	9,123	1,709	1,048	869	713
Total %	54.20%	34.50%	4.90%	2.50%	1.80%	1.40%	0.30%	0.20%	0.10%	0.10%

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3.8 Age and gender profile

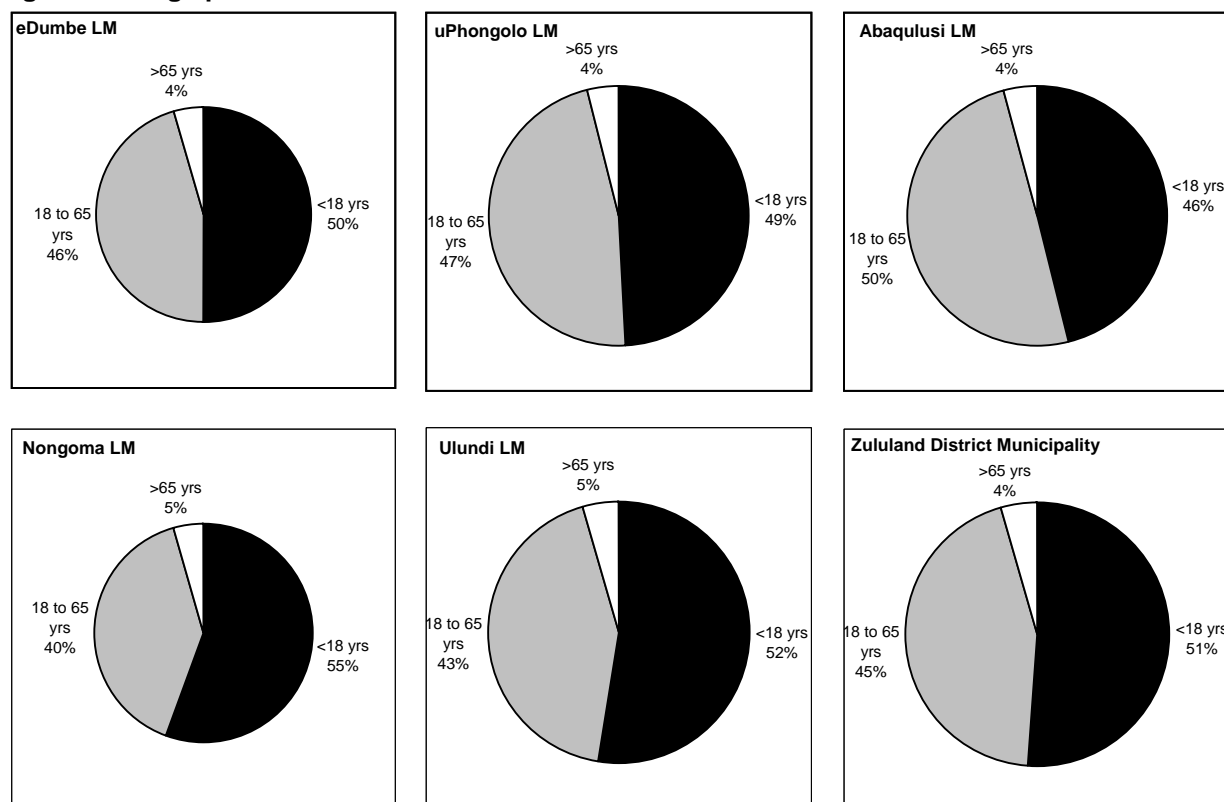
The ZDM is constituted predominantly of females (54%) and youth (51%). As collection of water is considered a female job (often walking several kilometres daily and spending hours), easier access to water would address the short-term practical needs of women and allow them to participate in more economically productive activities. The large percentage of youth means that these persons are legally unable to be employed (Table 3.8 and Figure 3.7). Many households are dependant on the social grants of pensioners, however the pensioner base is low (4.3%). Nevertheless, approximately 45% of the population is potentially economically active. However, relatively few of this age group are actually employed or have any meaningful income (see Sections 3.10 and 3.11). This could have implications for the supply of water services, both in terms of where and the level of services required, as well as the ability of people to pay for such services.

Table 3.8: Age and gender profile for each LM within the ZDM.

LM	Resident population	Economically active residents (18 to 65yrs)		Aged residents (>65 yrs)		Youth residents (<18yrs)		Male residents		Female residents	
		Persons	%	Persons	%	Persons	%	Persons	%	Persons	%
eDumbe	82,200	37,474	45.6%	3,646	4.4%	41,080	50.0%	38,887	47.3%	43,346	52.7%
uPhongolo	119,780	56,327	47.0%	4,571	3.8%	58,882	49.2%	56,176	46.9%	63,597	53.1%
Abaqulusi	191,022	94,813	49.6%	7,991	4.2%	88,218	46.2%	91,233	47.8%	99,768	52.2%
Nongoma	198,381	79,307	40.0%	8,948	4.5%	110,126	55.5%	88,339	44.5%	110,102	55.5%
Ulundi	212,937	91,302	42.9%	9,753	4.6%	111,882	52.5%	95,556	44.9%	117,409	55.1%
Total ZDM	804,320	359,223	44.7%	34,909	4.3%	410,188	51.0%	370,191	46.0%	434,222	54.0%

* Source: Census 2001. The percentages are per LM or DM respectively.

Figure 3.7: Age profile within the ZDM.



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3.9 Health profile

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. There is a link between water quality in its natural state and settlements such that poor quality water can transmit waterborne diseases⁴ and negatively affect overall health⁵, and poor water services can lead to contamination of the water resource and ultimately poor water quality. Therefore the combination of poor water services, use of untreated raw water, and ill-informed consumer groups with regard to health and hygiene places many consumers at risk of disease and other water related health problems.

Many consumers within the ZDM abstract untreated surface water for consumption, with the associated risk of transmitting waterborne diseases. In addition, groundwater quality may negatively affect the skin and teeth, and have a poor taste such that consumers do not drink sufficient fluids to maintain their health. However, boreholes that form part of the water services development plan and infrastructure of the ZDM are not equipped unless the water is within the SABS drinking water standards. Nevertheless, the close proximity of sanitation facilities and burial grounds can result in contamination of water resources. Therefore, monitoring of resource quality is required to ensure that there is no effective contamination and that the resource remains in a potable state. In addition to water monitoring, monitoring of some water related medical complaints is also conducted. Hospitals and clinics within the ZDM collect data for the Provincial Health Department. In respect of water-related diseases this data is broken down into head counts generally (namely "diarrhoeas") and specifically for cholera⁶. Information pertaining to bilharzias or specific effects is not collected and is therefore not readily available (Table 3.9a). Collection of such data would require a programme to be formulated by the ZDM. However, once a complaints monitoring-system is established, the cost involved would far exceed the benefit of such information and the money would be better spent in actual monitoring and quality testing of the water resource. The health profile for water services planning specific to the ZDM stills needs to be obtained.

Table 3.9a: Health profile for water services planning in the ZDM.

Area	Time frame	Total consumers*	Number of consumers affected by							
			Water related disease			Skin effects	Teeth effects	Taste effects	Pipe corrosion	Water colour
			Diarrhoea	Cholera	Bilharzias					
Urban		204,432								
Rural		739,283								
Total		943,715								

Source: Provincial Department of Health, Pietermaritzburg
*Population based on amended settlement data (Section 3.5)

⁴ Waterborne diseases include cholera and bilharzias as well as diarrhoeal symptoms.

⁵ Poor quality water may negatively affect skin, teeth and overall health. Although not always a medical problem, the colour and taste of water is considered to have a negative effect psychologically.

⁶ Bruce Margot, Provincial Communicable Diseases, 13 January 2004

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In addition to minimising the effect of water related disease and negative effects through the provision of adequate water services infrastructure, it is important to ensure sufficient health services exist to treat any health complaints. Disease and poor health can spread within a community where poor hygiene is practiced. The number of hospitals and clinics is given in Table 3.3, and spatially represented in Figure 3.1. These facilities offer a fairly widespread network of health care services. Almost three quarters of the settlements and 71% of the population are within 25 km of a hospital, while 90% of settlements and 95% of the population live closer than 10 km from a clinic.

In addition to cholera, the current statistics in terms of HIV/AIDS infection or prevalence in KZN is approximately 33.5% (36.2% estimation in the 2000 antenatal clinic survey⁷), with the province generally being regarded as having the worst levels of HIV infection in the country. The ZDM has an HIV prevalence of 33.1%⁸. Prevalence is determined by monitoring HIV/AIDS infection at antenatal clinics, therefore the sample population is purely female. This indicates that many young females (and probably males) are infected with HIV. Not only do they fall into the “eligible workforce” category and should be the most economically active population, but the high prevalence of HIV/AIDS has implications for water services requirements. The provincial population growth rate is expected to slowdown considerably as a result of the HIV/AIDS epidemic. If no effective intervention is put in place before the end of this decade, the strain on public sector resources will be severe. Water requirements for HIV/AIDS patients are higher than for healthy persons. This may affect the order of planned water services projects as the effect of HIV/AIDS is noted. Supportive services such as counselling and orphanages, provided by the Department of Welfare, are almost non-existent in the rural areas and are understaffed in the urban areas. In traditional authority environments, changes in household and economic structure may affect the ability of relatives and community members to care for orphans and the aged. In addition, HIV/AIDS is anticipated to result in a high turnover of construction and operations and maintenance staff, as well as low productivity through continual family leave⁹. The potential economic and social impacts of AIDS are summarised in Table 3.9b.

⁷ Department of Health (2000). *National survey – antenatal clinic HIV/AIDS prevalence.*

⁸ Department of Health (2001).

⁹ Ashton (2000).

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Table 3.9b: The economic and social impacts AIDS.

Economic impacts	Social impacts
1. The younger echelons of the labour force (aged 18 – 40) will be the most effected.	1. Families will have to care for AIDS patients at home as public services will be unable to cope.
2. High levels of absenteeism resulting in loss of productivity – although the approximately 6 years HIV window period may have little or no effect on productivity.	2. The cost of health care is expected to rise dramatically.
3. Decreasing levels of productivity as a result of loss of physical and mental capacity to perform present jobs (e.g. cane cutting that is physically demanding).	3. HIV/AIDS will be the cause of death of the breadwinners in the family.
4. Loss of productivity will negatively impact on the entire economy, with some sectors such as mining and transport being among the worst affected.	4. High costs of funerals for poor households.
5. Increased labour costs as firms find it necessary to employ additional staff.	5. Increase in the number of households comprising only children, and/or old people.
6. Absolute loss of skills, at all levels (i.e. lower occupational levels, technical and management).	6. The development of a society with a large number of orphans – approximately 2 million orphans through AIDS is expected in South Africa by 2010.
7. Increased pressure on medical aid schemes.	7. Increase in poverty.
8. Increase in costs to employers and employees in respect of medical, pensions and death benefits as the number of claims escalates.	8. Polarization will occur at both ends of the income spectrum.
9. Increase in unemployment among those infected.	9. Increase in crime (particularly involving youth) as levels of unemployment escalate.
10. Increasing levels of debt among individual households.	
11. Most of the people who die from AIDS are in the age group between 25 and 40. This means that the labour market loses trained people with experience.	
12. Life expectancy predicted to decline from approximately 60 years to about 46 years within the next 8 years.	
13. South Africa could lose about 20% of its workforce in the next 7 years.	

Source: DBSA (2000).

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3.10 Employment profile

Only 16% of the economically active population is employed, 24% are registered as unemployed, and 60% of this population are not economically active but do not classify themselves as unemployed (Census 2001 – see Table 3.10a). However, the “potentially” economically active population in terms of employment status for the Census 2001 data is defined as persons between 15 and 65 years, giving a total population of 429,841 persons that is larger than that defined in the WSDP – i.e. persons between 18 and 65 years (359,223). The unemployment figure must also be viewed with the knowledge that 54% of the population (and about 58% of the economically active population) is female, a large proportion of whom may not be seeking employment, as they are caring for family and home.

Table 3.10a: Employment status per LM*.

Employment status	Employed				Unemployed				Not economically active			
	Persons	%	% LM	% DM	Persons	%	% LM	% DM	Persons	%	% LM	% DM
KZ261: eDumbe	8,542	13%	19%	2%	11,539	11%	26%	3%	24,183	9%	55%	6%
KZ262: uPhongolo	15,951	24%	24%	4%	15,084	14%	23%	4%	35,213	14%	53%	8%
KZ263: Abaqulusi	21,442	32%	19%	5%	31,361	30%	28%	7%	57,729	22%	52%	13%
KZ265: Nongoma	7,140	11%	7%	2%	18,067	17%	18%	4%	72,886	28%	74%	17%
KZ266: Ulundi	13,822	21%	12%	3%	28,290	27%	26%	7%	68,592	27%	62%	16%
DC26: ZDM Total	66,897	100%		16%	104,341	100%		24%	258,603	100%		60%

*Source: 2001 Census. Data is for persons between 15 and 65 years (or the “economically active age group”). This is not the same as the classification required for the WSDP of “eligible workforce” of 18 to 65 years.

The number of people entering the labour force each year is large compared with employment opportunities. The situation is exacerbated by a high dependency ratio (only 53% of the population fall into the economically active age group of 15 to 64 years) and high illiteracy level (39% of the adult population – i.e. persons over 19 years of age - have had no formal education; Census 2001). The highest areas of illiteracy are in Ulundi and Nongoma LMs, where 45% of the LM adult population – or 12% and 10% respectively of the total adult population in the DM – has had no schooling (Table 3.10b). Therefore, employment of these persons is restricted to unskilled labour where income potential is low. This in turn may affect consumer ability to pay for services. In addition, illiteracy levels impact water services provision in terms of public participation, water conservation and use, and health and hygiene awareness programmes. Programmes must be formulated to address the correct target market.

Table 3.10b: Education levels illiteracy within the ZDM *.

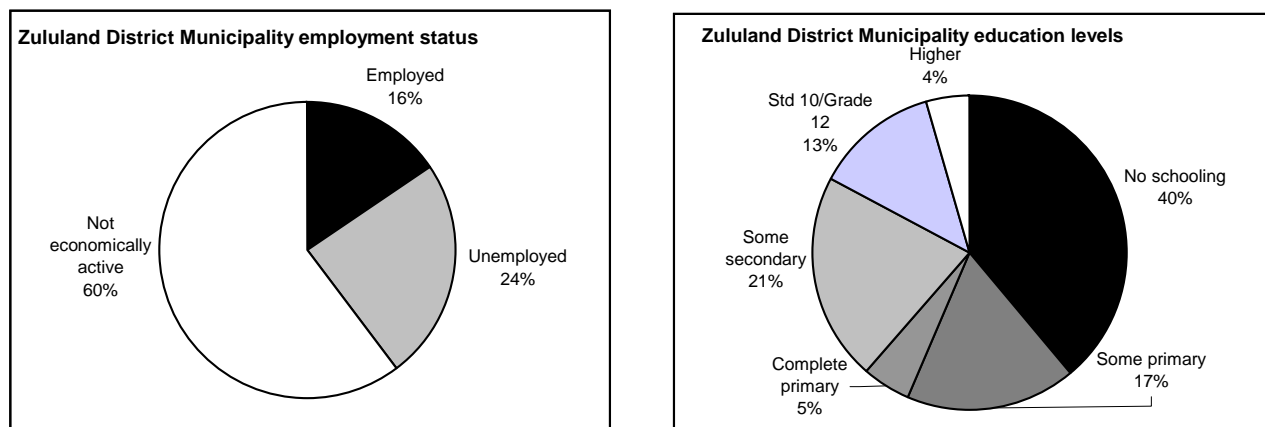
Education level	KZ261: eDumbe		KZ262: uPhongolo		KZ263: Abaqulusi		KZ265: Nongoma		KZ266: Ulundi		DC26: ZDM	
	Persons	% LM	Persons	% LM	Persons	% DM	Persons	% LM	Persons	% LM	Persons	%
No schooling	13,915	38%	20,231	37%	27,516	30%	35,028	45%	40,930	45%	137,620	39%
Some primary	7,926	21%	10,533	19%	16,672	18%	13,489	17%	13,177	15%	61,797	17%
Complete primary	2,101	6%	3,237	6%	4,956	5%	3,536	5%	3,679	4%	17,509	5%
Some secondary	8,085	22%	12,092	22%	23,711	25%	15,074	19%	16,227	18%	75,189	21%
Std 10/Grade 12	3,894	11%	6,757	12%	14,688	16%	7,978	10%	12,592	14%	45,909	13%
Higher	1,116	3%	2,097	4%	5,644	6%	2,645	3%	3,864	4%	15,366	4%
Total	37,037	100%	54,947	100%	93,187	100%	77,750	100%	90,469	100%	353,390	100%

*Source: 2001 Census. Data is for persons 20 years and over (or the “adult population”).

The overall employment status and education levels are indicated graphically in Figure 3.8.

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Figure 3.8: Employment and education levels within the ZDM (Census 2001).



Employment is mainly in the social services and agricultural sectors (Section 3.13), therefore seasonal employment may be an issue, especially in the sugar cane and forestry sectors. However, the base data used (i.e. Census 2001) does not indicate whether employment is temporary or permanent, and does not divide the data further than LM level. Therefore, a detailed employment profile divided between the settlement types of ZDM population still needs to be obtained in terms of Table 3.10c.

Table 3.10c: Employment profile per settlement type*.

Settlement type	Eligible work force (18 to 65 yrs)	Residents - without jobs	Seasonal farm workers	Domestic workers	Permanent farm workers	Industry/ Trade workers	Professional/ Service workers
Urban							
Dense							
Village							
Scattered							
Farmland							
Total	359,223	292,327	-	6,465	11,276	15,162	24,232

*Source: Census 2001. For persons aged 15 to 65 years.

Note: Within the employed population there are 9,261 persons (or 14%) whose professions are "undetermined".

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3.11 Household income

Income distribution indicates the ability of people to pay for services rendered that in turn affects the level of service that can be provided to communities. In addition, the ZDM income profile will indicate the number of indigent persons that may impact how the equitable share will be distributed. The income profile for “employed” individuals within the ZDM is given in Table 3.11a and Figure 3.9. An overwhelming 49.6% of the employed population earn less than R 800 per month. Conversely, only 4.2% of the total DM population earn more than R 800 per month – i.e. 4.2% of the DM population is financially supporting the majority of the district’s population. If one combines this data with that of age distribution it is evident that the high percentage of youthful population has an impact on the ability of persons to potentially pay for water services. eDumbe and uPhongolo LM have the worst dependencies with 69% and 65% respectively of the employed persons earning less than R 800 per month. Overall, a vast majority of the ZDM population is unable to make a meaningful financial contribution towards the provision of basic water services.

Table 3.11a: Individual monthly income distribution per LM*.

	No income	R 1 to R 800	R 801 to R 1,600	R 1,601 to R 3,200	R 3,201 to R 6,400	>R 6,400	Total
eDumbe	688	5,160	1,014	798	585	284	8,529
uPhongolo	312	10,123	1,917	1,822	1,210	562	15,946
Abaqulusi	776	8,997	3,503	3,442	2,999	1,728	21,445
Nongoma	487	2,151	1,511	1,695	1,031	262	7,137
Ulundi	855	3,594	2,576	3,029	2,648	1,132	13,834
Total ZDM	3,118	30,025	10,521	10,786	8,473	3,968	66,891
Percentage	4.7%	44.9%	15.7%	16.1%	12.7%	5.9%	

*Source: 2001 Census. Percentages are based on income for total population employed.

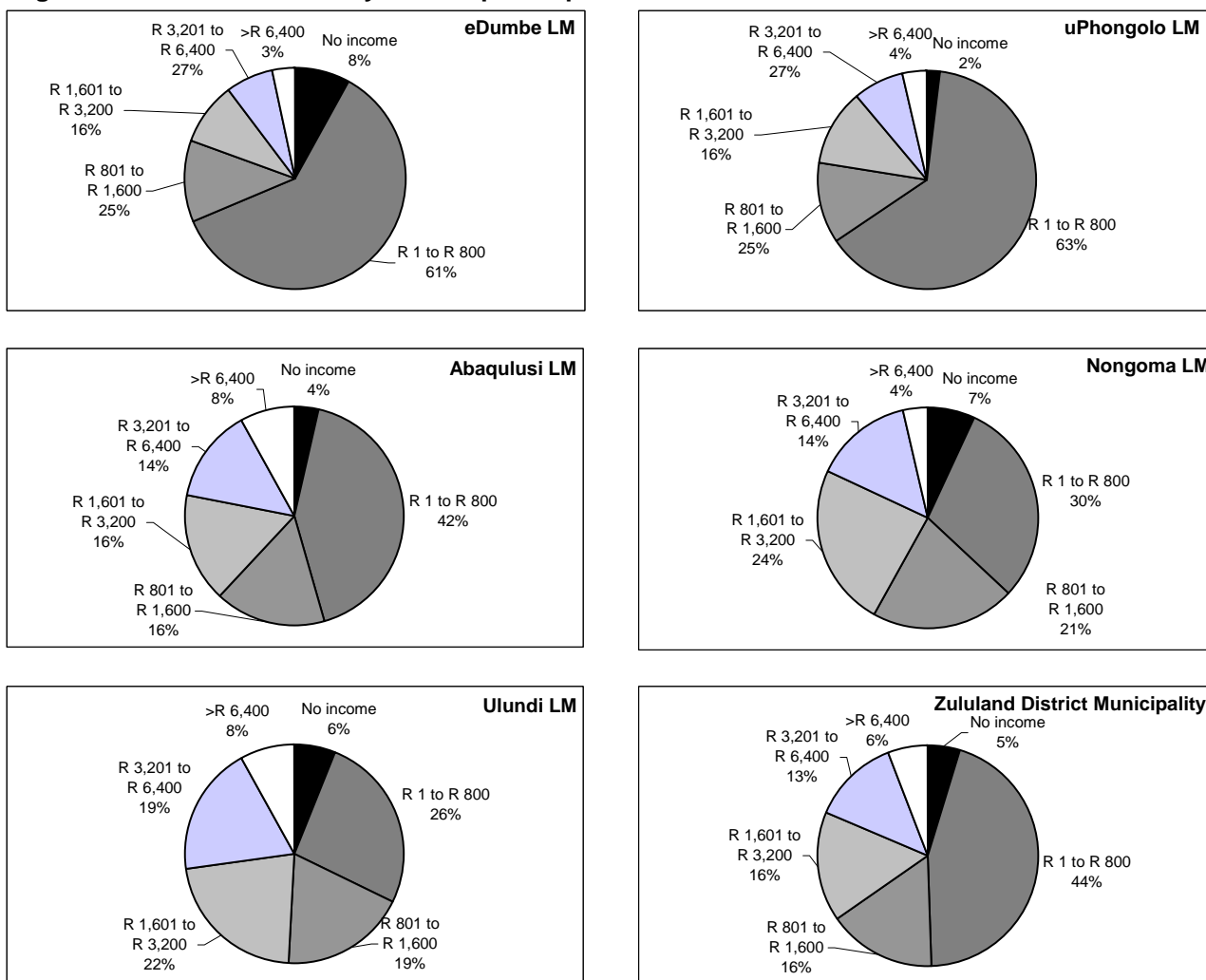
It should be noted that the overall total municipal bill which includes all municipal services and rates (i.e. not just water and sanitation) for low income earners should not be greater than about 5 percent of income.

The combined income of persons within a household (or billable unit) will indicate the true ability of consumers to pay for services. It is, however, difficult to convert the Census 2001 individual income data to household data, as there may be more than one earner per household in some areas, and no income earners in other areas. If one assumes that there is only one income earner per household then only 33,748 households (4.2% of the DM)¹⁰ earn more than R 800 per month and are likely to be able to contribute financially to the provision of water services. Cognisance also needs to be taken of National Government’s policy of free basic services provision that includes water and sanitation to all citizens. This policy aims to target “poor” communities (as identified in Section 3.12) and facilitate poverty alleviation. Although areas within the ZDM have been targeted for development, income distribution, and therefore the ability of individuals to pay for services, within the Zululand district is unlikely to change substantially in the foreseeable future. Therefore, only basic services levels are potentially sustainable.

¹⁰ This percentage is based on the total population for the ZDM according to the Census 2001 i.e. 804,320.

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Figure 3.9: Individual monthly income profile per LM within ZDM.



*Source: 2001 Census. Percentages are based on income for total population employed .

Household income, along with typical monthly water and sanitation bills, per settlement type to complete Table 3.11b would require an additional household income survey by the ZDM. This exercise is likely to be costly, and would not necessarily supply the ZDM with a different picture from that currently envisaged. In addition, the rural area where the majority of the population are likely to earn below R 800 per month, the communities will be receiving communal water and VIP sanitation supplied at the basic National standards.

Table 3.11b: Monthly household income distribution per settlement type.

Settlement type	Number of households with monthly income of:					Affordability			
	< R800	R800 to R1500	R1500 to R2500	R2500 to R3500	> R3500	Water		Sanitation	
						Typical monthly water bill	Ave % of monthly income	Typical monthly water bill	Ave % of monthly income
Urban									
Dense									
Village									
Farmland									
Total									

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3.12 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 (see Appendix 3).

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 (see Section 4). 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.

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3.13 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 (Table 3.13b). 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 3.13b).

Table 3.13a: Economic sector contribution to GGP.

Economic sector	Total no. of employees	No. of local employees	No. of migrating labour	% contribution to local GGP
Government	Unknown	Unknown	Unknown	
Manufacturing	3,223	3,223	0	
Retail/Trade (incl. Tourism)	7,539	7,539	0	
Farming/Agriculture	11,276	11,276	0	
Utilities (power & water supply)	391	391	0	
Mining	1,673	1,673	0	
Social services	18,211	18,211	0	
Finance	3,292	3,292	0	
Transport & communications	2,838	2,838	0	
Construction	2,727	2,727	0	
Total*	51,170	51,170	0	

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

Table 3.13b: 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

In terms of the Census 2001 data, the main employment sectors within the ZDM as a whole are social services, agriculture and trade (Table 3.13a and Figure 3.10). Mining is one of the smallest employment sectors at only 2.5%. It is interesting to note that private households represent the fourth highest employment sector overall (9.7%; Table 3.13b). Water usage within this sector would fall under residential consumption and does not adversely impact long-term water services planning. In addition, the employment sector for a large number of persons is undetermined or unknown. It is possible that these persons are employed within the informal sector. If all person employed within the “unknown” category work in the informal sector then this

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sector provides a large contribution to employment within the ZDM (13.8%; Table 13.13b). Typical informal sector activities, which can be observed at bus and taxi ranks and on the roadside, include:

- Craft work - basket & grass-mat weaving, beadwork and pottery;
- Roadside fruit stalls;
- Traditional healers, medication and herbs;
- Traditional shows and entertainment;
- Roadside clothing, food-ware and accessory stalls;
- Taxi related trade;
- Small household electronic stalls; and
- Backyard stores.

Although this shows an overall trend in terms of employment over the entire ZDM, the LMs vary slightly in terms of the dominant sectors. uDumbe and uPongolo LMs reflect similar employment patterns with the dominant sector being agriculture followed by social services, private households and trade. Similarly, Abaqulusi, Nongoma and Ulundi LMs reflect similar patterns with the dominant sector being social services followed by trade, private households and agriculture. Within Nongoma and Ulundi LMs agriculture does not contribute much to employment and is only the sixth highest employment sector (Table 3.13c).

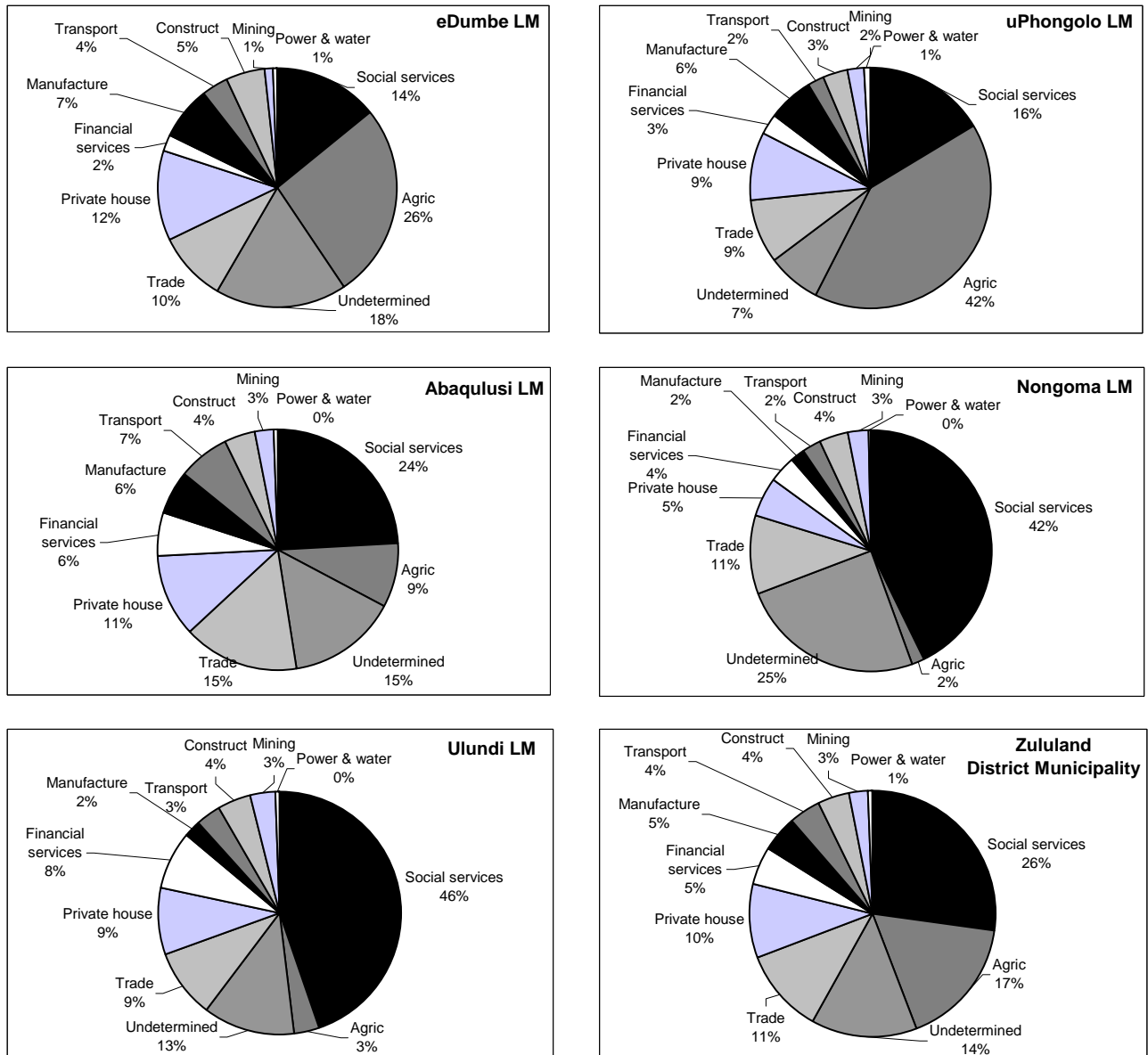
Table 3.13b: Economic sector employment within ZDM.

	Social services	Agric	Unknown	Trade	Private house	Financial services	Manufact	Transport	Construct	Mining	Power & water	Total
eDumbe LM												
Number	1,216	2,264	1,503	815	1,037	210	612	305	443	103	47	8,555
% LM	14.21%	26.46%	17.57%	9.53%	12.12%	2.45%	7.15%	3.57%	5.18%	1.20%	0.55%	100%
% Industry	6.68%	20.08%	16.23%	10.81%	16.04%	6.38%	18.99%	10.75%	16.24%	6.16%	12.02%	
% DM	1.82%	3.38%	2.25%	1.22%	1.55%	0.31%	0.91%	0.46%	0.66%	0.15%	0.07%	12.79%
uPongolo LM												
Number	2,602	6,562	1,142	1,372	1,462	476	935	393	511	335	154	15,944
% LM	16.32%	41.16%	7.16%	8.61%	9.17%	2.99%	5.86%	2.46%	3.20%	2.10%	0.97%	100%
% Industry	14.29%	58.19%	12.33%	18.20%	22.61%	14.46%	29.01%	13.85%	18.74%	20.02%	39.39%	
% DM	3.89%	9.81%	1.71%	2.05%	2.19%	0.71%	1.40%	0.59%	0.76%	0.50%	0.23%	23.83%
Abaqulusi LM												
Number	5,164	1,872	3,140	3,323	2,399	1,283	1,199	1,499	898	564	99	21,440
% LM	24.09%	8.73%	14.65%	15.50%	11.19%	5.98%	5.59%	6.99%	4.19%	2.63%	0.46%	100%
% Industry	28.36%	16.60%	33.91%	44.08%	37.11%	38.97%	37.20%	52.82%	32.93%	33.71%	25.32%	
% DM	7.72%	2.80%	4.69%	4.97%	3.59%	1.92%	1.79%	2.24%	1.34%	0.84%	0.15%	32.05%
Nongoma LM												
Number	3,061	116	1,761	760	360	261	145	170	285	192	25	7,136
% LM	42.90%	1.63%	24.68%	10.65%	5.04%	3.66%	2.03%	2.38%	3.99%	2.69%	0.35%	100%
% Industry	16.81%	1.03%	19.02%	10.08%	5.57%	7.93%	4.50%	5.99%	10.45%	11.48%	6.39%	
% DM	4.58%	0.17%	2.63%	1.14%	0.54%	0.39%	0.22%	0.25%	0.43%	0.29%	0.04%	10.67%
Ulundi LM												
Number	6,168	462	1,715	1,269	1,207	1,062	332	471	590	479	66	13,821
% LM	44.63%	3.34%	12.41%	9.18%	8.73%	7.68%	2.40%	3.41%	4.27%	3.47%	0.48%	100%
% Industry	33.87%	4.10%	18.52%	16.83%	18.67%	32.26%	10.30%	16.60%	21.64%	28.63%	16.88%	
% DM	9.22%	0.69%	2.56%	1.90%	1.80%	1.59%	0.50%	0.70%	0.88%	0.72%	0.10%	20.66%
ZDM												
Number	18,211	11,276	9,261	7,539	6,465	3,292	3,223	2,838	2,727	1,673	391	66,896
%	27.2%	16.9%	13.8%	11.3%	9.7%	4.9%	4.8%	4.2%	4.1%	2.5%	0.6%	

Source: Census 2001

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Figure 3.10: Economic profile per industry in terms of employment within the ZDM.



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3.14 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.

Although a qualitative analysis of the general economic trends have been given, the quantitative changes per economic sector towards GGP for individual years still need to be obtained to complete Table 3.14a.

Table 3.14a: Annual changes in GGP contributions per economic sector.

Economic Sector	Annual growth 1990 to 1995	Changes in GGP					
		1999/2000	2000/2001	2001/2002	2002/2003	2003/2004	2004/2005
Government							
Manufacturing							
Retail/Trade (incl. Tourism)							
Farming/Agriculture							
Utilities (power & water)							
Mining							
Social services							
Finance							
Transport & communications							
Construction							

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