

Table 35: Gini Coefficient for Zululand (2003-2008)

Municipality	2003	2004	2005	2006	2007	2008
eDumbe	0.6	0.6	0.59	0.59	0.6	0.6
uPhongolo	0.6	0.6	0.59	0.6	0.6	0.6
Abaqulusi	0.66	0.66	0.65	0.65	0.66	0.66
Nongoma	0.6	0.6	0.6	0.6	0.6	0.6
Ulundi	0.61	0.62	0.62	0.62	0.62	0.62
Zululand	0.62	0.62	0.62	0.62	0.62	0.63
KZN	0.67	0.67	0.67	0.67	0.67	0.67

Source: Global insight 2009

Zululand, on average is less unequal than the province as a whole, with a Gini Coefficient of 0.63. This may be because there are less high-earning individuals in Zululand, and so the scope for inequality, although high, is not as great. Interestingly Abaqulusi is the most unequal of the municipalities in Zululand. This is no doubt attributable to the greater degree of economic activity taking place in the district's biggest municipal economy, providing greater scope for inequality to exist.

The dependency ratio measures the proportion of the population that is outside the labour force and is dependent on the economic activity of those working. In South Africa, this is typically calculated as the proportion of the population between the ages of 0 to 14 plus those over 64 to those between the ages of 15-64. It is used to measure the pressure on productive population.

A high dependency ratio can cause serious problems for a country. A high dependency ratio implies that a large proportion of the government's expenditure is on health, pension, social security and education which are most used by old and young population. Generally, there has been a declining trend in the dependency ratio for South and the regional economies during the period under review primarily due to a number of developmental programmes that were introduced by the government since the advent of the new

democratic South Africa post-1994. Some of these programmes include, *inter-alia*, social grants, economic transformation, a myriad of poverty reduction programmes and the high economic growth trajectory observed since 1994. The decline in the dependency ratio, however, depends on a number of other factors such as fertility rate, death rate, working and retirement ages.

The dependency ratio can be interpreted as a crude measure of poverty. This argument is correct in the sense that only a handful of people in the labour force are sustaining a large proportion of dependents.

Nongoma and Ulundi posted the highest average dependency ratios, 112.9% and 105.4% respectively during the period 1995-2002. The same is true for the period 2003-2010, in which the two local municipalities recorded dependency ratios of 99% and 89.9%, for Nongoma and Ulundi respectively. In both periods, the dependency ratios were higher than the district average of 99% and 86.4% for 1995-2002 and 2003-2010 respectively.

6.2 MAIN ECONOMIC CONTRIBUTORS

Gross Value Added is the total of all production or services from every sector within the period of a year. It is useful, however, to know the main economic drivers within an economy, namely, which sectors add the most value to the local economy. The following table displays the relative contributions of each industry to Zululand's Gross Value Added. In 2010, General Government was the greatest contributor to value added/economic output, accounting for 22.5% of district GVA. This is not unusual for developing and relatively impoverished local economies, as government attempts to act as a catalyst for future private investments. In addition to general government, manufacturing; and wholesale and retail trade are important sectors. The share of both of these sectors is growing. This is particularly encouraging to see in the manufacturing sector, as this sector is targeted at national government level as an engine of economic growth and employment creation

for the South African economy. Both agriculture and mining have experienced falling shares over the past 8 years. This is reflective of the larger national and provincial trend in these sectors which has seen a steady decline in their economic contribution.

Table 36: Sector/Industry share of GVA (2003-2010)

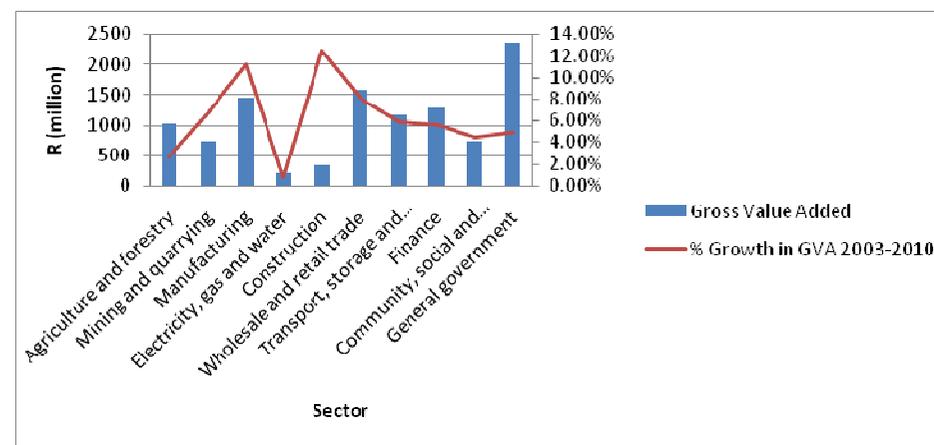
Sector	2003	2004	2005	2006	2007	2008	2009	2010	Ave share
Agriculture and forestry	12.4%	11.9%	10.9%	9.9%	9.3%	10.0%	9.5%	9.4%	10.4%
Mining and quarrying	7.0%	6.8%	5.7%	5.3%	5.4%	5.1%	7.1%	6.7%	6.1%
Manufacturing	9.5%	10.4%	11.4%	12.5%	13.3%	13.8%	13.1%	13.4%	12.2%
Electricity, gas and water	2.4%	2.4%	2.4%	2.3%	2.2%	1.9%	1.9%	1.9%	2.2%
Construction	2.0%	2.2%	2.5%	2.6%	2.9%	3.1%	3.1%	3.1%	2.7%
Wholesale and retail trade	12.8%	13.4%	14.1%	14.8%	15.0%	14.7%	14.5%	14.6%	14.2%
Transport and communication	11.0%	11.0%	11.2%	11.1%	11.1%	11.0%	10.7%	10.8%	11.0%
Finance	12.1%	11.8%	11.9%	12.1%	12.0%	12.1%	11.8%	11.8%	12.0%
Community, social and personal services	7.6%	7.4%	7.4%	7.3%	7.2%	7.0%	6.8%	6.7%	7.2%
General government	23.1%	22.6%	22.6%	22.1%	21.5%	21.3%	21.4%	21.7%	22.1%

Source: DEDT calculations based on Quantec data (2011)

Changes in the GVA share of each sector is perhaps more clearly seen in the growth rates for each sector over the past 8 years. As expected, considering the low GVA growth in 2010 for the district, all sectors recorded relatively low growth rates in 2010. General Government sustained the highest growth rate at 3%, further highlighting the fact that government spending is often not as sensitive to prevailing economic conditions as private sector spending is. In fact, Government spending often operates counter-cyclically, spending more in times of economic downturns, in order to stimulate the economy and retain employment. This trend, however, does not appear to be represented in the data, and even government spending has been constrained by the general post-recession slump in Zululand.

The following graph provides a graphic representation of the importance of each sector to district economic output, as well as showing the average growth of each sector. It is evident that the district’s largest contributors to GVA are not necessarily the fastest growth sectors. While General Government yields the highest in terms of Gross Value Added, it is one of the lower growth sectors. Construction, on the other hand, contributes relatively little in terms of GVA, but is a high growth sector, averaging 12.5% per annum, over an 8 year period, despite registering very little growth (1.1%) in 2010. This indicates that significant construction and development activities have taken place in Zululand, over the period under review. Unusually Electricity, Gas and Water, has grown very little, despite increased construction taking place. Wholesale and Retail Trade has reflected relatively strong growth over the period. This is in accordance with the expanding needs of a growing population and increasing levels of wealth (GVA per capita).

Table 37: Total GVA and GVA growth by economic sector



Source: DEDT calculations based on Quantec data (2011)

6.2.1 LOCAL ECONOMIC DEVELOPMENT

Local Economic Development is a unit in the Community Services Department. The fundamental focus of this directorate is promoting the Social and Economic Development of the municipality by implementing the Siyaphambili programme which is a strategic document for economic development in the municipality. The Local Economic Development Forum forms part of the overarching Institutional structure of the IDP Process. Apart from sharing information on future economic activities, the purpose of the forum is to jointly agree on a direction and guidance with all stakeholders and experts in the field of economic development in the district.

Sub-forums under the Local Economic Development Forum include Tourism and the recently established General Business and Agricultural forums.

Achievements of the LED Directorate include the following:

- Ukuzakha Nokuzenzela Program: This programme was established to assist the pro-poor communities within the District. ZDM is assisting the organized groups through ward Councilors. There are five tractors that are ploughing the fields for the communities and seeds are given.
- The following projects are under implementation with the partnership from COGTA:
 - Ulundi Tourism Hub
- Construction of New Office Block
- Restaurant
- Kitchen
- Toilet Block, and External works
- P700 Nodal Development
- Servicing twenty nine (29) commercial sites i.e. Sewer reticulation, water and electrification.
 - Laundromat Center
 - Mona Market Regularization
- Fencing the entire market

- Construction of informal traders facilities
- Informal traders facilities within Nongoma Town
-
- Ulundi Integrated Energy Center
- Sasol Filling Station
- Bakery
- Community Library
- Internet Café
- Hydroponics
-
- The following Business Plans were completed, ZDM is looking for potential investors/partners for their implementation:-
 - Cengeni Gate Community Tourism Project
 - Phongola Private Public Partnership
 - Nongoma Poultry Project
 - Louwsberg Agro-processing Initiative
 - Aloe processing facility and
 - District Nursery

6.2.2 SMME

One of the development objectives of the ZDM is to identify and develop economic opportunities for the rural population in the District in order to reduce poverty. The promotion of SMME development in the district is an action from this and this has also been identified in the LED Plan, i.e. development and support opportunities for business development have been identified.

SMME should be considered in relation to LED initiative in the district.

6.2.3 AGRICULTURE ANALYSIS

The Zululand Agricultural Sector Plan (prepared by PR Africa in 2006) provides the following summary in terms of the agricultural potential in the District.

Good agricultural potential exists in the western highlands and the eDumbe Municipality has very high potential as has most of the Abaqulusi municipality. High potential in the Phongola valley is as a result of irrigation opportunities that have been developed in this area. Current land cover reflects these potentials.

The communal areas of Ulundi and Nongoma are however not as fortunate and the agricultural potential is marginal to poor except for the high lying plateaus in each district. However, these make up a small portion of the total area. Valley bushveld of the two Umfolozi Rivers does provide considerable potential for the development of irrigation. Given the high temperatures in these valleys and the moderate winters, these areas are perfectly suited for the production of vegetables in the winter or off-season. Moreover, the deep low altitude river valleys of Pongolo and Mfolozi Rivers provide an excellent opportunity for intensive agricultural production where irrigation is available where sugar cane and out of season vegetables and sub-tropical fruits can be planted. Agricultural potential outside these valleys is limited to stock and game farming.¹

The said document tabled interventions that need to be employed in order to develop the agricultural sector and these include:

- Institutional structuring for agriculture
- Sustainable land reform
- Visible delivery in agriculture sector
- Improved market access for agricultural products

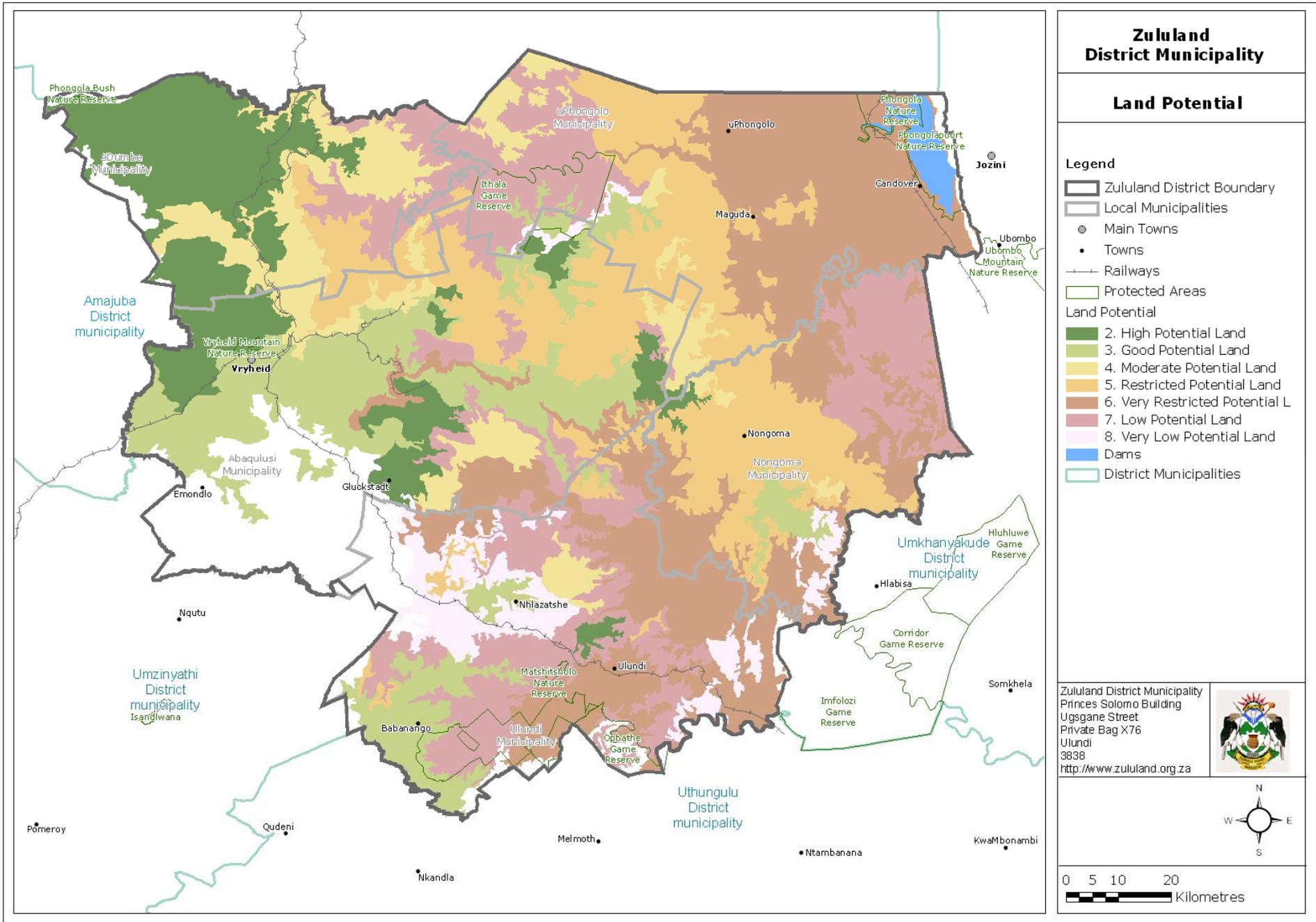
The agricultural sector is presently under strain throughout the country. Some of the key concerns to the sector are:

- Uncertainty that is caused by land reform
- Lack of imagination on what can be done with the land once the claimants have received the land and in some instances the land is not productively utilized
- Increasing input costs
- Rising interest rates

It has been argued that, in order for the agriculture sector to be developed, opportunities for tapping into the international markets need to be created and in the case of Zululand, these opportunities can be linked to the Dube Trade Port Developments. Where possible, major co-operatives will need to be involved and focus should be paid to various areas of opportunity in the District. The need for improved railway infrastructure in the District was also identified.

¹ Zululand Agriculture Sector Plan: (2006); pg. 17.

Map 21: Land Potential



6.2.4 TOURISM ANALYSIS

The District finalized its Tourism Sector Plan in 2006. The report paints the following picture as to the state of the sector in the District:

“While the Zululand District has a wealth of attractions that are authentic and different, the key obstacles to tourism growth lie in lack of awareness and information, lack of accessibility and the failure to package these assets in an attractive way that distinguishes from the other two districts forming the greater Zululand: uThungulu and Umkhanyakude. These two districts currently attract the overwhelming majority of tourists traveling north of the Tugela.

While there are a number of notable developments in the pipeline, individual land owners are battling to attract investment because of the reasons above. There is an urgent need to develop a high powered presentation and prospectus which will outline the actions planned by Zululand District Municipality to solve the infrastructural and information problems so that outside investors would be more confident to consider development in the district.”²

A number of hindrances to the growth of the tourism sector have been identified, notably:

- Lack of facilities
- Lack of private investment
- Poor road infrastructure
- Lack of coordinated effort in the development of the sector and poor marketing of facilities/destinations

The following critical steps in developing and promoting the sector in the District are noted:

- Need to market the District as a favoured destination

² Zululand Tourism Sector Plan: 2006, pg. 20

- Need for creation of authentic cultural experiences
- Need of opening up the Royal Palace to tourists
- Need to capacitate and create awareness among the previously disadvantaged communities
- Need to co-ordinate efforts of tourism development within the District
- Need to set standards for accreditation and grading to take place

In response to the above, the Siyaphambili Local Economic Development Strategy (2003) proposed some development strategies which include:

- The development and upgrading of game reserves, dams and nature reserves
- The establishment and marketing of arts and craft centres
- The need for tourism information tools, e.g. brochures, information offices and signage
- Development of festivals and events
- A travelers’ centre at Ulundi 19
- The development of the Emakhosini Valley
- The upgrade of roads

It has been noted that a number of developments are in the pipeline or being implemented. Most notably and related to tourism are the Pongolapoort Dam Proposals as well as the Emakhosini Ophathe Development Proposals. The significance of these projects are reflected in the district SDF as presented in section D of this report.

There are a number of very interesting tourism options that need to be pursued or warrant further investigation in the district. In addition, there are some critical projects needed to boost tourism development. These include:

- The uQweqwe area, approximately 25km from Babanango attracts substantial French interest every year understood to be the site where Prince Glenn Flanagan was captured. The site does not provide any basic facilities to tourists.

- Every year the Zulu Reed Dance is celebrated at Nsibaya/Enyokeni. There are a number of tourism development options that could be pursued with the annual celebration. Providing tourists with a better understanding of the Zulu Royal Family is only one of the opportunities presented.
- Development funding to the value of about R20 million has been allocated for the further development of the Emakhosini project, including a new entrance area as well as an amphitheatre. These still require implementation. The Emakhosini project at present does not provide accommodation facilities to visitors.
- The road between Nongoma and Pongola (R66) has to be tarred (only about 27 km) to open up the district to tourism. It is understood that more than 30 tour buses enter the district at Golela every day that do not spend time and money in the district.
- The linkage between Nongoma and Ulundi via the R66 (Tangami Spa, Swart Umfolozi and Vryheid) should be improved.
- Access road to Ithala Game Reserve, via the Klipwal Mine. The Klipwal Mine (the only Gold Mine in KZN) is only about 3 km from the northern boundary of the Ithala Reserve.
- The R69 (Roorante Road) between Magudu and the Pongolapoort dam is another very important link road.
- The P700 link to Empangeni/Richards Bay.
- An important link between Paulpietersburg, Wakkerstroom and Luneburg.
- About 20km of untarred road between Nongoma and Vryheid.

Apart from the road priorities listed above, a number of important themes have also been identified:

- Heart of the Zulu Kingdom and the Emakhosini project.
- Possible Zulu cultural museum at Ondini linked to the P700 development.
- Accommodation facilities in the ZDM in the traditional Zulu Cultural style.
- The Isibaya/Enyokeni annual reed dance.
- The monthly Mona craft and cattle sale (as well as traditional medicine) in Nongoma. This event lasts for 4 days but there is no market facility available.

- Proposals have already been prepared for the Ngome forest development.

6.2.5 BUSINESS SECTOR ANALYSIS

The Zululand District finalized its Business Sector Plan in May 2006. The document gives an overview of the different financial sectors and offers some suggestions on interventions that need to be made in order to improve the sector.

Commercial Sector: The commercial sector is well established in the towns of the District. However, it is not easily accessible for the majority of the rural population that currently account for 75% of the district population. A number of potential commercial markets exist. The lack of business support services will, however, limit entry of emerging entrepreneurs into these markets. Some of the opportunities that are presented in this sector include:

- Developing the commercial sector in the Rural Services Centres that are being developed in the District and to utilise the supporting infrastructure of these Rural Services Centres such as taxi ranks to tap into the markets that these draw.
- Commercial enterprises focused on tourism market through sale of locally produced goods, the restaurant industry, travel agencies/services and others.

Manufacturing Sector: Manufacturing activity within the District is low, at an estimated 11% contribution to the GGP for the area. The only agri-processing of note in the District is the Illovo sugar mill in the uPhongola Municipality. Despite the lack of large scale manufacturing in the District a number of interesting ventures have been, or are in the process of being, established. These activities generally relate to the raw materials and skills available in the District. The ventures include (1) arts and crafts production and marketing, (2) taxidermy, (3) mineral water and (4) charcoal manufacturing for export.

Some of the opportunities that are presented by this sector include:

- Opportunities generally promoted in the region in terms of agri-processing include traditional medicines, venison production for export, leather production as well as vegetable and fruit processing. The diversification of agricultural production in the District will lead to further potential for agri-processing.
- Opportunities exist for the diversification of the products of the district and the improvement of marketing systems that will open up new local, national and international markets. Other markets for arts and crafts include curio shops in national parks, curio shops in private game reserves, arts and craft centres in the District, as well as established marketing agents focusing on the national and international markets.
- Opportunities relating to timber product manufacturing should continue to be investigated. Timber construction relating to specifically the tourism industry may present opportunities for local contractors in future.
- Development of clothing and textile as well as building materials sector in the District.

Construction Sector: The sector has experienced growth in recent years. Some of the major recent and current construction activities in the District would include:

- The general residential market.
- Major infrastructure construction, e.g. the Paris Dam, major roads such as the P700 and other strategic linkages.
- The building of lodges and tourism facilities, e.g. lodges to be built at Emakhosini, in areas surrounding the Pongolapoort Dam and on private game farms.
- The provision of basic services to the previously disadvantaged urban and rural communities within the District municipality.
- The provision of low income housing to the urban and rural communities of the District.
- Building of municipal and public sector buildings, e.g. the offices of the District Municipality.

Transportation Sector: In the transport industry in the Zululand District Municipality distinction can be made between various sub-sectors, viz. road freight transport, public road transport, (dominated by the taxi industry) air transport and rail freight transport. In terms of the “informal” sector stakeholders also identify the so-called “bakkie” industry responsible for the transport of goods from distributors/wholesalers to a range of retailers located in the rural areas. Some of the opportunities that are presented in this sector include:

- Rural road maintenance and upgrading of rural roads which will continue to establish better linkages between settlements, rural nodes and municipal centres, thus increasing access to economic opportunities whilst increasing access to job opportunities.
- The proposed petrol filling station and information centre (Ulundi “19”) is viewed as a lead project impacting on both the transport and tourism sector in the District. This strategically located development will increase the attractiveness of this alternative route between Gauteng and the KwaZulu-Natal coast. It will also provide an opportunity for informing people passing through the area of the attractions which the area has to offer.
- The need for establishing a stop-over point for trucks in the Vryheid area has been identified in various planning studies.

Mining Sector: As it has been noted earlier in this document, mining activities in the district have decreased in the mid 1990’s mainly due to closure of mines as a result of open market in coal mining and agriculture. Opportunities still exist for small scale mining. These opportunities include:

- Mine rehabilitation
- Engineering support
- Equipment maintenance and support
- Preparing Environmental Management Plans

6.3 ECONOMIC: SWOT ANALYSIS

6.3.1 STRENGTHS/OPPORTUNITIES

- It is evident that the district's largest contributors to GVA are not necessarily the fastest growth sectors.
- A number of tourism developments are in the pipeline or being implemented, notably the Pongolapoort Dam Proposals as well as the Emakhosini Ophathe Development Proposals.
- The commercial sector is well established in the towns of the District.
- Opportunities generally promoted in the region in terms of agri-processing include traditional medicines, venison production for export, leather production as well as vegetable and fruit processing. The diversification of agricultural production in the District will lead to further potential for agri-processing.
- The diversification of the products of the district and the improvement of marketing systems that will open up new local, national and international markets.
- Opportunities relating to timber product manufacturing should continue to be investigated. Timber construction relating to specifically the tourism industry may present opportunities for local contractors in future.
- Opportunities exist for the development of clothing and textile as well as building materials sector in the District.
- Rural road maintenance and upgrading of rural roads which will continue to establish better linkages between settlements, rural nodes and municipal centres, thus increasing access to economic opportunities whilst increasing access to job opportunities.
- The proposed petrol filling station and information centre (Ulundi "19") is viewed as a lead project impacting on both the transport and tourism sector in the District. This strategically located development will increase the attractiveness of this alternative route between Gauteng and the KwaZulu-Natal coast. It will also provide an opportunity for informing people passing through the area of the attractions which the area has to offer.

- Opportunities still exist for small scale mining relating to mine rehabilitation as well as equipment maintenance and support.

6.3.2 THREATS/WEAKNESSES

- Zululand is ranked lower for economic output for the province than it is for total population indicating that the GVA per capita within Zululand is comparatively low in the provincial context.
- Abaqulusi and Ulundi municipalities contribute the majority of economic output for the district, between them contributing almost 63% being indicative of an economy that is not diversified throughout the district.
- Nongoma, which has the second highest population of all the Zululand municipalities, only contributes 13.6% to economic output.
- Only 31.1% of the working age population are engaged in actual employment or are actively seeking work.
- Unemployment in Zululand is unsustainably high and is having the negatively impact of discouraging people from spending the time and money to actively search for jobs.
- Employment has increased by just over 13,000 people between 2003 and 2009. This is insufficient in the light of population growth of over 106,000 in the same period.
- Zululand DM has very high dependency ratios. The dependency ratio can be interpreted as a crude measure of poverty.
- Uncertainty relating to the roll-out or implementation of the Land Reform programme has impacted negatively on agricultural development and growth.
- The commercial sector is not easily accessible for the majority of the rural population that currently account for 75% of the district population.
- Manufacturing activity within the District is low, at an estimated 11% contribution to the GGP for the area.

7. ENVIRONMENTAL ANALYSIS

7.1 ENVIRONMENTAL PRINCIPLES

The guiding principle for development in the ZDM is that it should be conducted in a sustainable manner. It is important to consider what the concept of sustainable development means for the ZDM and how this concept should be taken forward. The definition of sustainable development which has become the best known and most widely used is that of the Bruntland Report which defines sustainable development as:

‘Development which meets the needs of the present without compromising the ability of future generations to meet their own needs’ (World Commission on Environment and Development, 1987).

Hence, the following principles apply:

- Development must not degrade biophysical, built, social, economic resources or the system of governance on which it is based;
- Current actions should not cause irreversible damage to natural and other resources, as this may preclude future development options;
- In cases where there is uncertainty of the impacts of an activity on the environment, caution should be exercised in favour of the environment;
- The cost of pollution should be paid by the party causing the pollution;
- The needs of land use, environment and economic planning need to be integrated;
- A development framework and paradigm which promotes resource generation rather than resource degradation must be created;
- Immediate and long term actions need to be identified and planned for, to address urgent needs while still progressing towards longer term sustainable solutions;
- Resources must be utilized more effectively through each sector applying its resources to support other sectors rather than acting in an uncoordinated or competitive manner.

7.2 ENVIRONMENTAL VISION

The environmental vision for the Zululand District Municipality is therefore, in short, *“the conservation of biodiversity to enhance the well being of the people in Zululand”*.

In order to achieve this vision, priority actions for planning and management authorities are to:

- Protect and restore indigenous vegetation and terrestrial ecosystems and associated processes;
- Protect and restore freshwater ecosystems and associated processes;
- Protect and restore endemic and threatened species;
- Reduce waste generation and disposal and improve solid waste sites and management;
- Promote better water use and conservation;
- Control alien invasive species;
- Promote ecologically sustainable grazing, crop and forestry production systems;
- Ensure that all citizens have access to formal sanitation facilities, housing and medical advice and assistance where possible; and
- Minimize the impacts of climate change on biodiversity

7.3 ENVIRONMENTAL ASSESSMENT

The main Issues within the municipality were identified within the following categories: Housing, Soil, Water, Waste, Biodiversity and Tourism. The Fundamental Tools to be considered when contemplating each issue and acting on these issues are: Awareness, Regulation and Enforcement, Sustainability, and Delivery. Some of the Main Issues fall under more than one category, for example, “Wetland Degradation” might fall under Water, Soil and Biodiversity and even Tourism and Housing, as it is quite often housing

developments that damage wetlands, and loss of the wetland systems could affect tourism.

The environmental assessment informed the identification of key issues and priority actions.

7.4 ENVIRONMENTAL KEY ISSUES

Table 38: EMP/SEA Key Issues

Key Issue	Brief Description
Wetland Degradation	Wetland degradation is especially evident near urban or built up areas and occurs mainly as a result of inappropriate formal and informal development.
Soil Erosion	Soil erosion occurs throughout the region, but especially in the rural areas and in association with roads, pathways and subsistence agriculture.
Low Cost Housing Problems	Typical low cost housing related problems are subsidence, sewage problems and collapsing of houses.
Poor Sewage System Maintenance/Infrastructure	Instances of overflowing sewage treatment plants or emergency overflows as a result of failed, incorrectly installed, or vandalised pump houses.
Over Utilization of Soils	Over utilisation of soils in some areas (no crop rotation) results in reduced agricultural potential, and eventually soil erosion and subsidence.
Sand Winning	Illegal sand winning without permits.
Mining and Mine Rehabilitation	Several mines within the Zululand District Municipality have not been rehabilitated, and this is leading to severe environmental degradation, especially in terms of erosion, leaching, proliferation of alien invasive plants, collection of standing water and the associated diseases which result.

Key Issue	Brief Description
Alien Invasive Weeds	Proliferation of alien invasive plants throughout the region in rural and urban areas, in watercourses, wetlands, and especially around or on the edges of forests and afforested areas.
Family Planning and Poverty	While the national population growth rate is currently estimated at around 0%, with possible increases only resulting from influxes of immigrants, the impact of poor family planning on the families involved and their surrounding environment is considerable.
Personal Wealth and Environmental Sustainability	It must be noted that financially wealthy families, more often than not, have a tremendous impact on the environment in terms of their rates of consumption of numerous resources, and this issue should be addressed.
Management of Water Resources	Incorrect citing of high-impact developments (such as low cost housing with poor sewage, wastewater and storm water management) in close proximity to wetlands, drainage lines, rivers and dams is resulting in water pollution. There is a need to protect water resources as a means to prevent waterborne diseases and ensure adequate supply of quality water for household consumption.
Threat from Forestry to the Natural Environment	The municipality is located in an area well suited to commercial forestry, but a forestry threat to the natural environment is evident – especially in terms of encouraging unchecked alien invasive plant growth within or on the borders of afforested areas, and in the utilisation of high priority ecological / biodiversity and tourism areas for forestry.
Veld Fires	The veld is currently considerably over-burnt and this is resulting in soil erosion, damage to soil conditions and nutrients and the proliferation of:

Key Issue	Brief Description
	alien invasive plants; undesirable, less-palatable grass species; and woody species, which in turn create impenetrable thickets and further soil erosion.
Requirement for a Municipal Open Space System	A clearly defined municipal open space system (for the entire municipal area, but especially in the 'urban' areas of Vryheid, Ulundi, Paulpietersburg, Louwsburg, and Pongola, and later in the more rural areas (but still built up) of eDumbe, Hlobane and Emondlo etc.) is required for the protection of wetlands, associated rivers, streams and catchments and areas of natural beauty.
Amenity and Shelter Planting	Amenity and shelter planting (in all built up areas) is required to improve the residential and commercial centres and the general 'feel' or amenity of the area. This will improve the quality of life for all residents, as well as enhancing the natural environment, and could even attract tourists and business.
Solid Waste Management	Address waste disposal issues - solid waste management is a critical issue for the municipality. Almost all the landfill sites within Zululand need upgrading in order to comply with the legal requirements related to waste management.
Environmental Accounting	Environmental issues and impacts are often not addressed in developments and projects. Environmental accounting needs to become more integrated into the development planning process and must be considered in the very initial phases of planning any new development or upgrade, prior to any costly mistakes being made.
High Tourism Potential	The region has a high tourism potential, which has not been properly exploited, environmentally or otherwise. Numerous sites of tourism significance

Key Issue	Brief Description
	are being ignored or insufficiently marketed.
Illegal Muthi Harvesting	Excessive / illegal muthi harvesting – damages indigenous populations of plants and animals, without restocking (See Ngome, Swart Umfolozi, State Forest).
Unsustainable Agricultural Practices/Management	Loss of agricultural land due to development pressure, in which hard surfaced developments use up agricultural land is a serious issue, as this land is usually permanently lost to agriculture once covered over. Only land with low agricultural potential should be utilised for these types of developments.
Loss of Indigenous Vegetation Communities	Loss of indigenous vegetation communities and habitats due to: <ul style="list-style-type: none"> ▪ Afforestation ▪ Poor farming practices ▪ Alien plant invasion ▪ Poor catchment management ▪ Informal housing
Conservation of Biodiversity	Active protection of valuable environmental resources is regarded as critical (wetlands, indigenous forests, grasslands, and bushveld). Community involvement in viable tourism enterprises, which conserve the environment while providing employment and /or income, should be fostered and encouraged.
Rehabilitation of Damages and Degraded Areas	Rehabilitation of damaged and degraded areas does not ordinarily occur, as there was not previously any legislation to enforce it, (this has now changed), and the municipality could begin to enforce this legislation.
Management of Cemeteries	Upgrade and institute proper management of cemeteries (according to National Legislation guidelines).

Key Issue	Brief Description
Management of Biodiversity outside Protected Areas	Critical pieces of land (as identified by Ezemvelo KZN Wildlife) are required to sustain the natural resource base outside Protected Areas; these should be managed under appropriate protection measures.
Community Benefits from the Environment	Communities who value biodiversity should be able to share in the benefits of natural resources and community-based tourism initiatives. Environmental management plans should incorporate social issues in order to get 'buy in' from affected communities, including decision makers.

7.5 PRIORITY ACTIONS

● Vegetation and Terrestrial Ecosystems

There will be a balance between the need for development and environmental needs.

● Freshwater Resources

There will be pollution free water for all. There will be clean water systems, achieved by proper management of the river catchments and appropriate treatment of sewerage.

● Wetlands and Watercourses

No developments will be permitted in or on flood plains, watercourses or wetlands.

● Endemic and Threatened Species

Harvesting of indigenous species for firewood and muthi will be monitored and controlled, and will be sustainable.

● Waste Generation, Disposal and Management

To cater for waste disposal, both domestic and industrial, there will be properly sited and managed dumpsites and recycle bins. Implement a waste management system, which contributes to sustainable development and a measurable improvement in the quality of life.

● Formal Sanitation Facilities

Efforts shall be made to provide all residents of Zululand will be provided with formal sanitation facilities (whether as VIP Latrines, or as water borne sewage, or any of the new low water use designs on the market) by 2010.

● Water Use and Conservation

There will be region-wide acknowledgement of the scarcity of water in South Africa, and respect for his valuable resource from all, demonstrated through individual protection and conservation of the water resource.

● Invasive Species

There will be region-wide knowledge of alien invasive species and acknowledgement of the negative effects that these plants have on the environment. Compliance with the Conservation of Agricultural Resources Act, No. 43 of 1983.

● Sustainable Grazing and Cropping (Farming) and Aforestation

There will be region-wide knowledge and implementation of sustainable agricultural practices, to include cropping practices, plantation / exotic forest management, grazing methods, stocking density, burning regimes etc.

● Climate Change and Biodiversity

Industries will be located in the best possible areas for particular emissions, and the emissions will be strictly curtailed and monitored according to the accepted protocols.

● Tourism

There should be sustainable ‘exploitation’ / use of the high tourism potential of the region.

- Mining and Sand Winning

Erosion - Reduce, remedy and ultimately prevent soil erosion in the region.

- Housing

Housing, especially low cost and informal housing will be appropriately located in all instances, and residents will not be permitted to occupy areas which are environmentally or socially unsuitable or unsustainable.

- Health and Social Welfare

A concerted and honest effort will be made to tackle the problems of HIV / Aids and other communicable disease prevention.

- Planning

Planning will adopt a holistic approach and include adequate planning for people with disabilities and environmental constraints. Inappropriately located developments will not be permitted. Fertile agricultural land will be set aside for farming purposes only, and will not be lost due to development pressure.

- General: Governance

Promote co-operative Governance and capacity building.

8. INFRASTRUCTURE ANALYSIS

Large disparities are apparent in terms of the nature and structure of the built environment with the most significant disparity between the level of services and development in the rural and urban areas of the District. The towns have comparatively good levels of infrastructure and services.

With regard to service provision the following should be noted:

- The ZDM has an indigent policy in place.
- Free Basic Services (FBS) in respect of water is provided to all by the ZDM, i.e. 6KL free per household per month.
- The ZDM is not an electricity service provider.

8.1 WATER AND SANITATION PROVISION

The Zululand District Municipality has conducted a Section 78 assessment for the water and sanitation sector in terms of the requirements of the Municipal Systems Act (32 of 2000). The aim of this assessment being to develop options to enable the District Council to make balanced decisions as to which is the most appropriate services provider option to pursue.

The following tables demonstrate the current, and percentage, water and sanitation backlogs:

Table 39: Water and Sanitation Backlogs

Water	None or Inadequate	Rudimentary	Communal standpipes	Yard connections	TOTALS
		<RDP	RDP	>RDP	
AbaQulusi LM	0	0	0	20,350	20,350
eDumbe LM	0	0	0	6,162	6,162
Nongoma LM	0	0	0	957	957
Ulundi LM	0	0	0	6,980	6,980
uPhongolo LM	0	0	0	4,135	4,135
Total (urban)	0	0	0	38,584	38,584
AbaQulusi LM	5,647	3,200	264	6,608	15,719
eDumbe LM	2,521	1,191	1,104	4,033	8,849
Nongoma LM	11,792	9,606	9,107	2,594	33,099
Ulundi LM	5,487	6,808	7,810	8,224	28,329
uPhongolo LM	3,123	1,216	1,247	12,377	17,963
Total (rural)	28,570	22,021	19,532	33,836	103,959
Total (households)	28,570	22,021	19,532	72,420	142,543

Sanitation	None or Inadequate	VIP	Septic tank	Waterborne	TOTALS
		RDP	RDP	>RDP	
AbaQulusi LM	0	0	0	20,350	20,350
eDumbe LM	0	0	595	5,567	6,162
Nongoma LM	0	0	0	957	957
Ulundi LM	0	0	0	6,980	6,980
uPhongolo LM	0	0	0	4,135	4,135
Total (urban)	0	0	595	37,989	38,584
AbaQulusi LM	6,714	8,968	37	0	15,719
eDumbe LM	765	7,940	144	0	8,849
Nongoma LM	21,808	11,291	0	0	33,099
Ulundi LM	17,395	10,892	42	0	28,329
uPhongolo LM	5,953	11,684	326	0	17,963
Total (rural)	52,635	50,775	549	0	103,959
Total (households)	52,635	50,775	1,144	37,989	142,543

Source: WSDP 2012

Table 40: Percentage Backlogs

WATER	TOTAL HOUSEHOLDS	BACKLOGS	% BACKLOGS	% OF TOTAL BACKLOGS
AbaQulusi LM	36,069	8,847	24.53%	17.49%
eDumbe LM	15,011	3,712	24.73%	7.34%
Nongoma LM	34,056	21,398	62.83%	42.30%
Ulundi LM	35,309	12,295	34.82%	24.30%
uPhongolo LM	22,098	4,339	19.64%	8.58%
Total	142,543	50,591	35.49%	100.00%
SANITATION	TOTAL HOUSEHOLDS	BACKLOGS	% BACKLOGS	% OF TOTAL BACKLOGS
AbaQulusi LM	36,069	6,714	18.61%	12.76%
eDumbe LM	15,011	765	5.10%	1.45%
Nongoma LM	34,056	21,808	64.04%	41.43%
Ulundi LM	35,309	17,395	49.27%	33.05%
uPhongolo LM	22,098	5,953	26.94%	11.31%
Total	142,543	52,635	36.93%	100.00%

Source: WSDP 2012

Details of the planned **water** and **sanitation** related investment into the district is provided hereunder. As such, a summary table is provided indicating the extent of the capital requirements for water and sanitation provision in the ZDM:

Table 41: Capital Requirements for Water from 2012/13 to 2016/17

WATER	Capital requirements	2012/13	2013/14	2014/15	2015/2016	2016/2017	>2017
Regional bulk	R 1,744,257,962	R 261,833,460	R 252,013,825	R 122,947,376	R 141,194,771	R 105,133,211	R 861,135,319
Secondary bulk	R 1,088,374,123	R 122,088,842	R 95,981,010	R 57,291,804	R 44,491,516	R 26,385,475	R 742,135,476
Reticulation	R 130,622,400	R 14,061,980	R 13,741,600	R 5,743,680	R 3,829,120	R 2,613,220	R 90,632,800
Total capital (new)	R 2,963,254,485	R 397,984,282	R 361,736,435	R 185,982,860	R 189,515,407	R 134,131,906	R 1,693,903,595
Regional bulk	TBA	TBA	TBA	TBA	TBA	TBA	TBA
Secondary bulk	TBA	TBA	TBA	TBA	TBA	TBA	TBA
Reticulation	TBA	TBA	TBA	TBA	TBA	TBA	TBA
Total capital (refurbishment)	TBA	TBA	TBA	TBA	TBA	TBA	TBA
Total capital	R 2,963,254,485	R 397,984,282	R 361,736,435	R 185,982,860	R 189,515,407	R 134,131,906	R 1,693,903,595

Source: WSDP 2012

Table 42: Capital Requirements for Sanitation from 2012/13 to 2016/17

SANITATION	Capital requirements	2012/13	2013/14	2014/15	2015/2016	2016/2017	>2017
Bulk infrastructure	R -	R -	R -	R -	R -	R -	R -
Reticulation	R -	R -	R -	R -	R -	R -	R -
VIP toilets	R 315,820,000	59,668,000	61,884,000	59,190,000	59,402,000	60,750,000	14,926,000
Total capital (new)	R 315,820,000	R 59,668,000	R 61,884,000	R 59,190,000	R 59,402,000	R 60,750,000	R 14,926,000
Bulk infrastructure	TBA	TBA	TBA	TBA	TBA	TBA	TBA
Reticulation	TBA	TBA	TBA	TBA	TBA	TBA	TBA
VIP toilets	TBA	TBA	TBA	TBA	TBA	TBA	TBA
Total capital (refurbishment)	TBA	TBA	TBA	TBA	TBA	TBA	TBA
Total capital	R 315,820,000	R 59,668,000	R 61,884,000	R 59,190,000	R 59,402,000	R 60,750,000	R 14,926,000

Source: WSDP 2012

8.1.1 APPROACH TO WATER AND SANITATION PROVISION

Water provision is a key development issue in the Zululand District Municipality. The Zululand District Municipality, in terms of the Water Services Act³, is the Water Services Authority in respect of its area of jurisdiction. A Water Services Plan⁴ has been developed and is reviewed on an annual basis. The RDP standard for water supply (and the ultimate goal for water provision) is 25l/person/day within 200m walking distance. However, a rudimentary water supply process is currently underway to expedite the supply of water to all by ensuring that every settlement has access to a minimum of 5 l/person/day within 800 m of the home.

Zululand District Municipality has adopted a Free Basic Water Services policy, as part of the WSDP, as follows:

- All households will receive six kilolitres of potable water free of charge for domestic use.
- Industrial, commercial and institutional consumers do not qualify for free basic services.
- All water supplied from standpipes and rudimentary systems will be free.

The following table defines this policy further:

Table 43: Water Services Policy

Service Level Number	Level of Water Service	Definition	Free Basic Water Policy
DW1	Full pressure conventional house connection	Direct unrestricted full pressure (24m) connection to the reticulation system, metered and billed	Stepped block tariff (with first block at zero charge free to all households)
DW2	Yard tank (RDP standard)	Restricted (to 200l per day) individual erf connection	All water at no charge

³ Act 108 of 1997 Section II G

⁴ Water Services Act Section 12.

Service Level Number	Level of Water Service	Definition	Free Basic Water Policy
		with tank in yard	charge
DW3	Communal street tap (RDP standard)	Unrestricted full pressure standpipe not further than 200m from dwellings (shared by a number of consumers)	All water at no charge
DW4	Rudimentary system	Formalised supply: <ul style="list-style-type: none"> ● Borehole equipped with hand pump ● Protected spring ● Communal standpipe further than 200m from dwellings 	All water at no charge

Source: WSDP 2012

Table 44: Free Basic Sanitation Policy

Service Level Number	Level of Sanitation Service	Definition	Free Basic Sanitation Policy
DS1	Water borne sewage	Unrestricted connection to municipal sewerage system	Included in free basic water allocation
DS2	Septic tank or similar facility	On-site disposal (self treatment)	No charge
DS3	Conservancy tank	Localized sewage temporary storage facility	No charge to selected households in specific areas as determined by the municipality, aligned to free basic water policy for service level DW4
DS4	Ventilated improved pit	Dry pit with sufficient capacity on-site disposal	No charge

Service Level Number	Level of Sanitation Service	Definition	Free Basic Sanitation Policy
	(VIP) latrine	based on set standards	

Source: WSDP 2012

The developmental approach and motivation for the various levels of service offered by the municipality is explained in the policy. This free basic services policy is based on the same approach and is also subject to affordability and economic viability, so the municipality may review the policy based on practical realities with regard to consumption and financial viability of metering and billing from time to time.

The municipality is aware that consumption in rural areas is steadily increasing. To measure consumption in unmetered zones, the municipality uses the water balance to determine consumption. Although the free basic water policy is implemented and no metering is intended in these zones immediately, the financial viability threshold (based on consumption and costs) will determine whether and when metering and/or billing may be introduced.

The Zululand District Water Services Plan gives a clear indication as to where and when water infrastructure will be provided in the District. It provides a clear indication of what amount of water capital infrastructure will be provided when and at what cost and during which year.

There are two main programmes that are utilized for the implementation of water and sanitation services. The Department of Water Affairs and Forestry provides funding for specifically water and sanitation infrastructure development. The Municipal Infrastructural Grant funds various infrastructure projects, not only limited to water and sanitation, but will exclusively be utilized by the ZDM for water and sanitation infrastructure provision during the next 5 years.

There are 10 regional water schemes that have been developed to roll-out water supply to the whole district. The schemes are listed hereunder and shown in the following image:

- Coronation
- Hlahlindlela
- Khambi
- Mandlakazi
- Nkonjeni
- Simdlangentsha East
- Simdlangentsha Central
- Simdlangentsha West
- Usuthu
- Candover

Each regional scheme footprint as a sustainable water source from where infrastructure is progressively being rolled out to all households within the supply area. The supply footprints have been identified such that water can be provided to all households within the area in a sustainable manner and at the lowest possible cost (R/kl).

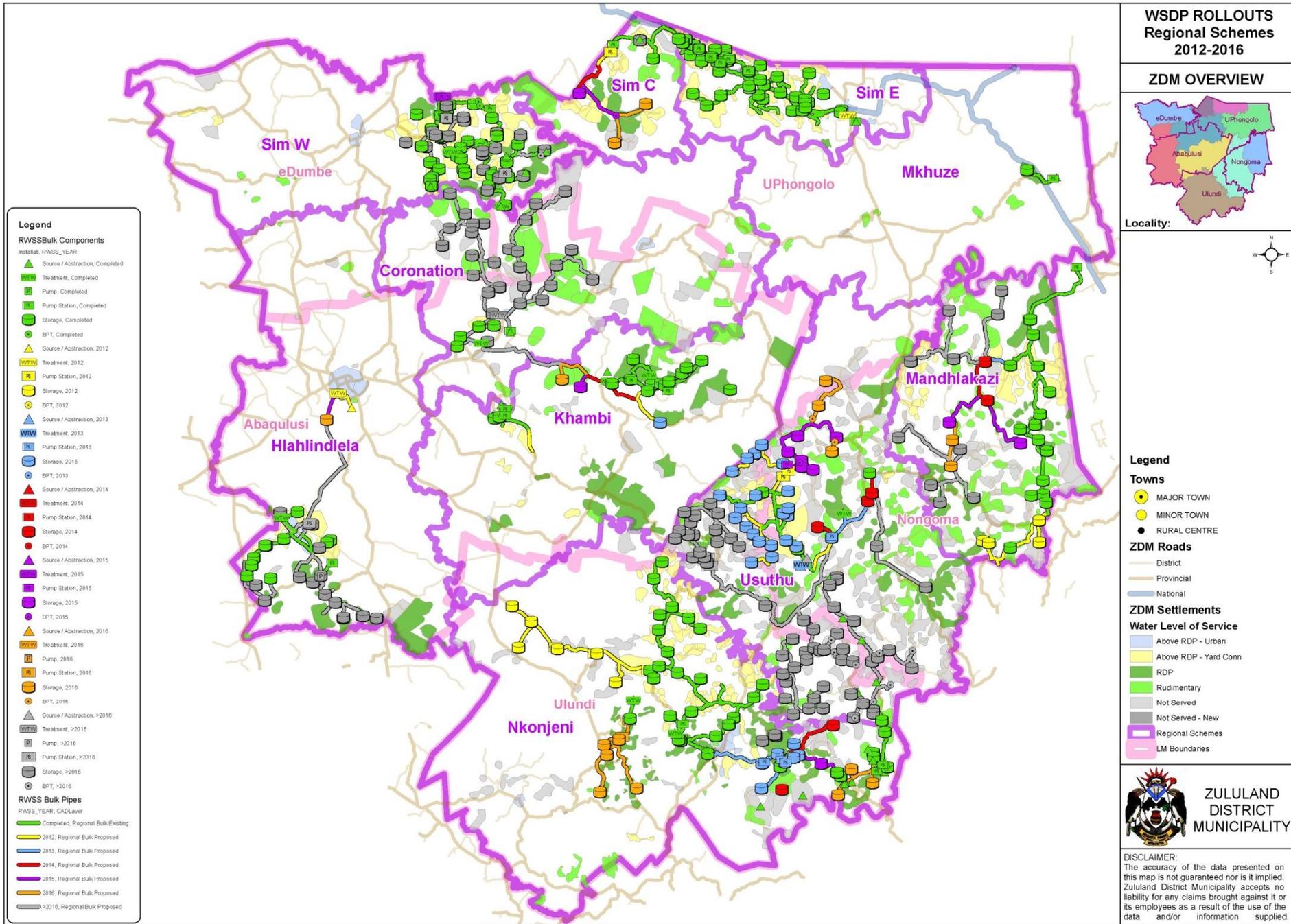
Sanitation in the rural areas is being provided in the form of dry-pit VIP toilets and the strategy is to implement these simultaneously with the roll-out of water services. This ensures a more effective impact with health and hygiene awareness training.

The following should be noted:

- Rudimentary water supply provides 5l per capita per day within a distance of 800m.
- RDP water supply roll-out (Regional Water Supply). Provides for 25l per capita per day within a distance of 200m.
- Rural Sanitation to the RDP standard of 1 dry-pit VIP per household.

The following series of maps illustrate the roll-out of the Regional Schemes, Sanitation and Rudimentary Water over the next five years.

Map 22: Regional Schemes Rollout 2012 - 2016



Map 23: Rural Sanitation Rollout 2012-2016

