

According to the National Freshwater Ecosystem Priority Areas (FEPA) Database (2011), the wetland is classified as a FEPA system, with a rank of 2 indicating that the majority of its area is within a sub-quaternary catchment that has sightings or breeding areas for threatened *Bugeranus carunculatus* (Wattle Crane), *Balearica regulorum* (Grey Crowned Crane) and *Anthropoides paradiseus* (Blue Crane).

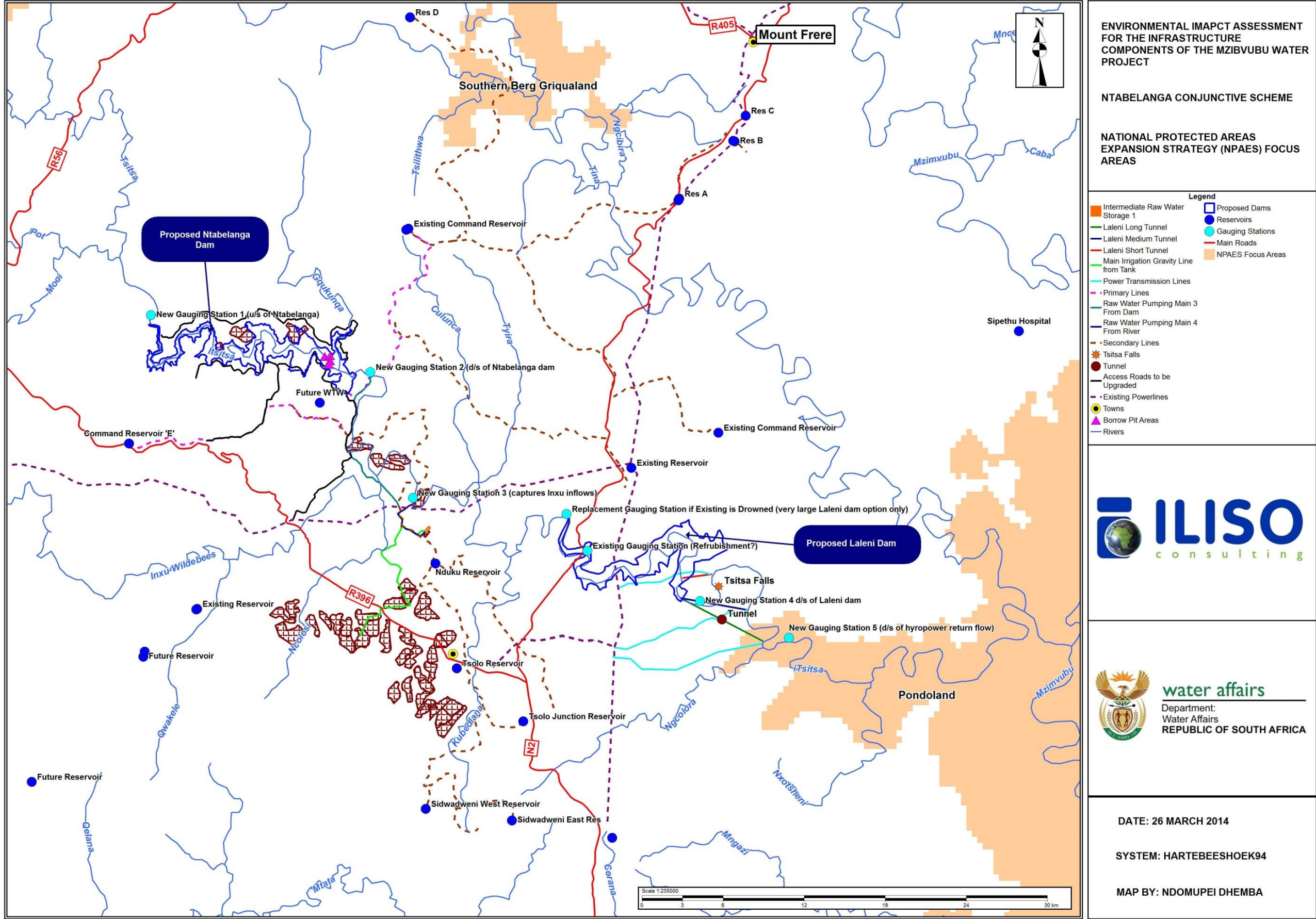
There are no formal or informal protected areas within the project area. However, the National Protected Areas Expansion Strategy (NPAES) identified two Focus Areas in the north and east of the project area: Pondoland and Southern Berg Griqualand. A gauging station, and possibly a section of the Laleni Dam tunnel and the power line fall within the Pondoland Focus Area, while a section of the secondary distribution lines in the north of the study area falls within the Southern Berg Griqualand Focus Area (**Figure 31**).

7.5 HERITAGE RESOURCES

Resources may be tangible, such as buildings and archaeological artefacts, or intangible, such as landscapes and living heritage. Their significance is based upon their aesthetic, architectural, historical, scientific, social, spiritual, linguistic, economic or technological values; their representivity of a particular time period; their rarity; and their sphere of influence.

Past Heritage Impact Assessments (HIAs) in the area have typically focussed on archaeological sites (and sometimes traditional burial places) to the exclusion of other heritage resources. Literature and database reviews indicate that the following heritage resource types are likely to be present in the study area:

- Places associated with oral traditions or living heritage
Communal areas in southern Africa typically include places (such as mountains, river pools and forests) that are associated with cultural tradition; oral history; performance; ritual; popular memory; traditional skills and techniques; indigenous knowledge systems; and the holistic approach to nature, society and social relationships. Such places may be known to and utilised by entire communities, or only certain individuals, such as traditional healers. They may be visited regularly or only periodically, and their heritage significance could vary from low to high along a local to a national scale.
- Landscapes and natural features
The project area is largely undeveloped and rural with nucleated dispersed settlements (*amalali*) and associated infrastructure within a formalised subsistence agriculture landscape. *Amalali* are grouped as clusters of small family-sized homesteads located across the undulating interfluvies between steeply incised drainage basins. Visual impacts will result from the construction and operational phases of the proposed project and will require assessment by a visual specialist.



- Traditional burial places

Numerous traditional burial places are known to occur within and adjacent to the project area. Such burials comprise one or more ancestral graves, typically located within or close to homestead precincts, rather than in formal cemeteries managed by a local authority. Graves usually comprise stone-packed mounds, with or without a headstone, although older graves may be less readily identifiable due to the deflation of the mound and scattering of the stone covering.

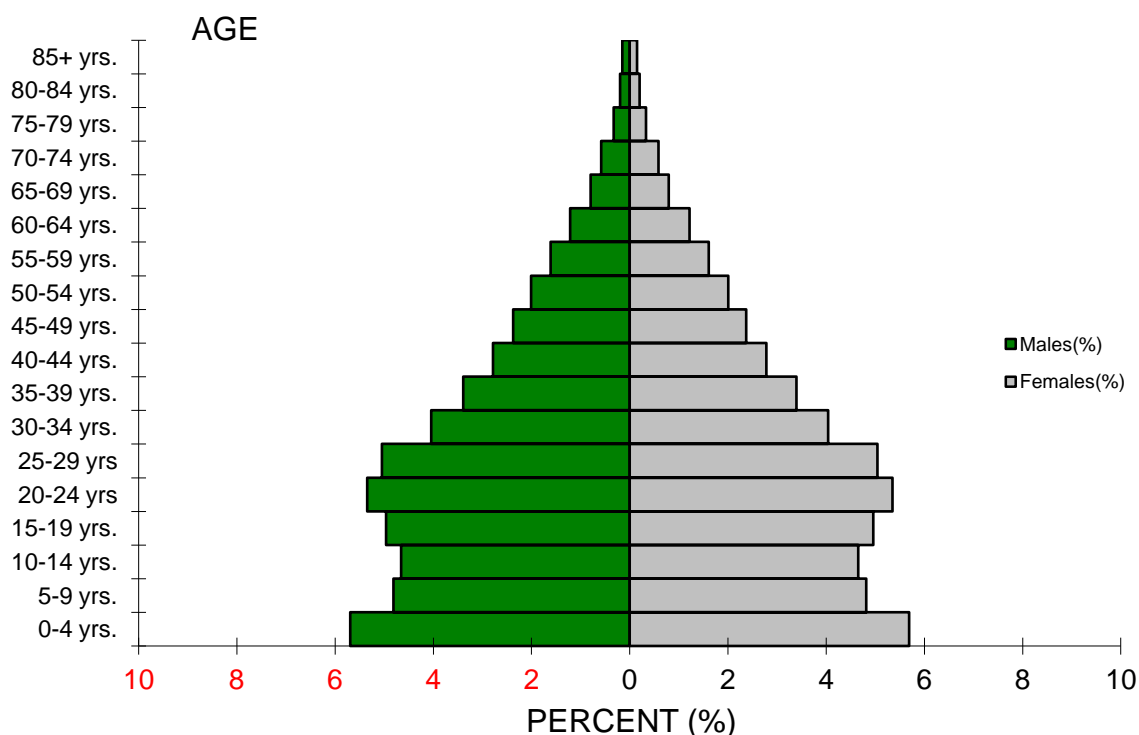
- Archaeological sites

Due to low survey coverage very few archaeological sites have been recorded within the immediate project area. However, Late Stone Age and Rock Art sites, Early and Later Iron Age and historical sites have been recorded and investigated within the wider Mzimvubu Basin (Prins and Granger, 1993).

7.6 SOCIO-ECONOMICS OF THE EASTERN CAPE PROVINCE

7.6.1 Demography

The Eastern Cape Province covers an area of 168,966 km² making it the second largest province by area thus covering 13.8% of South Africa. This is only surpassed by the Northern Cape covering 372,889 km² accounting for 30.5% of the land area of the country. The total population of the province stood at 6,562,053 in 2011 (Statistics South Africa, 2012) and was estimated at 6,620,100 in June, 2013 (Statistics South Africa, 2013, p. 3). Consequently, the province is ranked third in respect of population size and has a population density of 39 people/km² making it the sixth densely populated province in South Africa. In respect of age structure, 33.0% of the population are under 15 years of age, while 60.2% are between 15 and 64 years old with 6.7% being over the age of 65 years. The population pyramid of the province is illustrated in **Figure 32**.



Data source: (Statistics South Africa, 2012)

Figure 32: Population pyramid Eastern Cape Province

In the Eastern Cape Province, 86.3% of the population are black African, 8.3% are coloured, 4.7% are white and 0.4% are Indian or Asian people. IsiXhosa is spoken by 78.8% of the population, followed by Afrikaans (10.6%), English (5.6%), and Sesotho (2.5%).

The 2011 Census indicated that there were 1,687,385 households in the province with an average household size of 3.9. Of these households, 49.6% were female headed, 63.2% lived in formal dwellings and 59.6% either owned or were paying off their dwelling.

The 2011 Census also indicated that 40.4% of households in the province had flush toilets connected to the sewerage system, while 41% had their refuse removed on a weekly basis. Piped water was delivered to 32.8% of households and 75% of Eastern Cape households used electricity as a means of energy for lighting.

The sex ratio across the study area indicates a higher number of females compared to males.

7.6.2 Unemployment

In the 4th quarter of 2013 the official unemployment rate in the province was 27.8%, the second highest rate of unemployment in the country (after the Free State). However the expanded unemployment rate (which includes disillusioned work

seekers) in the 4th quarter of 2013 was 43.3%, the highest expanded rate of unemployment in the country. The LMs in the study area have unemployment rates of between 40 and 50% (*The Local Government Handbook*, 2014).

7.6.3 Poverty

Although there have been some improvements across the province, the study area remains one of the poorest parts of the country, characterised by high poverty and out-migration resulting in sex ratio imbalances, a high proportion of female headed households and a low or even negative population growth rate. At large the population lacks basic amenities and relies heavily on subsistence farming which is not highly successful.

The proportion of households owning household goods across the area is lower than that of the province.

The study area is characterised by a high dependency ratio which indicates the burden of supporting children under 15 years and people over 65 years placed on the working population aged 15–64 years.

7.6.4 Health

In addition to HIV AIDS, a further issue concerning health in the province relates to cancer. It is indicated that “[t]he rate of the cancer in the Eastern Cape is six times the national average” (Stassen, 2011) and new research is linking this with the processing of home-grown maize and the silica from the grid stones that may cause throat irritations (Sewram, 2011).

7.6.5 Education

The situation regarding schooling in the area improved somewhat between 2001 and 2011. Notwithstanding this, all the district and local municipalities within the study area (with the exception of uMzimvubu LM) are above the provincial level (10.5%) in terms of the percentage of the population with no education.

7.7 MUNICIPAL DESCRIPTION

The project impacts the three district municipalities of Joe Gqabi, O. R. Tambo and Alfred Nzo. Of these districts Joe Gqabi covers the greatest land area and has the lowest population density across the region at 14 people/km² while O. R. Tambo has the largest population and the highest population density at 110 people/km². With regard to population group, black African people are the dominant group across all districts at over 90%. Xhosa is the dominant language spoken in the area ranging between 70.5 and 94.2 percent. This data is represented below in **Table 12**.

Table 12: Demographic data district level

	Joe Gqabi DC14	O. R. Tambo DC15	Alfred Nzo DC 44
Geographical area	25,663 km ²	12,096 km ²	10,731 km ²
Population	349,768	1,364,943	801,344
Density	14/km ²	110/km ²	75/km ²
Population group			
Black African	93.8%	99.0%	99.1%
Coloured	3.5%	0.5%	0.4%
Indian/Asian	0.2%	0.2%	0.1%
White	2.4%	0.2%	0.2%
Language			
Xhosa	70.5%	94.2%	84.6%
Sotho	20.2%	0.27%	8.8%
English	1.4%	2.7%	2.3%
Afrikaans	5.9%	0.17%	0.84%
Zulu	0.25%	0.49%	1.2%
Other	1.8%	3.1%	3.1%

Data source: (Statistics South Africa, 2012)

The difference between the populations and households of the districts as they occurred in 2001 and 2011 are compared **Figure 33**.

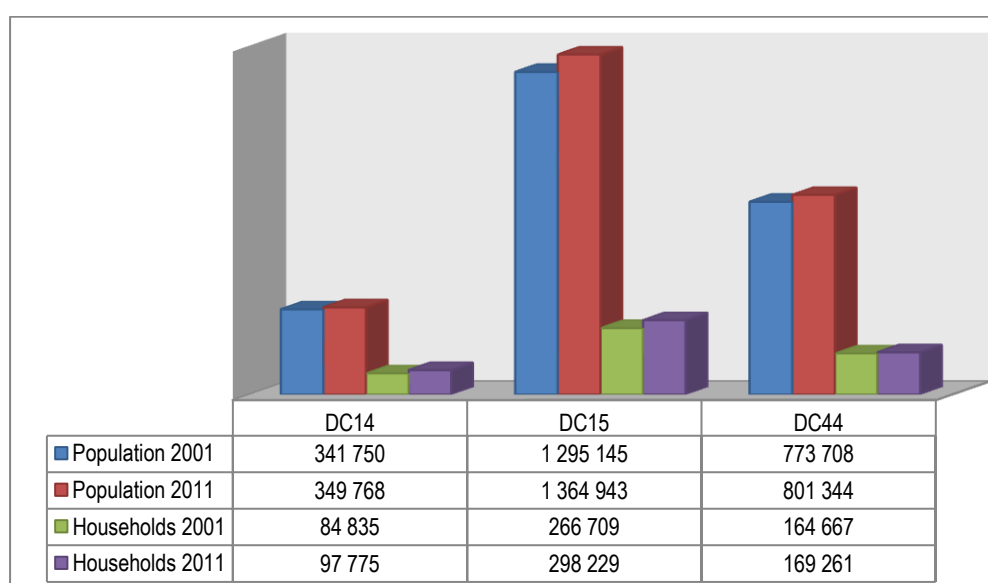


Figure 33: Population and households 2001 and 2011 across districts

Data source: (Statistics South Africa, 2012)

7.7.1 Health

Concerning the HIV prevalence rate amongst antenatal women in 2011 as assessed across the affected districts, Joe Gqabi had the highest prevalence rate at 29.3%. This is followed by the Alfred Nzo District Municipality at 28.9% and O. R. Tambo at 28.4%. Across both metropolitan and district municipalities in the Eastern Cape Province, Buffalo City had the highest prevalence rate at 34.1% while Cacadu had the lowest at 25.8%. This is illustrated in **Figure 34**.

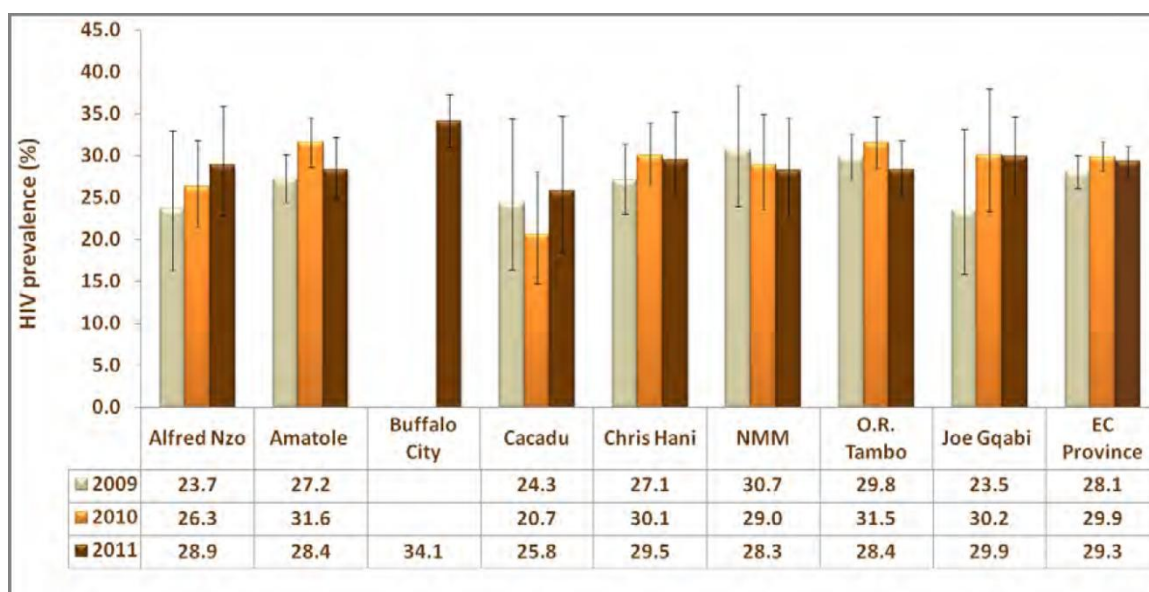


Figure 34: HIV prevalence trends: Antenatal women by district 2009 – 2011

Source: (National Department of Health, 2012, p. 23)

7.7.2 Local Municipalities

At the local municipal level the project impacts the following 4 local municipalities, Elundini, Mhlontlo, Umzimvubu and Ntabankulu. Of these municipalities Elundini covers the greatest geographical area at 5,065 km² and Ntabankulu the smallest area at 1,385 km². With a population of 123,976 people Ntabankulu the highest population density at 90 people/km². Umzimvubu has the highest population with 191,620 people living within the municipal area. At over 98% Black African people are the biggest population group across all municipalities and Xhosa is the dominant language spoken. This data is represented in **Table 13**.

Table 13: Demographic data local municipalities

	Elundini EC141	Mhlontlo EC156	Umzimvubu EC442	Ntabankulu EC444
Geographical area	5,065 km ²	2,826 km ²	2,577 km ²	1,385 km ²
Population	138,141	188,226	191,620	123,976
Density	27/km ²	67/km ²	74/km ²	90/km ²
Population group				
Black African	98.1%	99.4%	99.4%	99.4%
Coloured	1.0%	0.2%	0.3%	0.4%
Indian/Asian	0.1%	0.1%	0.1%	0.1%
White	0.7%	0.2%	0.1%	0.1%
Language				
Xhosa	70.1%	94.9%	93.1%	95.2%
Sotho	24.8%			
English	1.6%	2.3%	2.6%	1.4%
Afrikaans	1.7%			
Zulu				
Other	1.8%	2.8%	4.3%	3.4%

Data source: (Statistics South Africa, 2012)

The difference between the populations and households of the local municipalities as they occurred in 2001 and 2011 are compared in **Figure 35**.

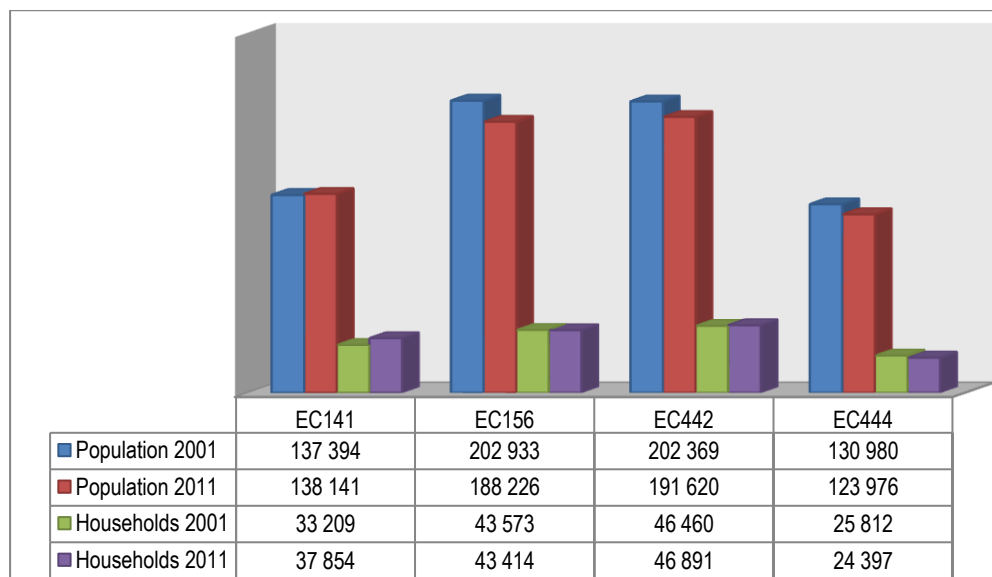


Figure 35: Population and households 2001 and 2011 across municipalities

Data source: (Statistics South Africa, 2012)

7.7.3 Dependency Ratio

The study area is characterised by a high dependency ratio which indicates the burden of supporting children under 15 years and people over 65 years placed on the working population aged 15–64 years. Although there has been some improvement across all areas between 2001 and 2011 the burden still remains heavy with it being greatest in Ntabankulu at 91.7 and lowest being across the Joe Gqabi District Municipality at 71.4. This data is illustrated in **Figure 36**.

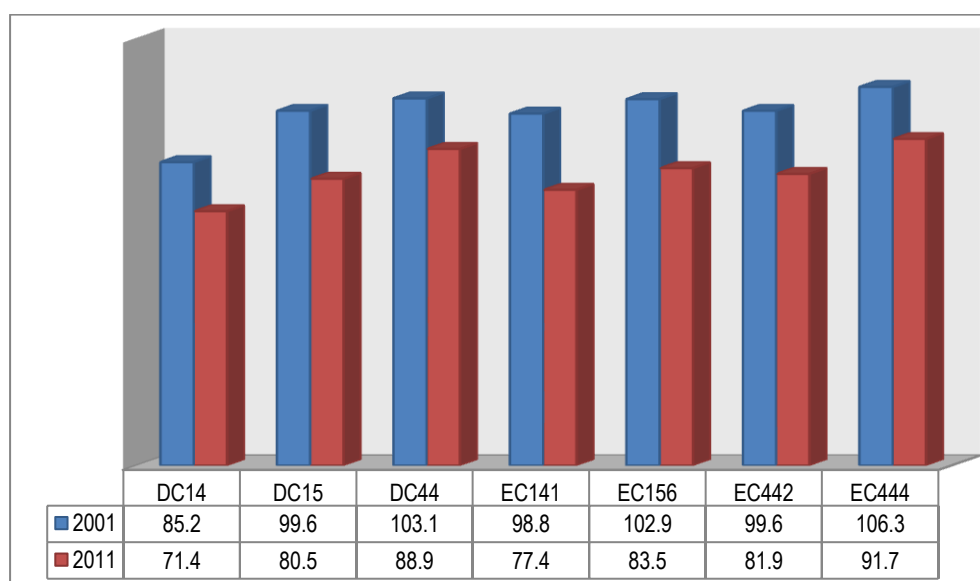


Figure 36: Dependence ratio district and local municipalities

Data source: (Statistics South Africa, 2012)

7.7.4 Gender

The sex ratio across all areas indicates a higher number of females compared to males with Ntabankulu having the highest proportion of females to males and Elundini the lowest at 90.10% as illustrated in **Figure 37**.

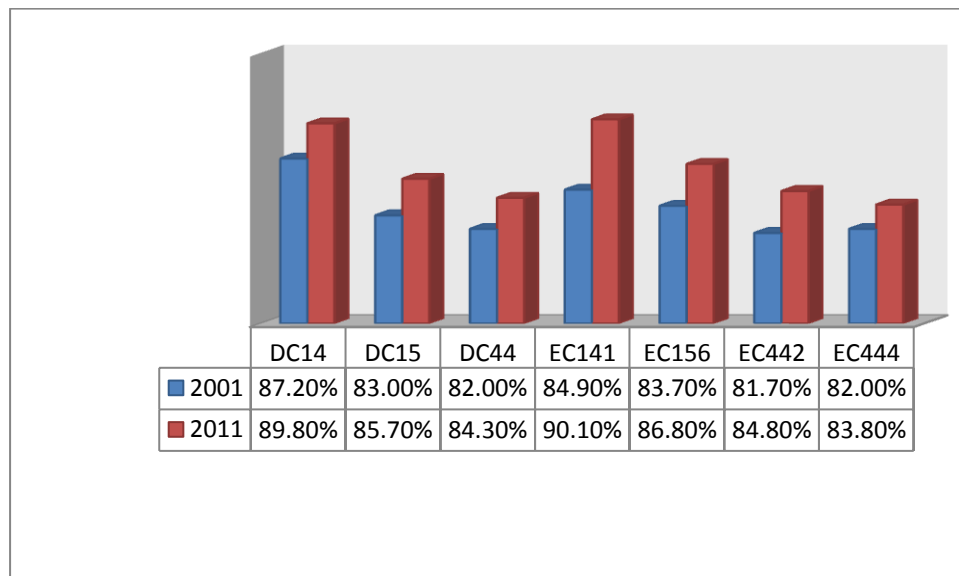


Figure 37: Sex ratio district and local municipalities

Data source: (Statistics South Africa, 2012)

Apart from the Joe Gqabi district, where 49.3% of the households are female headed, all other areas have a higher percentage of female than male headed households with the greatest percentage of female headed households at 60.4% being found in Ntabankulu. Most formal dwellings are found in the Joe Gqabi district with the lowest percentage of formal dwellings at 24.3% being found in Ntabankulu. At 64.4% the local municipality of Ntabankulu has the highest percentage of housing being owned or being paid off with the lowest percentage, 53.9%, being found in Mhlontlo.

7.7.5 Population Growth

Between 2001 and 2011 Mhlontlo, Umzimzubu and Ntabankulu all showed a negative population growth with the O. R. Tambo district having the highest population growth at 0.52%. This is illustrated in below in **Figure 38**.

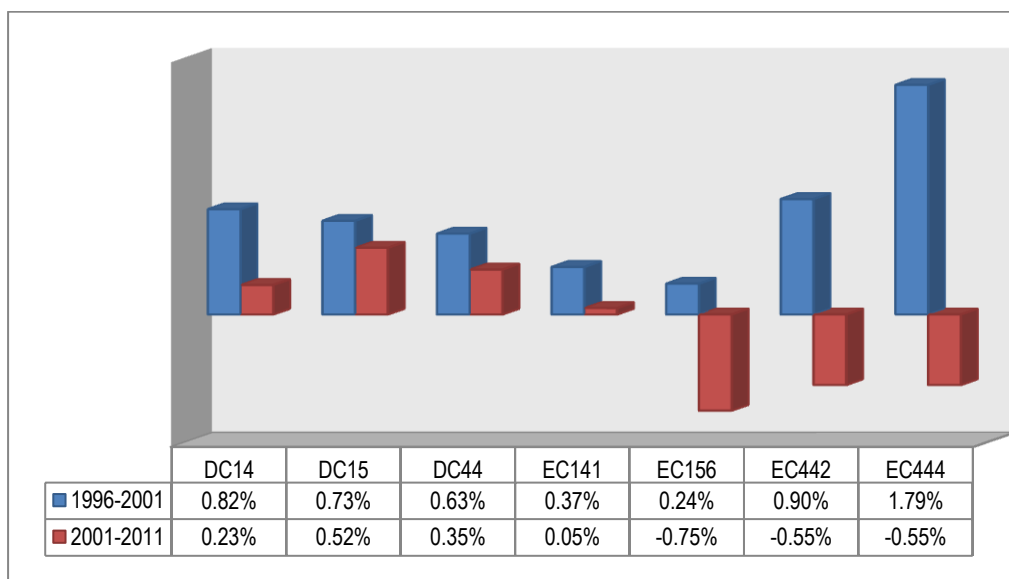


Figure 38: Population growth % p.a.

Data source: (Statistics South Africa, 2012)

7.7.6 Employment

In respect of the labour market, at 50.6% the highest level of official unemployment is found in Ntabankulu with the lowest level being found in the Joe Gqabi district at 35.4%. Amongst the youth between 15 and 34 years of age Ntabankulu also has the highest rate of unemployment at 60.7% with Joe Gqabi again having the lowest at 43.3% as illustrate below in **Figure 39**.

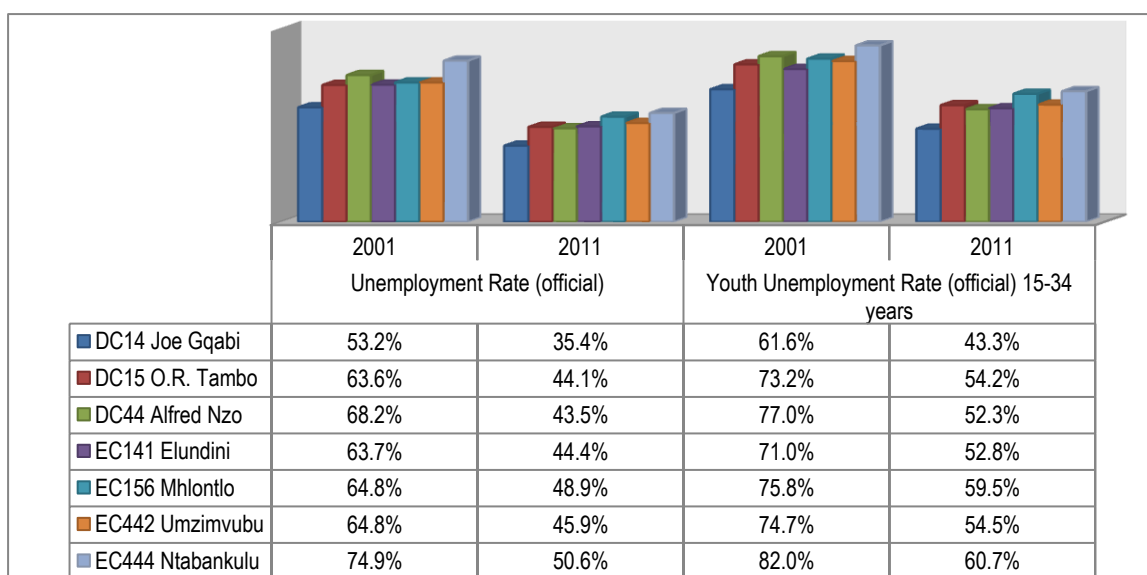


Figure 39: Official unemployment and youth unemployment rate

Data source: (Statistics South Africa, 2012)

7.7.7 Education

The situation regarding schooling in the area improved somewhat between 2001 and 2011. Notwithstanding this, however, there is still a need to improve the situation

further with areas such as Ntabankulu and the O. R. Tambo district still having over 17% of the population over 20 years of age having no schooling. At a provincial level 10.5% of the population aged over 20 years have no schooling, 19.8% have a matric and 8.7% have a higher education. This places all the district and local municipalities below the provincial level of education with only Umzimvubu, at 8%, having a lower percentage of the population with no education. Education across the area is illustrated below in **Figure 40**.

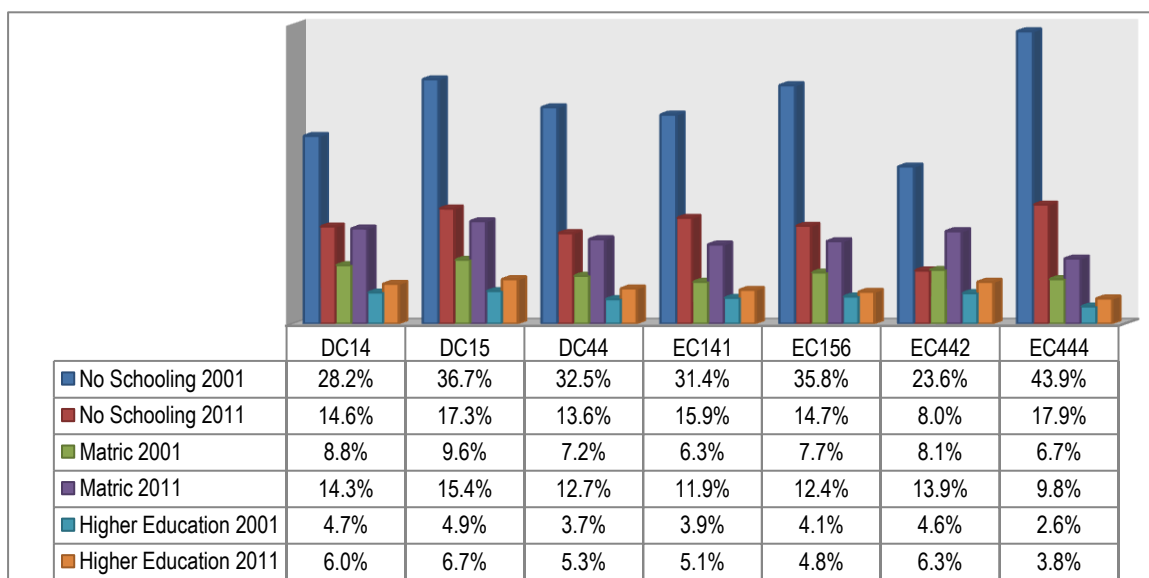


Figure 40: Education over 20 years of age

Data source: (Statistics South Africa, 2012)

7.7.8 Household size

The average size of households in the area range between 3.6 in Elundini and 5.1 in Ntabankulu and is illustrated in **Figure 41**.

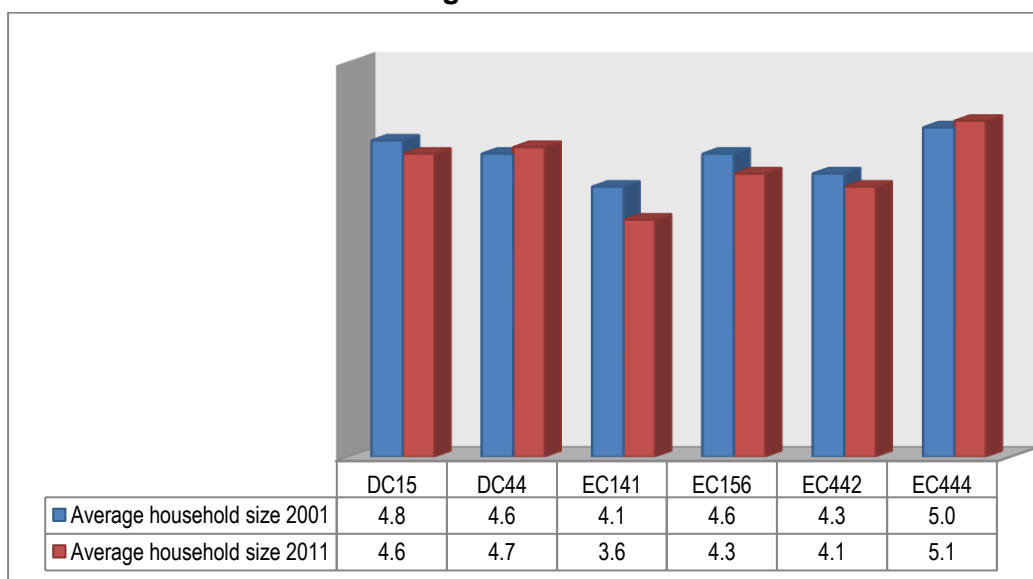


Figure 41: Average household size

Data source: (Statistics South Africa, 2012)

7.7.9 Services

In respect of household services, apart from electricity as a source of lighting, where it is surpassed by both the Mhlontlo local and O. R. Tambo district municipalities, on a general basis the Joe Gqabi District Municipality has the highest level of service delivery. Ntabankulu has the lowest level of service delivery across all indicators. The indicators of household services are illustrated below in **Figure 42**.

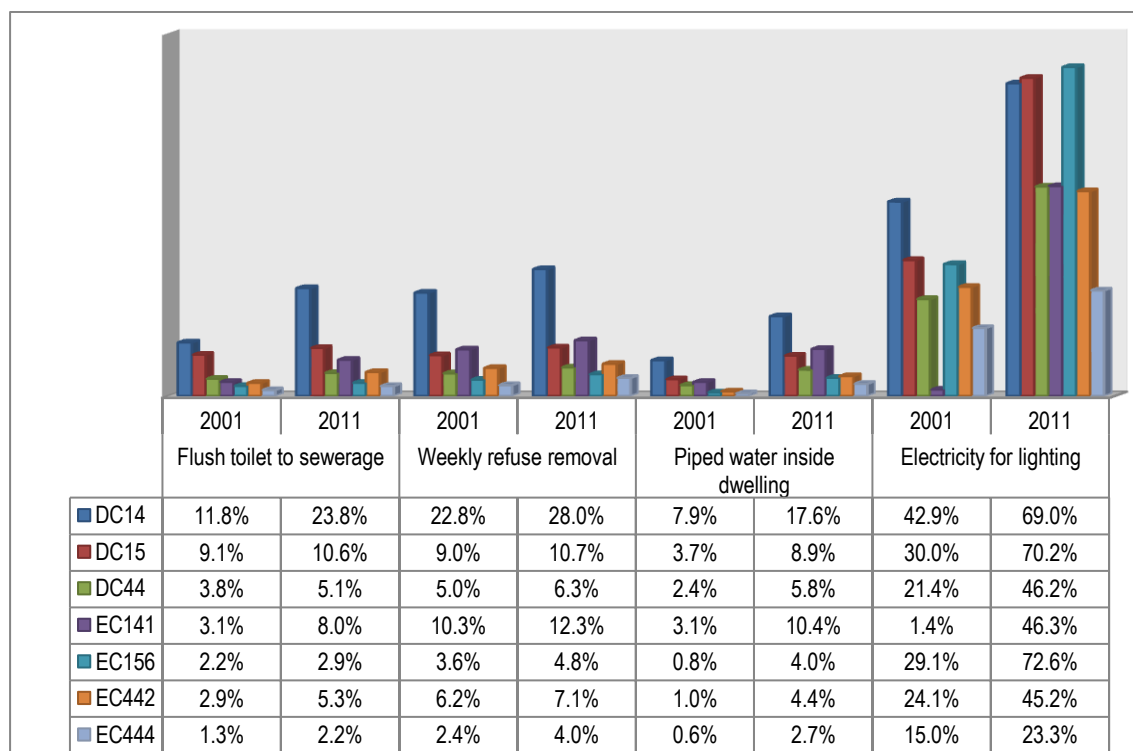


Figure 42: Household services

Data source: (Statistics South Africa, 2012)

7.7.10 Household Goods

The proportion of households owning household goods across the area is lower than that of the province. On a general basis, households in the Joe Gqabi municipality own a greater proportion of household goods than those across the other municipalities with households in Ntabankulu owning the lowest proportion of household goods. The distribution of household goods across the study area is illustrated in **Figure 43**.

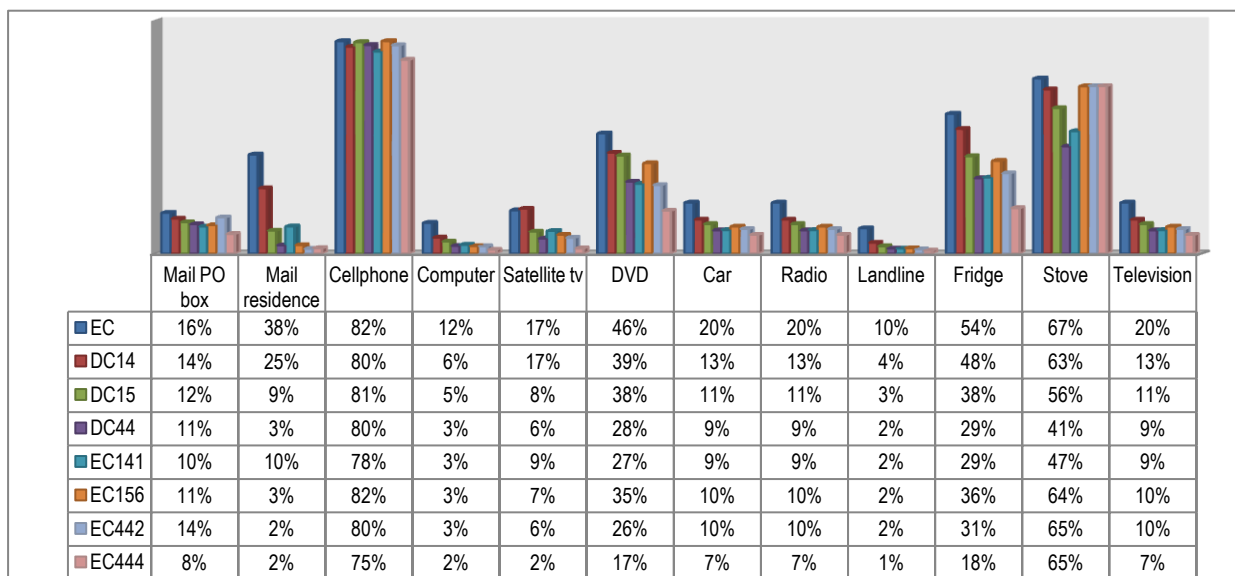


Figure 43: Distribution of household goods

Data source: (Statistics South Africa, 2012)

Although there have been some improvements across the region the area remains one of the poorest parts of the country, characterised by high poverty and out-migration resulting in sex ratio imbalances, a high proportion of female headed households and a low population growth rate. At large the population lacks basic amenities and relies heavily on subsistence farming which is not highly successful.

7.8 LAND USE AND TENURE

The study area is rural, characterised by low densities and generally low levels of economic activity. The main land uses are pastoral stock and subsistence crop farming (**Figure 44**).



Figure 44: Households within the project area

The proposed project is located on state-owned land which is administered by traditional authorities. The land is therefore currently subject to communal land tenure arrangements. Under this system the State owns the land, but it is managed and allocated to community members by the Traditional Leaders.

Agricultural practices

About 37.7% of households in the Eastern Cape engaged in agricultural activities over the period June 2011- June 2012. Of these households 24.8% were involved with poultry production, 20.5% with livestock production, 19 % with grains and food crops, 19.9% with fruit and vegetables and only 0.2% with industrial crops (Statistics South Africa, 2012, pp. 2-3). Of the households in the province involved with different crop planting activities, 23.8% were in backyard gardens, 0.2% in communal gardens and 0.1% in school gardens. The percentage of households classified as food access adequate was 72% while 19.4% were food access inadequate and 8.8% food access severely inadequate. Although in this respect there are no statistics specific to the study area, it is unlikely that the situation in the study area will be significantly different.

Indeed, an aerial inspection of the immediate area shows that much less crop production is currently practised than in the past, it is estimated that about 20% of the previously contoured lands are currently still cultivated. Before 1994, communal farmer support structures were very active in the region and most of the families produced enough maize (a staple diet food) for their own consumption. This is not happening currently and the area is a maize import area.

The *Agricultural assessment and irrigation water use* study (AsgiSA EC, 2009) concluded that: "Substantial potential exists in the study area for the development of new agricultural enterprises under rain-fed conditions and for the improvement of existing agricultural practices and productivity. Whilst opportunity exists for small irrigation scheme developments, there are several limiting factors with respect to large irrigation schemes An initial focus on the upgrading of rain-fed cultivation and livestock farming can bring great gains at moderate investment".

Commercial irrigation farming is not the traditional farming method in the area and extensive public consultation will be required to obtain buy in from traditional leaders and communities and facilitate the transformation of this sector.