

**FARM DWELLER HOUSING IN THE CAPE WINELANDS:
IMPLICATIONS OF REGIONAL MIGRATION AND DEMOGRAPHIC
DYNAMICS**

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DECLARATION

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ABSTRACT

The housing of farm workers has been an issue in South Africa since the emancipation of slave labour in 1838. This study specifically focuses on farm dweller housing within the Cape Winelands District Municipality (CWDM), which is essential for ensuring sustainability and future growth within the agricultural sector as well as the entire region as a whole. The aim of the study was to determine the migration and demographic dynamics of farm dwellers and its implications for housing provision strategies and policies in the CWDM.

Quantitative empirical analysis was conducted using secondary data, Census 2011, of the CWDM, one of the most intensive agricultural regions in the country. The understanding of broader regional demographic and migration dynamics and the socio-economic profile of farm dwellers is particularly important to fully comprehend the complexities of farm dwellers and their housing needs. Agrarian transformation, including casualisation, mechanisation and global economic competition resulted in the reorganisation of the spatial settlement patterns of farm workers and dwellers.

This study clearly indicated that farm dweller migrants proportionally have higher education, income and employment levels than non-migrants. Living conditions of farm dwellers in the CWDM are contextualised against other types of settlements and a number of farm dweller ‘migrant hotspots’ were identified through the application of spatial statistical techniques. The implications of the findings for future housing provision of farm dwellers are also outlined.

Keywords and phrases: Farm worker housing, Cape Winelands, Migration, Housing, Planning, Demographics

OPSOMMING

Die behuising van plaaswerkers is 'n kwessie in Suid-Afrika sedert die bevryding van slawe-arbeid in 1838. Hierdie studie fokus spesifiek op plaasbewoner behuising binne die Kaapse Wynland Distriksmunisipaliteit (KWDM), wat noodsaaklik is vir die volhoubaarheid en toekomstige groei in die landbousektor, sowel as die streek in geheel. Die doel van die studie was om migrasie en demografiese dinamika van plaasbewoners te bepaal sowel as die implikasies daarvan vir behuisingsstrategieë en beleide in die KWDM.

Kwantitatiewe empiriese ontleding is uitgevoer met behulp van sekondêre data, Sensus 2011, van die KWDM, een van die mees intensiewe landbou streke in die land. 'n Beter begrip van die breër plaaslike demografiese en migrasie dinamika en die sosio-ekonomiese profiel van plaasbewoners is veral belangrik om ten volle die kompleksiteit van plaasbewoners en hul behoefte aan behuising te begryp. Landbou transformasie, insluitend geleentheidswerk, meganisasie en globale ekonomiese mededinging het gelei tot die herorganisasie van die ruimtelike vestigingspatrone van plaaswerkers en bewoners.

Hierdie studie het duidelik geïllustreer dat plaasbewoner migrante proporsioneel hoër vlakke van onderwys, inkomste en indiensneming het as nie-migrante. Lewensomstandighede van plaasbewoners in die KWDM is gekontekstualiseer teen ander vorme van nedersettings en 'n aantal plaasbewoner 'migrante magnete' is geïdentifiseer deur die toepassing van ruimtelike statistiese tegnieke. Die implikasies van die bevindinge vir toekomstige behuisingsvoorsiening vir plaasbewoners is ook uiteengesit.

Trefwoorde en frases: Plaaswerker behuising, Kaapse Wynland, Migrasie, Behuising, Beplanning, Demografie

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ABBREVIATIONS AND ACRONYMS

Cape Winelands District Municipality	(CWDM)	2
City of Cape Town	(CoCT)	19
Extension of Security of Tenure Act	(ESTA)	6
Geographically Weighted Regression	(GWR)	40
Integrated Development Plan	(IDP)	1
Local municipality	(LM)	11
Nelson Mandela Bay	(NMB).....	19
Small Area Layer	(SAL).....	11
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SECTION 1: INTRODUCTION

1. INTRODUCTION

1.1 Background

The housing of farm workers has been an issue in South Africa since the emancipation of slave labour in 1838. According to Section 26 of South Africa's constitution the opportunity to receive housing and basic services is considered a constitutional right. Additionally, housing satisfaction and access to adequate services are regarded as essential for social cohesion in society and increased life satisfaction and act as the catalyst for a sustainable, productive economy (Marans 2002). The provision of basic housing and access to basic services is a prerequisite for all local municipalities, and therefore is incorporated in their Integrated Development Plans (IDPs) in adherence to the Housing Act, 1997 section 9(1)(f) (Kotsoane 2013). The Act states that all necessary measures should be taken by municipalities to ensure that housing is part of development plans within the area of jurisdiction (DoH 1997). However, this objective is proving to be elusive for many municipalities and there has been a steady decline in service delivery on farms since the closure of the Rural Foundation in 1996 (Ewert & Hamman 1999; Atkinson 2007). A range of national housing programmes exist in the form of financial, incremental, social and rental, as well as rural housing categories. However, none of these specifically consider farm workers *per se* (Kotsoane 2013). The National Housing Code's *rural interventions* and the *Farm Residents Housing Assistance Programme* aim to provide adequate housing to farm workers and farm dwellers through subsidy mechanisms (DHS 2009). These programs set forth criteria incompatible with the group it wants to target. 'Farm workers' are people who work on farms, but do not necessarily live on a farm, whereas 'farm dwellers' live on farms, but do not necessarily work on a farm. Collectively, all rural dwellers should be integrated and form part of municipal IDPs.

1.2 Problem statement

Farm workers are considered as one of the poorest and most vulnerable groups of people in South Africa (Hall 2003). Of the 2 879 637 agricultural households recorded in South Africa, 20% have no access to piped water, 9% have no access to any type of toilet, while 22% of households have no access to electricity and must make use of alternative energy sources for lighting and cooking (Lehohla 2011; Stats SA 2012).

Farm workers traditionally resided on farms, but the increasing insecurity of labour and global economic restructuring have led to labour cutbacks in the agricultural sector. As a result, many previously permanent farm workers are laid off and have to leave farms with no alternative housing options provided (Hall 2003). In addition to labour cuts, there has also been an increased propensity to employ seasonal and temporary farm workers, who are not considered as farm dwellers as they do not

physically reside on the farms, although they are still classified as farm workers. Conversely, some farm dwellers do not work on farms and can therefore not be classified as farm workers. This dualistic categorisation makes it difficult to keep track of all farm workers as they have become footloose in the deregulated agricultural economy, no longer fitting into traditional worker typologies (Hall 2003; Atkinson 2007). Limited data is available on farm workers, as there are only limited records of workers not residing on farms. For the purpose of this study, the focus is on farm dwellers. This group thus includes both farm workers living on the farms and farm dwellers residing on farms but not necessarily employed on the farms where they reside.

The understanding of broader regional demographic and migration dynamics and the social and cultural characteristics of farm dwellers is particularly important to fully comprehend the complexities of farm dwellers and their housing needs. These broader factors impact on farm dweller' housing provisions, as resources are mobilised towards regions with the greatest potential for growth and social needs. Human settlement strategies aimed at accommodating farm workers living on or off commercial farms need to incorporate realistic and sensible spatial planning. Changing labour processes have also resulted in workers having to adopt a diverse and complex set of livelihood strategies and depend on multiple income streams, including the reliance on governmental grants (Brown 1991; PLAAS 2011). This article aims to contribute to knowledge and understanding of farm dweller dynamics and its implications for housing strategies.

1.3 Aim and objectives

The overarching aim of the research is to determine the migration and demographic dynamics of farm dwellers and its implications for housing provision strategies and policies in the Cape Winelands District Municipality (CWDM).

The aim will be pursued by reaching the following objectives:

- Objective 1: To assess agrarian transformation and its implications for farm worker/dweller housing
- Objective 2: To analyse regional farm worker settlement and migration patterns in the CWDM between 2001 and 2011, determining its implications for housing provision policies and strategies
- Objective 3: To assess current conditions regarding access to housing, service delivery on and off farms and tenure security for farm dwellers
- Objective 4: To analyse the demographic characteristics of farm dwellers and determine the implications for housing provision policies and strategies

SECTION 2: LITERATURE REVIEW

2. LITERATURE REVIEW

2.1 International agrarian transformation and farm worker housing arrangements

Waged agricultural workers encompass 40% of the world's agricultural labour force, or some 450 million workers, constituting a large segment of impoverished groups in society (Hurst, Termine & Karl 2005). These workers have insecure tenure arrangements on the land where they live and work. The number of small farmers is declining, while waged agricultural workers are increasing in absolute and relative terms in most regions of the world. These workers can also be classified and divided into groups based on their labour arrangements, namely permanent¹-, seasonal²-, casual³- and temporary⁴ workers. They can also be defined as migrant- or indigenous workers based on their country of usual residence. The casualisation of the agricultural workforce has resulted in more than 70% of agricultural labourers being casually employed with minimal job security (ILO 2002).

The transformation of agriculture during the process of globalisation and deregulated trade heightened the level of competition. Commercial farmers responded to the increased international competition and standards by lowering production costs, inevitably leading to agricultural workers being paid less for their work. Technological advances and mechanisation have also led to the demand for higher skilled labourers as well as labour cutbacks (Hurst, Termine & Karl 2005).

Labour demands fluctuate greatly throughout a year, where for example more hours of physical labour are required during harvesting seasons than during off-peak periods. Migrant workers are a particularly vulnerable group and often face challenges of inadequate access to housing, services and financial resources. The agricultural economies of countries such as Ghana, Germany, the United States, and Argentina are heavily reliant on migrant workers (ILO 2003). Poor working conditions combined with poor compensation discourage indigenous workers, but attract more migrants having little or no alternative employment opportunities in their host country (ILO 2003; Stalker 2000).

Housing and living conditions of waged agricultural workers are a challenge globally. Workers' living quarters are often associated with overcrowding and little or no access to sanitation services and drinking water (ILO 2003). International case studies (in Kenya) of farm worker housing reveal conditions where private companies are legally bound to provide housing for farm workers. However,

¹ 'Permanent workers' work for an employer and are paid directly by that employer

² 'Seasonal workers' are usually sourced to do a specific job during a specific period, usually the harvesting season

³ 'Casuals' are employed on a short term basis, but only works part of a working week

⁴ 'Temporary workers' are not permanently employed, but only work for a specific length of time or until a specific job is completed

most of these privately supplied houses are in need of upgrades and repairs, while older units necessitate complete demolition and replacement. Although housing delivery projects in the form of off-farm estates do occur in some countries such as the United States and Kenya, their occurrence are limited. Housing is usually only provided for permanent workers, a group which has been experiencing significant labour reductions in absolute and relative terms (ILO 2003; Hurst, Termine & Karl 2005).

The shift towards casual labour leaves the greatest segment of the agricultural labour force with limited housing options available. The fact that casual workers, consisting of many migrant workers, do not receive any housing from private (companies or farmers) or public (government housing programmes) initiatives, led to these migrant and casual workers generally being absorbed into existing informal settlements, or encouraging the establishment of new informal settlements near farms with little or no services or basic sanitary facilities (Hurst, Termine & Karl 2005). Housing conditions of farm workers, even in developed countries, remain poor with Jacobs (1996: 177) stating that “looking at their housing conditions in California, farm workers would justifiably feel and believe that California is a Third World country”. Laws that protect retired workers by increasing their tenure security and providing them with housing on farms have been introduced in some countries (Hurst, Termine & Karl 2005).

In general, strong support exists for subsidised housing developments in urban areas for the general low-income population as well as ‘special needs’, a category that includes farm workers. By including farm worker housing needs, they become a part of the planning agenda (Appenbrink et al 2010). Another alternative is on-farm housing which normally links access to housing with employment relations. On-farm housing has the potential of acting as a labour camp, trapping workers, potentially exposing them to exploitation (Appenbrink et al 2010).

Due to low wages and the casualisation and seasonality of farm labour, tenure security remains a challenge amidst numerous assistance programs. These challenges make it difficult for workers to undergo long-term mortgage commitments and choosing one permanent location of residence. A main obstruction preventing many farm workers from receiving subsidies or access to public housing is their illegal immigration status (Appenbrink et al 2010).

2.2 Agricultural reform in South Africa

Over the last three decades, agriculture in South Africa has experienced significant shifts and changes. Agricultural employment figures indicate the occurrence of workforce reductions with 382 932 agriculture jobs lost between 1985 and 2002. The ratio of permanent to casual labourers changed from 3:1 to 1:1 as seasonal and temporary contract labour were increasing in conjunction with permanent labour cutbacks (Murray 2011). The remaining workforce continued to earn low wages, with the majority (61.3%) earning between R501 and R1 500 per month (Poole & Eigelaar-Meets 2010). Low

earnings are often supplemented by the paternalistic relations between farmers and workers, where employers provide housing and services to permanent workers (Du Toit 1993; Atkinson 2007).

Increasing compliance requisites concerning labour and tenure rights, coupled with the deregulation of agriculture, meant that farmers had to adapt to stay in the market. Adaptive measures taken by farmers included raising their productivity and standards by using mechanic harvesting techniques and equipment, which resulted in reduced demand for physical labour. Success of these adaptive measures is evident, as Murray (2010) stipulated that farmer incomes increased by 27% in the Cape Winelands since the inception of new machinery and farming methods. Farmer income increases are combined with a 2% reduction of permanent workers, while casual and seasonal employment numbers increased by 45%, validating the shift in labour demand over the period (Murray 2010; Poole & Eigelaar-Meets 2010).

In 2003 the state introduced a minimum wage for farm workers, differentiating within the agricultural sector between urbanised areas (receiving a higher minimum wage) and their rural counterparts. Since the promulgation of the minimum wage, employment levels fell by almost 200 000 (20 % drop) in the agriculture sector (Bhorat et al 2012). This labour reduction trend can partially be considered as a reaction to the minimum wage, increasing economic pressure on local farmers. Farmers responded to this increased pressure by diversifying their production. This diversification necessitated the use of labour brokers sourcing big groups of casual workers when required during the year (Poole & Eigelaar-Meets 2010).

Other adaptive responses by employers included charging for services that used to be free of charge, further reducing labour demands through investing in productivity improvement strategies, as well as shortening the working hours of seasonal workers to cut costs of production (FARE 2013). Concomitant to the decline in the Cape Winelands' agricultural employment has been the increase in population and rapid in-migration with census data indicating that the Cape Winelands' population grew by 19.9% between 2001 and 2011.

2.3 South African policy framework relevant to farm worker housing

Prior to 1994, government provided farmers with housing subsidies to erect farm worker housing on farms, placing the onus of service provision on the farmers, supported by the *Rural Foundation* and the *Department of Agriculture* (Du Toit & Ally 2003). An array of new policies and strategies for the alleviation of housing issues on and off-farm were however introduced after 1994 (Atkinson 2007).

The Housing Code specifies basic minimum standards for all subsidised housing developments which include water, sanitation and storm water drainage, as well as access to electricity where available. The National Housing Code of 2009 (part three) contains a chapter specifically focusing on '*rural interventions*', including several subsidy schemes and programmes available to farm workers, farm dwellers and farm owners (DHS 2009).

The *Farm Residents Housing Assistance Programme* aims to provide adequate housing to farm workers and dwellers through subsidy mechanisms. Subsidised housing options include on-farm as well as off-farm arrangements, with farm owners acting as custodians of service delivery (DHS 2009). On-farm housing programmes are applied in areas where farm residents live far away from the nearest town, making it impractical to house workers in nearby towns. On-farm housing arrangements are undertaken by assessing local conditions in order to develop the most suitable housing solution for particular needs in a specific region (DHS 2009).

Agri-villages were identified as a possible off-farm housing solution, although the majority of such projects has been associated with unwanted consequences, acting as poverty traps and camps of cheap available labour (WCDHS 2013). Most recently government interventions include emergency housing in cases of eviction and displacement, as well as integrating and including farm workers on existing municipal housing waitlists that will reserve 5% of housing opportunities for retired farm dwellers (Atkinson 2007).

Closely associated with the issue of farm worker housing is the aspect of access to services. The critical questions in the debate regarding rural services provision is *what* services should be provided, *who* are responsible for providing these services, *if and how* costs of services will be paid for and by whom, as well as *where* these services should be provided. In the CWDM, farmers have traditionally been the custodians for providing basic services on farms to their permanent workforce, dependent on the good will and capacity of individual farmers (Atkinson 2007). Thus access to services that are dependent on existing labour relations between workers and their employers can be viewed as promoting paternalism (Du Toit & Ally 2003; Atkinson 2007).

Local municipalities have also indirectly contributed to urbanisation by willingly neglecting rural development, resulting in farm workers with minimal rural housing choices opting to migrate to urban areas in search of adequate housing and employment opportunities (Del Grande 2009). Farmers are becoming increasingly reluctant to accommodate workers on their farms and are opting to employ as few permanent workers as possible (Du Toit & Ally 2003). The significant reduction of farm labour on commercial farms also affected surrounding areas that had to accommodate the overspill of people no longer residing on farms (Wegerif et al 2005).

Tenure security of farm workers was specifically addressed in 1997 with the promulgation of Extension of Security of Tenure Act (ESTA) of 1997. The Act stipulates the legal procedure required to evict people from farms, where a court case is required to make a judgement and grant the right to farmers for evicting people (Atkinson 2007). Thus, ESTA attempts to protect farm dwellers from arbitrary evictions (Hall, Kleinbooi & Mvambo 2001; Wegerif et al 2005).

ESTA however had paradoxical effects, leading to a dramatic spike in farm evictions since the promulgation of the Act (Wegerif et al 2005). ESTA attempts to protect all people residing on farms,

referred to as 'occupiers', whether they work on the farm or not. Wegerif et al (2005) estimated that 129 196 people were evicted from farms in 1997 (after the introduction of ESTA), with another spike of 138 308 evictees in 2003 (introduction of minimum wage) (Wegerif et al 2005).

Another unintended consequence of ESTA was the fact that farmers started neglecting the existing housing stock on farms, as ESTA requires successful evictees to receive alternative housing not worse than the housing and services they received on the farms (Du Toit & Ally 2003; Atkinson 2007). Attempts to increase tenure security of farm workers have thus inadvertently led to a reduction of permanent on-farm workers and housing and services previously provided through paternalistic relations (Atkinson 2007). Evictions also increase pressure on already resource-limited local municipalities to provide suitable housing and services (Ewert & Hamman 1999).

2.4 Migration and farm dweller housing

Data limitations concerning farm dwellers as a unique group within society have led to many uncertainties about demography, socio-economic profiles as well as migration patterns of farm workers. The diversity of livelihood strategies of different categories of farm dwellers also requires an understanding of their mobility patterns and socio-economic structures (Chen & Korinek 2010).

Migration as livelihood strategy

Migration has specific implications for the place of origin as well as the destination region and it is therefore important to understand causal factors triggering farm dwellers to make the decision to move (Lee 1966). Migration triggers can be associated with numerous factors that can be synthesised into a holistic model (Gelderblom 2006). This synthesised model integrates micro-, meso- and macro-level factors influencing migration decisions as well as identifying potential obstacles preventing successful migration (Gelderblom 2006). The model explains the spatial reward structure, where a decision to migrate can only occur when one region potentially satisfies an individual more than another region. This could be the case where city life seems more rewarding economically, compared to the surrounding countryside (Gelderblom 2006; Kok, Gelderblom, Oucho & van Zyl 2006).

At a micro- and meso-level, decisions to migrate are affected by the individual's characteristics such as age, gender, income, education and occupation. These characteristics determine individual rewards associated with the move, as demographics will determine the probable benefits of migrating to the destination region (Kok et al 2003; Gelderblom 2006). Thus, an informed decision to migrate to a specific region requires cognisance of expected rewards that can be associated with the move, instead of remaining stationary. Socio-cultural context of migrants come into the equation as he/she will have to convince other household members of the migration decision. Power structures, such as gender and age can either act as a facilitating mechanism (if a male/ head of household) or as an obstacle (if a female/ minor) (Lee 1966; Gelderblom 2006).

Household size and age of its members play a pivotal role in the economic arrangements and decisions the household make. Decisions to migrate, as well as the location of migration are closely intertwined with the socio-economic structure of a household (Moen & Wethington 1992; Chen & Korinek 2010). People are more likely to make the decision to migrate at a certain stage in their lives. Younger people are more likely to migrate than older people; however, decisions are not always as calculated and planned. Unanticipated factors could also trigger decisions to move. These factors include social restructuring such as unexpected marital status changes (divorce or death of a spouse), addition to the family, compromised health, as well as economic factors (employment status and occupational changes) (Kok et al 2003).

It is clear that the decision to migrate is complex, requiring consideration of several factors and influences triggering the decision of an individual or entire household to move. These factors need to be understood in order to effectively analyse migration patterns as well as comprehend the driving forces behind decisions to migrate. Seasonal migration is considered to be common practice for poor households, especially rural households, attempting to stabilise annual income levels. This is achieved during off seasons through members making temporary residence adjustments in pursuit of job opportunities (Ellis 2003).

Migrants' impacts on destination regions

Migrants contribute both positively and negatively to the destination region. Positive contributions of migrants, especially seasonal migrants, are their availability as cheap labour in the host region (Asfaw, Tolossa & Zeleke 2010). Migrants contribute to the development of the host region through increasing the availability of cheap labour force, as well as stimulating the local economy where migrants increase the market size for which goods and services can be provided (Costello 2009). Conversely, negative outcomes associated with seasonal migrants include the transmission of communicable diseases, contributing towards environmental pollution as well as increasing pressure on host destinations' service delivery, such as water, electricity, as well as health services. Increasing population size as well as frequent movements by migrants, especially seasonal migrants, contribute towards traffic congestion, increasing pressure on public transport systems as well as the availability of adequate housing stocks. Additionally, inhabitants of the host destination may also be forced out of jobs by cheaper bargaining (Asfaw, Tolossa & Zeleke 2010).

Migrant profiles are an important determinant for service and infrastructure requirements as each age cohort of migrant requires specific services and infrastructure (Costello 2009). Population growth and new arrivals of migrants also impact the housing stock as well as the type of new housing stock required and provided to new migrants. As affordable housing stocks become more and more limited, new-comers seeking cheap accommodation are forced to locate themselves in areas with lower resource and services available. Informal settlements are the most common phenomenon as result of

population growth, increasing housing prices and limiting affordable housing available to existing and new-comers lacking the financial means to afford adequate houses in formal residential areas (Costello 2009).

2.5 Conclusion

This review of available literature provides an overview of the main features shaping the composition of agricultural labour and social relations on farms. International literature regarding farm worker housing revealed unsatisfactory conditions not confined to only developing countries. International studies substantiated the claim that meeting the diverse needs of vulnerable farm dwellers remain a global challenge. The review has identified how globalisation and international economic restructuring have occurred at the same time when new labour, wage and tenure laws were introduced in South Africa, contributing to increased pressure on commercial farms and hence affected relations between workers and employers.

Migration theory is reviewed and indicated how migration, specifically to farms, affect the destination region. Migration plays an important role in changing demographics of a region and should be assessed to understand motivating factors of migrants as well as the implications of new-comers on housing and services in the destination region. Regional factors such as economic transformation, labour policies, land reform policies and minimum wages have an impact on farm worker conditions, as well as the economic and social environment in which they live. It is important to take these factors into account to understand workers' living conditions as well as their livelihood strategies, often directly linked to migration decisions impacting housing, services and tenure security.

SECTION 3: METHODOLOGY AND STUDY AREA

3. METHODOLOGY

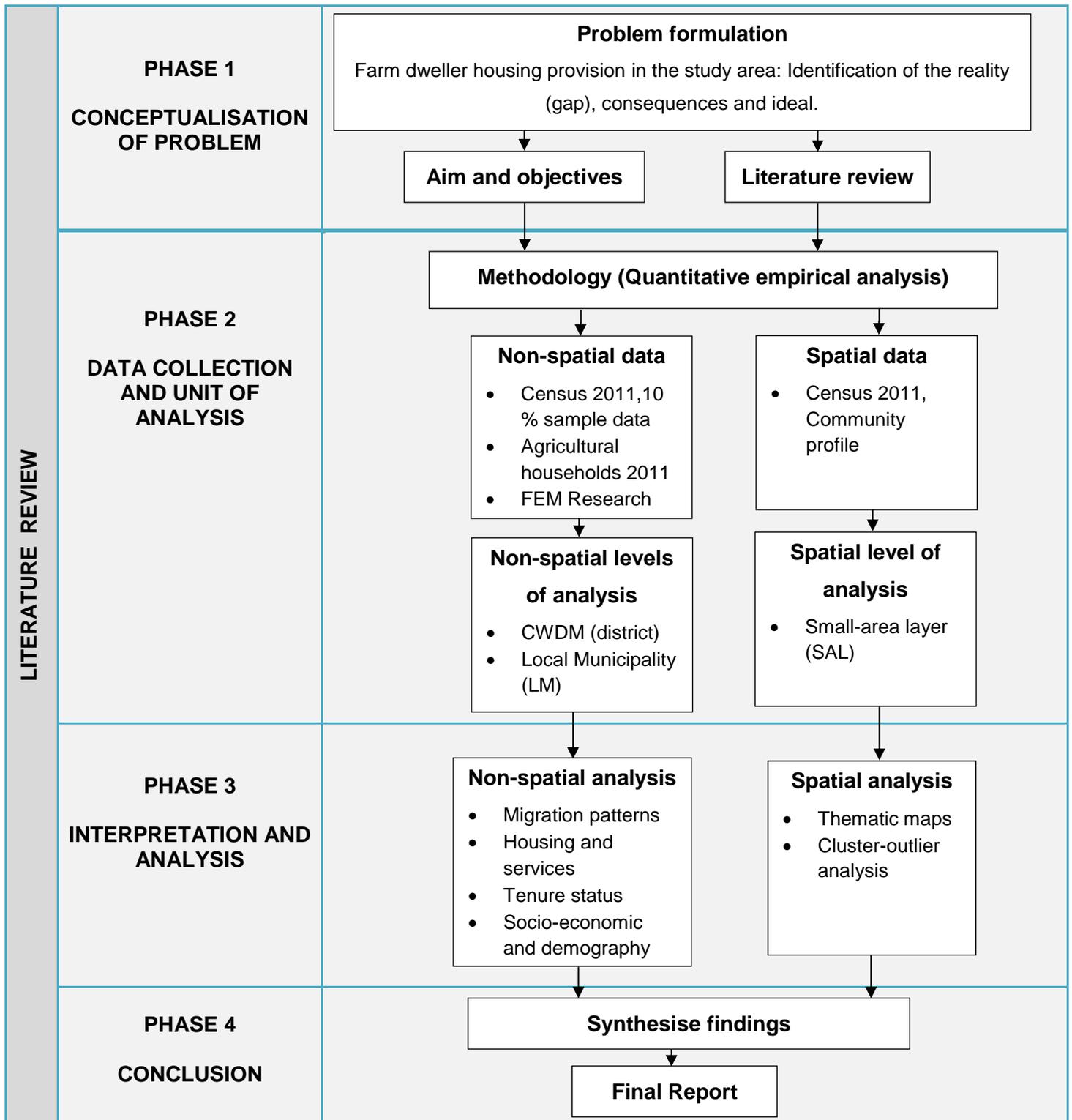
The research follows an inductive approach where qualitative reasoning follows quantitative research. Very little research has been conducted concerning farm workers and farm dwellers, their housing conditions, and the regional migration dynamics of the Cape Winelands. A quantitative empirical analysis is conducted concerning demographic dynamics of farm dwellers. Findings are assessed against existing theory and observations, complying with the description of a ‘retroductive case study’ approach.

Interpretive or phenomenological analysis was conducted where quantitative research methods are used to assess service levels and housing standards of farm dwellers in the CWDM. The research incorporates a migration perspective to understanding farm dweller dynamics in the CWDM, as well as determining the implications of migration and socio-economic profiles of farm dwellers on housing and service provision.

3.1 Research design

Table 3.1 depicts the research design adopted for this study consisting of four distinct research phases.

Table 3.1 Research design



The quantitative analysis was conducted using aggregated spatial data of the study area. Secondary data consisting of spatial objective information was used (Marans & Kweon 2011), distinguishing between spatial and non-spatial data.

Non-spatial analyses were performed at district level (first unit of analysis) and LM level (second unit of analysis) using the 10% sample data of census 2011, agricultural household data as well as data derived from a farm survey of the CWDM (FEM Research 2015).

Non-spatial analyses include migration patterns, housing and services, tenure security and socio-economic structures of farm dwellers. Differentiation was made between farm dwellers and urban residents, the latter further subdivided between formal and informal residential areas. It is important to illustrate trends and differences evident between farm, formal and informal residential areas within the study area, as farm worker living conditions need to be evaluated both on farms as well as off farms, where they are predominantly located in existing informal settlements. Distinctions were also made between migrant and non-migrant farm dwellers, distinguishing profile differences as well as implications of differences and trends pertaining to housing planning.

The absence of the economic sector variable from the 2011 census data imply some limitations on the type of analysis that could be performed on this dataset, but was supplemented with alternative data sources. To fill this gap in the census data, secondary data derived from a farm worker survey report (FEM Research 2015) was used, where the Cape Winelands' farm workers in particular were surveyed in 2014. The farm worker survey data complements Census 2011 data to formulate demographic as well as socio-economic profiles of farm workers in the Cape Winelands region.

Agricultural households' data (Census 2011) was used to develop an agricultural profile of the CWDM as well as a farm labour profile of the CWDM. This data indicates the distribution of farm workers within the district as well as the specific labour profiles of these workers, such as differentiating between full-time, casual or seasonal workers. The 10% sample of Census 2011 was used to conduct in-depth migration analysis of farm dwellers in the study area. The 10% sample data provides more variations of migration and other variables to enrich potential analysis of migration patterns as well as distinguishing differences between migrants and non-migrants.

Census 2011 community profile data was used to perform a detailed spatial analysis of the study area at SAL (third unit of analysis). The spatial analysis includes thematic maps indicating farm dweller locations within the district, as well as migrant farm dwellers' area of origin and destination region. An inferential spatial statistical tool was used to reveal potential spatial clustering within the datasets. Anselin Morans I (cluster-and-outlier) analysis identifies clusters of high or low values as well as spatial outliers; therefore it measures the strength of patterns for each specific feature/variable.

Migration analyses allow a longitudinal assessment of distributional changes that occurred between 2001 and 2011.

3.2 Migration definitions and concepts

Migrants in this study refer to people who do not live in the same house as in 2001 and who were located in the CWDM at the time of the 2011 census. Migrants are further categorised based on their point of origin. **Census 2011 data** was used for the **spatial analyses of migration** where the community profile data at SAL level enabled the analysis of three categories of migrants (internal, external and foreign). In this classification internal refer to migrants originating from both within the district as well as from within the Western Cape. External are migrants from outside the Western Cape and foreign are international migrants.

The **10% sample data of Census 2011** allows for a more detailed analysis including a wider range of cross-tabulation between various categories but only limited to municipal level and therefore could distinguish between four categories of migrants (**non-spatial migration analyses**). Internal migrants include people who originated from within the CWDM; whereas external migrants originated from outside the district. External migrants are further subdivided as external (from within the Western Cape), external (outside the Western Cape) and external (foreign) representing the international migrants to the CWDM.

Non-migrants in this study are the people who lived in the CWDM since 2001 without relocating. It is important to make a distinction between migrants and non-migrants in order to analyse differences between the two groups as well as its implications for the planning of farm dweller housing in the CWDM.

3.3 Study area

The CWDM, situated within the Western Cape is the area under investigation. Table 3.2 represents the dispersion of residents based on their type of enumeration area in the Cape Winelands.

Table 3.2 Enumeration areas of total population

Municipalities	Formal residential	Informal residential	Farms	Collective living quarters	Small holdings	Other	Total
Witzenberg	47%	5.5%	46%	0%	0%	1.5%	100%
Drakenstein	78%	3%	15%	1.5%	1.5%	1%	100%
Stellenbosch	61%	12%	18%	3%	5%	1%	100%
Breede Valley	61%	4%	28%	5%	0%	2%	100%
Langeberg	65.5%	1.5%	31%	1%	0%	1%	100%
CWDM	65%	5%	25%	2%	2%	1%	100%

(Census 2011)

Findings suggest that farms as a location for housing are prominent, with the largest proportion of the study area comprised of farmland (Figure 3.1). Cultivated commercial farmland is the main location of farming activities, predominantly deciduous fruit and wine grape farms, which are labour intensive, especially during harvesting seasons. Cultivated farmland accounts for 10% of the study area, being the land use that is the most densely populated by farm dwellers within the district. Natural vegetation (shrubland and fynbos) accounts for 88% of the study area, with 40% of this category being protected and thus preserved from agriculture activities.

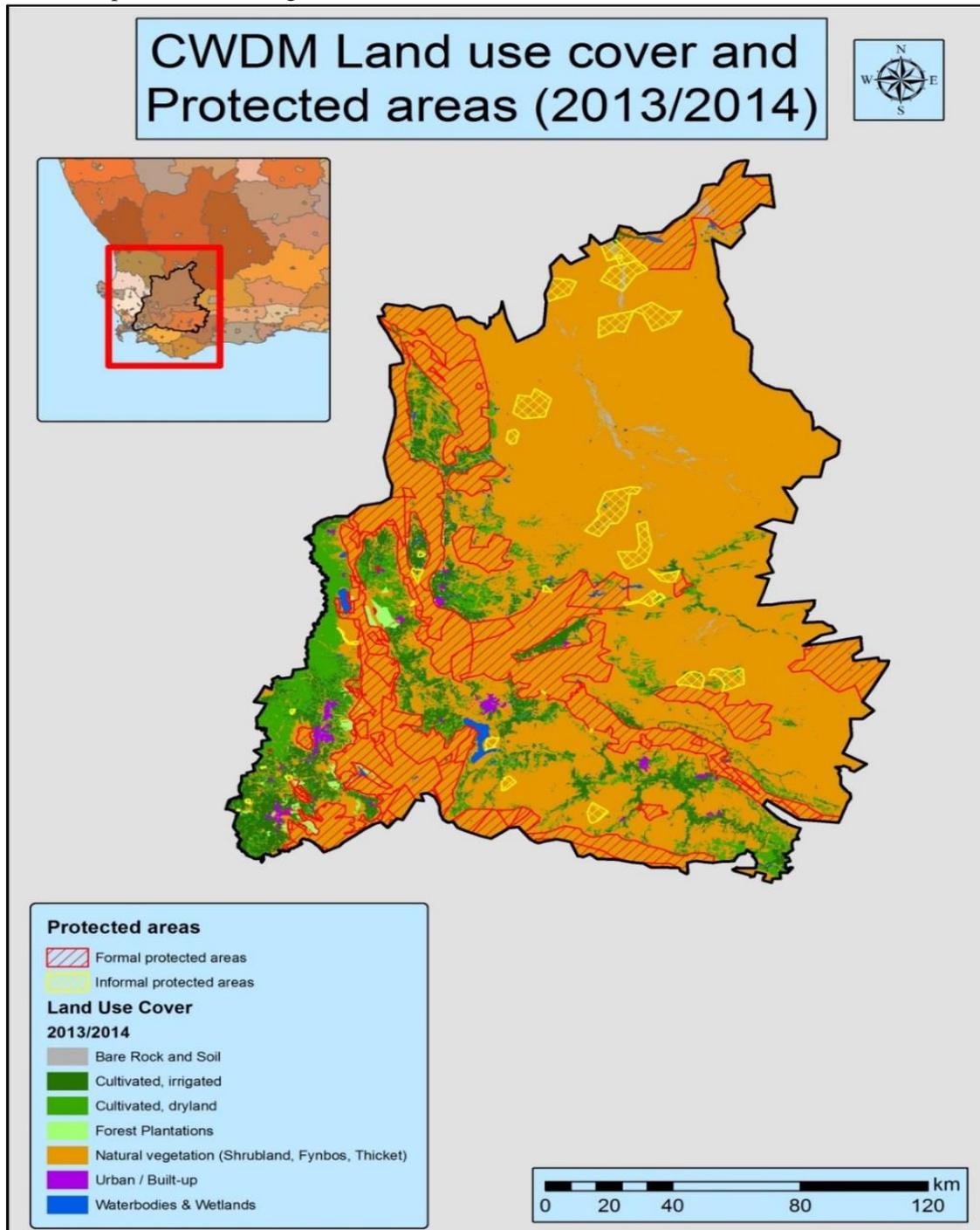


Figure 3.1 Land use cover and protected areas in CWDM

(Southern African Land Cover 2013)

SECTION 4: EMPIRICAL ANALYSIS

4. RESEARCH RESULTS AND DISCUSSION

4.1 Spatial distribution of farm worker housing

Table 4.1 provides an overview of the extent of households in the Cape Winelands, located on farms, and who are actively involved in agricultural activities. According to Census 2011, Agricultural household⁵ data, a total of 15 065 households (7.6%) in the CWDM are involved in agricultural activities. Only 32.5% of households located on farms in the CWDM are involved in agricultural activities. The Western Cape has a much higher percentage of farm households who are involved with agricultural activities (73%) than the CWDM (35.5%), which implies that many farm households in the district are not considered as agricultural households. The municipalities with the highest proportion of agricultural households on farms are located in the Drakenstein and Langeberg LM (46% and 40.4% respectively). Breede Valley LM has the lowest percentage of agricultural households on farms.

Table 4.1 Households in the Cape Winelands

Local municipality	Agricultural households	% Agricultural households	% Agricultural households located on farms	All households
Witzenberg	3 189	11.60%	27.60%	27 419
Drakenstein	3 645	6.10%	46%	59 774
Breede Valley	2 447	5.80%	22%	42 527
Stellenbosch	2 805	6.50%	33.60%	43 420
Langeberg	2 979	11.90%	40.40%	25 125
CWDM	15 065	7.60%	32.50%	198 265
Western Cape (WC)	84 575	5.20%	73%	1 634 000

(Census 2011, Agricultural households)

⁵ Agricultural households refer to households that are involved in any agricultural activities

The highest concentration of farm dwellers at SAL level resides in De Doorns and surrounds, the Ceres region, farms located at ‘Op-die-berg’, and in the Langeberg LM (Robertson, Bonnievale, McGregor, Montagu and Ashton agglomerations). As expected, farm dwellers are mostly located on commercially cultivated land. The farm dweller density on cultivated farms with irrigation is 48 people per square kilometre (km²) compared to a density of only 17 people per km² in cultivated areas without irrigation.

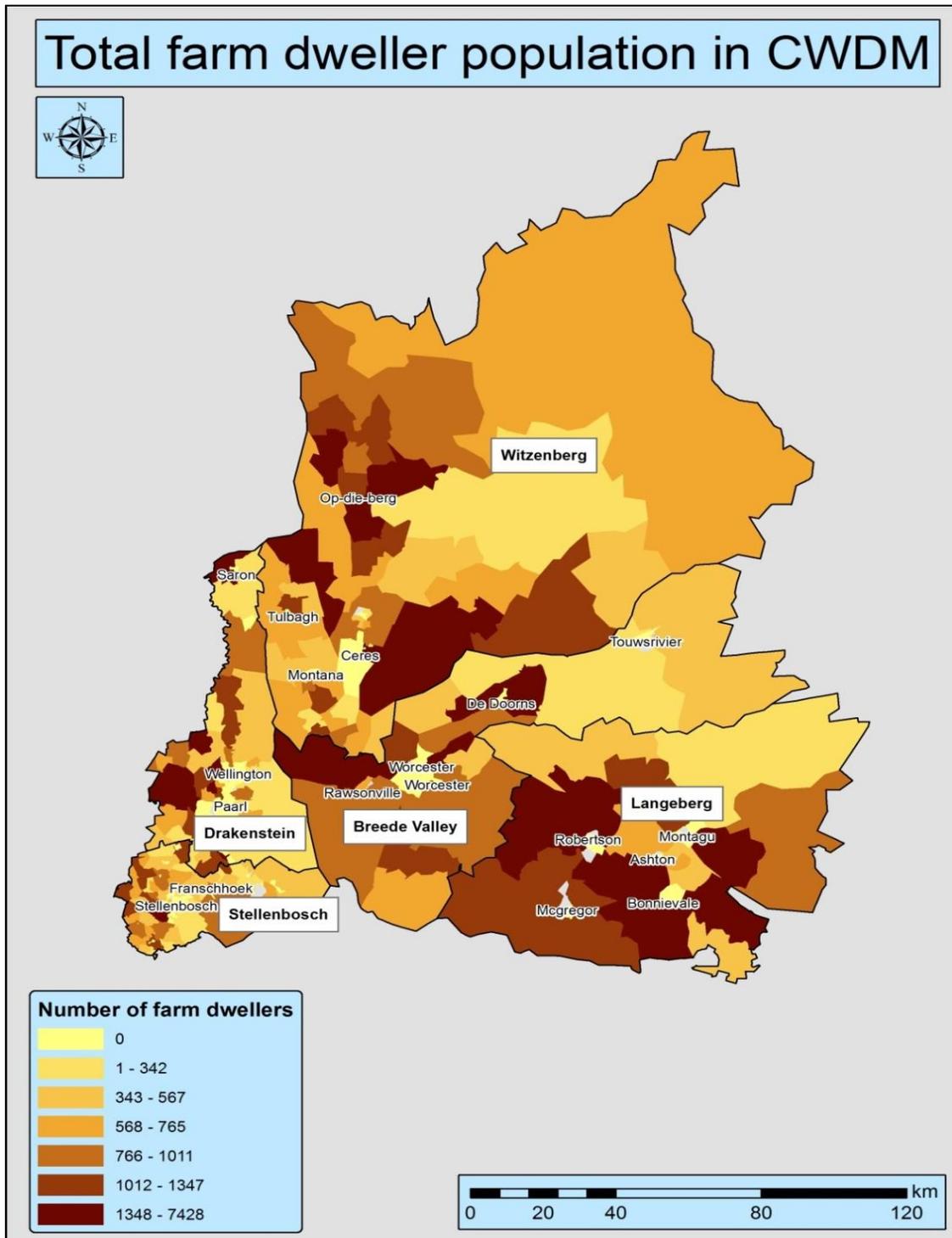


Figure 4.1 Total farm dweller population

(Census 2011)

Figure 4.2 displays the density of farm dwellers in the Cape Winelands District. It is clear that the most densely populated areas in terms of farm dwellers are located in the De Doorns region, the western parts of the Stellenbosch LM, around Paarl-Wellington, around Ceres and Op-die-Berg, and around Ashton. The density of farm dwellers in these areas is generally in excess of 80 farm dwellers per km² (compared to the district average of 9 people per km²) with densities up to 368 farm dwellers per km² in some areas. The largest area within the CWDM is however very sparsely populated by farm dwellers at densities of less than 4 farm dwellers per km².

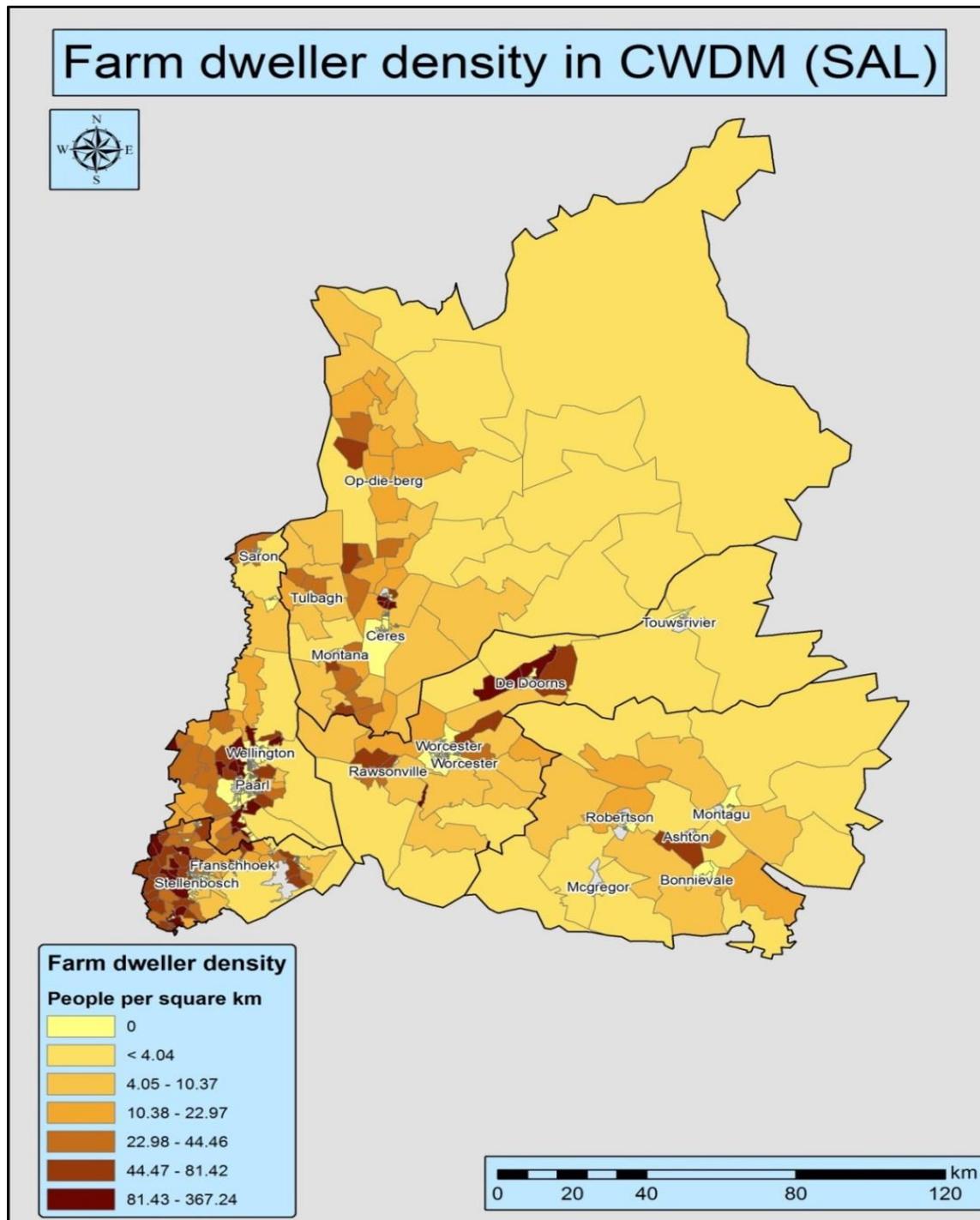


Figure 4.2 Farm dweller density

(Census 2011)

4.2 An analysis of migration in the study area

4.2.1 Extent of migrants to the Cape Winelands

Table 4.2 displays the percentage of people who have relocated in the CWDM since 2001. Approximately 32 000 farm dwellers can be classified as migrants, representing 17% of the total farm dweller population. The high proportional expansion of informal areas as result of migrants can be partially ascribed to the notion of evictions and labour casualisation in the agricultural sector resulting in more workers relocating themselves to informal areas in proximity to the farms where they work (Hurst, Termine & Karl 2005; Costello 2009).

Table 4.2 Migrants since 2001

Enumeration area	Migrants		Non-migrants		Total population	
Formal	90 939	18.39%	403 677	81.69%	494 616	100%
Informal	12 246	30.78%	27 537	69.22%	39 783	100%
Farms	32 691	16.97%	159 900	83.03%	192 591	100%
Total	135 876	18.69%	591 114	81.31%	726 990	100%

(Census 2011)

4.2.2 Farm migrants' place of origin

Migrants are classified as people who do not live in the same house as in 2001 and therefore cannot all be viewed as contributors to in-migration in the district. In order to determine the percentage of migrants who contributed to the total number of people within the district it is necessary to distinguish between migrants based on their origins. Migrants are classified as internal, external (from within WC), external (from outside WC) and foreign migrants.

The majority of farm migrants in the CWDM are external migrants (61%) implying that 19 942 migrants have entered the district since 2001 and are currently living on farms (Table 4.3). External migrants (from within WC) account for 28% of farm migrants, external (foreigners) for 20% and migrants external from the WC 13% of all migrants. Internal migrants, who have relocated within the district, account for 39% of all farm migrants. Internal migration has a smaller financial cost associated with the move as well as conditions being more comparable between the point of origin and destination region, thus having more potential to satisfy the migrant at a socio-cultural as well as economic level. External migrants have to incur greater financial and social costs to migrate, motivated by expectations of better living conditions (employment, higher income, housing and services) at the destination region (Gelderblom 2006).

Table 4.3 Total farm migrants to the Cape Winelands

	Internal (within district)	External (from within WC)	External (from outside WC)	(External) Foreign
Cape Winelands	39%	28%	13%	20%

(Census 2011)

The highest proportion of internal migration in all LMs is represented by relocations within the same local municipality (Table 4.4). These figures range between 16% in the Witzenberg LM and 50% in the Langeberg LM and thus imply limited inter-municipal migration between municipalities within the CWDM, but substantial relocation of farm dwellers within the same municipality.

External migrants (from within the WC) are predominantly composed of migrants originating from the City of Cape Town (CoCT) (15%) with other municipalities within the WC accounting for a further 13% of migrants to the CWDM. The proportion of migrants from CoCT to Stellenbosch LM is particularly high (29%) and could be ascribed by its close proximity. This could be the result of financial constraints influencing an individual's choice of relocation, where migrants opt for the nearest move as well as a region with the highest expected return (Gelderblom 2006). Another pull-factor in Stellenbosch LM could be employment opportunities for farm workers; however employment rates are the lowest in Stellenbosch LM (57% employed), compared to the other LMs. These workers cluster in nearby informal areas where they could potentially engage in alternative economic activities, or compliment their incomes during off-seasons. The majority (50.5%) of farm workers within Stellenbosch LM live off-farm (Section 4.3).

External migrants to farms (from outside the WC) predominantly originate from municipalities in the Eastern Cape representing approximately 11% of migrants to the district. The main areas of origin include the Senqu municipality in the Eastern Cape, accounting for 27% of farm migrants to Witzenberg LM. Other municipalities outside the Western Cape that are significant areas of origin include Lukanji, Nelson Mandela Bay (NMB) and the City of Johannesburg. These migrants predominantly opted to relocate to Witzenberg (38%).

Table 4.4 Migrant farm dwellers' point of origin and destination region

Previous municipality	Destination Municipality					
	Witzenberg	Drakenstein	Stellenbosch	Breede Valley	Langeberg	CWDM
Witzenberg	16%	4%	3%	0%	3%	5%
Drakenstein	1%	31%	3%	0%	0%	7%
Stellenbosch	1%	3%	22%	2%	1%	6%
Breede Valley	2%	1%	2%	43%	2%	10%
Langeberg	0%	0%	2%	2%	50%	11%
Internal (within district) Subtotal 1	19%	39%	32%	47%	57%	39%
City of Cape Town (CoCT)	12%	17%	29%	9%	8%	15%
Bergrivier	2%	3%	2%	3%	3%	3%
George	4%	3%	3%	3%	3%	3%
Oudtshoorn	3%	2%	2%	4%	3%	3%
Other	2%	5%	2%	3%	6%	4%
External (within WC) Subtotal 2	23%	31%	38%	23%	24%	28%
Lukanji	7%	2%	0%	1%	0%	2%
Senqu	27%	0%	1%	6%	0%	7%
Nelson Mandela Bay	3%	1%	1%	1%	1%	1%
City of Johannesburg	1%	3%	5%	2%	0%	2%
Other	0%	3%	1%	1%	1%	1%
External (outside WC) Subtotal 3	38%	10%	8%	11%	2%	13%
External (Foreign) Subtotal 4	20%	21%	22%	18%	18%	20%
Total migrants	100%	100%	100%	100%	100%	100%

(Census 2011, 10 per cent sample)

International migrants (external- foreign) roughly represent the same proportion of migrants in each of the LMs, accounting for 20% of all migrants to the CWDM (Table 4.4). The main motivator for long distance moves (external and foreign) would be the expected benefits or opportunities at the destination region, and influenced less by marginal travelling cost differences (Gelderblom 2006).

The spatial depiction of farm migrant origins is illustrated on Figure 4.3 and indicates that farm dweller migrants originate predominantly from Senqu, followed by internal relocation within the CWDM as well as the CoCT. Migrant farm dwellers have specific/ clustered areas of origin, suggesting that they are being attracted by a very distinct type of economic activity.

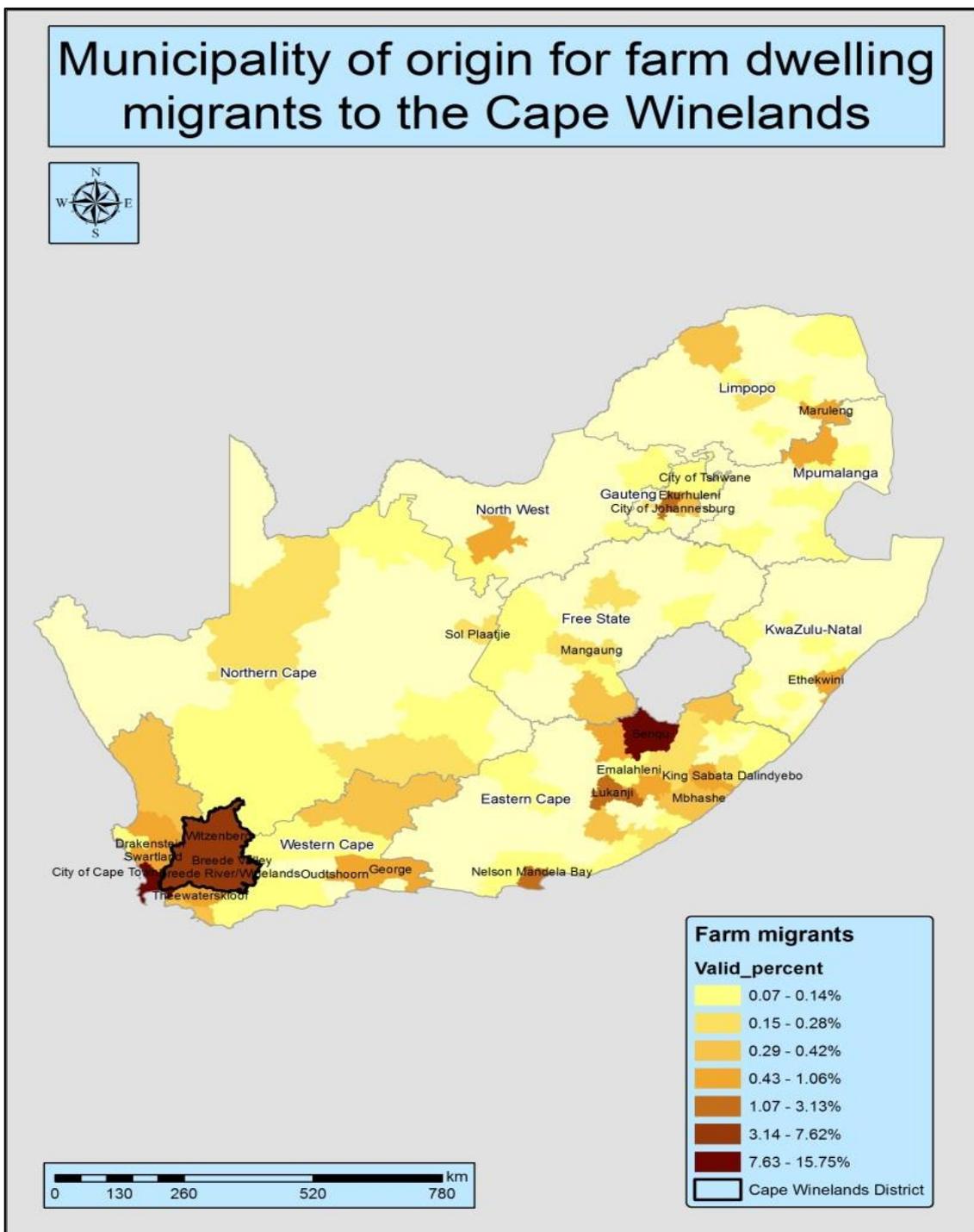


Figure 4.3 Farm dwelling migrants' point of origin

(Census 2011, 10 per cent sample)

4.2.3 Migrants' destinations

Figure 4.4 displays the dispersion of migrant farm dwellers in the CWDM. The spatial analysis of farm migrants' destination areas in the CWDM clearly indicates that farm dweller migrants tend to be most densely concentrated in the Stellenbosch and Drakenstein LM, as well as De Doorns in the Breede Valley LM, the latter accounting for the highest farm dweller migration density of 363 farm dwellers per km².

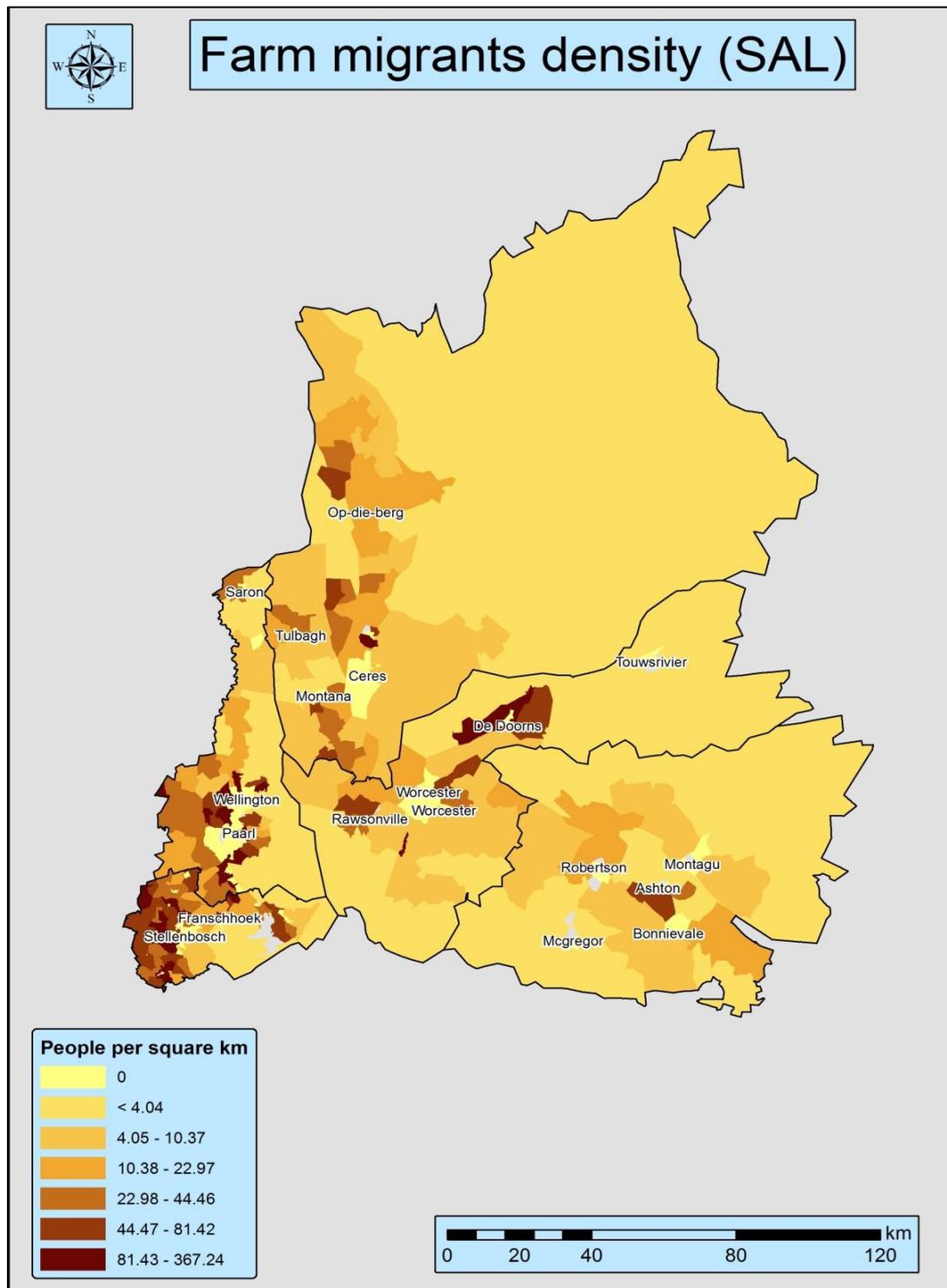


Figure 4.4 Farm migrants density

(Census 2011)

In order to determine the statistical significance of the observed spatial patterns of farm dweller migrants to the CWDM and either reject or confirm the null hypothesis of Complete Spatial Randomness (CSR) in these patterns, the Anselin Local Moran I technique ('cluster-outlier analysis' function) was applied to the data (Figure 4.5). The purpose is to further analyse the spatial distribution of farm migrant destinations to determine whether these spatial patterns exhibit statistically significant clustering or dispersion, and would provide evidence of statistically significant underlying spatial processes. High positive local Moran I values imply that the unit under analysis has similar high or

low values as its neighbours, and these can therefore be regarded as spatial clusters. A high negative local Moran I value means that the value of the unit under analysis is different from the values of their surrounding locations and that the location under study is a spatial outlier. From this spatial analysis it is clear that there is a high-high cluster of farm dweller migrants to 'Op-die-berg' region in Witzenberg LM as well as to De Doorns.

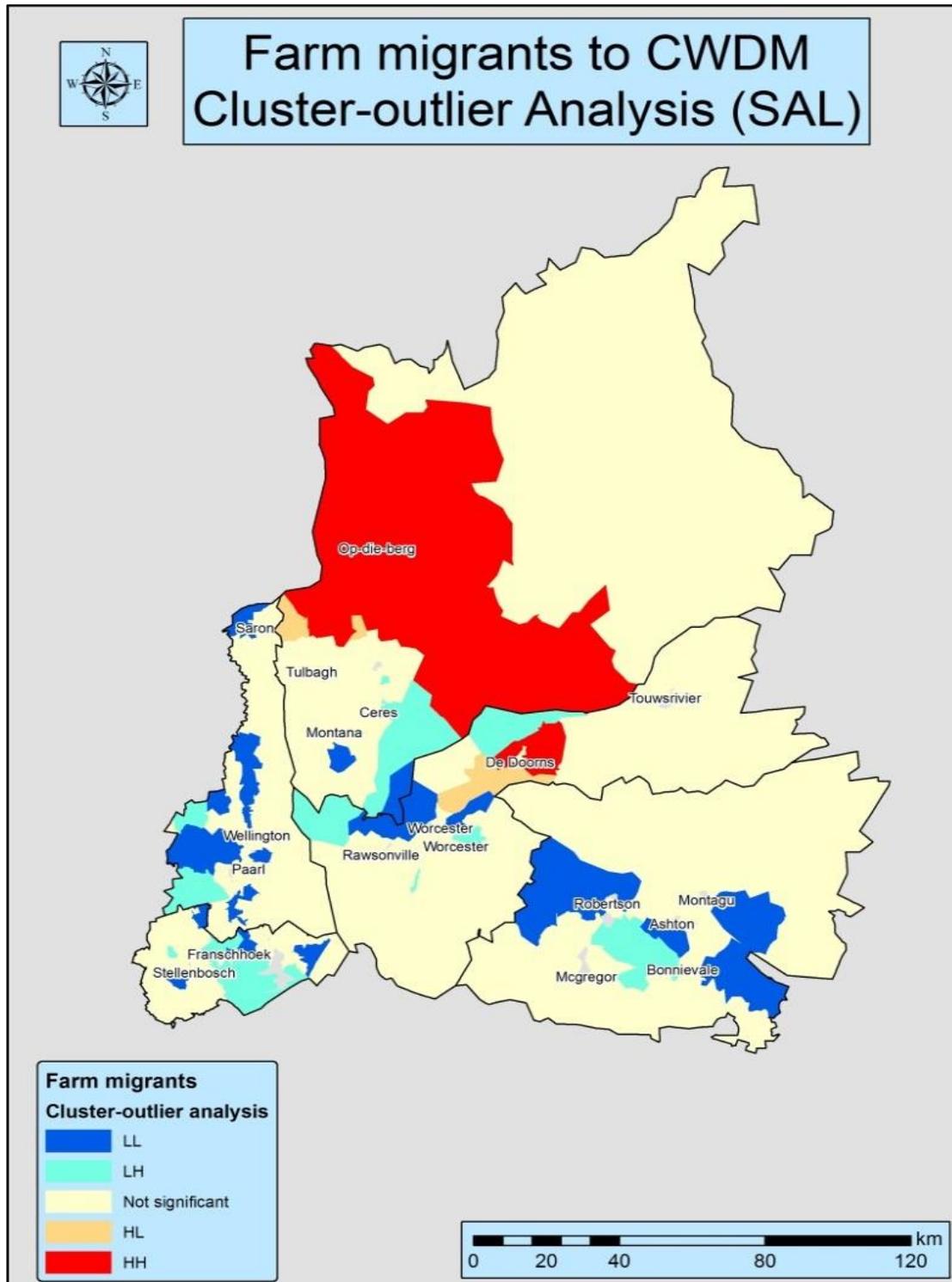


Figure 4.5 Areas of farm migrant clustering

(Census 2011)

Identifying areas acting as ‘migrant hotspots’ can inform the targeting of government spending (social and infrastructural investments) and private business investment within the district and in specific localities in LMs. Providing appropriate forms of housing and services to these migrants is vital to curb the overflow of migrants ending up in informal settlements.

4.3 Quality of housing and services of farm dwellers in the CWDM

A farm census conducted in 2014 specifically captured all farm workers in the CWDM, classifying them as living on or off farms (Figure 4.6). The majority of farm workers reside on-farm (73%) and can thus be assumed to rely on farm owners for provision of housing and services. Langeberg LM has the highest percentage of farm workers living on-farm (90.3%) compared to Stellenbosch LM where farm workers living off-farm narrowly outweigh those living on-farm (51.5% off-farm). These living arrangements could expose workers to possible paternalistic relationships where access to housing is linked to employment (Appenbrink et al 2010). However, it could also imply that many farm dwellers have housing and services superior to what can be provided elsewhere.

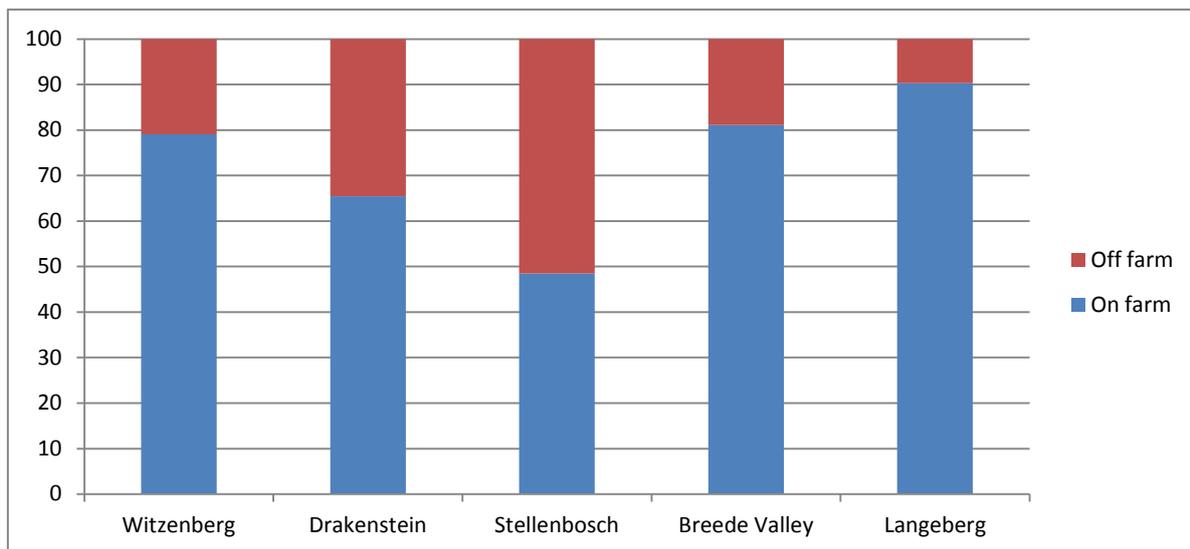


Figure 4.6 Farm workers' housing arrangements

(Fem Research 2015)

A high proportion of farm dweller population (61%) occupy their dwellings rent-free (Figure 4.7) but home ownership is very low (15%) while only 24% are formally renting their dwellings. The “rent free” farm dwellers are often also governed by formal contracts between the farm dweller and the land owner, but these contractual agreements rely on the good will of the land owner regulating the relationships that could lead to possible evictions if relationships are damaged or contracts breached (farm dweller not working on farm anymore / conflict between worker and land owner) (Du Toit & Ally 2003).

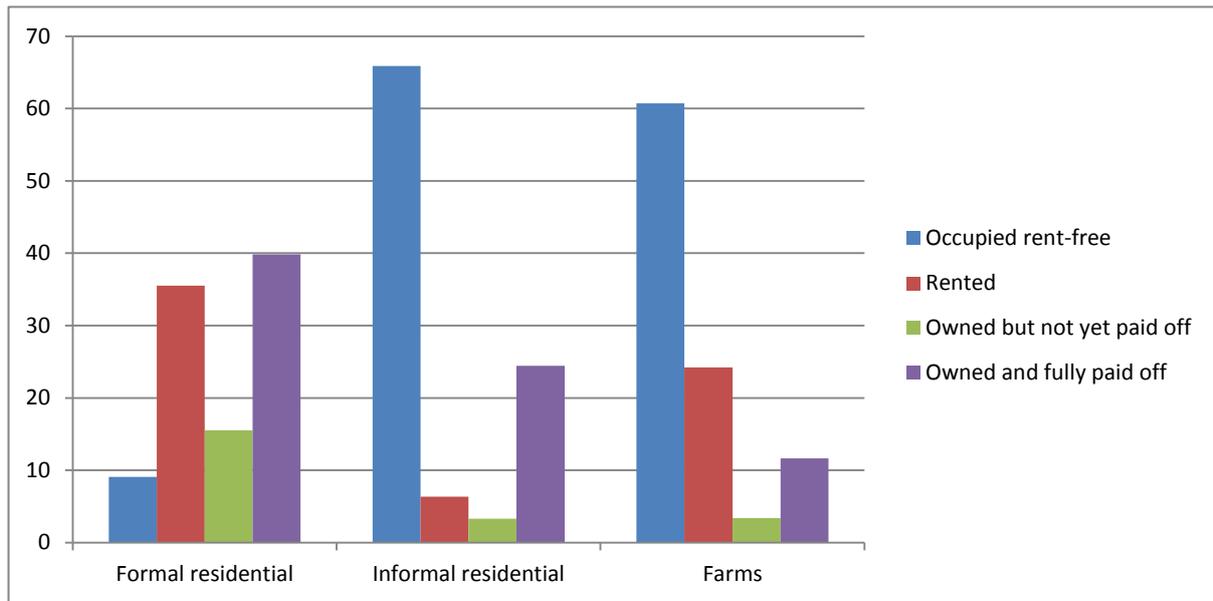


Figure 4.7 Tenure status between urban and farm dwellers (Census 2011)

The majority (88.8%) of farm dwellers in all five municipalities of the CWDM live in formal houses⁶ (Figure 4.8). Breede Valley LM has the most diverse housing typology on farms, where ‘shack in backyard’ and ‘informal dwelling’ compose more than 19% of all farm dweller housing. The majority (40%) of formal houses in the district have two bedrooms with an average household size of two members per unit and can thus generally be regarded as not overcrowded (Census 2011, 10% sample data). The majority of these formal houses have access to piped water inside their dwelling (82%) or at least inside their yard (14%). The main problem found with farm dwellings’ services was the reliability of water sources as 81% of farm dwellers felt that their water source is not reliable.

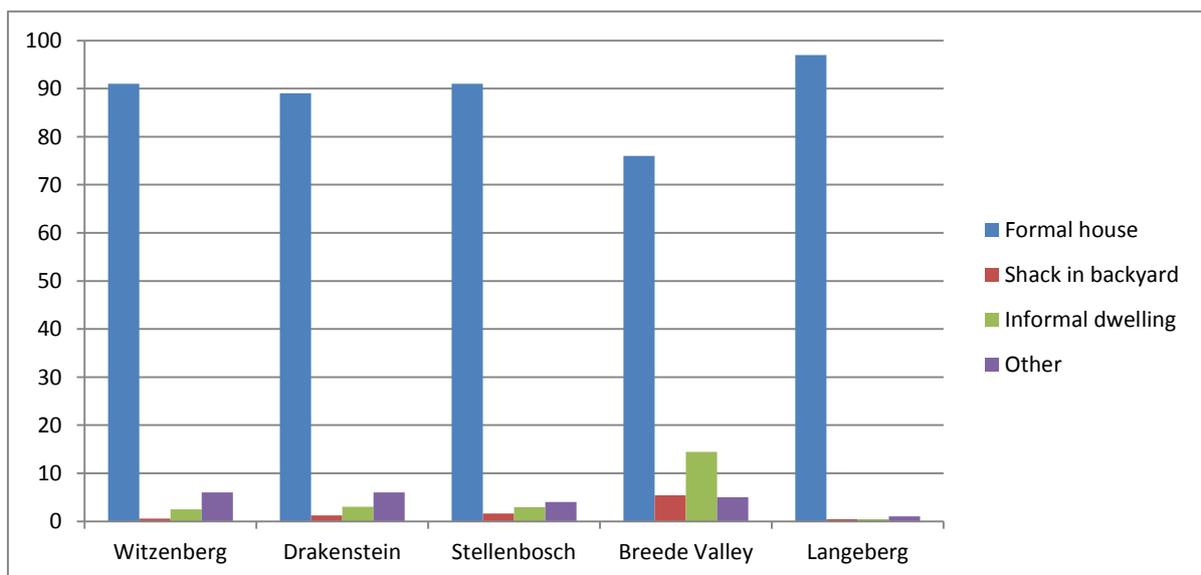


Figure 4.8 Farm dweller housing types (Census 2011)

⁶ Formal houses refer to housing that includes ‘brick structures’ and ‘semi-detached houses’

Other services also adequately provided to formal farm dwellings include electricity, where 95% of farm dwellings use electricity as source of energy for lighting, and toilet facilities where the majority (77%) of farm dwellers have flush toilets connected to a waterborne system or connected to a septic tank (11%) (Figure 4.8). However, 4% of these formal farm dwellings do not have any form of toilet facility available. Most of these structures make use of own refuse dumps (36%), local authority removing waste once a week (32%) and communal and other arrangements (14%). This could be attributed to the remoteness of most farms, where farmers would make their own arrangements to collect and dispose solid waste to nearby dump sites (Appendix A).

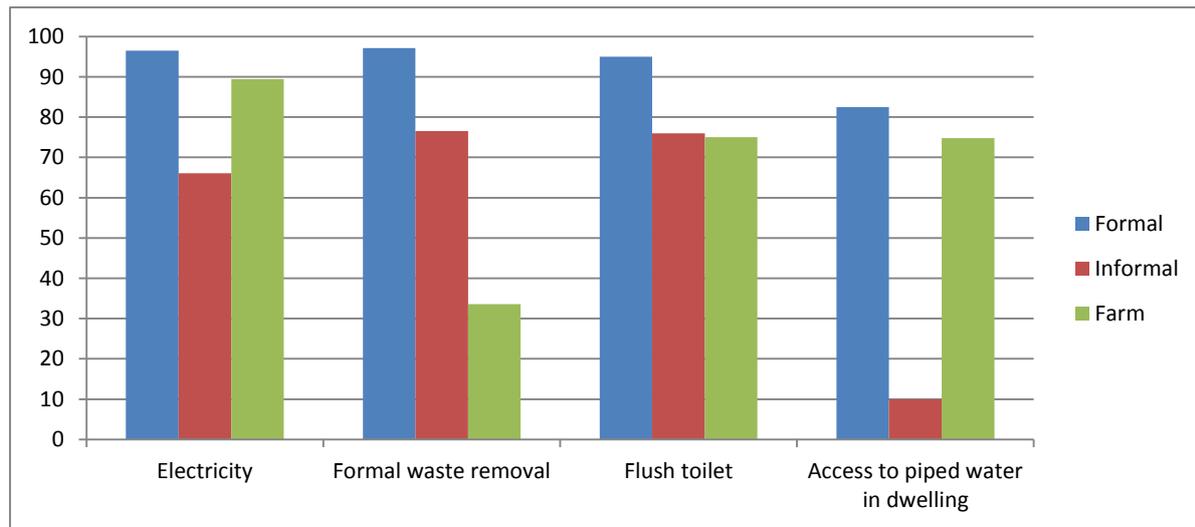


Figure 4.9 Service level differences between formal, informal and farm

(Census 2011)

Apart from formal waste removal, the overall level of services available to farm dwellers is not very different to those of formal urban areas, and generally of a much higher standard than in informal settlements.

4.4 Socio-economic profile of farm dwellers and its implications for housing provision

The analysis of the socio-economic profile makes a specific distinction between the characteristics of migrant and non-migrant farm dwellers, and also contextualises the information of farm dwellers against formal and informal residential areas to make informed comparisons between these groups.

4.4.1 Age and gender of farm dwellers

The age of farm dwellers is an important factor impacting and determining the specific needs of each age group. Age also determines the dependency ratio that influences affordability levels of households.

The majority of farm dwellers (69%) in the Cape Winelands fall in the economically active age bands (15-64 years) (Figure 4.10). Young dependents (0-14 years) account for 27.3% of farm dwellers while only 3.7% are aged 65 years and older (compared to 5.1% of the total population of the CWDM). This low percentage of people aged 65 years and older could imply that many elderly, who have reached retirement age, perhaps leave farms or are no longer allowed to live on farms (Atkinson 2007). Males are clearly dominant in the age category between 20 and 34.

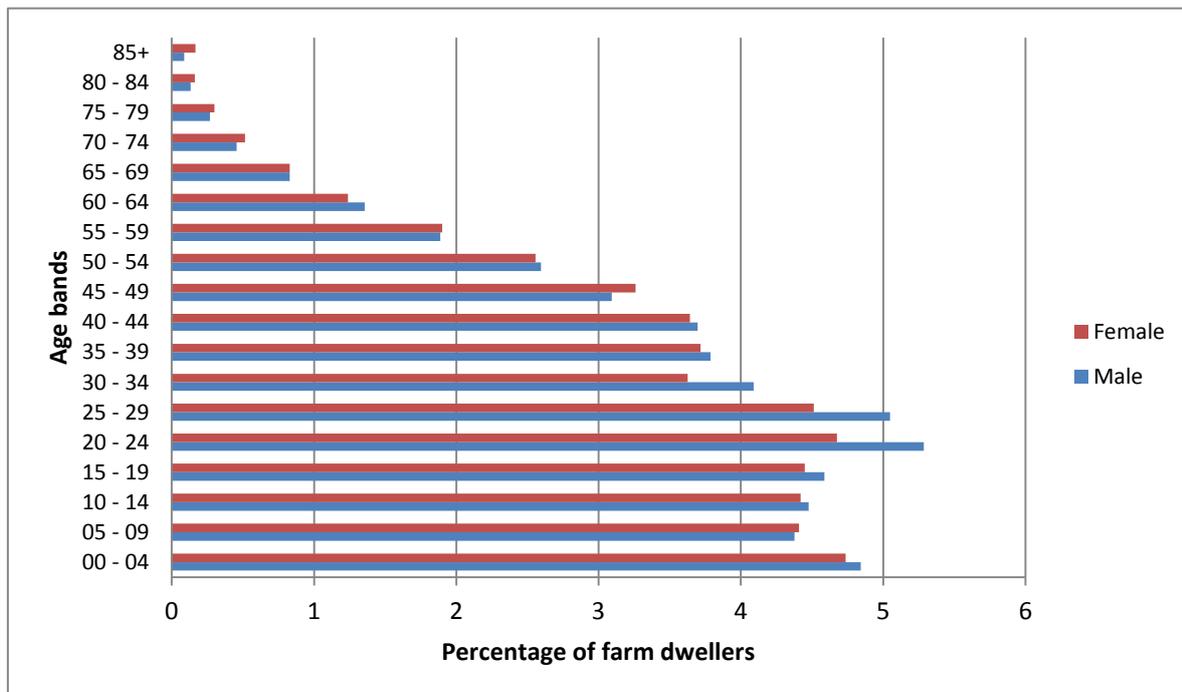


Figure 4.10 Age and gender of farm dwellers

(Census 2011)

When comparing age bands of migrant and non-migrant farm dwellers it is evident that the majority of migrants fall within the economically-active group (79%), compared to 65% of the non-migrant farm dwellers (Figure 4.11).

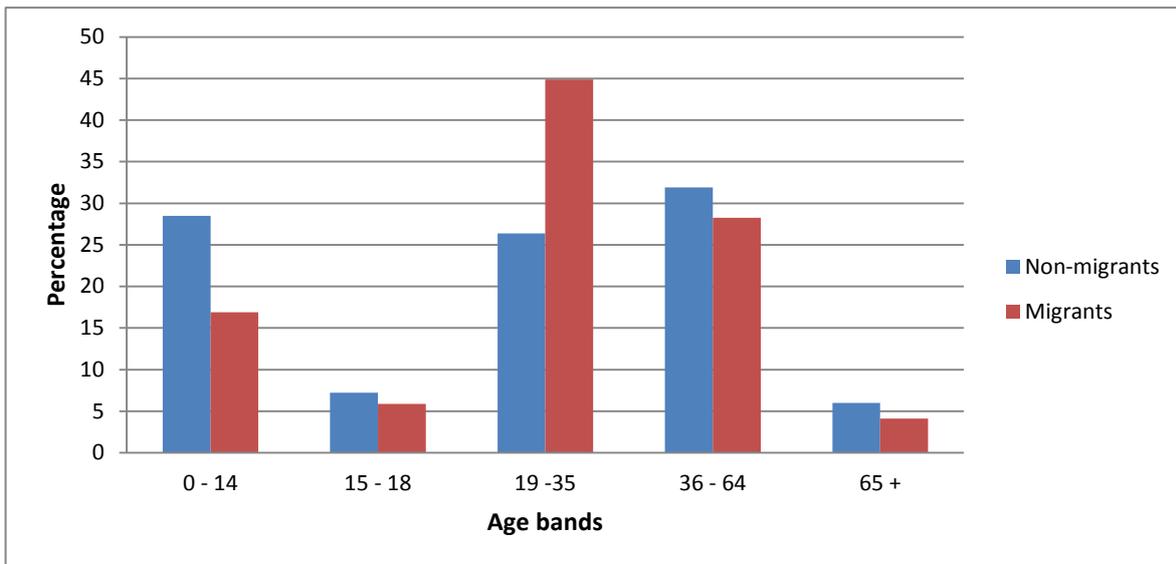


Figure 4.11 Age bands of farm migrants and non-migrants (Census 2011, 10 per cent sample)

As much as 42% of the farm dwellers are single (Appendix B). They would potentially require housing of a particular type in the form of rental accommodation.

4.4.2 Education levels of formal, informal and farm dwellers

Farm dwellers generally have low levels of education, with the majority only completing primary and secondary school (44% in both categories) (Figure 4.12). These low educational levels inhibit farm dwellers' opportunities for employment elsewhere or in other economic sectors whereas their general circumstances seriously hamper further education.

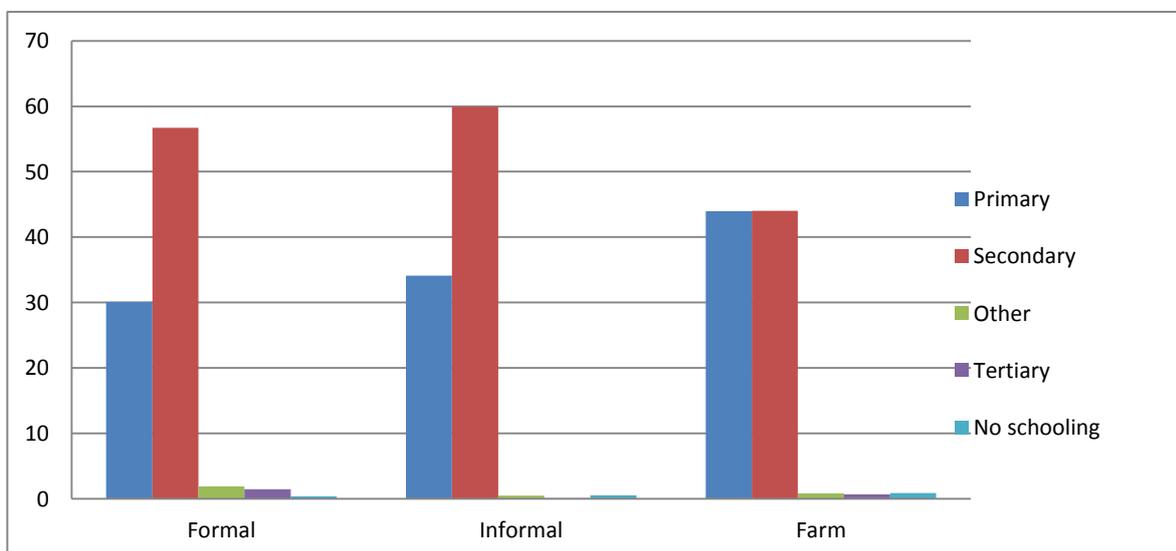


Figure 4.12 Education levels of formal, informal and farm dwellers in CWDM (Census 2011)

This would also imply some “path dependency” as farm workers are unlikely to escape from low income employment and have limited prospects for the future. This low educational attainment is also reflected in the skill levels of employed farm dwellers. The majority (85%) are employed as general workers and 5% as tractor drivers. Both of these types of work are low-skilled jobs, requiring little or

no education. The remaining 10% of the agricultural workforce on farms have managerial positions, including specialised positions and administrative work (see Appendix C).

Migrants have higher educational levels than non-migrants with the proportion of migrant farm dwellers with secondary and tertiary education being much higher than that of the non-migrants (Figure 4.13).

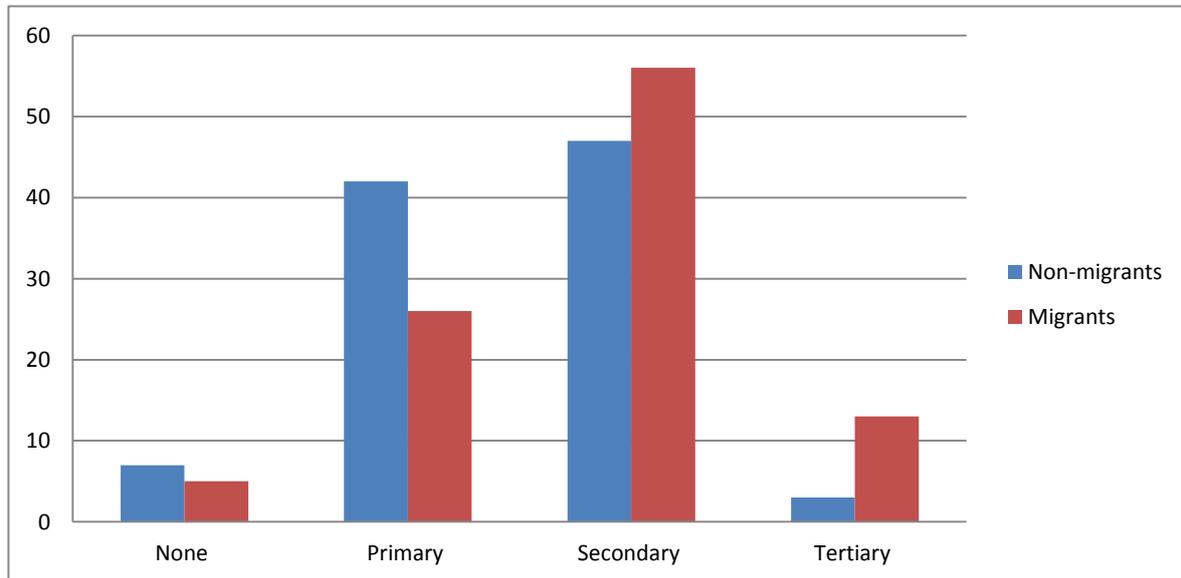


Figure 4.13 Education levels of migrants and non-migrant farm dwellers

(Census 2011)

4.4.3 Income levels of formal, informal and farm dwellers

Farm dweller households predominantly (29%) earn between R 1634 and R3 183 per month⁷ (Figure 4.14). An interesting feature is that only 7% of farm dweller households have no income, a figure significantly lower than the comparable figures for formal and informal urban areas. Household incomes determine the affordability levels of households in terms of housing and services provision. To qualify for an individual housing subsidy, the gross monthly income of the household may not exceed R3 500. The majority (57%) of households located on farms could thus potentially qualify for a subsidy of R160 573, subject to fulfilling all other eligibility criteria. Conversely, 43% do not qualify and require alternative housing assistance or subsidy schemes from government.

⁷ Annual household incomes are converted to monthly incomes to evaluate the eligibility of households for housing subsidies based on monthly household incomes

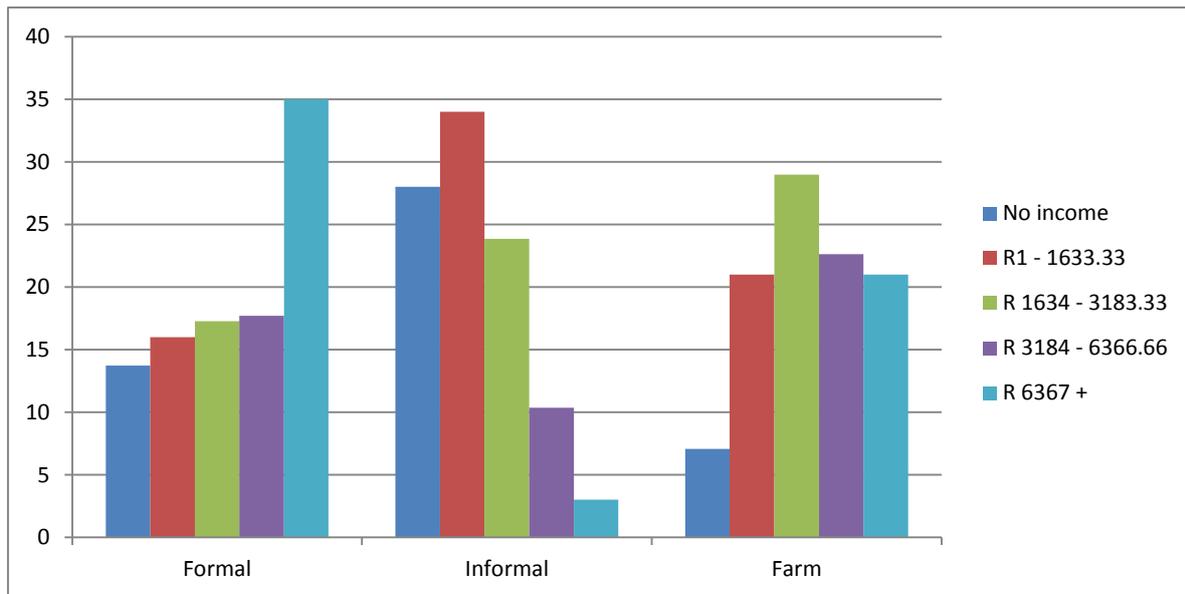


Figure 4.14 Monthly household income levels (Census 2011)

Income levels of migrants and non-migrants are compared using individual monthly incomes, as households are not exclusively comprised of migrants / non-migrants (Figure 4.15). Migrants have higher monthly incomes than non-migrants, with 13% of migrants earning more than R6 401 per month compared to 6% of non-migrants. Important to note is that farm dweller migrants do not only refer to farm labourers, but could also include farm owners who are a very affluent group.

These affluent people could be attracted based on the principle of environmentalism, rather than productionism. Alternatively, some farm migrants might be engaged in higher skilled employment with higher remuneration potential. There are also fewer migrant farm dwellers with no income (20%) compared to non-migrant farm dwellers (25%) although the biggest portion of migrants (42%) however remains in the R801-1600 class.

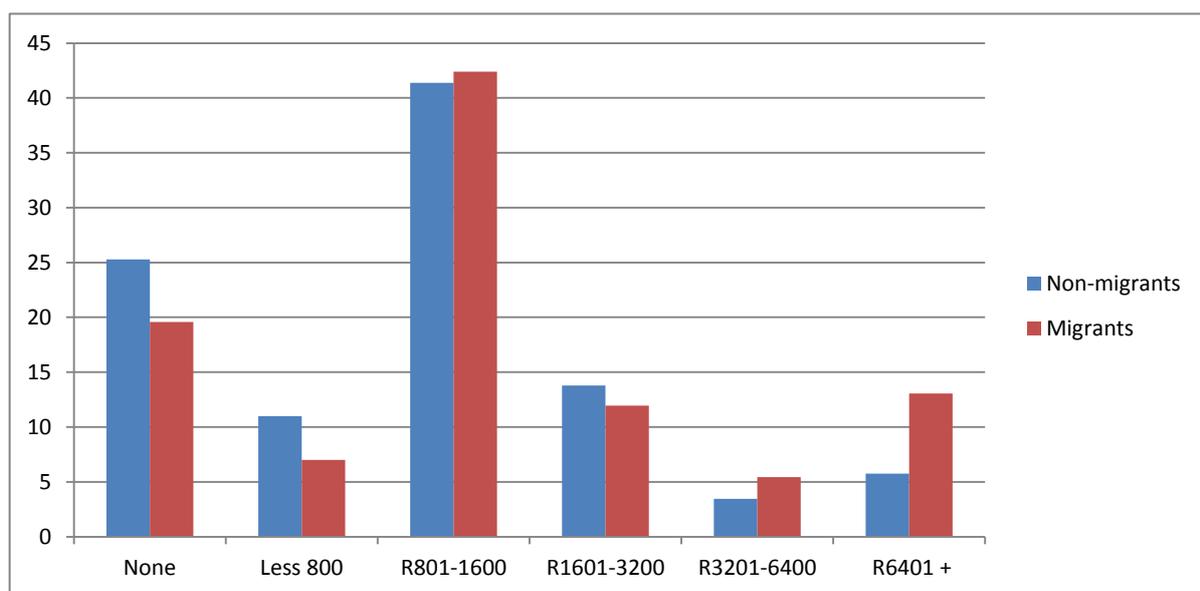


Figure 4.15 Individual monthly incomes of farm migrants vs non-migrants (Census 2011, 10 per cent sample)

These findings can also be explained through the spatial reward structure, where the probability of better living conditions motivates individuals to make the decision to migrate. Disposable incomes also directly determine an individual or whole household's financial capability to migrate (Gelderblom 2006).

4.4.4 Employment status of formal, informal and farm dwellers

Contradictory to common belief, farm dwellers have the highest employment rate (71%) and also the lowest unemployment rate (3%) in the district compared to formal and informal residents (Figure 4.16). A reason for this is that most farm dwellers are only allowed to occupy the land / receive housing as part of an employment contract with the land owner.

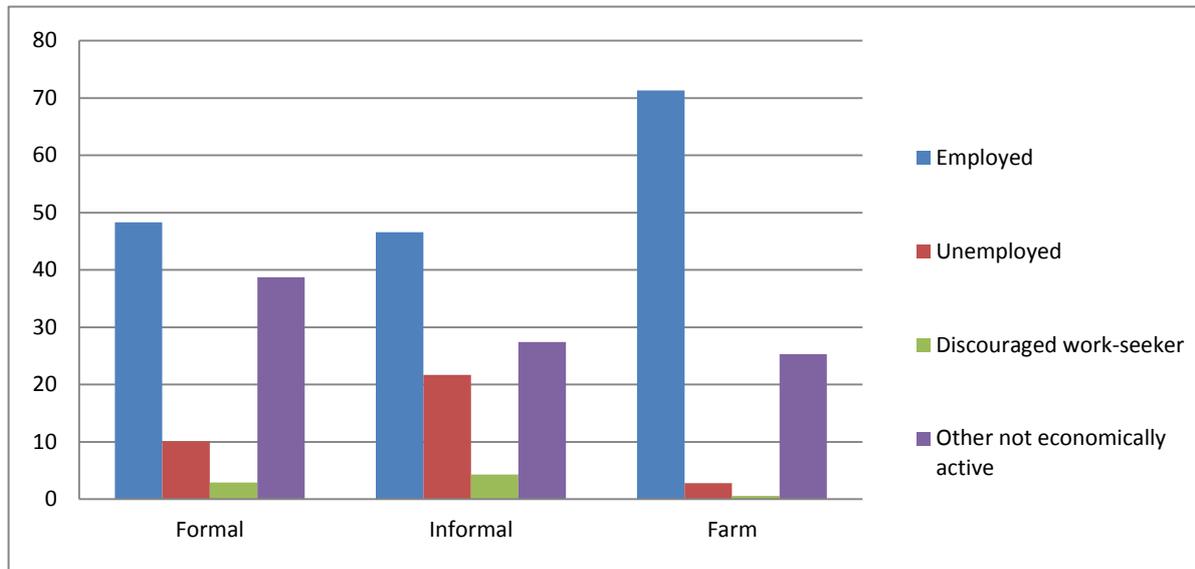


Figure 4.16 Employment status differences

(Census 2011, 10 per cent sample)

In all the local municipalities except Breede Valley LM, the percentage of migrants who are employed are higher than non-migrant farm dwellers (Figure 4.17). This indicates that people migrating to farms in the Cape Winelands have a high probability of securing employment. It could also be argued that they are seasonal migration workers, and for the time spent in the Cape Winelands, they will by implication be employed.

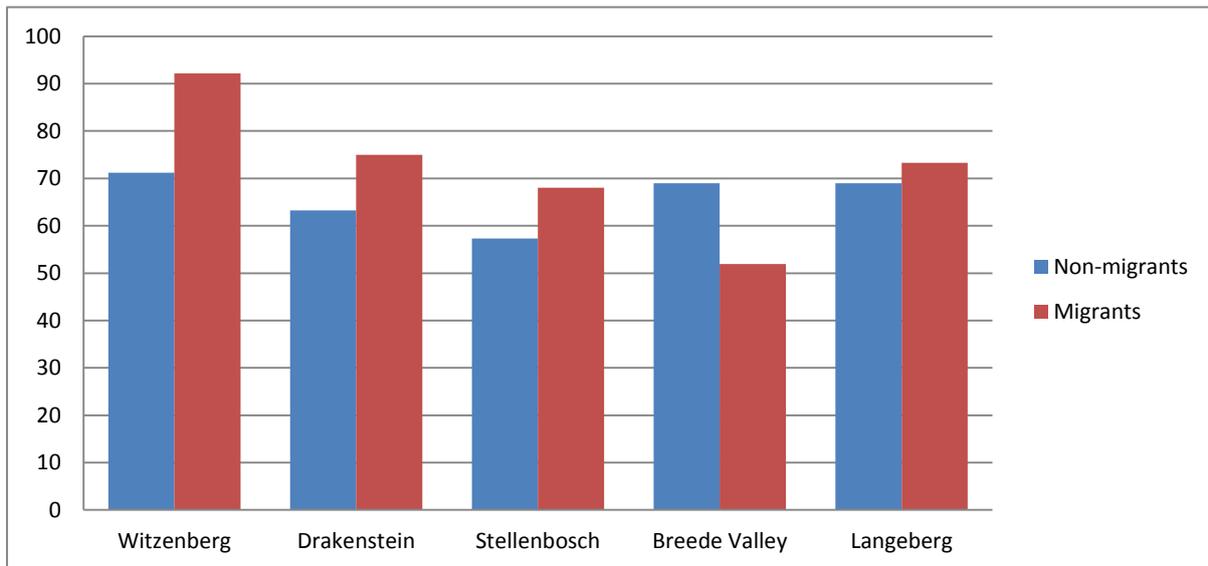


Figure 4.17 Percent employed farm migrants

(Census 2011, 10 per cent sample)

As far as the type of employment is concerned, the majority (66%) of economically-active farm dwellers are permanently employed on the farm where they live (Figure 4.18). Seasonal and temporary farm workers living on farms account for a further 18% of all farm dweller households in the CWDM. This implies that as much as 84% of farm dwellers are employed on the farms where they live.

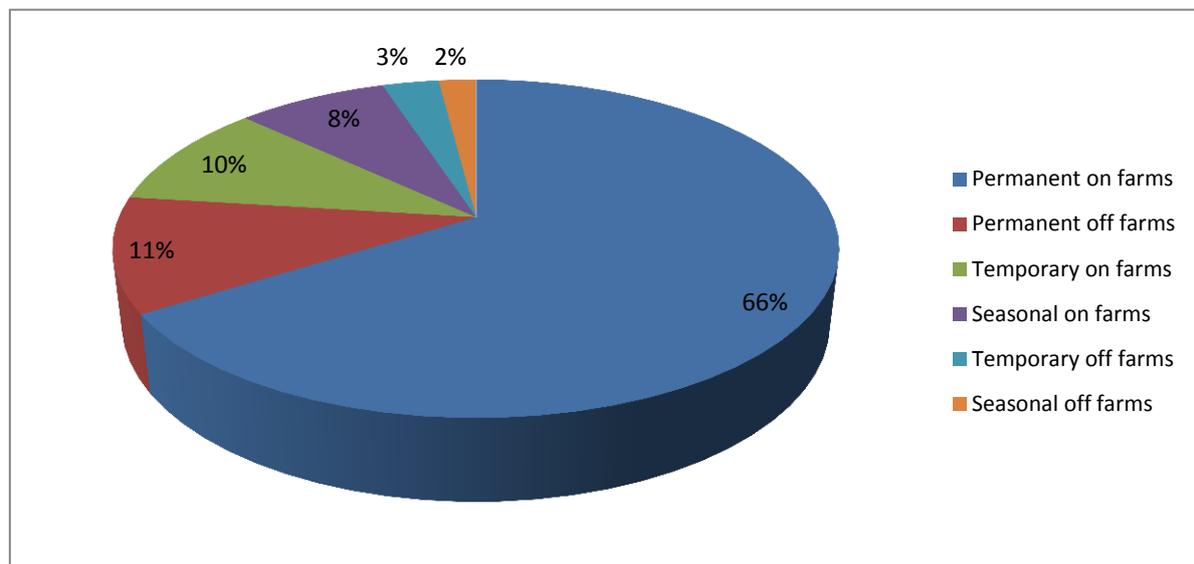


Figure 4.18 Type of employment of farm dwellers in the CWDM

(FEM Research 2015)

These findings also correlate with other studies (Du Toit & Ally 2003; Wegerif et al 2005; Murray 2010) suggesting that it is mostly permanent farm workers who remain on-farm. A mere 5% of farm dwellers are casual workers contracted off-farm while 11% are permanently employed off-farm in nearby towns (Figure 4.18).

SECTION 5: SYNTHESIS

5. CONCLUSION

The aim of the research was to assess farm dweller demographics and migration patterns within the Cape Winelands and its implications for farm worker housing on and off-farm. The key findings of the four objectives of the study are summarised in Table 5.1. For each of the individual objectives the main findings and possible explanations are summarised and both the spatial and non-spatial implications on housing and service provision to farm dwellers/ workers in the CWDM are outlined.

Table 5.1 Findings, explanations and implications

Objectives	Findings	Explanations	Implications (Non-spatial)	Implications (Spatial)
<p>Objective 1: Agrarian transformation and its implication for farm worker/dweller housing</p>	<ul style="list-style-type: none"> • Increasing global competition. • Farmers/ owners used to provide services free of charge, but more and more are currently charging for it. • International trend of increasing casualisation of agricultural workforce (internationally and locally), encouraging establishment of or settlement in informal settlements. • Housing and living conditions of waged agricultural workers is a challenge globally and access to housing and services often linked to employment. • Increased regulations resulted in evictions/lay-offs. 	<ul style="list-style-type: none"> • Neo-liberal policies and globalisation of agriculture. • Minimum wage and agrarian transformation increased financial pressure on farmers. • Seasonal and temporary workers seldom receive housing on-farm and with low incomes, informal settlements are the only additional viable option available. • Heightened global economic pressures resulted in low enumeration for workers, supplemented by ‘free’ housing and services. • Fear of losing land (ESTA) and minimum wage. 	<ul style="list-style-type: none"> • Labour cuts/ mechanisation reduce need for physical labour and require higher levels of skilled workers. • Inability of farm dwellers to pay for service fees where it is charged. • Linking employment with housing and services improve living conditions, but increases dependency/paternalism. • Formerly permanent workers could lose their jobs and on-farm housing. 	<ul style="list-style-type: none"> • Skilled workers (permanent) live on farms. • Casual workers live in informal settlements and travel to farms daily. • Farm dwellers that must pay service fees, but can’t afford it face the possibility of being evicted off farms. • Temporary workers commute daily between informal settlement and farms. • Retrenched workers on farms are displaced (end up in informal settlements).

Objectives	Findings	Explanations	Implications (Non-spatial)	Implications (Spatial)
<p>Objective 2: Analyse regional farm worker settlement and migration patterns in the CWDM</p>	<ul style="list-style-type: none"> • Highest farm dweller densities located in cultivated areas with average densities ranging from 17 people per km² in areas without irrigation to 48 people per km² in areas with irrigation. • 61% of farm dweller migrants are external migrants, including 28% from other areas within the WC, 13% from other provinces, and 20% foreigners. • De Doorns, Ashton, Paarl, Rawsonville, Wellington and Western part of Stellenbosch LM have the highest farm dweller densities. • ‘Migrant hotspots’: Op-die-Berg and De Doorns exhibit statistically significant spatial clustering of farm dweller migrants. 	<ul style="list-style-type: none"> • Irrigated agriculture requires more physical labour and permanent workers residing on-farm. • Pulled to region by higher expected living conditions and income than their place or origin. • High intensity (Cultivated & irrigated) agricultural activities. • Pull factors: Rich cultivated irrigated land, labour intensive farming, expected farm work & higher incomes (skilled labourers). 	<ul style="list-style-type: none"> • Higher density living on-farm increases the viability of providing bulk services to these households. • Additional new arriving farm dwellers require more housing stock. • Labour intensive activities make use of more seasonal labour, as opposed to permanent labour to cut costs, comply with regulations and as response to fear of ESTA. • In-migration contributes to the population size, increasing demand for housing & services. Pull factors should be explored to accurately predict future influx of migrants. 	<ul style="list-style-type: none"> • More housing required in proximity of irrigated agriculture land to accommodate higher density of farm dwellers/permanent workers on-farm. • De Doorns, Ashton, Paarl etc. are most suitable for multi-purpose facilities (education, health, and other social support facilities).

	<ul style="list-style-type: none"> Clustered origins: Senqu, Lukanji, Maruleng, NMB, CoCT, Ethekwini & George. 	<ul style="list-style-type: none"> Suggesting strong push factors and migrants with the same origins. 	<ul style="list-style-type: none"> Push factors necessitate research at point of origin and particular migrant profile (skills). 	<ul style="list-style-type: none"> 'Migrant hotspots' should make provision (housing and services) for influx of migrants.
Objectives	Findings	Explanations	Implications (Non-spatial)	Implications (Spatial)
<p>Objective 3: Access to housing, services and tenure security for farm dwellers</p>	<ul style="list-style-type: none"> Farm dwellers mostly (89%) reside in formal housing. The majority of farm workers reside on-farm (73%) and can thus be assumed to rely on farm owners for provision of housing and services. Apart from formal waste removal, the overall level of services available to farm dwellers is not very dissimilar to those of formal urban areas, and generally much better than in informal settlements. Home ownership is very low on farms (15%) while only 24% is formally renting their dwellings. As much as 61% of farm dwellers have 'rent-free' tenure status. 	<ul style="list-style-type: none"> Houses built and provided by farm owners. Farm owners are custodians of service delivery. Remoteness of farms makes waste removal strategies implausible. Most farm dwellers have contractual agreements with employers for housing. 	<ul style="list-style-type: none"> Farm owners own the houses and can therefore remove dwellers from farms (no security of tenure). Current housing stock on farms is adequate in terms of basic service levels. Communal waste dumps are used. Contractual agreements act as security of tenure, but rely on the good will of the employer, reducing their security of tenure. 	<ul style="list-style-type: none"> Formal houses attract migrant farm workers (better serviced). Solid waste is removed from a central location by farmers. Termination of contracts could result in displacement of farm dwellers.

Objectives	Findings	Explanations	Implications (Non-spatial)	Implications (Spatial)
<p>Objective 4: Demographic dynamics and socio-economic structures</p>	<ul style="list-style-type: none"> • 79% of migrant farm dwellers are in the economically-active group compared to 65% of non-migrant farm dwellers. • Farm migrants have higher education, income and employment levels than non-migrants. • 57% of farm dweller households earn less than R3500 p.m. • 71% of farm dwellers are employed. Majority (66%) of economically-active farm dwellers are permanently employed on the farm where they live, while a further 18% are seasonal and temporary farm workers living on farms. 	<ul style="list-style-type: none"> • Young (19-35) people make the decision to migrate. • Migration decisions are made by educated/skilled people earning more than non-migrants OR mechanisation requires more skilled labour. • The minimum wage of farm workers in 2011 was R1316.39. • Permanent workers are viewed as an asset for the employer/ land owner and are more regularly required on the farm; therefore they receive housing on-farm if possible. 	<ul style="list-style-type: none"> • Farm migrants reduce the dependency ratio of farm dwellers in general in the CWDM. • New better skilled workers will continue to migrate to farms in response to changing labour market needs. • Low incomes reduce farm dwellers' ability to afford service fees, but qualify them for a housing subsidy. • Permanent employment status of farm dwellers ensures continuous income enabling them to pay rent or service fees. • Permanent workers on-farm has less need to commute /travel between place of work and home, reducing commuting costs. 	<ul style="list-style-type: none"> • Skilled workers replace general workers on farms. General workers are displaced and become casual workers. • Subsidised housing should be provided at migrant hotspots.

5.1 Importance and relevance of findings and implications

The aim of the research was to assess farm dweller demographics and migration patterns within the Cape Winelands and its implications for farm worker housing on- and off-farm.

Agrarian transformation results in the redistribution of farm worker settlement patterns. The permanent workforce (skilled workers) is replacing general workers residing on farms while general workers are increasingly replaced by casual and seasonal workers who are less likely to reside on farms. This implies changing settlement patterns with larger numbers of farm labourers residing in low-income or informal settlements and less on farms. This will require less focus on permanent on-farm labour housing options and an increased need for rental type off-farm housing to address the need of transient labourers. Municipalities will thus have to assume a bigger responsibility to plan for this type of housing through relevant planning processes such as housing sector plans and Integrated Development Plans, an element hardly addressed in most of these plans. This planning should acknowledge the fact that casual and seasonal workers have a diverse livelihood strategy and therefore cannot be viewed solely as farm workers. These workers should form part of existing housing provision strategies (low income housing and subsidy schemes) and consideration in the implementation of *Upgrading of Informal Settlement Programme*. These changing conditions also imply that the planning focus for farm dwellers can not only be on housing provision, but also on improving skills levels to respond to changing labour market demands in the agricultural sector.

Changing labour arrangements of farm workers have resulted in distributional bifurcations of settlement location. Skilled workers are becoming increasingly required on farms and contribute to the new socio-economic composition of permanent farm dwellers. These workers are also attracted from other parts of the country, relocating to high intensity agricultural land where densities can be as high as 368 people per km² of irrigated agriculture. These high density farm dwelling areas, coinciding with farm dweller migrant hotspots, should be the focus areas for farm dweller housing projects – both on and off-farm as mentioned above. These locations are also financially more feasible for the provision of multi-purpose facilities (education, health, and other social support facilities) requiring a minimum threshold of users.

Farm dwellers mostly live in formal housing with access to basic services, but with very low levels of ownership or formal rental agreements. This implies a trade-off between the benefits of having access to relatively good quality housing and services, and the disadvantages of not having formal security of tenure. This calls for higher levels of collaboration between private land owners and the public sector. This could reduce pressure on farmers to provide housing and services to farm dwellers / workers as well as increase the security of tenure of farm dwellers.

The profiles of migrant farm dwellers indicate a shift towards better educated/skilled people, with higher employment rates and better income levels residing on farms. The majority (57%) of farm

dweller households however still earn less than R3500 per month, qualifying them for a housing subsidy. Farm dweller settlements at 'migrant hotspots' could be subsidised, where permanent farm workers/dwellers could buy their own house or pay for rental accommodation if their residence on farms is not a long term commitment.

As Appenbrink et al (2010) pointed out; on-farm housing provision linked to permanent employment status on-farm carries with it the risk of being trapped in an occupation (farm labour). Although these potential negative consequences could be accurate, increasing economic difficulties and declining job opportunities could foresee many farm workers content with a life-long or even inter-generational contractual agreement where ownership of subsidised housing is linked to willingness to work on the farm. This could ensure farm dwellers with employment and housing security for as long as they are willing and capable of working on-farm.

New off-farm settlements for farm dwellers/workers should only be available to verified previous permanently employed farm workers who are retired or no longer work on-farm. Off-farm 'retirement villages' specifically for farm workers should form part of municipal planning located in existing sustainable settlements, promoting the housing transitions at different life stages of a farm worker's life.

5.2 Limitations of this study

One of the shortcomings of this study is that census 2011 data does not include information on employment per economic sector, and it was thus not possible to make a clear distinction between farm dwellers and farm workers. The research however focussed on farm dwellers as main subject of investigation. Some of the statistical challenges were overcome by using the 10% sample data, allowing for more detailed cross tabulations between variables than the census 2011 data allows. The study adopted a quantitative approach, giving accurate statistical representations of farm dweller demography, housing and service levels. However qualitative data through interviews could have enriched the findings by reflecting the views and lived experiences of farm dwellers regarding housing conditions and standards of services.

5.3 Recommendations and future research

Future research could incorporate qualitative data collection methods, exploring perceptions of farm dwellers as well as land owners through interviews. This could enrich the statistical findings of this study and contextualise it within unique local circumstances and facilitate the identification of feasible solutions. Future studies could also focus on the areas of origin of farm dweller migrants to understand push factors at point of origin resulting in people to make the decision to move, specifically to farms in the CWDM. Foreign migrant farm dwellers could also be central to future studies examining countries of origin, citizenship status of foreign migrants as well as its implications for housing, tenure security and labour relations. Future studies could assess geographic relationships

between two or more variables, whereby clustering of features can be explained. Geographically weighted regression (GWR) technique can be used to statistically identify pull factors attracting migrants to certain geographic regions (farms). This can be used to accurately predict and forecast influx of farm migrants to specific areas based on the presence of specific variables and thus improve planning and sufficient provision of rural housing and services.

5.4 Significance of this study

There is currently a paucity of knowledge in existing literature pertaining to farm dweller housing, especially in the South African context. The CWDM is one of the most intensive agricultural regions in the country. This study specifically focuses on farm dweller housing within the CWDM, which is essential for ensuring sustainability and future growth within the agricultural sector as well as the region as a whole. This study is unique in its spatial analysis of patterns of origin and destination of farm dweller migrants as a separate group. This study contributes to understanding the spatial patterns of farm dweller distribution. Distributional changes are the result of agrarian transformation, technological changes and socio-political shifts resulting in sudden bifurcations. Traditional long range planning (20 years plus) becomes obsolete in such a rapidly changing environment. Analysing migration patterns over a 10-year time span enables the identification of shifts and trends necessary for effective planning in the near future. This study clearly indicated that farm dweller migrants proportionally have higher education, income and employment levels than non-migrants and spatially identified 'migrant hotspots'. It also contextualised living conditions of farm dwellers in the CWDM against other types of settlements.

8 900 words

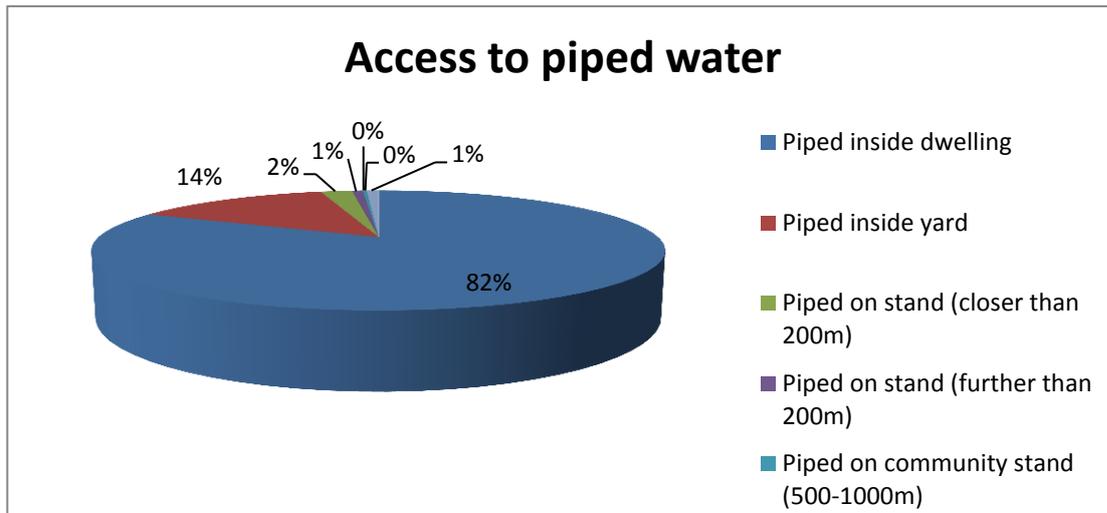
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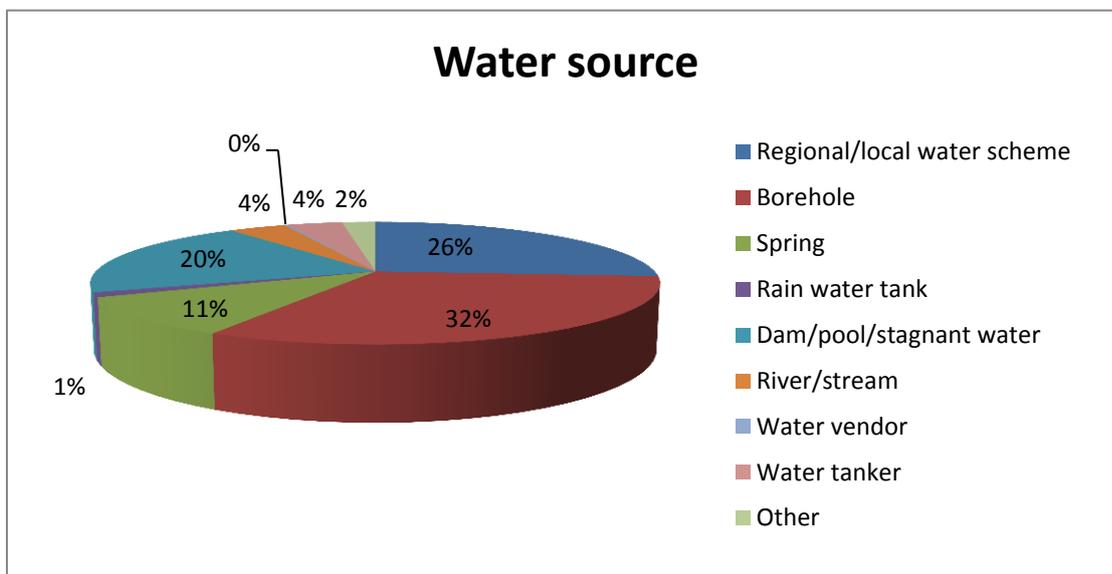
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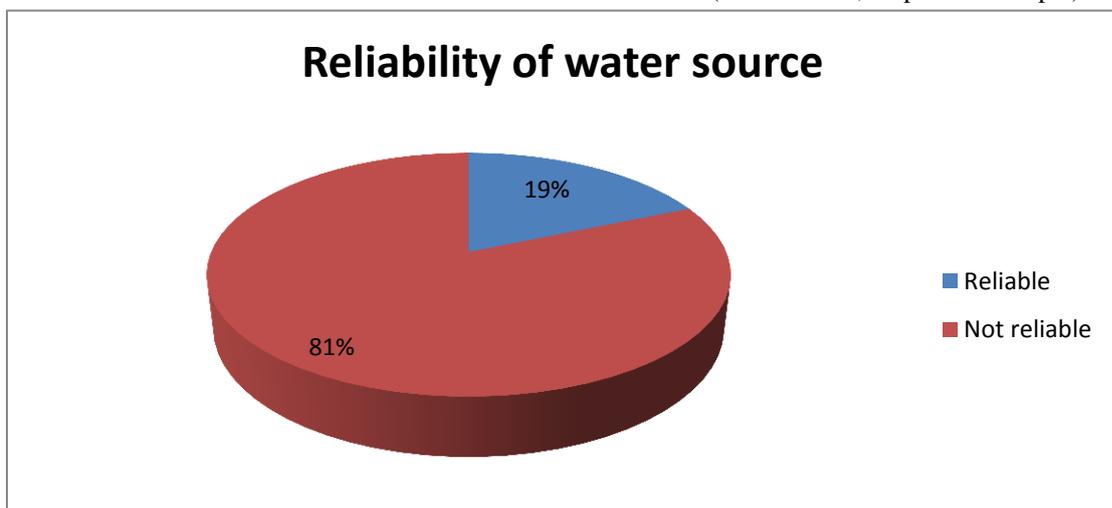
APPENDIX A



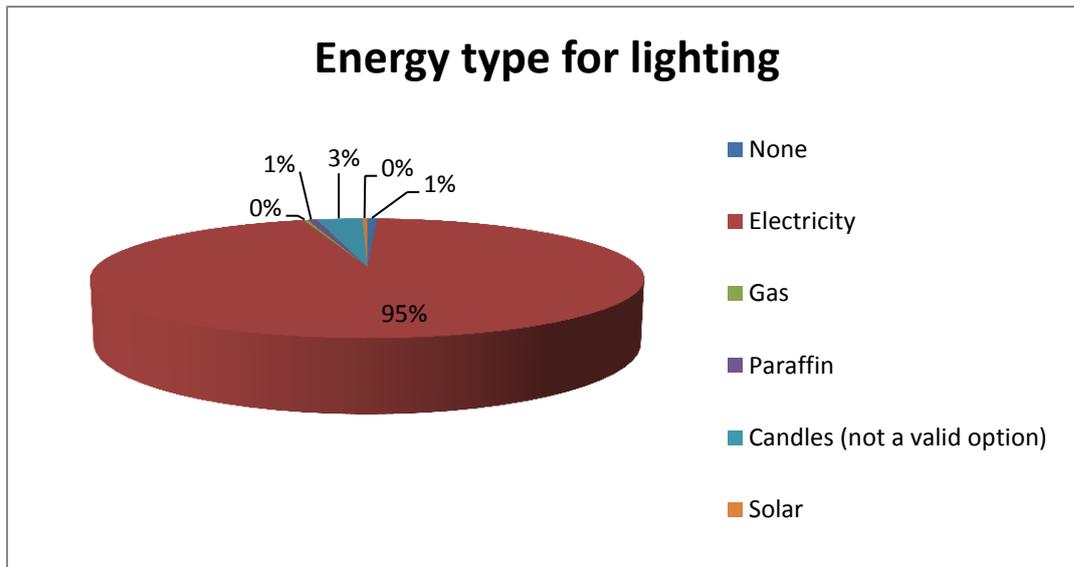
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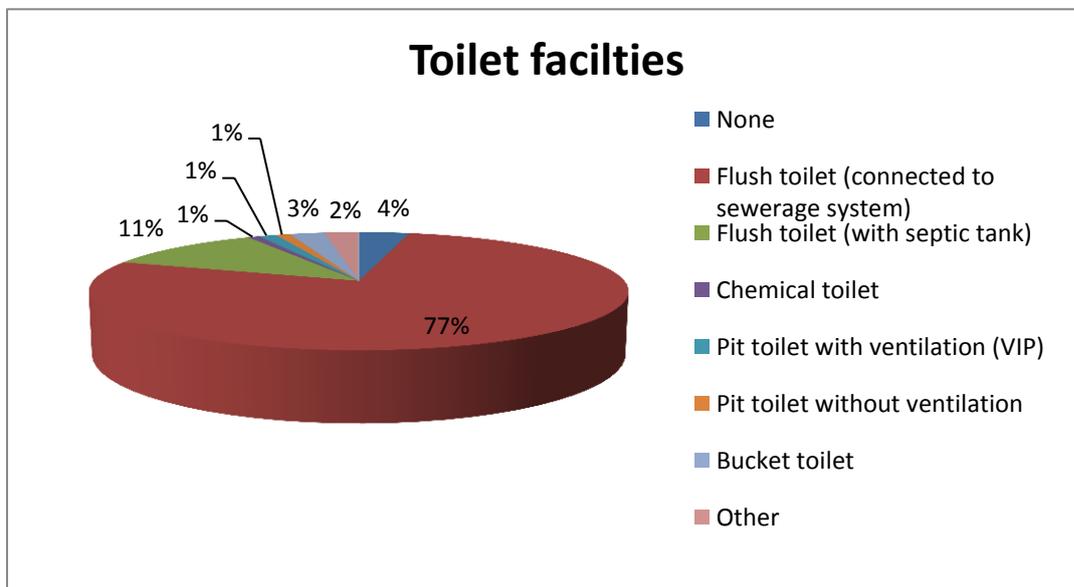
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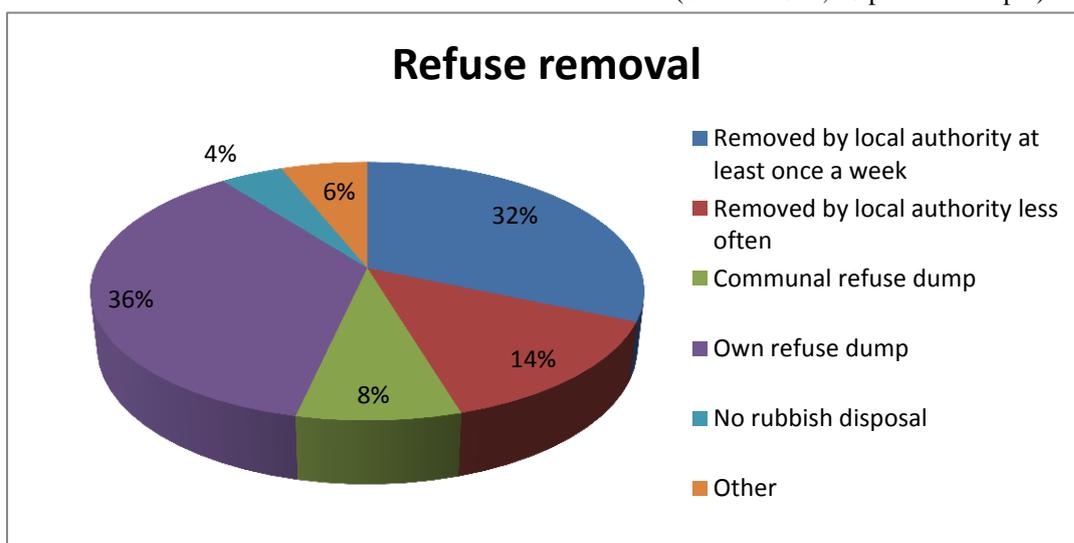
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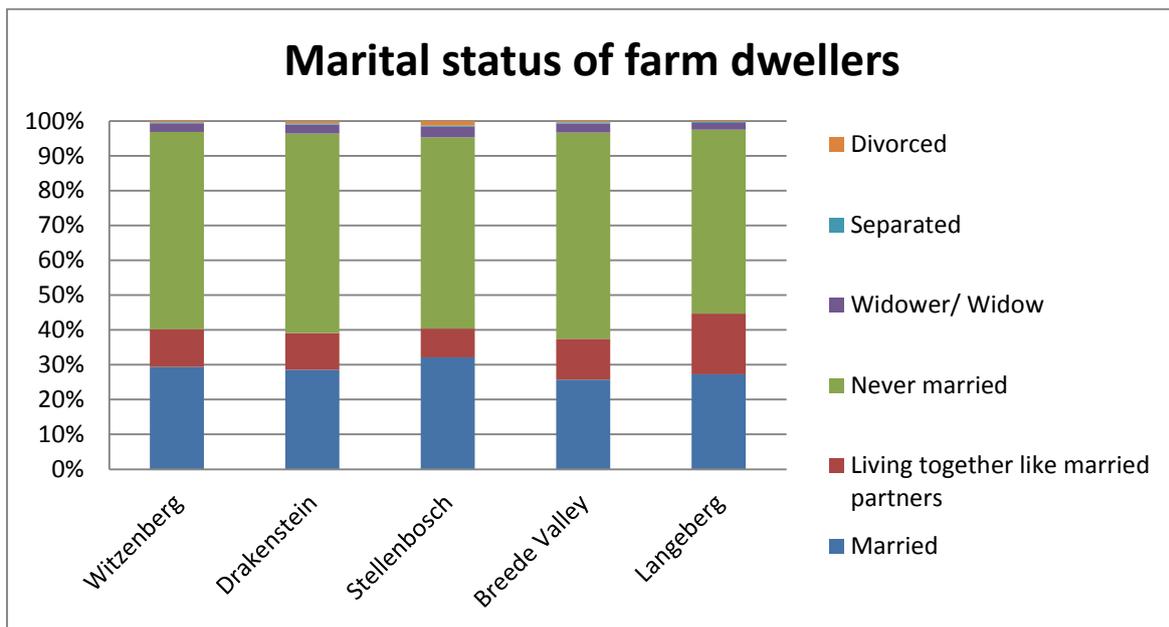


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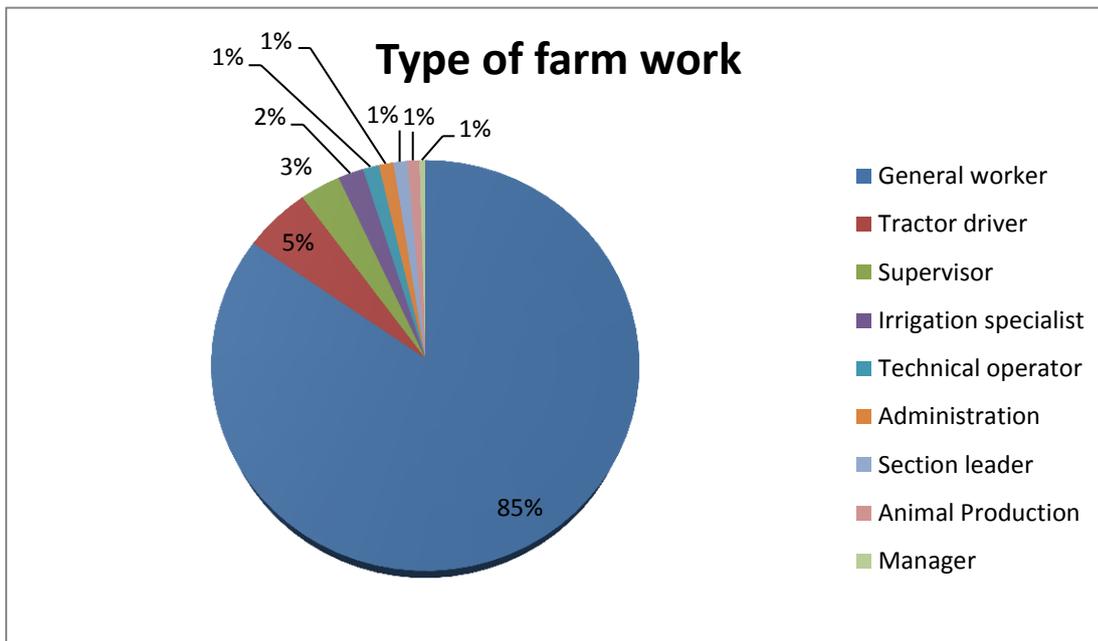
(Census 2011, 10 per cent sample)

APPENDIX B



(Census 2011)

APPENDIX C



(FEM Research 2015)