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Letlalo, Motlatso Olivia

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Transformation of agricultural land by fragmented legislations within the Ekurhuleni Metropolitan Municipality of Gauteng Province

A research report submitted in partial fulfilment of the requirements for the degree

of

Master of Environmental Science.

with

Witwatersrand University, Johannesburg, South Africa,
(School of Geography, Archaeological and Environmental Science within the Faculty of Science)

By

Motlatso Olivia Letlalo
721825

Supervisor: Prof. D Simatele

September 2016

Acknowledgements

I wish to express my appreciation to the following people and institution which made it possible for me to carry out this study:

Prof D Simatele for his leadership, encouragement, patient as a supervisor and the hard work he put in ensuring this final research report is of the required standard.

The Deputy Director General and Human Resource Director of the Gauteng Department of Agriculture and Rural Development for responding to my request and give permission to collect data.

All the participants in this study from the Department of Agriculture and Rural Development for their assistance in sharing their knowledge with regard to the research topic.

I would like to thank my family, especially my mother Mrs V Rakobela and my husband Mr S Letlalo for the continuous support and encouragement to continue and finalise this research report, my father Mr S Rakobela for supporting me throughout my career financially and my children Letlhogonolo and Thato Letlalo for understanding when not been involved in their lives during needy times and their positive considerations from which my strength was founded to keep on.

I would like to thank God for giving me strength to continue with the research report through all the difficult times.

Declaration

I, Motlatso Olivia Letlalo declare that the transformation of agricultural land by fragmented legislations within the Ekurhuleni Metropolitan Municipality of the Gauteng Province represent my work, and that all the sources that I have used and quoted in this study have been indicated and acknowledged in the form of reference and this study was not submitted by me previously for a degree at another institution.

Signature…… Date……

Abstract

The cause of the transformation of agricultural land to other land uses has been investigated, especially in the Northern Service Delivery of the Ekurhuleni Metropolitan Municipality within Gauteng Province. This was achieved by evaluating the processes undertaken during the review of the land use applications and what was considered by the decision makers when making decisions on land use applications in order to determine the effectiveness of the legislations and policies in protecting agricultural land from been transformed to other uses such as residential and industrial activities.

The literature review undertaken in this study showed that for South Africa, and particularly the Gauteng Province to be more successful in addressing the transformation of agricultural land to other land uses, different approaches are necessary. The review of literature showed that the South African legislations are fragmented and contribute to the transformation of agricultural land. In addition, it was highlighted that the South African government's priority is on infrastructure development which is also considered the cause of the transformation of agricultural land, and this compels government to continuously amend the planning policies in order to accommodate pressure of development. Lastly, several studies highlighted that government is also focusing on the land reform programmes which are not sustainable hence failed due to lack of support from government.

The results of the investigation confirmed that there is fragmentation of legislations and operational structure resulting in conflicting mandate and inconsistent decision making. This was pointed out through the experience of the participants during the questionnaire survey and semi-structured interviews. Data from the questionnaires, interviews and literature review was analysed to find information in order to address the research questions. Based on the findings of the study, it is recommended that legislations should be amended and ensures that the administration process is simple and aligned.

Key words: Transformation of agricultural land, fragmented legislations, fragmented institutions and processes.

List of Tables

Table 2.1 Total land transfers under South African land reform programmes, 1994 –2006 ..... **Error! Bookmark not defined.**
Table 2.2 Farms expropriated in 2006..... **Error! Bookmark not defined.**
Table 3.1 Demographic information of population ..... **Error! Bookmark not defined.**
Table 4.1 List of factors affecting implementation of legislations ..... **Error! Bookmark not defined.**
Table 4.2 Participants responses based on factors resulting in transformation of agricultural land ..... **Error! Bookmark not defined.**
Table 4.3 Participant's reasons supporting the amendment of legislations **Error! Bookmark not defined.**
Table 5.1 Responses on the state of legislations ..... **Error! Bookmark not defined.**

List of Figures

Figure 1.1: Map showing the boundary of the study area 4
Figure 1.2: South Africa national land cover/use map showing the agricultural land and residential development in the study area ..... **Error! Bookmark not defined.**
Figure 2.1 Friedman's core periphery model ..... **Error! Bookmark not defined.**
Figure 4.1 Variances of responses by participants affecting implementation of legislations resulting it been fragmented ..... **Error! Bookmark not defined.**
Figure 4.2 Variance of participants on the amendment of legislations **Error! Bookmark not defined.**
Figure 5.1 Responses on the state of legislations ..... **Error! Bookmark not defined.**

List of Acronyms

SLAG	Settlement Land Acquisition Grant
LRAD	Land Redistribution for Agricultural Development
SAAU	South African Agricultural Union
TCOE	Trust for Community Outreach and Education
GDP	Gross Domestic Products
BMA	Bangkok Metropolitan Area
SACN	South African Cities Network
IAP	Independent Advisory Panel
ANC	African National Congress
MEC	Member of Executive Council
DEA	Department of Environmental Affairs
GDACE	Gauteng Department of Agriculture, Conservation and Environment
GDARD	Gauteng Department of Agriculture and Rural Development
DAFF	Department of Agriculture, Forestry and Fisheries
EMM	Ekurhuleni Metropolitan Municipality
NEMA	National Environmental Management Act
ECA	Environmental Conservation Act
EIA	Environmental Impact Assessment
GAPA	Gauteng Agricultural Potential Atlas
SALA	Subdivision of Agricultural Land Act
EMF	Ekurhuleni Management Framework
SDF	Spatial Development Framework
CARA	Conservation of Agricultural Resources Act
PDALF	Preservation of Development of Agricultural Land Framework
SUAR	Sustainable Utilisation of Agricultural Resources

Table of Contents

Acknowledgements ii
Declaration iii
Abstract iv
List of Tables v
List of Figures ..... **Error! Bookmark not defined.**
List of Acronyms vi
Chapter 1 1
Frames of Reference 1
1.1 Introduction 1
1.2 Research Statement 1
1.2.1 Research Questions 2
1.3 Study aims and objectives 3
1.4 Description of the location of the study area, its importance and challenges 3
1.4.1. Location of the study area 3
1.4.2. The importance of the study area and challenges 4
1.5 Scope and limitation of the study 7
1.5.1 Literature Review and Theoretical Consideration 7
1.5.2 Limitation of the study 7
1.7 Methodology considerations 8
1.7.1 Research Methodology 8
1.7.2.1 Population and sampling methods 8
a. Population 8
b. Sampling methods 8
1.7.2.2 Data collection methods 10
a. Interviews 10
b. Questionnaires 11
1.7.2.3 Data analysis 12
1.8 Ethical considerations 12
1.9 Research design 13
Chapter 2 14
Theoretical Considerations and Literature Review 14
2.1 Introduction 14
2.2 Local Context 14
2.3 Global context 23
2.3 The analysis of actions in protecting agricultural land 27
2.4 Conclusion 29

Chapter 3 31
Methodological Considerations 31
3.1 Introduction 31
3.2 Research philosophy 31
3.3 Recapping research aim and objectives 32
3.4 Research design 32
3.4.1 Selection of the study and its importance 32
3.4.2 Study population and sampling procedure 33
3.4.3 Data Collection Tools 35
a. Questionnaires 35
b. Semi-Structured Interviews 36
3.4.4 Data analysis 38
3.4.5 Methodology reflection 40
3.5 Conclusion 41
CHAPTER 4 42
Empirical Evidence 42
4.1 Introduction 42
4.2 Legislations, Policies and Strategic approaches 42
4.2.1 National Environmental Management Act 107 of 1998 (NEMA) 42
4.2.2 Gauteng Agricultural Potential Atlas version 3 of 2006 (GAPA, 2006) 45
4.2.3 Strategic Plan 2010 – 2014 46
4.2.4 Subdivision of Agricultural Land Act 70 of 1970 47
4.2.5 Conservation of Agricultural Resources Act 43 of 1983 (CARA) 47
4.2.6 Sustainable Utilisation of Agricultural Resources of 2003 47
4.2.7 The Preservation and Development of Agricultural Land Framework of 2015 48
4.3 Legislations and policies framework in Gauteng Province 49
4.4 Participants perspectives on the transformation of agricultural land by fragmented legislations 55
4.5 Conclusion 57
CHAPTER 5 60
Analysis and Discussion 60
5.1 Introduction 60
5.2 Assessment of the perception of participants reviewing land use applications 60
5.3 State of legislations and policies regulating agricultural land 62
a. Gaps in legislations 65
b. Lack of knowledge of other legislations mandated to manage other environmental issues. 65
c. Conflicting mandate 65

d. Legislations required to be amended 65
5.4 Planning for development 66
5.5 Analysis of government action on the protection of agricultural land 67
5.6 An overview of the research topic 69
5.7 Conclusion 70
CHAPTER 6 72
Conclusions and Recommendations 72
6.1 Introduction 72
6.2 Summary of the research findings 72
6.3 Recommendations on legislations and policies 73
6.4 Recommendations for further research study 74
References 75
Appendix A 83
Questionnaires completed by participants 83
Appendix B 89
Semi-Structure Interviews Questions 90
Appendix C 90
Proof of Authorisation to conduct Semi-Structured Personal Interviews at the Department of Agriculture and Rural Development 91

Chapter 1

Frames of Reference

1.1 Introduction

According to Niemand (2011), “agricultural land gets scarcer as a result of the transformation of land use” such as residential and industrial activities. The question that came up was that, what has been done to protect agricultural land from been transformed as Ramsey and Corty (1982) pointed out that “people are aware of the rapid growth of urban areas, the spread of urban development and the extent to which prime agricultural land has been diverted to other land uses”.

It has been pointed out by Fuggle and Rabie (1992) that “agricultural land which is the most important component of South Africa’s natural resource base and provides the source for the future development of the country, in terms of food security of its populations”. The United Nations (2002) highlighted that agriculture is important in meeting the demands of future populations, especially in terms of eradicating poverty, providing food security and empowering rural communities in countries such as South Africa”. The importance of protecting agricultural land has been evidenced by the creation of sustainable job opportunities, investment by foreigners and benefiting the environment by maintaining biodiversity, which Lyson and Olson (1999) agreed that is “essential for the economic, social and environmental wellbeing of the citizens of a country”.

Collett (2013) pointed out that there is only “about 3 to 4 percent high agricultural land in South Africa suitable for sustained food production, however, it has been lost to other competing land uses, resulting in agricultural land been under tremendous pressure from new or expanding residential or industrial developments to facilitate current growth”. Glaeser and Kahn (2003) pointed out that “farmers have been forced to sell their land as government departments support the construction of residential development on the urban fringe”. Collett (2013) argued that in order to “manage pressure on the land, it is important to conduct land use in such a manner that it adheres to the policies developed. In addition, agricultural land should be efficiently utilised, protected for agricultural use and be protected from been degraded of lost”.

1.2 Research Problems Statement

In recent years there has been a “remarkable development of environmental laws in South Africa due to increased environmental degradation resulting from both natural and anthropogenic activities” (Glazewski, 2005). The various legislations that have been developed include the National Environmental Management Act 107 of 1998, the Subdivision of Agricultural Land Act 70 of 1970, the Conservation of Agricultural Resources Act 43 of 1983, the Local Government’s Physical Planning Act 125 of 1991, the Town Planning and Townships Ordinance 15 of 1986. All these pieces of legislations aimed to protect the environment for purposes of ensuring that sustainable development is achieved.

Despite the development of various pieces of environmental legislations, Bray (1995) is of the view that “environmental governance in South Africa remains fragmented and this is as a result of the weak institutional framework and a lack of cooperation and coordination of environmental activities among institutions that have been mandated to manage the environment”. This was suported by Kotze (2005), who stated that there has been “development of disjointed, unaligned and fragmented environmental governance institutions and structures as well as ill formulated environmental strategies and policies that tend to conflict with each other, resulting in unsustainable land and resource use practices”. An example of such fragmentation was shown by land use management and planning frameworks resulting in the conversion of agricultural land to other land uses such as the construction of residential housing units in the Gauteng Province, which Collett (2013) has observed that it has both “direct and indirect implications on environment and wellbeing of the society”.

It has been acknowledged that “Gauteng Province is among the rapidly urbanised province in South Africa” (Statistics South Africa, 2012:13), but it is also crucial to protect and conserve designated land for agricultural and food production purposes. Therefore, this study was intended to investigate how environmental legislations protect agricultural land from been transformed through the processes undertaken during the review of land use applications, which legislation is appropriate to change the land use to allow other land uses and whether other legislations have been considered.

1.2.1 Research Questions

It was deemed necessary to investigate the effectiveness of the environmental legislations based on the highlighted research statement. The questions developed to guide the research process are as follows:

a. How could fragmentation of legislations which result in the loss of agricultural land be addressed through integrated government?
b. What are the existing challenges that prevent the coordination of various institutions mandated to be environmental stewards?
c. How to improve cooperation among various environmental institutions?
d. What associate the findings of this study with sub-Saharan countries?

1.3 Study aims and objectives

The aim of the study was to assess how legislation regulates change of agricultural land use through the decision made after the review of the Environmental Impact Assessment (EIA) applications. The study was intended to find out how to interpret sustainability concept within agricultural and environmental legislations and ensure better environmental governance within agriculture sector.

The following are the objectives of the study in order to address the research problem and research questions:

a. To assess how the review of the EIA applications are undertaken by the GDARD in order to protect agricultural land.
b. To determine which legislation could allow the change of agricultural land to other land uses.
c. To determine whether other legislations are considered when making decisions on land use applications.

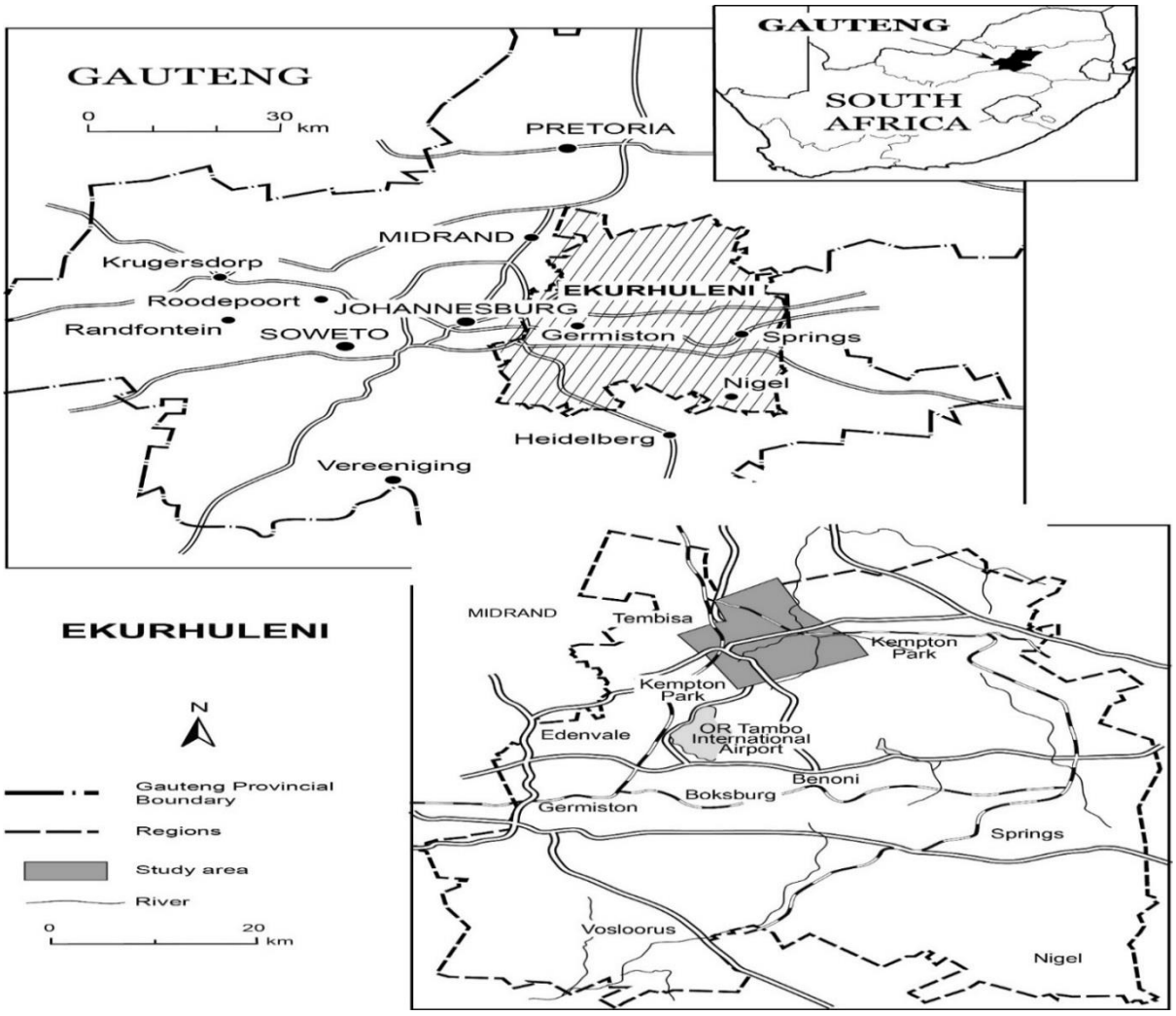
1.4 Description of the location of the study area, its importance and challenges

1.4.1. Location of the study area

The study area is located within the Northern Service Delivery Centre of the Ekurhuleni Metropolitan Municipality (Kempton Park area) of the Gauteng Province of the Republic of South Africa (Figure 1.1). According to SACN (2007), the Ekurhuleni Municipality “comprises of 1924 square kilometres (average population density of 1313 square kilometres) with an estimated population of 2 528 303 square kilometre. It further indicated that “Ekurhuleni ranks third in terms of average population”, while the Ekurhuleni Environmental Management Framework (2008) presented that the “total population of the northern service delivery area has grown by more than 30 percent between 1996 and 2001 and this was due to influx of migrants from other provinces or from outside the country”.

As shown On Figure 1.1, the study area is located east of the R21 freeway with part of the western boundary bordering on the freeway, south of R25 (Bronkhorstspruit road) road, north of the R23 (Benoni) road. The study area is in close proximity to the OR Tambo International Airport. The farm Witfontein is located on the boundary of the northern part of the Ekurhuleni Metropolitan Municipality and the western part of the Tshwane Metropolitan Municipality, which is also not transformed. The study area is not located in close proximity to urban area.

Figure 1.1 Map showing the boundary of the study area



Source: Wendy Phillips (2014), University of Witwatersrand, Johannesburg

1.4.2. The importance of the study area and challenges

The GDARD conducted surveys within the Gauteng Province in 2002 and 2006 to identify the productive agricultural land. The 2002 study showed that “approximately 28.7 percent of the land

has a high and moderate to high agricultural land. This was made up of 15.1 percent high agricultural land and 13.6 percent moderate to high agricultural land" (Gauteng Agricultural Potential Atlas 2, 2002). There was continuous pressure of developing this agricultural land, which resulted in a follow up study in 2006, which focussed on current land use. The 2006 study showed that "only 17.3 percent of land in the province could still be regarded as high agricultural land, 46.8 percent has a moderate agricultural, 17.34 percent has a low agricultural and 18.48 percent was regarded as built up areas" (Land Capability Report, 2006). Based on the findings, the agricultural land was classified in order to easily identify and protect it. However, there were still continuous proposal of non-agricultural development in the Witfontein area, hence this study to examine the position of legislations and policies in protecting agricultural land.

According to the EMM EMF (2008), the farm Witfontein is "zoned for agricultural purposes and open spaces". This was confirmed by the Environmental Impact Assessment report compiled for Serengeti Golf and Wildlife Estate on Portion 3, the remaining extent of Portions 4 and 7 of the farm Witfontein (see Figure 1.2 below), which is approximately 608 hectares and form part of the study area, compiled by Rock Environmental Consultants in 2004. The EIA report for Serengeti Golf and Wildlife Estate highlighted that the farm was "used for agricultural activities such as maize, bean production and planted grass pastures which facilitate grazing cattle and considered agriculturally viable. The land was considered important in terms of improving economic growth of the country and alleviating poverty". However, the above-mentioned Environmental Impact Assessment report did not highlight the employment generated as a result of the agricultural activities used to take place in the area but only highlighted that the area was not productive for agricultural activities due to its proximity to the industrial areas and there was no sufficient water for irrigation of the area. According to World Bank (2004a), "the rate of poverty reduction has been very closely related to agriculture performance, particularly the rate of growth of agricultural productivity". Considering the findings of the study undertaken in 2006, most of the study area was not transformed, situated within the High Agricultural Potential Area and adjacent to the Ekurhuleni-Tshwane Hub in terms of the GAPA (2006).

High agricultural land was defined in terms of GAPA (2006) as land having the "soil and terrain quality with growing season moisture supply needed to produce sustained high yields of crops when treated and managed according to best possible farming practices, while the agricultural hub is an "area with a large amount of high agricultural land that should be protected for agricultural uses.

Figure 1.2 The South Africa National land cover/use map showing the agricultural land and residential development in the study area



Source: Land cover/use map by Olivia Letlalo (2014)

1.5 Scope and limitation of the study

1.5.1 Literature Review and Theoretical Consideration

The study would concentrate on the assessment of the legislations and policies applicable to the management and protection of agricultural land such as the National Environmental Management Act 107 of 1998, Subdivision of Agricultural Land Act 70 of 1970, the Gauteng Agricultural Potential Atlas (GAPA, 2006), the Strategic Plan 2010-2014, Conservation of Agricultural Resources Act of 1983, the Preservation and Development of Agricultural Land Framework Bill of 2015 and Sustainable Utilisation of Agricultural Resources Bill of 2003 which are applicable within the Gauteng region of South Africa. The intention was to investigate whether these legislations were designed to protect the agricultural land from been transformed to other land uses.

Various researches undertaken about the transformation of agricultural land to other land uses were considered during literature review and theoretical framework. In addition, documents such as EMF, SDP, previous research projects, internet sites and journal relating to the research topic were also considered. The Environmental Impact Assessment (EIA) reports compiled for the Witfontein area was considered to assess why the area was not considered for the agricultural activities but for other activities such as residential and industrial uses. Further to the above, the appeals and court decision as a result of the Environmental Impact Assessment decision issued in the area was taken into account.

The intention of the researcher was to investigate on whether there are strategies and plans developed to address the problem of the fragmentation of the agricultural land and how the strategies and plans address the concerns of the transformation of agricultural land to other land uses. The study would also highlight the gaps identified during the review of literature and how they were addressed. In addition to the review of legislations and other studies undertaken, the study focused on obtaining data from the reviewers of land use applications and policy makers on the review processes and challenges encountered.

1.5.2 Limitation of the study

The study was conducted locally, limited to the farm Witfontein located within the Ekurhuleni Metropolitan Municipality of the Gauteng Province. The study focused on the review of literature including the national and provincial legislations, municipal documents and previous research projects, journals and internet sites relating to the research topic. In addition to the above, the

study focused on conducting questionnaires survey and interviewing the reviewer of land use applications, therefore, access from the organisation was considered important. This would have assisted the researcher to approach many participants and be able to obtain more data that would assist in addressing the research problems or questions.

1.7 Methodology considerations

1.7.1 Research Methodology

In this study, the phenomenological method which according to Husserl (1992) was "used as a means to secure a foundation of knowledge from the participants was employed, and focused more on individual experiences, beliefs and perceptions" (Husserl, 1962). This method was acknowledged by Streubert and Carpenter (2003) that "it describe particular experience of things as lived experienced". The intention of the researcher in using the phenomenological methods was to obtain individual experience and opinion about the research topic.

The approach on phenomenological research method according to Burns and Grove (2003), "aim to select sources of data that would assist the understanding of experiences from an insider perspective and people's own experience".

1.7.2.1 Population and sampling methods

a. Population

According to Burns and Grove (2003), "population is described as all elements that meet certain criteria for inclusion in a study". For this study, population included the officials reviewing Environmental Impact Assessment within the GDARD. Bless and Higson-Smith (2000:84) described the "population as the entire set of objects or people that form the focus of the research on which the researcher intends to determine some characteristics".

b. Sampling methods

Burns and Grove (2003) defined a sample as a "selected groups of elements that are individuals and organisations in order to participate in a research study". A "sample would be chosen from the study population that is referred to as target population or accessible population" (Pilot and Beck, 2004). The participants chosen met the adequate criteria set for the study.

To qualify for inclusion in this study, participants had to satisfy the following criteria:

i. Be an employee of the provincial department reviewing or commenting on the EIA applications and also be responsible for the planning of development that advice the review of the EIA applications.
ii. In addition to the above, be someone who has experience in the review of EIA or land use applications.

Potential participants who did not meet these criteria were excluded from participating in the research study. The process of selecting participants followed guidelines of ethics committee and started after approval from relevant ethics committee has been granted.

Individuals considered in this study are professionals with experience in the review of EIA applications at provincial department and those responsible for planning of development in the study area. The study engaged 25 (twenty five) officials from different directorates such as the Environmental Impact Assessment, Compliance and Enforcement and Agriculture within the GDARD at senior management (Director), lower management (Assistant Director) and officials (officials at entry level).

A list was compiled of all officials with relevant knowledge in the research topic. The identified individuals were given an opportunity to confirm on whether they would participate in the research study. The details of the study was provided to the identified individuals who accepted to participate to the research project and arrangements were made taking into consideration suitable time and place to the participants.

According to Ritchie, Lewis and Elam (2003), “samples for qualitative studies are generally much smaller than those used in quantitative studies. They highlighted that more data does not necessarily lead to more information. They are of the view that one occurrence of a piece of data is all that is necessary to ensure that it becomes part of the analysis framework and useful in understanding the process behind a topic”. Similarly, Crouch and McKenzie (2006) pointed out that “qualitative research is concerned with meaning and not making general hypothesis statements”.

To obtain participants for this study, purposive or judgmental sampling method was used to determine a sample for the in-depth key informant interviews. De Vos (2002) and Burns and Grove (2003) agreed that “purposive sampling involves the researcher making a conscious decision about which individuals and which organization would best provide the desired

information". This results in "discussion which leads to sharing, familiarising new ideas and concepts with an outsider who then familiarise with them" (Chambers, 1992).

1.7.2.2 Data collection methods

According to Burns and Grove (2003: 373), "interviews, participant observation, focus group discussion, narrative and case studies are methods that could be used to collect data". "Literature review was also used to collect data", which Da Silva Rodrigues (2009) considered important and sources are books, national, provincial and local legislations and policies, previous studies conducted in South Africa and other countries, theses and the internet sites". Talbot (1995: 472) highlighted that "data collection began with the researcher deciding from where and from whom data would be collected which Streubert Speziale and Carpenter (2003: 18) supported and further pointed out that the "researcher is the main research tool or primary instrument".

An interviews and questionnaires were used for this study as methods to collect data. The intention of considering the abovementioned methods was to ensure that more data was collected from the participants that would help to address the research questions. Questionnaires were sent to the participants by e-mail, with questions that enabled the participants to share their experience with the researcher. In addition, the researcher considered semi-structured interviews in order to obtain more knowledge on issues that were not part of the questionnaires.

a. Interviews

"Interviews are one of the most commonly used methods of data collection (DiCicco-Bloom and Crabtree 2006). Qualitative research interview was defined by Kvale (1983, p.174) as an "interview whose purpose is to gather descriptions of the life-world of the interviewee with respect to interpretation of the meaning of the described phenomena and collecting data with this tool could be done in several ways, for example, face-to-face interviews, interviewing by telephone and interviewing using the internet". The series of interviews questions varied from closed to open-ended, which allowed participants to provide more detailed information. "Open-ended questions are the most effective route towards an original understanding of people's experiences" (Neuman, 2000). This study considered face to face and telephonic open-ended interviews which are the most common, planned well in advance by the researcher. The snowball technique was followed in this study, which Thompson (2002) defined it as a "method whereby a few identified members of a population identify other members of the population for the purpose of obtaining non-probability sample". This method allowed participants to express their opinion with regard to what they consider when reviewing land use applications.

During the interview, participants were asked about the specific cases which took place within the study area that helped the researcher to understand why there is pressure to change agricultural land to other land uses. For example, residential development on Portion 1 of the farm Witkoppies, known as Chieftain Estate Development and also residential development on Portion 1 of the farm Witfontein and on Portions 4, 5 and 7 of the farm Witfontein, known as Serengeti Estate Development, which Environmental Impact Assessments were conducted and environmental authorisation were issued. The developments were proposed in areas that were zoned for agriculture, appeals were lodged and court case (Chieftain Estate Development) took place prior commencement of the residential development. The case studies pointed out issues of concern with regard to the processes undertaken during the review of the land use applications. Stake (2000:437) highlighted that collective case studies are used because it is believed that understanding them would lead to better theorizing about the problem. In addition, the issue with regard to which the department made the decision about change of land use, advised by which legislation and whether other department were consulted would be clarified.
Therefore, in order to obtain more information, the researcher made appointments with the research participants at a time which suit them, they were reminded of the interview agreement date before an interview date and also given background of what the interview would be about.

b. Questionnaires

The researcher used structured questionnaires to collect data from the participants. Open ended and closed ended questions were designed in order for participants to give more detailed information, personal opinions and challenges encountered during the review of applications. The questionnaires were sent via e-mail to the identified officials. This gave them more time to respond and be able to provide detailed information. It was submitted that participants do not have time for verbal interviews because they are not always in the offices. In addition, the researcher was of the view that the completion of questionnaires would allow low level of involvement and high number of respondents. Woods (1999) highlighted that the “less the researcher disturb the scene, the deeper the result of the research and the more the representation of it might be truthful”.

The intention of the questionnaires was for the participants to give general overview in terms of their experience and challenges encountered during the review of the applications, to highlight if there are any strategies developed in addressing the challenges, whether the strategies were implemented accordingly and if not why? In addition to the above, it was the intention of the researcher to collect data that would help to understand how spheres of government address the issues of urban planning and the management thereof. The questionnaires helped the researcher

to collect data which is what Kendal (2008) highlighted that “questionnaires could provide evidence of patterns amongst large populations and qualitative interview data often gather more in-depth insights on participant attitudes, thoughts and actions”.

1.7.2.3 Data analysis

As highlighted above (see section 1.7.1), phenomenological method was used to analyse data. Kleiman (2004) pointed out that the “structure of phenomena is the major findings of any descriptive phenomenological inquiry. This structure is based upon the essential meanings that are present in the descriptions of the participants and also the researcher’s perspective”. In addition, the data was validated using the data triangulation method. According to Hussein (2009), data triangulation is referred to the “combination of different data sources used in the same study for validation purposes”. For example, mixing the use of interviews with the questionnaires survey in analyzing the data, and this is referred to methodological triangulation. Olsen (2004) argued that triangulation is not only aimed at validation but “at deepening and widening the understanding” of another person. According to the Institute for Global Health (2009), the advantage of the triangulation method is that it “provides for in-depth data by integrating multiple data from various sources through the collection, examination, comparison and interpretation (Institute for Global Health, 2009). Triangulation method assists in improving the validity of the results by reducing the risk of false interpretation of the collected information” (Institute of Global Health, 2009).

1.8 Ethical considerations

The study involved the participation of officials, therefore, ethical issues such as confidentiality and anonymity, consent, privacy and withdrawal was considered. The researcher complied with the ethical policy of the University of Witwatersrand when conducting the research. According to Streubert Speziale and Carpenter (2003: 314), the researcher is required to “consider the rights of the participants expected to provide the knowledge” on the research topic, which was also supported by Grove (2003:65).

1.9 Research design

This research is an investigative study, intended to focus on the review of the environmental legislations in order to understand the effectiveness of the existing legislations and the position that legislations played in the prevention of the transformation of agricultural land to other land uses, previous studies and thesis conducted with regard to the research topic. The processes undertaken by the reviewer of land use applications were assessed to establish the sustainability concept within agriculture and environmental legislations in order to ensure better environmental governance within agricultural sector. Chapter 3 presented data collected through the semi-structured interviews and questionnaire surveys from the GDARD in order to understand the processes considered during the review of applications. The empirical evidence and analysis of the data collected through the literature review, interviews and questionnaires and the discussion of the findings of the research study was presented in Chapter 4 and 5 of the study. The last chapter of the research discussed the combination of the conclusion and the recommendations from the study.

Chapter 2

Theoretical Considerations and Literature Review

2.1 Introduction

This study intends to evaluate existing theories and literature in order to have knowledge of the views of other authors about the research topic. Additional sources of information to be reviewed would include academic journals and internet sites as indicated in Chapter 1 (see Chapter 1, Section 1.5.1) of this study. It is important to establish whether previous studies undertaken addressed this research problem of the transformation of agricultural land to other land uses or whether failure could be managed by this research study. In addition, it would be essential to identify whether other authors agree or disagree about this research topic. This chapter would further investigate how Zimbabwe, Namibia and Bangkok address the issues of preventing the transformation of agricultural land to other land uses for the purposes of agricultural activities. The main objective would be to learn from international practices that could help South Africa in addressing the problem of the transformation of agricultural land to other land uses. Secondly, it was noted that these countries was faced with the same problem which South Africa, especially the Ekurhuleni Metropolitan Municipality of the Gauteng Province is facing. Therefore, the relevance of these countries to South Africa is important to be discussed, taking into consideration the approaches and trends that could serve as a lesson for South Africa.

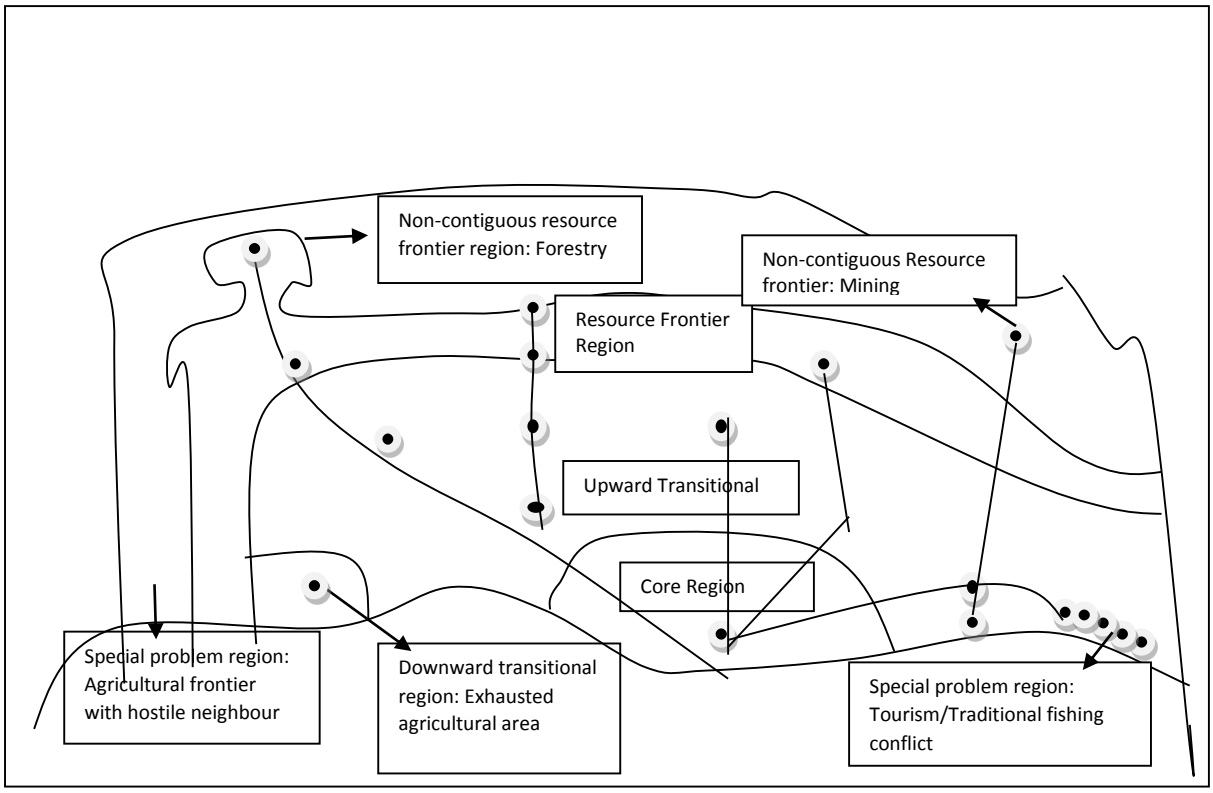
2.2 Local Context

The studies undertaken in addressing the transformation of agricultural land to other land uses showed that there are factors not effectively considered by spheres of government when supporting the expansion of development in the area which are contributing factor to land use change. In 2011, the Statistics of South Africa registered an urbanisation rate of 61 percent (51.8 million people), which Gauteng Province alone had an urban population of about nine million. Although the urban growth rate varies across different metropolitan areas, for “the 1996 to 2001 period, growth for the Ekurhuleni Metropolitan Municipality (EMM) area was 4.46 percent while during the 2001 to 2011 period, there was a drop in growth rate for EMM area” (Ruhiiga, 2014). The Ekurhuleni Metropolitan Municipality Environmental Management Framework (EMM EMF, 2008) presented that “Ekurhuleni is known as the commercial, industrial and transportation centre of South Africa which attract more development and the population growth for the was 2.7 percent per annum, while the total population of the Kempton Park (the Northern Service Delivery Region

were the study area is located) has grown by more than 30 percent between 1996 to 2001 compared to the southern and eastern service delivery area which has grown by 20 percent during the same period. The EMM EMF (2008) further presented that in order to support the population growth and development pressure, the planning of the area has to change". In addition, the review of literature pointed out that the research conducted by Stats SA (2015) showed that population within the Gauteng Province has increased by 13.20 million (24 percent) and this could be an evidence of the possibility of the region to experience more increase in population.

According to Kok and Gelderblom (1991), the socio-economic and planning problems are as a result of high population. Knox and McCarthy (2012) describe this as urbanisation by implosion which is when population growth is happening but not noticed. Knox and McCarthy (2012) hold views that "countries with high levels of urbanisation tend to have high levels of economic development, however, not clear on the direction of the extent to which urbanisation promotes economic development" and this create the opportunity for investors in less developed regions, taking advantages of available land. Myrdal's notion of cumulative causation saw growth in less developed regions following the pattern of urbanisation experienced by Europe during the Industrial Revolution which triggered strong demand. Myrdal's model was influenced by Hirschman (1958), Perroux (1955) and Friedmann (1966) who used a similar logic, which was about trickle down effects. This was described as the economic growth that spread to more remotely located cities and regions that is generated by high levels of demand in more centrally located cities and regions (Sjoberg, 1960). Similarly, Perroux (1995) pointed out the importance of the propulsive industries that have characteristic of regions with high rates of economic growth such as textile industry in England during the Industrial Revolution (Vance, 1971). Propulsive industry grows and attracts other related industries, growth pole is formed and an urban growth centre develops. These ideas are shown in Friedman's model (Ranford, 1979).

Figure 2.1 Friedman's core periphery model



Source: Adapted from Ranford, 1979

Figure 2.1 shows the core-periphery model which includes the core, the upwards and downwards transitional regions, the resource frontier region and the special problem regions. This model shows that the core remains unchanged and continues to occupy the central position in the system while the periphery is divided into downward and upward transitional regions, special problem regions and resource frontier regions. The upwards transitional regions are characterised by rapid economic growth and improvements of infrastructure while the downwards transitional regions are occupied by rural agriculture that are deteriorating. The model shows that the resource frontier regions are occupied by large scale economic activities and the special problems regions require special development approach. However, the core region which has a huge concentration of economic activities is characterised by the promise of economic growth (Friedmann, 1996). The core regions are small areas but has highly developed infrastructure such as transport system, water, health facilities. Friedmann (1966) pointed out that the core has advantage for change and supported politically. However, the challenge is how to sustain growth and provide for the needs of population growth in the core regions (Friedmann, 1966)?

Knox and McCarthy (2012) argued that although these kinds of development models have informed policies and practices in the past, they are now regarded as too simpleminded. They argued that the model maintains the misrepresentation of developmentalism that all countries and regions are on the same economic growth (Knox and McCarthy, 2012). They are of the view that this model failed to appreciate that developing countries are different from developed countries which were free from competition. “People in less developed cities and countries compete in a crowded field and overcome barriers that were created by the success of the developed countries and cities. The problem is that urban growth is not producing the expected boost in economic development” (Knox and McCarthy, 2012).

Lötter (1987) observed what Freidmann’s core periphery model explained, and reported that high populations in some regions were contributed by the spatial inequalities in economic development. This inequalities between economic and population is what Lötter (1987) argue that is a well-known characteristics of the South African spatial structure. Furthermore, this inequalities lead to regions that are better endowed with natural resources than others to attract investments. On that note, it could be concluded that core regions play an important role in the economy and job creation. It was noted that there is lack of urban integration with small towns or rural areas in South Africa, resulting in decision makers been biased in terms of investment and policy attention while little has been undertaken in terms of understanding the development issues of small towns (Dewar and Todeschini, 1999). Gore (1984) put forwards that the social inequalities between people should cause a concern from a moral perspective and not the inequality of regions per se. This would lead to the development of policies addressing the dilemma of poor people and not regions. Thus because the spatial processes never function independently from social processes, it is incorrect to isolate space in this way. Rogerson (1989) is also of the view that “integration of space with national macro and sectoral policies is the key to successful and effective national policies”. Therefore, in order to address the issues of spatial inequalities and ensure development of the regions, South Africa needs to reduce pressure of over concentration in the metropolitan areas (SA, 1982). Kok and Gelderblom (1991) pointed out that even though some researchers in South Africa are not willing to deny such motivation completely, the majority do not prefer to subscribe to that argument. They (Kok and Gelderblom, 1991) maintain that the control of growth of large cities is up to South African government and not that people from rural areas are the cause of urbanisation. On the one side, this could be confirmed as poor planning by government whereby development is prioritised in urban areas and not in rural area, resulting in people migrating to urban areas to look for better life and employment.

It was submitted that the economic growth of South Africa depend on the infrastructure development (EMF, 2008). This could be confirmed by an agreement made between the Ekurhuleni Municipality and the GDACE in 2005 to amend the EMF of 2005 in order to allow mixed development in the area that attracted more pressure of development. Furthermore, Ruhiiga (2014) reported that "since 2009, Gauteng Province established massive infrastructure development around the main highways and also the completion of Gautrain has introduced major impact on the construction industry". It was acknowledged in the EMM Spatial Development Framework (SDF) (2011, pg 41) that there is pressure of development within the study area. An example of a high residential development proposed on Portion 1 of the farm Witfontein was presented in the SDF report. It was further pointed out that this resulted in a challenge as the EMM has not planned for development in the area due to unavailability of bulk services. Moyo (2013) has put forward that land holding patterns have not significantly changed to reflect political transformation, which result in a challenge in the management of land use in the area. Moyo (2013) further argued that skewed land ownerships are still the norm in South Africa, Swaziland and Namibia. However, this could be argued that it has been promoted by Sections 19 and 20 (1)(a) of the Town Planning Ordinance (1986) administered by the local municipalities which consent to the use of land for any activities. In the views of Silberstein and Maser (2002), this landowner pattern is likely to push the biological carrying capacity to the limit when population growth is used as primary non-negotiable constraint around which development should occur. They further argue that this would shift the landscape from its natural state, upset the ecological integrity and finally affect the quality of life. Therefore, in order to address planning of development in the area, Ruhiiga (2014) is of the view that planners need to understand changes in the area in order to plan for urbanisation. This would lead to the introduction of policies that promote development growth in the area.

Furthermore, Collett (2013) argued that the demand for competing land uses and increase in pressure of economic growth which are not effectively addressed; contribute to the loss of productive farmland in the core regions. In her research study conducted in 2013, it was reported that less 14 percent of South African land was suitable for dry crop land and 3 percent was considered as high agricultural land of which industrial related activities expansion in Gauteng occurred on this high agricultural land. This was as a result of the ineffective land use planning and lack of integration of environmental planning in the overall development planning. She further argued that the inputs of the agricultural specialists are not incorporated into the planning reports by the local authorities (Collett, 2013) during the creation of planning reports. This showed that public participation process is not considered important in other sectors. Potter's (1985: 152) pointed out that "public participation needs to be taken seriously, it need no longer be considered the current planning phobia", is highly relevant. Emmett (1992c) put forward that "participation

offers important benefits beyond specific needs to change in South Africa especially in decision making, implementation of development programme and projects, and sharing benefits of development". It is clearly presented in the 1998 White Paper on Local Government that development in local government requires active participation of citizens in development initiatives in their areas. According to Khan (1980: 58-59), the planners are not able to communicate fully with the affected parties and argue based on the following statement:

"Unfortunately, what we are experiencing today is development administered to the people. It is the policymakers, planning bureaucrats and technocrats who decide what is good for the people. Then they try to impose that package on the population".

This defeated the aim of the 1998 White Paper on Local Government which makes it clear that development of local government requires the active participation of citizens in development initiatives in their area. On that note, Erasmus (1991) hold views that the "essence of sustainable development is effectively broadly based on people's participation in the determination of priorities, the identification and sharing of resources and the selection of strategies". Erasmus (1991) argued that "there would be hope to reconcile the medium to long term aims of the state and immediate needs and priorities, should government not listening to the researchers and academics as well as communities.

In 1994, the African National Congress (ANC) led government initiated way to address the land resdristribution issues in order to promote protection of agricultural land for agricultural purposes. However, Ntsebeza (in Hendricks, Helliker and Ntsebeza, 2013) argued that there was a research study conducted in the Queenstown area of the Eastern Cape during the late 1980 and early 1990 with an aim to address the issues of land ownership. The question of buying and selling land to address the issue of land ownership was hardly discussed. In 1991, De Klerk assessed approaches to address land reform in the post-apartheid South Africa (Kok and Gelderblom, 1991). The approach considered was market based and could be seen to reflect the degree of state intervention. Therefore, the initiatives by De Klerk failed and he pointed out that the democratic government led by ANC would take over in order to resolve the land reform problems (De Klerk, 1991). According to Zicker (2003), "land reform is defined as the redistribution of property or rights in land for the benefits of the landless, tenants and farm labours". Therefore, considering its broadest meaning incorporating land redistribution, land tenure and land restitution as defended in section 25 of the Constitution (Dlamini, 2014), this study would focus on land to be accessed by black majority for the use of agricultural purposes although comments about land reform may be considered.

According to Ntsebeza (in Hendricks, Helliker and Ntsebeza, 2013), the debate that took place during 1980 about land reform did not include how the future of South African democratic government would be like, however, land reform issues were discussed. He further put forward that the discussions was about the Bill of Rights for future South Africa whereby there was an argument by the South African judges who questioned the property rights and further pointed out that the "South African problems would be threatened if existing property rights were protected". The two judges according to Ntsebeza pointed out that the "Bill of Rights cannot afford to protect private property. However, in addressing the land reform issues, Ntsebeza pointed out that "the ANC shifted from the Bill of Rights and Freedom Charter and consider Section 25 in the Interim Constitution of 1993 and the Final Constitution of 1996" (Ntsebeza in Hendricks, Helliker and Ntsebeza, 2013), which refer to the redistribution of land to the dispossessed majority including public interest (Chaskalson, 1994). Ntsebeza further presented that during the "early to mid-1990s, there seems to have been a belief that what was discussed and agreed upon in the 1980s would not be lost". For example, some white farmers including those in the South African Agricultural Union (SAAU) accepted that they would have to part with portions of the land for transfer to the dispossessed majority (Chaskalson, 1993:73). However, Ntsebeza presented that the political negotiations regarding properties that could be taken away without compensation was a surprise and was of the view that this matter deserve further research.

In 1997, the Department of Land Affairs adopted White Paper on Land Policy which endorsed the willing seller, willing buyer principle. According to Ntsebeza (in Hendricks, Helliker and Ntsebeza, 2013), a target of 30 percent of agricultural land which should be transferred from white farmers to blacks within the first 5 years of implementation of South African willing seller willing buyer programme was predicted by the World Bank. The outcome of the implementation of the willing seller, willing buyer did not have positive result. By 1999, which was the end of the first 5 years of democracy, only 1 percent of the land was transferred back to black South African. Following this failure, Ntsebeza indicated that "the Minister of the Department of Land Affairs changed the target date to 2014". Furthermore, Ntsebeza (in Hendricks, Helliker and Ntsebeza, 2013) presented that 3 percent of agricultural land was managed to be transferred back after 10 years of South African democracy. This failure of meeting the target was observed by Lahiff (2007) as he pointed out that "land reform in South Africa has consistently fallen behind the target set by government".

Ntsebeza (in Hendricks, Helliker and Ntsebeza, 2013) highlighted that considering the failer of the willing seller, willing buyer, it was discussed during the land summit in 2005 that willing seller, willing buyer should be rejected as there was no progress and was difficult to meet the target. In addition, the effectiveness of willing seller willing buyer was questioned by government representatives during the land Tribunal held by Non-Government Organisation called Trust for

Community Outreach and Education (TCOE) in Port Elizabeth in December 2003. Ntsebeza (in Hendricks, Helliker and Ntsebeza, 2013) stated that "there were concerns on whether government have resources to buy land where there is a willing seller at a market price". The efficiency of willing seller willing buyer was also raised by politicians taking into consideration slow pace of redistribution of land (see Table 2.1). Furthermore, the argument was regarding the way land reform was implemented, the regulation on foreign ownership of land and investment in agriculture, which would influence investor confidence and contribution agriculture made to economic growth.

Table 2.1 Total land transfers under South African land reform programmes, 1994 –2006

Programme Hectares redistributed Contribution to total (%)	**Programme Hectares redistributed Contribution to total (%)**	**Programme Hectares redistributed Contribution to total (%)**
Redistribution	1 477 956	43%
Restitution	1 007 247	30%
State Land Disposal	761 524	23%
Tenure Reform	126 519	4%
Total	3 373 246	100.0%

Source: Department of Land Affairs, power point presentation to Nedlac by Mr Mduduzi Shabane, Deputy Director-General, 24 August 2006.

According to Mathebula and Anseeuw (2008), "thirty nine (39) Land LRAD projects initiated in Limpopo Province, within the Modimolle Local Municipality were assessed and are in a negative form, with decreasing production. The outcome of the assessment showed that 16 LRAD projects have entirely collapsed and have no income. The farmers have expanded their production into guest houses, forestry and game farming and the remaining projects (38.5 percent), 9812 hectares – mainly the Settlement Land Acquisition Grant (SLAG) projects generate an income between R1 and R100 000, with a 45 percent of their income coming from leasing out the land to the previous landowner" (Mathebula and Anseeuw, 2008). This was acknowledged by government officials that government has been buying land at market value before handed it to original owner, who were evicted during apartheid era, which Hall (2007) reported that in South Africa, there is "no indication of success in land reform projects, no attention paid to livelihood benefits generated, instead focus has been on the number of hectares transferred and number of beneficiaries". This has been confirmed in the Strategic Plan (2010) that there are "challenges to promote the identified agricultural land to be used for commercial purposes and also protect it from been transformed".

Lahiff (2007) holds views that “where land has been transferred, it has made little positive impacts on livelihoods or on the wider rural economy. This showed negative growth with decreasing production levels, resulting in land reform to fail. Lahiff’s argument was based on the fact that there were surveys that were conducted, however, showed that the land redistributed was underutilised, and land that was potentially arable had being used for less intensive forms of production”. May and Roberts (2000:8) contended that much “land remains under-utilised with the most common form of productive use as grazing”.

Based on the above arguments and observations, it could be concluded that South African government is required to conduct a research that would investigate on whether the land given to original owners are positively utilised, which would determine if there is a need to continue with the strategies or rather support the current farmers with a condition of employing the beneficiaries to obtain skills and also while benefiting financially as shareholders.

It was submitted by government officials that the willing seller-willing buyer process used more funds, resulting to the process fail as there are delays in the reform process. Thus this resulted in a strong call between 2007 and 2012 for the removal of willing seller-willing buyer policy. The debate came up again in 2015 during the ANC conference held in Midrand, Johannesburg (Ntsebeza in Hendricks, Helliker and Ntsebeza, 2013). It was decided that the Property Valuation Act of 2014 introduced by the Department of Land and Rural Development would replace such a policy area of concern. The aim of the Act was to regulate the valuation of property identified for land reform to property that was identified for acquisition or disposal by the department.

In January 2016, the Portfolio Committee on Public Works considered and adopted the Expropriation Bill which was later debated in Parliament. It was argued that the debate about Expropriation Bill has been in place since 2008 and seen strong opposition from critics highlighting that it would undermine the property rights and investors confidence. An expropriation has been defined in the Constitution as the “process whereby a public authority takes immovable property for a public purpose and against payment of compensation” (van der Walt, 2004). Expropriation bill has been defined by the objectors as a process whereby government would take away land privately owned to be owned by government for public use such as roads, power lines and to speed up land reform. However, argued that the state should engage the landowners first and this expropriation process should be considered the last option. The objectors acknowledged that the Expropriation Bill would be very important for any land reform, however, the main concern is regarding the compensation of the landowners that need to be fairly addressed and should consider the market value, the history of the land, current use of the property, inconvenience of the landowner and the purpose of the expropriation. Ntsebeza (2007) is of the view that

“compensation has been described as an important aspect of expropriation and without it; the existing property rights would be violated”. In terms of Section 25(2) of the Constitution (1996), government has powers to expropriate property subject to payment of compensation for the property that has been taken. However, he is of the view that the issue of compensation under Section 25(3) is vague (Ntsbeza, 2007). He argued that section 25(3) state that “the amount, time and manner of payment must be just and equitable but not clear what is justified as just and equitable”. Furthermore, an argument was with regard to the uncertainty regarding this Bill to the investors concern about losing money should the land be expropriated without consideration of market value and also the improvement of the economic growth of South Africa. It was pointed out by the objector that the uncertainty of this Bill would result in ineffectiveness of its implementation in the next five to six years. Ntsebeza (2007) argued that the issue of “compensation could lengthen the expropriation through court process if white farmers decide to contest the compensation amount”. An example provided by Ntsebeza (2007) was that, in terms of the Expropriation Act, the application process to court could take up to eight months if the owner of the farm does not accept a compensation offer. These factors are discouraging as only rich farmers could afford the legal costs while the poor landless black suffer through delays or where court decision favour white farmers. Based on the above argument, the researcher contend that should that Expropriation Bill be adopted at its current state without amending Section 25 of the Constitution, would result in the ineffectiveness of its implementation and the same results as the willing seller willing buyer principle.

Several authors pointed out an interesting argument that “expropriation was envisaged post 1994 in South Africa and was unused as it was weakend by the government’s adoption of the World Bank to enforce willing seller willing buyer as a policy which guide land reform” (Hall, 2004; van der Walt, 2006 and Ntsebeza in Hendricks, Helliker and Ntsebeza, 2013). These observations conclude that there was a lack of political will of the South African government, which was argued by most commentators (Ntsebeza in Hendricks, Helliker and Ntsebeza, 2013). Based on the observations and arguments presented, the question that remains is, will this approach take South African government forward in addressing the land reform issues?

2.3 Global context

This section investigated the manner in which agricultural land was addressed in Zimbabwe and Namibia. The discussion would argue on whether the approach considered by the South African

government in addressing land redistribution would be successful or not and what could be learnt from that approach.

Land reform in Zimbabwe began in 1980 whereby an agreement was signed at the Lancaster House in Britain about the willing seller-willing buyer, which was the promise given by the government of the United Kingdom with support from United State government. Moyo (2014) holds views that the main problem resulting to land reform is a “struggle against unjust system, a system of exploitation, oppression and racial discrimination, a struggle of human equality and dignity. He further pointed out that white racism is the result of the highest stage of capitalism; therefore, it was clear that the principle could not have worked with such misunderstanding and revenge between whites and blacks”. The promised made by the United Kingdom and United State government to purchase land from white farmers made the discussion about the willing seller-willing buyer succeed (Moyo, 2014), however, was opposed as it was considered unreasonable for farmers who owned the best land because they were compelled to share the land with landless black people.

Linnington (1999) put forward that the “pace of land reform through willing seller- willing buyer considered in 1980 by Zimbabwean government was not successful, hold by lack of financial resources”. It was submitted that the Zimbabwean government relied more on the contributions of the British and its government which did not materialised when implementing the land reform and resulted in the programme failed (Moyo, 2001). In addition, Linnington (1999) reported that for the “first 10 years of independence, government was prohibited from embarking on a process of land redistribution because Section 16 of the Constitution was effectively insulted from amendment”. The legal framework designed by the former colonial master appeared as a hindrance to any effective move towards black empowerment and that led to the unpopular of the principle. It was noticed that “few farmers were willing to sell to the government for land redistribution and a free market willing seller-willing buyer was never going to solve the problem given that it depend on the will of the seller” (Moyo, 2000).

In 1990, it was realised that the delay in implementing land reform could lead the economic and human disaster, then passed the land reform act, which authorised government to expropriate land at a fixed price to be distributed to black majority (Dlamini, 2014). This was as a result of unsuccessful attempt to negotiate with landowners to transfer land on the market (Moyo, 1998). On the other hand, Moyo (1998) expressed his view that the Zimbabwean government attempted the land expropriation during 1993 and 1995, which failed to generate enough land. The Zimbabwean government listed 5 million hectares of land owned by white farmers to be underutilised which was followed by high profile land occupations, war and other landless groups

from 1996 (Moyo, 2001). The same issues experienced in Zimbabwe regarding the slowness and the expensiveness of the willing seller-willing buyer was experienced in South Africa. The implementation of expropriation led to Britain and United State to stop donating to the land reform as they deemed it corrupts and unfair (Moyo, 2014).

De Villiers (2003) expressed a different view that led to the initiation of the land reform in Namibia. He pointed out that it was "realized by Namibian government that 90 percent of the population in Namibia depend on land for farming or worked on commercial farm". Therefore, the Namibian government saw an opportunity to address the unbalance access to commercial land ownership that was foreseen to promote growth of the country and eradicate poverty (Dlamini, 2014). In 1991, the National Conference on Land Reform and Land Question was convened to discuss how to implement the land reform in both commercial and communal areas. A willing seller-willing buyer policy was adopted at the conference which stipulated compensation for the acquired land (Namibian Constitution, 1998). On that note, the Agricultural Land Reform Act 6 of 1995 was created to advice the implementation of the land reform. The Act focussed on the commercial agriculture, especially section 14(1) which included a provision that the Minister may obtain agricultural land to be used for agricultural purposes by the disadvantaged citizen by the past law. Section 2 of the Act further included an interesting provision of the creation of Land Reform Advisory Commission to advice government on the suitability of farms to be purchased and prevent dispute by other Acts (Land Reform Act, 1995) and also help government in obtaining productive land for agricultural purposes. However, Werner (2001) is of the view that the "government had a vision on how to implement the land reform by introducing a land tax. He pointed out that an amendment of the Agricultural Land Reform Act 2 of 2001 which introduced the land tax was passed in order to achieve land reform (Werner, 2001). However, the main aim of the act was to penalise unproductive farmers and force them to sell the land to government" (Werner, 2001). It was envisaged in the Land, Environment and Development project of 2005 that some of the farmers who could not afford to pay tax would give up their land. The necessary procedures were introduced in 2002; however, still tax has so far not been collected.

According to Tapia Garcia, the land reform in Namibia has been slow. This was alluded by Werner (2001) that same was experienced by South Africa and Zimbabwe. It was submitted that "the reason for this assertion was that the political balance of forces stacked against the landless and dispossessed" (Werner, 2001). According to the Lead, Environment and Development (2005), "the Agricultural (Commercial) Land Reform Act was amended in July 2003 giving government powers to expropriate land in the public interest in order to speed up the land reform because the willing seller-willing buyer process had been blamed for being too slow to deliver land to landless". This was also announced by the Minister of Land and Resettlement in March 2004 (Odendaal,

2006 and Ndala, 2009), knowing that government had powers in terms of the Agricultural (Commercial) Land Reform Act of 1995 to expropriate agricultural land in the public interest for resettlement purpose (Ndala, 2009). This was argued by Hall (2004) that expropriation was envisaged post 1994 in South Africa and was unused as it was weakened by the government's adoption of the World Bank enforced willing seller-willing buyer policy as a guide to land reform. According to Ndala (2009), "the Act gives provision the Minister to expropriate agricultural land after consultation with the Land Reform Advisory Commission and also when the landowners are not willing to sell the land. Furthermore, the Act gives provision of fair compensation to the landowner taking into consideration the market related price".

Table 2.2 Farms expropriated in 2006

Region	**Farm Name**	**Size (Ha)**	**Compensation Paid (N$)**	**% of Total Compensation**	**Average Cost/Ha (N$)**
Omaheke	Kansas	4,972	1,517,401	12%	305
Omaheke	Wyoming	5,038	1,684,223	13%	334
Omaheke	Groot Ruigte	5,919	1,737,915	13%	294
Otjozondjupa	Marburg	5,112	2,968,910	23%	581
Otjozondjupa	Okorusu	3,410	5,049,148	39%	1481
Total		25.451	**12,957,597**	**100%**	**530**

Source: Statistics from: (Ministry of Lands and Resettlement 2009)

Table 2.2 present the agricultural land expropriated in the two regions of Namibia. Since the announcement of expropriation of agricultural land, the Minister of Land and Resettlement expropriated only five farms in 2006 totalling 24,451 hectares of land in 2006 (Ndala, 2009). The land expropriated in the Omaheke region is 65 percent and remaining 35 percent in the Otjozondjupa region and compensation was considered to land owners at market price. However, Ndala (2009) questioned whether this compensation is "at or above" the market price. The question was due to the amount of N$ 12,957,597 million paid as compensation to land owners at market price, which he is of the view that it might be expensive as compared to buying through willing seller willing buyer. It was further submitted that Namibia is facing a challenge with regard to the expropriation policy. This is as a result of the identified farms for expropriation by the Minister of Land and Resettlement, and landowners are challenging the identification process of the farms in court.

Further to the above, it was submitted that “poor planning could be considered as the reason for the transformation of agricultural land to other land uses” (Ranjith, 2011). This argument was based on the decision made to allow the conversion of agricultural land in the Ladkrabang District of the Bangkok Metropolitan Area (BMA) for the transportation logistic hub to support Suvarnabhumi International Airport during 1976 to 2005 (Ranjith, 2011). According to the Nation (2009), the area was “promoted to be Airtropolis to meet the needs of transportation, services, industrial and residential at an alarming rate, however, almost three decade of intervention by BMA resulted in the decline of residential development adjacent to the Suvarnabhumi International Airport due to excessive noise and air pollution by the operation of the airport”.

2.3 The analysis of actions in protecting agricultural land

According to Hall (2004) and Moyo (2001), South Africa and Zimbabwe had powers to expropriate properties, however, not used. The governments considered the willing seller-willing buyer which was supported by European countries as the primary means of redistribution. Namibia government had powers in terms of the Agricultural (Commercial) Land Reform Act of 1995 to expropriate agricultural land in the public interest for resettlement purpose (Ndala, 2009). Legislations were created to ensure effective implementation of the land reform programme. However, the willing seller-willing buyer was opposed during the addressing of commercial farmers in Matebeleland in Zimbabwe on 09 July 1989. The dispute made regarding the willing seller, willing buyer was that it was unreasonable for farmers who own the best land, therefore, required to share with black people.

The land reform programme failed in South Africa, Zimbabwe and Namibia as it was slow and the target predicted were not met. In South Africa, failure of the willing seller-willing buyer was acknowledged by the politicians and government officials. The concern raised was as a result of the expensiveness of the land reform programme, how land reform was implemented, the regulation on foreign ownership of land and investment in agriculture, which would influence investor confidence. According to Linnington (1999), the willing seller-willing buyer in Zimbabwe failed due to lack of financial resources. The Zimbabwean government relied more on the contributions of the British government (Moyo, 2001). It was further submitted that the legal framework designed by the former colonial master appeared as a hindrance to an effective move towards black empowerment and that led to the unpopular of the principle (Linnington, 1999). However, Werner (2001) stated that “the political balance of forces stacked against the landless and dispossessed” in Namibia was considered the main reason of slowness and failure of the land reform process and the “willing seller-willing buyer programme was a challenge on its own as it fully protect the interest of the landowner” (Lahiff, 2007), depend on the landowner’s will to

sell the land and also the white farmers to decide on land to be given blacks (Aliber, 2006). Moyo (2000) further highlighted that “ew farmers were willing to sell the land”, however, a free market willing seller-willing buyer was never going to solve the problem given that it depend on the will of the seller.

Expropriation was considered the best decision to address the inefficiency of redistributing land to the black majority. However, this was questioned by Hall (2004) and Moyo (2014) as both countries had powers in terms of post legislations to expropriate properties. Hall (2004) pointed out that expropriation was not used in South Africa as it was “weakened by government’s adoption of the World Bank enforced willing seller-willing buyer policy as a guide to land reform”.
It was further submitted that expropriation in Zimbabwe resulted in government listing 5 million hectares of land, which was followed by high profile land occupation, war and other landless groups from 1996 (Moyo, 2001). The Namibian government expropriated 24.451 hectares of land (see Table 2.2) with the consideration of compensation at market price, which led to the question on whether compensation was at or above the market price. The question was due to the amount paid (see Table 2.2) as compensation to the land owners. Furthermore, Ndala (2009) is of the view that “the implementation of expropriation in Namibia could result the country facing a challenge as the landowners are challenging the identification process of the farms” by the Minister of Land and Resettlement in court. Ndala (2009), further contend that the amount paid as compensation might be expensive as compared to buying land through willing seller-willing buyer.

In South Africa, expropriation has been opposed based on the compensation of the landowners that need to be fairly addressed and should consider the market value, the history of the land, current use of the property, inconvenience of the landowner and the purpose of the expropriation. Ntsebeza (2007) conceded that “compensation has been described as an important aspect of expropriation and without it; the existing property rights would be violated. He further indicated that the issue of compensation under Section 25(3) of the Constitution (1996) is vague. He put forward that section 25(3) state that the amount, time and manner of payment must be just and equitable but not clear what is justified as just and equitable”. Furthermore, an argument was with regard to the uncertainty regarding this Bill to the investors concern about losing money should the land be expropriated without consideration of market value and also the improvement of the economic growth of South Africa. It was pointed out that the uncertainty of this Bill would result in ineffectiveness of its implementation in the next five to six years. Ntsebeza (2007) argued that should white farmers decide to contest the compensation amount, compensation process would lengthen the expropriation of land through court.

It was submitted by Ranjith (2011) that “poor planning by government also contribute to the transformation of agricultural land to other land uses”. This was evidenced in the BMA, whereby Ladkrabang District of the BMA made a decision to convert agricultural land for the transportation logistic hub to support Suvarnabhumi International Airport, however, almost three decade of intervention by BMA resulted in the decline of residential development adjacent to the Suvarnabhumi International Airport due to excessive noise and air pollution by the operation of the airport (The Nation, 2009).

2.4 Conclusion

The discussion showed that the willing seller-willing buyer policy’s intention was to benefit the willing seller and not to ensure the previously disadvantaged black majority have access to agricultural land to use for agricultural purposes. This was conceded by politician, government officials and researchers that the programme is expensive. Furthermore, it was submitted that it is a slow programme; therefore, it is not considered the preferred approach to address the redistribution of agricultural land to black majority. The chosen principle resulted in the predicted target not been met in South Africa, Zimbabwe and Namibia. This was due to the fact that the landowners were not willing to sell and if white farmers were willing to sell, it was based on a market value which was expensive for government as the buyer of the land. This led to both the countries abandoning the initially favoured willing seller-willing buyer policy and considers the expropriation. The discussion further showed that the main reason of abandoning this policy was that there was no will from the politicians and government officials to ensure effective implementation, lack of capacity and lack of prioritisation. Both Zimbabwe and Namibia were the first countries to consider expropriation, however, there are challenges encountered that would lengthen the programme and result it failing just as the willing seller-willing buyer. The findings of literature review showed that the land reform programme was not well thought of by the African countries. This could be argued based on the fact that in Zimbabwe, what made the willing seller-willing buyer successful was the commitment by the United Kingdom and United State government to contribute funds in buying the land for redistribution. Furthermore, the approach considered in the implementation of the preferred land reform programme, resulted in the three countries spend a lot of money buying the land for redistribution. An example of this failure was the result of the survey undertaken in Modimolle Local Municipality within the Limpopo Province. Based on the discussion brought forward, it could be concluded that both countries are not successful in addressing the protecting agricultural land for the use of agricultural purposes. The next chapter intends to determine from the reviewer of land use application on how the implementation of the existing legislations assist in protecting agricultural land.

Chapter 3

Methodological Considerations

3.1 Introduction

This chapter present research methods considered to guide how to collect data. Research methodology is a method of searching knowledge or experience about the research topic. According to Kothari (2004), research "methodology is defined as a scientific and systematic search for relevant information on a specific topic" which Redman and Mory (1923, p.10) concur. This chapter further describe the research philosophy considered, research design, population sampling procedure, data collection methods which entailed the interviews and questionnaires. This chapter further explain the methodology reflection and conclude with the analyses of data collected.

3.2 Research philosophy

A wide variety of philosophies are available to understand the experience and opinions of the problems. However, this study focused on the phenomenological methods. Patton (2002) states that phenomenology is a method that describe the subjective perspective of how people experience the world and also on analysing what this experience means to them. Thani (2011) further explain phenomenology using this example.

> *"A researcher is conducting research on personal experiences of unemployed postgraduate students. The main goal is to understand their experiences and perceptions of the problem of unemployment. This means that the researcher allows the participants to share their perceptions and then record them or take notes in order to present their perceptions as they are"*

According to Kupers (2008), phenomenology began from the philosophical views of Husserl (1962), who thought this method is about experiencing and made meaningful by acts of consciousness. The consideration of this method by Husserl (1962) was to obtain reasons based on the opinion, without sacrificing the variety that history reveal. Importantly, Husserl (1962) tried to examine the knowledge which human beings become aware of as their experience.

This study used phenomenological method to understand the opinion of the reviewer of land use applications on the agricultural land use change and how agriculture and environmental legislations could be explained to show sustainability within the sectors. This was achieved by understanding the evaluation process of the land use applications by the GDARD officials. This philosophy was analysed by Munhall (2007) as a problem solving agent that could effect change in policies and practices and further argued that the phenomenological research result could improve awareness of unknown and erroneous information.

3.3 Recapping research aim and objectives

This study involve investigating the role of the legislations on how it protect the agricultural land from been transformed and be used for other land uses and also the extent to which legislations are used during the review of the land use applications. In order for the aim to be achieved, it was considered important to evaluate the review process of the land use applications to understand the experience and opinion of the reviewers.

3.4 Research design

3.4.1 Selection of the study and its importance

As stated in section 1.3 above, it was considered important to incorporate the investigation of the local and global context on the transformation of agricultural land to other land uses, the implementation of the existing legislations, what are considered when reviewing land use applications and which legislation is considered to make the final decision resulting in the transformation of agricultural land to other land uses. This nature of the study led to the adoption of a qualitative research method using questionnaires and semi-structured interviews, which required an understanding of the opinions of the reviewers of land use applications at the GDARD.

The GDARD conducted surveys within the Gauteng Province in 2002 and 2006 to identify the agricultural land which is still productive for agricultural purposes. The 2002 study indicated that “approximately 28.7 percent of the land has a high and moderate to high agricultural, made up of 15.1 percent high agricultural land and 13.6 percent moderate to high agricultural land”. Due to pressure of developing this agricultural land, detailed study focusing on current land use and the capability of the land was conducted in 2006, which revealed that “only 17.3 percent of land in the province could still be regarded as high agricultural land, 46.8 percent has a moderate agricultural, 17.34 percent has a low agricultural and 18.48 percent was regarded as built up areas” (Land

Capability Report, 2006). Based on the findings, agricultural land was classified in order to easily identify the high agricultural land and protect it. However, the location of the study area been in close proximity to the OR Tambo International Airport and industrial area, continued to attract proposal of non-agricultural development in the Witfontein area, hence the researcher saw the need to examine the position of legislations and policies in protecting agricultural land.

3.4.2 Study population and sampling procedure

According to Part A of Schedule 4 in the Constitution (1996), the land use management has been mandated to national and provincial departments. However due to the nature of this study, focus was on the GDARD which is responsible for the review of land use applications at a provincial level. The GDARD comprises of sections responsible for land use management, which are the Environmental Impact Assessment, Agriculture, Compliance and Enforcement directorates. The Environmental Impact Assessment directorate has been divided into five regions that covers the Gauteng Province (Ekurhuleni, Johannesburg, Tshwane, West Rand and Sedibeng Regions) and focus on the review of Environmental Impact Assessment applications while the Agricultural directorate is responsible for providing comments or advising on the land use applications, the research and technology development services which includes sustainable resource management related functions such as land use planning services and mechanization. The Enforcement directorate also review the land use applications; however, focus on Section 24G applications. These are applications whereby the developer had commenced with the activities that require environmental authorisation in terms of Environmental Impact Assessment Regulations published under National Environmental Management Act. Therefore, the developers apply to obtain authorisation of activities that are already in operation.

The researcher obtained a list of officials reviewing land use applications from the Human Resource officials of the GDARD (see Table 3.1). The researcher used purposive or judgmental sampling method to determine a sample of relevant officials. This method helped the researcher in ensuring that only officials with experience in the review of land use applications participate in the research study. This was conceded by De Vos (2002) and Burns and Grove (2003) that a “conscious decision about which individuals and which organization would best provide the desired information requires the researcher to make a judgement”. Talbot (1995:472) also agreed that “data collection begins with the researcher deciding from where and from whom data would be collected”. According to Streubert and Carpenter (2003: 18), the “researcher is the main research tool or primary instrument”. The researcher send out e-mails to the identified officials and informal telephone calls were made in order to secure a date for the first meeting, to explain what the research was about and identify interested in participating and also find out if they would

complete questionnaires or conduct interviews. The information sheet explaining in details the intention of the research was also send to the identified officials prior the date of the meeting in order to read and understand before agreeing in participating in the research. Furthermore, a snowball method was used to identify other officials not initially considered for the research study. On that note, it was purposefully decided for this study to choose 25 participants from both the Environmental Impact Assessment (EIA) directorate, Compliance and Enforcement directorate and the directorate Agriculture. The choice was also based on the size of the directorates within the department. From the EIA and Enforcement directorates, focus was on the knowledge and number of years of the participants reviewing the land use applications. The main goal for this choice was to obtain as much as possible data from variety of participants on the review of land use applications that helps to understand the cause of the transformation of agricultural land to other land uses. Considering the responsibilities of the directorate Agriculture, it was intended to understand the challenges of developing policies which need to focus on balancing the factors of sustainable development such as environmental, social and economic while guiding planning of development in the area. In addition, to also understand the views of the officials representing the directorate of Agriculture about decisions made by the directorates EIA and Enforcement on land use applications, whether it considered policies developed.

Bless and Higson-Smith (2000:84) pointed out that “a population is seen as the entire set of objects or people that form the focus of the research on which the researcher intends to determine some characteristics”. From the target population, the researcher would determine a sample (Phago, 2010) to ensure data collections are undertaken. The demographic information of the participants considered in this study is shown on Table 3.1 below.

Table 3.1 Demographic information of population

Directorates within GDARD	Total population	Targeted population	Proportion of sample	Percentages
Environmental Impact Assessment	42	33	19	57%
Agriculture	12	7	3	43%
Compliance and Enforcement	17	5	3	60%
Total	71	45	25	56%

Source: Fieldwork based materials

Table 3.1 above shows the population selected to share their experience about the research topic. The population represents the officials within the Environmental Impact Assessment, Enforcement and Agriculture directorates within the GDARD responsible for the review of land use applications. The questionnaires and interviews were administered to the chosen participants indicated in the table above. Immediately after receiving a completed questionnaire, a formal thank you note was distributed via e-mail to the participant. This was to ensure an establishment of a good relationship with the participants as it will enable the participant to share any further information when required. Table 3.1 above shows the average representative of the sample population which is 56 percent.

A conclusion was drawn about “unknown population parameters from the known sample” (Bless and Higson-Smith, 2000: 84) and allows researcher to facilitate an efficient selection of participants from the total population taking into considerations the knowledge under investigations.

3.4.3 Data Collection Tools

This study used tools which are questionnaires and semi-structured interviews to collect data.

a. Questionnaires

As a method of collecting data from the participants, an investigation was conducted in the form of questionnaires for this study. Designed structured questionnaires with open-ended and closed ended questions were used to encourage participants to provide more detailed information about their personal experiences and challenges encountered during the review of the land use applications. A list of questionnaires that were send out to the participants for completion are provided in Appendix A.

The questionnaires followed a consistent sequence starting with simple topics and progress to detailed issues to sustain the interest of the participants and allow more willingness to provide answers. The questionnaire was organised into four sections. The first section enabled participants to indicate the responsibility and the sector represented. This helped in understanding that the participants identified are relevant to participate in the research topic. Sections 2 and 3 allowed the participants to present the knowledge of the legislations that manage land use activities. Section 4 required the participants to express their opinion on whether the legislations are effective on managing the agricultural land.

The questionnaires were send via e-mail to the participants containing the same questions formulated based on the research aim, objective and research questions, which gave participants an opportunity to provide detailed information. The questionnaires were written in English which all participants understand and there was no need to translate in another language. This method was considered important as participants would read through the questionnaires before responding and be able to ask questions prior responding and sending back questionnaire. A cover letter containing details about the research accompanied the questionnaire and the ethical consideration. Advantage of using this tool was that it cost lower. The use of an e-mail system to send questionnaires and receive response promoted efficiency and allowed participants to respond to questions at their own pace. The questionnaires could be completed in the office or at home and it is self-administered. This allowed participants to respond to the questionnaire without interference by the researcher, which resulted in high number of respondents. Woods (1999) affirmed that the less the researcher disturbs the scene, the deeper the result of the researcher and the more the representation of it might be truthful. However, further acknowledged that participants may not provide strong motivation to the questions asked which is not easy to follow up unlike interviews (Woods, 1999).

b. Semi-Structured Interviews

Semi-structured interviews were conducted with the participants after the completion of the questionnaires in order to learn about their experience and be able to address the research aim and objectives of this study. “Interviews are one of the most commonly used methods of data collection” (DiCicco-Bloom and Crabtree 2006). The qualitative research interview was defined by Kvale (1983, p.174) as "an interview whose purpose is to gather descriptions of the life-world of the interviewee with respect to interpretation of the meaning of the described phenomena and that collecting these descriptions could be done in several ways, for example, face-to-face interviews, interviewing by telephone and interviewing using the Internet”. Therefore, this study considered face to face and telephonic interviews.

This tool was considered in this study as it allowed questions to be structured and revolve around open ended questions. This allowed follow up questions to be posed to the participants in order to further express their opinion. Leedy and Ormrod (2001: 159) pointed out that this process is considered successful if guided by the reviewer asking questions focusing on “people’s beliefs, about the facts, motives for undertaking certain decisions, present and past behaviours, the standards for behaviour (what people think should be done) as well as conscious reasons for actions or feelings”. Semi-structured interviews were arranged with lower management (Assistant Directors) and officials (officials at entry level) responsible for reviewing land use applications within the Ekurhuleni Metropolitan Municipality (EMM) region. This was a decision made by the officials within the Environmental Impact Assessment directorate, (responsible for Johannesburg, Tshwane, West Rand and Sedibeng regions) identifying officials responsible for the EMM region to participate in the semi-structured interviews. This method is known as snowball technique which Thompson (2002) explained the technique as “a method whereby a few identified members of a population identify other members of the population for the purpose of obtaining non-probability sample”. The researcher was also advised to consult officials within the directorate Compliance and Enforcement responsible for the review of land use applications whereby development has commenced prior obtaining approval from the Department and also used to work within the directorate Environmental Impact Assessment. This was based on the fact that the officials have knowledge on the research topic. In addition, senior official (Director) and lower management (Assistant Directors) within the Agricultural directorate were identified by the officials within the directorate Environmental Impact Assessment for the semi-structured interviews. A telephonic interview was conducted with 3 (three) officials from the directorate Agriculture and 3 (three) officials from Compliance and Enforcement. The intention was to understand the experience from the Agricultural directorate officials responsible for developing the policies and advising on the land use applications when there is proposal of non-agricultural development. The advantage of this sampling method was that knowledge was shared with relevant participants with an understanding of the research topic.

Investigative interview questions were compiled to guide participants and to allow participants to express their experience in relation to the research topic. This was intended to highlight the common responses from the participants that address the research questions. The tool allowed participants to share detailed information with the researcher to address the issues of concern unlike the closed-ended questions.

The face to face interview were scheduled for the same date with 6 (six) participants from the directorate of Environmental Impact Assessment, which took place during office hours at the participants office. This was due to the fact that they are all situated in the same office. Another advantage was that the process will be less costly, less time consuming and effective. The same questions were asked during the entire interviews. This was considered important to ensure smooth facilitation of the interviews. Appendix B provided a list of interview questions. All the interviews conducted lasted for a minimum of 30-45 minutes.

For valid data to be collected, researcher focused on officials with 5 (five) to more than 10 (ten) years of experience reviewing land use applications. Therefore, consideration of the number of years (experience in reviewing land use applications) resulted in the smaller group of the officials within the Environmental Impact Assessment, Compliance and Enforcement and Agriculture directorates participated in the semi-structured interviews. In spite of this, Bless and Higson-Smith (2000: 110) are of the view that “while a focus group is more commonly used in social science research, a carefully selected group of between four and eight respondents would be sufficient”. On the other hand, Babbie (2001: 294) argued that “typically 12 to 15 people are brought together to engage in a guided discussion of some topic”. These differences in opinion (probably in experience as well) suggested that “the decision on the number of participants depends upon the nature of the research being undertaken” (Phago, 2010). According to Ritchie, Lewis and Elam (2003), “a samples for qualitative studies are generally much smaller than those used in quantitative studies and more data does not necessarily lead to more information. Therefore, one occurrence of a piece of data is all that is necessary to ensure that it becomes part of the analysis framework and useful in understanding the process behind a topic”. Crouch and McKenzie (2006) conceded the above argument and pointed out that “qualitative research is concerned with meaning and not making general hypothesis statements”.

3.4.4 Data analysis

This section of the study presented how the results of the data collected through questionnaires and interviews were analysed to ensure that the inputs of the participants are well understood and also addressed the research questions.

The formulation of the semi-structure interviews and questionnaires was done using the aim of this study as outlined in Chapter 1, section 1.3. This helped in ensuring that the responses provided address the research questions. In addition, follow-up interviews were arranged with the participants in order to address questions that were not highlighted in the questionnaire survey and to obtain detailed information about the participant's knowledge. The data triangulation method was employed, whereby responses from the questionnaires and interviews were considered in analysing data. According to Brookhart and Durkin (2003) and Lai and Waltman (2008), "questionnaires and interviews are often used together in mixed method studies investigating educational assessment". Kendal (2008) is of the view that "questionnaires provide evidence of patterns amongst large populations while qualitative interviews gather more in-depth insights on participants attitude, thoughts and actions". The researcher made notes from the responses provided, ensure that focus was on the responses with similar themes that would help to summarize the outcome of the opinion of the participants.

The researcher continue reading the responses provided while preparing notes that guide the analysis of the data collected, with the aim of reducing information to only the relevant data that would address research questions. A summary of similar themes identified were prepared, labelled and further investigated. This helped the researcher to interpret data and ensure the responses provided were well understood. During the writing of the research report, the transcript of the questionnaires and interviews were consulted to ensure that the responses provided are not disregarded. The researcher ensured that the process of reading the transcript and its interpretation continues throughout the process. Ladikos and Kruger (2006:161) submitted that "it is important to analyse the response with the aim of identifying common themes and analyse the views and knowledge of the participants". Data was presented in the form of tables and figures, and the frequency of responses was presented as percentage. Details of the findings of data collected would be presented in the next chapter of empirical evidence.

3.4.5 Methodology reflection

Since 2004, the researcher was employed as a reviewer of the land use applications; and there was a concern about the rate in which agricultural land has been transformed and the continuous decisions of allowing non-agricultural land uses on agricultural land made by the Department. Therefore, it was believed that it would be important and easier for the researcher to further investigate the role of legislations and understand what spheres of government (National and Provincial department and Local Municipality) considered when reviewing land use applications. In order to address the issues of concern, the researcher enrolled a Master's degree in order to further investigate the transformation of agricultural land to other land uses. For the researcher to investigate the problem, it was deemed relevant to consider using the interviews and questionnaires tools in the context of qualitative research method to collect data from the reviewer of land use applications.

Based on the above, it was decided that the practical investigation of the research topic would be very interesting to the tertiary supervisors and the reviewers of land use applications. However, the researcher had a concern on whether the participants would appreciate the research topic, and be willing to participate during data collection. The concern led to the decision of continuing with the research study, using the qualitative research approach than changing the method of obtaining information as the objective was to understand what officials considered when reviewing land use applications than focusing on the measurements and quantities. The information sheet was then sent to the participants; detailing the research topic and the intention of undertaking the research study using e-mail and communicating with the participants telephonically. The response from the participants was positive and showed willingness to meet with the researcher to provide the experience and opinion about the research topic.

However during the interview, participants did not want to be recorded which made the interview process difficult as the researcher has to take notes and quickly think of the follow up question. It was also difficult to amend the transcripts in relation to the inaccuracies; however, based on the friendship made, participants were welcoming to conduct follow up telephonically. This process also allowed an additional opportunity to reflect on the content of each interview. On the other hand, some of the participants did not strongly motivate the responses when completing the questionnaires, therefore, the researcher had to trust the information provided despite the completeness of the questionnaires. September (2012) indicated that "even though the participants are knowledgeable, the reliability of interview is complicated to assess objectively and there are information that need to be kept in mind". Despite the above, the reliability of the collected information through interviews and questionnaires was considered important because

of the participant's role and experience in the review of the land use applications (September 2012).

The initial intention was to approach DAFF, the GDARD and EMM to obtain information on what are considered when reviewing the land use applications. This was due to the fact that DAFF is mandated to regulate the subdivision of agricultural land prior any changes or development commencing on the property in terms of the Subdivision of Agricultural Land Act (1970) while the EMM is mandated for the development of the land within their area of jurisdiction in terms of the Town Planning and Township Ordinance 15 of 1986. However, it was not easy to obtain access from the DAFF and EMM. Johl and Renganathan (2010) confirmed that it is difficult to access organisations in order to conduct research. Therefore, it was believed that officials from the GDARD, which issued the researcher with a permission to conduct research, will provide information regarding the review of land use applications and what they consider when reviewing the applications.

3.5 Conclusion

This study followed the qualitative research method based on the phenomenology approach as the intention was to obtain the opinion of the participants on the research topic. The selection of the sample population and identification of participants considered the experience and the number of years of reviewing the land use applications. This helped to ensure that valid and reliable data are collected. A judgemental sampling method was employed to reduce the list compiled of the officials reviewing land use applications in order to ensure that only applicable officials participate in the research study. Data collected were analysed to ensure that inputs of the participants are well understood and also addressed the research questions. Data triangulation method which is the combination of different data sources used in the same study was used to validate information collected.

Chapter 4

Empirical Evidence

4.1 Introduction

It is important to note from the previous chapter that qualitative data was collected using structured questionnaires and semi-structured interviews. In this chapter, the description of the legislations are presented and followed by the findings from the two data collection methods. This chapter conclude by discussing the participant's perspective on the transformation of agricultural land by fragmented legislations.

4.2 Legislations, Policies and Strategic approaches

Agricultural land use changes are regulated by a variety of laws which played important roles in the final decision-making about land use conversion from agriculture to other types of land use (Niemand, 2011) and this showed the importance of preserving agricultural land nationally. In the early 1990s South Africa started to participate internationally in environmental law actions, such as the Earth Summit in Rio de Janeiro (Niemand, 2011). This led to "the introduction of a new constitution in South Africa during 1994 caused unmatched legislations developed over the next decade" (Kidd 1997). Section 44 (1) (a) (ii) of the Constitutions confirmed the passing of legislations about matters within a functional area listed in Schedule 4 which is related to land use management. Part A of Schedule 4 of the Constitution "gave provision of the concurrent national and provincial functions on the environment, agriculture, urban and rural development". On that note, this chapter considered legislations applicable to the management of agricultural land and the sustainability of the agricultural land administered by the GDARD and DAFF which would be discussed in the next section. The core functions and mandate of the GDARD are governed by NEMA, policy such as GAPA (2006), and planned policy initiatives such as Gauteng Policy on Protection of High Agricultural Land (2011) (GDARD Strategic Plan 2010 – 2014). On the other hand, DAFF administers the Subdivision of Agricultural Land Act 70 of 1970, the CARA, SUAR and the Preservation of Development of Agricultural Land Framework (2015).

4.2.1 National Environmental Management Act 107 of 1998

The NEMA is the successor of the Environmental Conservation Act 73 of 1989. The ECA intended to protect and control the utilisation of the environment which Glazewski (2005) argued that "this act was not effective in coordinating environmental matters within government, and did not include any substantive provisions regarding environmental management. The sections of the ECA were triggered only by the exercise of Ministerial discretion in the form of policies and other directives, rather than being substantive provisions in its own right" (Glazewski 2005). This resulted in the amendment of ECA and promulgation of NEMA which "is relevant to the regulation of all three of the environmental areas referred to as land use planning and development, natural resources and pollution control and waste management" (NEMA, 1998). The NEMA "aims to promote cooperative governance by coordinating environmental functions exercised by organs of state and ensure enforcement of all relevant environmental management laws" (NEMA, 1998). The NEMA helps government to ensure that significant environmental impacts of the proposed development are identified, assessed, evaluated and mitigation measures are introduced prior obtaining authorisation through its Regulations published in terms of Chapter 5 of NEMA, which Andrews (1998) declared and indicated that "it helped to protect the environment from been degraded". The NEMA played an important role in agricultural land use change by regulating land use change and the impacts thereof. The first NEMA EIA Regulations were published in 2006. These Regulations (Government Notice, Regulation 385, Regulation 386 and Regulation 387 in Government Gazette No 28753 of 21 April 2006) came into effect on 3 July 2006; identified activities which required that an environmental authorisation be obtained before the commencement of the activity from the Provincial (GDARD) and National (DEA) departments. For this study, the following activities qualified the change of agricultural land to other land uses in terms of NEMA EIA Regulation of 2006, Government Notice No. 386:

a. Activity 18: The subdivision of portions of land 9 hectares or larger into portions of 5 hectares or less
b. Activity 23: The transformation of undeveloped, vacant or derelict land to –
    (i) residential, retail, commercial, recreational, industrial or institutional use, inside an urban area, and where the total area to be transformed is 5 hectares or more, but less than 20 hectares, or
    (ii) residential, retail, commercial, recreational, industrial or institutional use, outside an urban area and where the total area to be transformed is bigger than 1 hectare but less than 20 hectares.

The 2006 EIA Regulations required that the significant impacts that would occur as a result of subdividing the agricultural land into smaller portions be identified, assessed, evaluated and mitigation measures be provided in order to minimize the significant impacts or where mitigation

measures cannot be provided, the activity must be avoided. The intention was to control the subdivision of agricultural land and the use of the land in order to prevent the transformation of viable agricultural land to other land uses.

The 2006 EIA Regulations was repealed by the 2010 EIA Regulations which was also promulgated in terms of Chapter 5 of NEMA 107 of 1998. The 2010 EIA Regulations came into effect on 02 August 2010 (Government Notice. Regulation 543, Regulation 544, Regulation 545 and Regulation 546 in Government Gazette No 33308 of 18 June 2010). The review of the 2010 NEMA EIA Regulation showed that listed activity 18 mentioned above was removed from the EIA Regulations. This confirmed that farmers or owners of the agricultural land could subdivide the land without undertaking any assessment to determine if subdivision of agricultural land would have significant impact on the environment and the community.

The 2014 EIA Regulations which was published on 08 December 2014 (Government Notice, Regulation 982, Regulation 983, Regulation 984 and Regulation 985 in Government Gazette No 38282 of 04 December 2014) repealed the 2010 EIA Regulations. The evaluation of the regulations presented that an activity that addresses the transformation of agricultural land to other land uses has been introduced, however with threshold.

a. Activity 28 of the 2014 EIA Regulation address “the transformation of land where such land was used for agriculture or afforestation on or after 01 April 1998 and where such development occur inside the urban area and the total land to be developed is bigger than 5 hectares or land occur outside urban area and total land to be developed is bigger than 1 hectare”.

Further to the above, it has been discovered that all NEMA EIA Regulations requires that public participation process be undertaken to afford interested and affected parties an opportunity to provide comments on the proposed activity. This is in support of the requirements of the NEMA (1998) and the Constitution (1996) which provides a framework for cooperative environmental governance.

4.2.2 Gauteng Agricultural Potential Atlas version 3 of 2006 (GAPA, 2006)

The Gauteng Agricultural Potential Atlas (2006) is a policy developed by the GDARD in 2006 as a result of the findings of the study conducted within Gauteng Province during 2005 - 2006. The study was based on the current land cover/use and capability of land (GAPA, 2006; pg 3). The intention of conducting this study was for the following:

a. To identify the agricultural land available in comparison with the findings of the study conducted in 2002, taking into consideration the continuous pressure of development within Gauteng province.
b. To protect land that has been identified as high agricultural land from been developed for non-agricultural uses when EIA decisions are made and ensure equitable access to agricultural land for agricultural activities (GAPA, 2006; pg 4).

In 2002, the GDARD conducted a study which showed that “approximately 28.7 percent of the land has a high and moderate to high agricultural potential. This is made up of 15.1 percent of high agricultural land and 13.6 percent of moderate to high agricultural land” (GAPA, 2002). However, there was a continuous pressure of development which resulted in the 2005-2006 study been conducted, hence the development of the Gauteng Agricultural Potential Atlas policy (GAPA 3, 2006). The findings of the study conducted in 2005-2006 showed that “only 17.3 percent of land in the province can still be regarded as high potential agricultural land, whilst 46.8% has a moderate potential, 17.34 percent has as low agricultural potential and 18.48 percent is regarded as built up areas” (Land Capability report, 2006). The review of GAPA (2006) further pointed out that as far as soil potential is concerned, agricultural land must be protected for activities that depend on soil while livestock and animal housing may not be allowed on the high potential agricultural soils.

The review of the GAPA policy further put forward that in order to protect agricultural land for activities that depend on soil, agricultural land identified need to be classified as follows:

a. Agricultural hubs (HP_AH). Seven agricultural hubs were identified in the Gauteng Province. These hubs are regarded as areas with large amount of agricultural land that should be preserved for agricultural uses, aligned with its agricultural potential and preferred land use. Therefore, should a change of land use be proposed on this classified land, agricultural specialist study will be required to be submitted with the EIA applications.
b. Important agricultural sites (HP_IAS). This refers to all agricultural land located outside the urban edge but not within an identified agricultural hub. Therefore, should a change of land

use be proposed on this classified land, agricultural specialist study will be required to be submitted with the EIA applications.

c. High potential agricultural land located within the urban edge (HP_IUE**)**. This land will not be regarded as viable agricultural land for future agricultural production.
d. Overlapping the urban edge (HP_OUE). This land could be utilised for agricultural production purposes. Therefore, should a change of land use be proposed on this classified land, agricultural specialist study will be required to be submitted with the EIA applications.
e. High potential agricultural land located within a Protected Area (HP_PA). This land will be managed as per the management plan of the relevant Protected Area and not be utilised for agricultural purposes.

Further the review of GAPA (2006) policy highlighted challenges that need to be taken into considerations when classifying the identified agricultural land and also when reviewing the land use applications.

a. Decisions made prior to the implementation of the GAPA policy (2006) would result in the fragmentation of pockets of agricultural land to the extent that the remaining agricultural land would not be viable for agricultural activities;
b. A negative decision would be inconsistent with decisions made in the vicinity of properties since the implementation of the GAPA policy (2006);
c. Soil samples taken on site contradicts with the Geographical Information System data;
d. Site specific agricultural specialist studies prove the site not to be of high agricultural potential; and
e. Specific benefits associated with the development outweigh the loss of agricultural land.

4.2.3 Strategic Plan 2010 – 2014

The review of the Strategic Plan 2010 showed that the mandate of the GDARD involves environmental protection, rural and urban development and local government matters related municipal planning. The strategic plan further pointed out that it is important to protect agricultural land from been transformed. It presented that “1080 black farmers were allocated land for primary agricultural production after democratisation of the country and through land reform programmes such as the Land Redistribution for Agricultural Development” (LRAD) in order preserve it from been transformed. It further highlighted challenges to promote the identified agricultural land to be used for commercial purposes and also protect it from been transformed. This plan pointed out that the challenges are due to the fact that beneficiaries are scattered, some are located in an urban and semi-urban areas, and no strategy on how to address the problem.

4.2.4 Subdivision of Agricultural Land Act 70 of 1970

The review of the Subdivision of Agricultural Land Act (1970) showed its aim which is “to regulate the subdivision of agricultural land and the actions that could occur as a result of the subdivided land; prevent the establishment of uneconomic farming units, while preserving agricultural land for agricultural purposes” (Subdivision of Agricultural Land Act, 1970). The Act further presented that any land that is not declared or proclaimed to be a township by specific legislation is considered to be agricultural land and it requires approval from the Minister. Section 3 (a) of the Act prohibit the subdivision of agricultural land unless the approval is obtained from the Minister of the DAFF after reviewing and concurring to the application lodged with the Department as per section 4 (2) of the Act.

4.2.5 Conservation of Agricultural Resources Act 43 of 1983 (CARA)

The main goal of CARA (1983) is “to provide for the conservation of the natural agricultural resources by maintaining the production of land, by combating and prevention of erosion and weakening or destruction of the water sources, by protecting the vegetation and combating of weeds and invader plants”. The review of the Act further showed the weakness in terms of its applicability as “it does not apply to any land which is situated in an urban area, to any land situated within any area declared under section 2 of the Mountain Catchment Areas Act 1970 63 of 1970 and the burning of veld which do not apply to a private forest as defined in section 1 of the Forest Act 72 of 1968”. Further, the review of the Act presented that there is no provision of cooperative governance, however, Section 7(5)(a) of the Act consider decisions undertaken in terms of other legislations before its commencement. For example, any directions declared applicable with regard to land under Sections 3, 4 or 7 of the Soil Conservation Act 76 of 1969 shall be deemed to be a directive in terms of CARA.

4.2.6 Sustainable Utilisation of Agricultural Resources of 2003

The objective of the Sustainable Utilisation of Agricultural Resources is “to conserve the utilisation of natural agricultural resources by controlling the subdivision and change of use of agricultural land and also to control over the spreading of weeds and invader plants”. The Sustainable Utilisation of Agricultural Resources focused on the conservation of agricultural land especially prime and unique agricultural land and determines which agricultural land may be used for agricultural purposes considering its value relative to a particular area (South Africa, 1982).

The review of Sustainable Utilisation of Agricultural Resources presented that the Minister of the DAFF would consult with other department's Ministers and Member of Executive Councils (MECs) to discuss the criteria in terms of which prime agricultural land and unique agricultural land would be utilised for purposes other than agricultural. However, Section 13(4) indicated that the criteria for change of agricultural land utilisation do not apply if the land is owned by the State. Further, Section 15(a) indicated that agricultural land would not be subdivided unless the Minister has consented in writing. It has been further presented in Section 27 of Sustainable Utilisation of Agricultural Resources that should the Bill be enacted, it would repeal the CARA; however, a regulation made under Section 29 of CARA should remain in force despite the repeal of CARA and be deemed to have been established and made under Section 10 and 26 of Sustainable Utilisation of Agricultural Resources.

4.2.7 The Preservation and Development of Agricultural Land Framework of 2015

The objectives of the PDALF is "to regulate subdivision and rezoning and ensure protection of agricultural land; preserve and develop agricultural land by encouraging provincial and municipalities to promote the use of agricultural land for farming purposes; promote compatible uses of agricultural land in their policies, legislations and planning tools; discourage non-agricultural land uses on agricultural land; prohibit subdivision and rezoning on agricultural land; encourage the mitigation of the lost productive agricultural land if benefits of using agricultural land cannot be avoided; establish framework that facilitate concurrent land uses on agricultural land; ensure public participation takes place at all levels of government and encourage well-functioning intergovernmental relations" (PDALF, 2015). Chapter 2 of PDALF presented the activities that would be regulated. For example, "the provision of regulations pertaining to subdivision and rezoning applications on high potential cropping land and on medium potential agricultural land respectively; for Protected Agricultural Areas; for the use of agricultural land; for other applications on agricultural land, for provincial and municipal responsibilities and coordinated planning and development" (PDALF, 2015).

The Bill presented that the subdivision and rezoning of high potential cropping land is prohibited unless approval is obtained from the Minister or Intergovernmental Committee. It further indicated that if there is an application for consent of high potential cropping land, approval should be obtained from Provincial Department in which the activity would take place. It is clear of the requirements of the Bill that when the applicant submit an application, information with regard to the change of land use of high potential cropping land should be disclosed. The Bill further highlighted that local municipalities must provide comments on the applications taking into

considerations all planning tools such as the Integrated Development Plan, Spatial Development Framework and Environmental Management Frameworks.

The Bill if enacted would replace the Subdivision of Agricultural Land Act 70 of 1970, “an act that was repealed in 1998 but never signed into law by the president, the Sustainable Utilisation of Agricultural Resources Bill that was tabled by legislature in 2003 but never presented to Parliament” (Frantz, 2010) and the Conservation of Agricultural Resources Act 43 of 1983. The assessment of the Bill presented that it intends to preserve and develop agricultural land where the Subdivision of Agricultural Land Act failed to do so.

4.3 Legislations and policies framework in Gauteng Province

The investigations of the existing legislations and policies relating to the environmental care and resource management in Gauteng presented that they have similar objectives which is to protect agricultural land from been transformed. This has been pointed out in Section 3(a) of the Subdivision of Agricultural Land Act (1970), Section 15(a) of the Sustainable Utilisation of Agricultural Resources, Sections 5, 6, 29 and 30 of Chapter 2 of the PDALF, the NEMA EIA Regulations and the GAPA (2006). However, a few of these documents do have some implications or relevance for protecting agricultural land from been transformed to other land uses. Such legislation is the SALA which does not focus on the protection of all identified agricultural land in the country and also not address cooperative governance principles.

The investigation of Subdivision of Agricultural Land Act showed that it is only applicable to privately owned land and when compared with other instruments, it was discovered that its effectiveness was limited by recent policies and legislations related to land use, land use planning and the environment, for example the GAPA policy, the NEMA and its Regulations in regulating the land uses. Therefore, it can be concluded that Subdivision of Agricultural Land Act is not a suitable mechanism to effectively protect agricultural land from other development and/or fragmentation. This was asserted by participants during the interviews and in the questionnaire completed, who highlighted that the current operational approach by various department results in the potential clash of direction with regard to land use preference, therefore, integration of agricultural land into the NEMA EIA Regulations and GAPA would address the problem of the transformation of agricultural land. Further the review of Subdivision of Agricultural Land Act indicated that “it does not provide for the allocation of legislative and executive powers between national and provincial government, it does not address intergovernmental relations, it does not address cooperative governance principles”. It was submitted that other legislative instruments override Subdivision of Agricultural Land Act. It was asserted during the interviews that certain

government departments are of the opinion that they are not bound by the provisions of Subdivision of Agricultural Land Act. Furthermore, the municipalities are increasingly allowing the development on and subdivision of agricultural land without approval of the DAFF Minister.

It was noted that the activities which was listed under the 2006 NEMA EIA Regulations had the same goal as the Subdivision of Agricultural Land Act, however, they were removed in the 2010 NEMA EIA Regulations which raised a question of whether the Subdivision of Agricultural Land Act would continue to protect agricultural land which is available for agricultural purposes from been transformed through subdivision. This concern was due to the fact that the participants indicated that they are not bound by the provisions of Subdivision of Agricultural Land Act as it was not their mandate. The review of the 2014 NEMA EIA Regulations further showed the introduction of an activity that addresses the transformation of agricultural land. However, the activity still focuses on the development of the land (including subdivided land) and not addresses the subdivision and its cumulative impact on the agricultural land. The review of this activity confirmed that farmers and owners of agricultural land could still subdivide agricultural land without undertaking an assessment to evaluate the potential significant impacts on the environment and the community.

The NEMA EIA Regulations and Subdivision of Agricultural Land Act have the same objectives of protecting agricultural land from been transformed, however, the review of the 2014 NEMA EIA Regulations, especially activity 28 mentioned in section 4.2.1 above indicated that NEMA EIA Regulations are not concerned about the cumulative impacts of the activities, instead the current impacts of the development. For example, if the owner of agricultural land or farmer has decided to subdivide 100 hectares of agricultural land to develop an Estate (residential development estate), that agricultural land would not be considered viable for agricultural purposes in future due to permanent degradation occurred as a result of the development. For this reason, the researcher asked a question on whether Subdivision of Agricultural Land Act would be able to regulate subdivision prior the land has been developed or prior NEMA EIA Regulations are considered. This is the problem faced by South African government mandated to administer land uses with regard to the implementation of the legislations, which Kotze (2005) highlighted the challenges as a result of the silo-based operation by government department, resulting in fragmented legislations.

Table 4.1 List of factors affecting implementation of legislations

Factors	**Frequency**	**Responses**	**Percentages**

Lack of cooperative governance	25	12	12%
Fragmented structures	25	24	25%
Unclear responsibilities of department causing confusion	25	22	23%
Sufficient information not shared amongst officials about protecting agricultural land	25	21	21%
Fragmented Legislation	25	19	19%
Total	25	98	100%

Source: Fieldwork based materials

As could be seen from the table depicted as Table 4.1, there are several factors taken from the questionnaires completed by participants which were considered the main reasons resulting in legislations been fragmented. Table 4.1 shows an evidence of participants agreeing that legislations are fragmented, therefore required to be amended. The investigations showed that fragmented structure within the departments account for the largest percentage (25%) of the factors contributing to fragmented legislation, followed by the responsibilities of the department making the final decision on the protection of agricultural land not been clear (23%), sufficient information not been shared with officials (21%), fragmented legislation with 19% and cooperative governance accounting for 12% respectively. A concern was raised during the interviews with regard to the information not been shared with officials. This was due to the decisions made to refuse non-agricultural activities proposed in the Witfontein area (the study area). It was discovered by the officials that there was an agreement made between the GDACE MEC and the EMM to allow mixed development along the R21 Road/Corridor. Nonetheless, the number of responses on the factors influencing fragmented legislation on Table 4.1 above gives a good indication on the root of the problems.

Table 4.2 Participants responses based on factors resulting in transformation of agricultural land

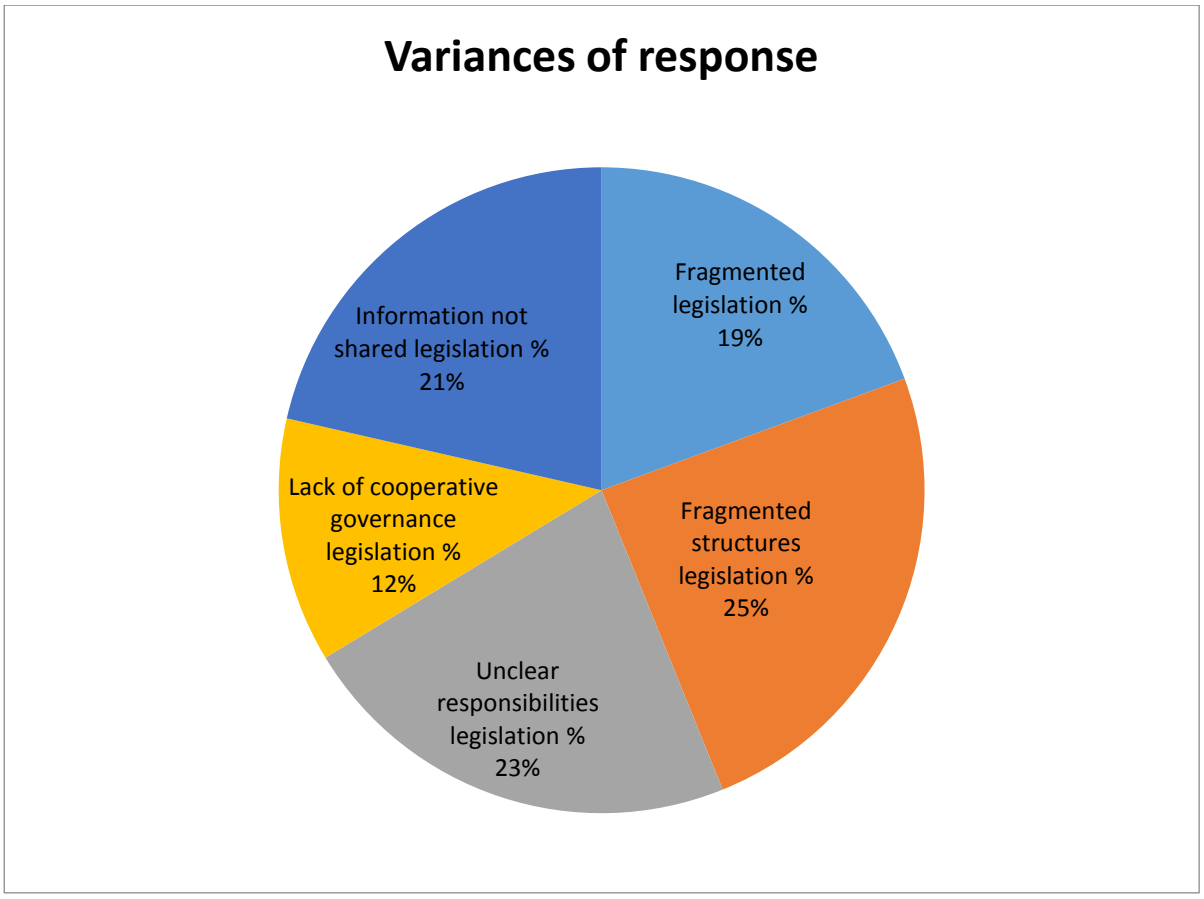
Type of Response	Fragmented legislation		Fragmented Structures		Unclear Responsibilities		Lack of cooperative governance		Information not shared	
	#	%	#	%	#	%	#	%	#	%
Yes	19	76	24	96	22	88	12	48	21	84
No	6	24	1	4	3	12	13	52	4	16
Total	25	100	25	100	25	100	25	100	25	100

= number of Reponses

Source: Fieldwork based materials

It can be evidenced from Table 4.2 that participants do have a serious concern with the existing legislations. This table shows the main reasons which are considered by the participants as contributing to ineffective implementation of legislations. From Table 4.2, it was observed that fragmented structure account for the highest percentage (96%) of the reasons contributing to fragmented legislation, followed by confusion caused by unclear responsibilities of department (88%), fragmented legislations account for 76% and lastly by information not shared amongst officials accounting for 84%. The concern with regard to cooperative governance does not represent much different in terms of percentages. This was as a result participants highlighted that there is cooperative governance taking place on a monthly basis with the local municipality. A concern that was mentioned was that there is no intergovernmental relation with the DAFF (the national department). It was further highlighted that there is potential clash of direction with regard to land use preference.

Figure 4.1 Variances of responses by participants affecting implementation of legislations resulting it been fragmented



Source: Fieldwork based materials data from table 4.2

The evidence presented in Figure 4.1 showed uncontested confirmation that fragmented structure account for 25 percent followed by confusion caused with regard to which department is responsible for making final decision on the protection of agricultural land accounting for 23 percent, sufficient information not been shared with officials accounting for 21 percent, and the lack of cooperative governance account for lower percentages of 12 percent. It has been shown that fragmented legislation also contributes to ineffective implementation of legislation, accounting for 19 percent. From this table, it could be concluded that the department is executing the requirement of NEMA (1998) and the Chapter 3 of the Constitution (1996) with regard to cooperative governance.

The GDARD has developed the GAPA policy in 2006 based on the findings of the study conducted in 2005 to 2006. The investigations of PDALF showed that it has the same intension as GAPA (2006). It has been discovered that the identified agricultural land has been classified in terms of

GAPA 2006, which is what PDALF has highlighted. The differences identified between GAPA and PDALF was that PDALF gives provision the provincial government departments mandate to review and consent application on a high potential cropping area. Considering the responses of the participants with regard to the uncertainty of the department responsible for making final decision on the protection of agricultural land, it could be concluded that participants (88%) support the PDALF as they believed it would address the issue of conflict of direction regarding the land use preference and mandate. The findings of the approach considered by the GDARD when developing GAPA policy of the unforeseen challenges as a result of decisions made prior the development of this policy were well thought of. This indicated that more thought were given to the success of the implementation of this policy. Therefore, considering that the PDALF has the same objectives as GAPA, it would be important for the national and provincial departments to engage on the approach to address similar challenges.

The findings of the review of PDALF revealed that the enactment of this Bill into an Act would clearly indicate the responsibilities of the government departments. The Bill presented that it would empower provincial department to administer part of PDALF, however, the competent authority would still remain the Minister of DAFF. This showed compliance with Section 146(2) of the Constitution which highlighted that “the national legislation that applies uniformly with regard to the country prevails over provincial legislation”. It was clear in the PDALF that the provincial departments would be responsible for the review of subdivision and rezoning applications and the municipalities would provide comments on the applications taking into consideration the planning tools. The findings of the review of PDALF showed that its intention is to guide development and transformation of agricultural sector in order to achieve growth in agricultural employment, enable the DAFF to ensure the production of sufficient food for the nation over the long term and the protection of agricultural land. There are provisions of regulations in PDALF which Subdivision of Agricultural Land Act (1970) did not make provision of.

Based on the review of the above legislations, it has been confirmed that the intention of all legislations was to protect agricultural land from been transformed. Section 3(a) of Subdivision of Agricultural Land Act of 1970, Section 15(a) of Sustainable Utilisation of Agricultural Resources (2003), Sections 5, 6, 29 and 30 of Chapter 2 of Preservation and Development of Agricultural Land Framework (2015), Gauteng Agricultural Potential Atlas (2006) and the NEMA Environmental Impact Assessment Regulations prohibit the transformation of agricultural land unless the Minister and MEC consented to the application in writing. It was further noted that NEMA EIA Regulations, Sustainable Utilisation of Agricultural Resources and the Preservation and Development of Agricultural Land Framework promote cooperative governance principles

while the CARA and the Subdivision of Agricultural Land Act do not encourage the cooperative governance principles.

4.4 Participants perspectives on the transformation of agricultural land by fragmented legislations

From the interviews conducted, participants were concerned about the silo-based operation by the government departments while Chapter 3 of the Constitution (1996) and NEMA (1998) gives provision of cooperative governance. On the other hand, discussion with participants showed that sometimes recommendations are made to approve land use applications in order to satisfy senior management and politicians as they are more concern about the number of authorisations issued as opposed to the protection of the environment. Participants made reference to the statement made by the politicians that EIA process frustrate development because of unnecessary delays and create unreasonable barriers during the State of Nation Address.

From Table 4.2, it has been noted that participants (96% of responses) maintain that fragmented structure is the cause of reasons affecting the implementation of legislations, resulting it been fragmented. Therefore, in the view of addressing this fragmentation, participants agreed during the completion of the questionnaires and interviews that legislations regulating agricultural land should be amended and mandated to one department whereby other departments would support and provide comments on matters affecting their departments. Table 4.3 below provide responses suggesting that legislations required to be amended. However, table also shows that amongst those interviewed, there are participants who still believe that the current administrative system is feasible.

Table 4.3 Participant's reasons supporting the amendment of legislations

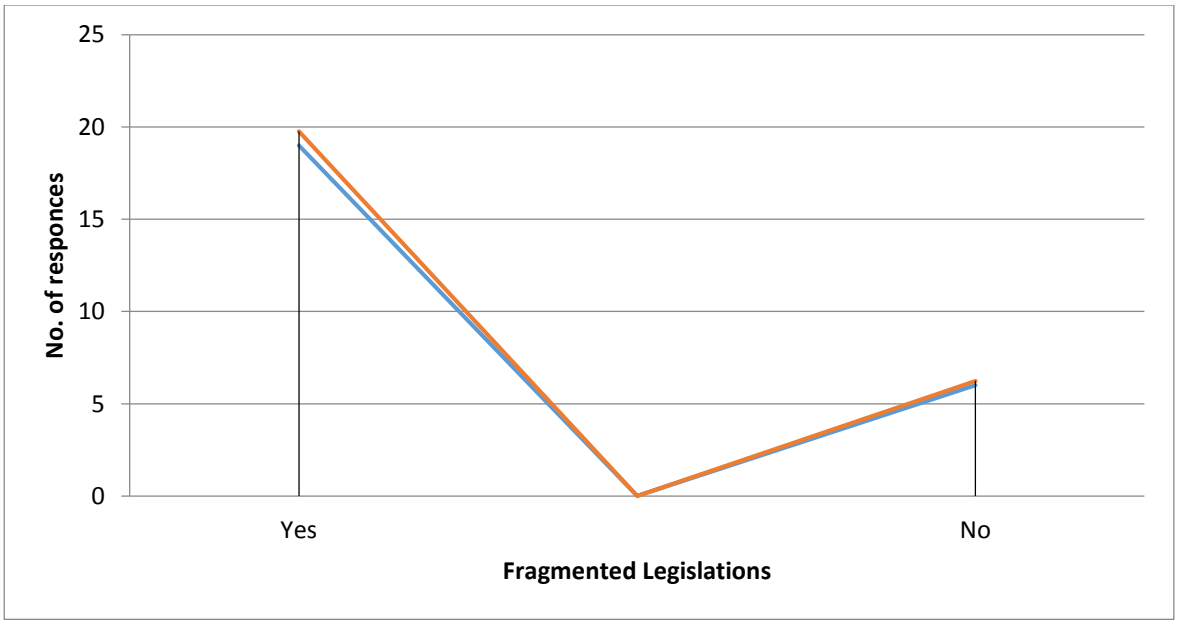
Fragmented legislation	**Frequency of responses citations by participants**	**Responses participants**	**Percentages**
Yes	▼ ▼ ▼ ▼ ▼ ▼ ▼ ▼ ▼ ▼ ▼ ▼ ▼ ▼ ▼ ▼ ▼ ▼ ▼	19	76%
No	▼ ▼ ▼ ▼ ▼ ▼	6	24%
Total	25	25	100

Source: Fieldwork based materials

Table 4.3 focused on one reason supporting the amendment of legislations, which is fragmented legislation accounting for 76 percent of the responses by participants. This was based on the

response from participants highlighted that having different legislations to manage and protect agricultural land from been transformed result in conflict processes, poor and inconsistent implementation of legislation due to fragmented structures administering land use. Therefore, there is a need to amend and integrate legislations to ensure effective and successful implementation, appropriate management and protection of agricultural land from been transformed to other land uses. It was submitted that the amendment of legislations would help the administrative requirements, procedure and processes to be simpler and aligned and ensure there is clear mandate of authorities which would prevent confusion and duplication of effort in the implementation of legislations. Surprisingly, the amendment of legislations was supported by officials (environment officers at entry level and assistant directors) interviewed including senior manager (deputy director and director) responsible for the directorate of agriculture and environmental impact assessment. The main reason for their support was that there are potential clash of direction with regards to land use preferences. Based on the information on Table 4.3, it could be concluded that the provision of Section 41(1)(g) of the Constitution (1996) need to be amended as well to allow spheres of government responsible to administer the environmental issues to perform their functions in a way that promote sustainable development within agricultural sector.

Figure 4.2 Variance of participants on the amendment of legislations



Source: Fieldwork based materials data from Table 4.3

From the data presented on Figure 4.2 with regard to the amendment of legislations, it can be concluded by larger percentages of responses provided by participants supporting the

amendment of legislations that the current operating systems between the departments administering the land use application is not feasible. During the interviews, participants indicated that there is silo-based operation between the departments. It was further reported that this result in poor communication on the land use applications resulting in decision made not incorporating other significant issues of concern from other department. Kotze (2005) highlighted that this disjointed and fragmented governance processes are still dominant at the operational level.

It has been noted that most participants who were interviewed were not familiar with other legislations regulating other environmental issues. Participants pointed out during the interviews that there is no need to know and understand other legislations not mandated to their department when making decision. It was further highlighted that this was due to the fact that it would be difficult to monitor conditions not governed by the legislation mandated to their department. Participants pointed out that the problem was originated from Section 41(1)(g) of the Constitution (1996) which gave provision that "the spheres of government should exercise their powers and perform their functions in a manner that does not encroach on the geographical, functional or institutional integrity of government in another sphere. It is important to note that this fragmentation of legislation was investigated previously, which Kotze (2005) pointed out that this fragmentation was addressed in the High Court of South Africa, where it was stated that *"the statutory framework regulating town planning and building regulations in its present form is fragmented and cumbersome in the extreme ... It requires a vast bureaucratic machine to administer all these provisions ... The system also frequently ...gives rise to conflicting and inconsistent decisions taken by different functionaries, officials and organs at different levels of local and provincial government. It would be of great assistance to everyone involved in the process…….. if the administrative machinery required to regulate these matters could be consolidated, simplified and streamlined".* However, to date the continuous and rapid transformation of agricultural land due to decisions made by various government departments showed that there are still fragmented structures operating in silo.

4.5 Conclusion

The investigations of the legislations showed that they have similar objectives which is to protect agricultural land from been transformed. This has been highlighted in Section 3(a) of the SALA, Section 15(a) of the Sustainable Utilisation of Agricultural Resources, Sections 5, 6, 29 and 30 of Chapter 2 of the PDALF, the NEMA EIA Regulations and the GAPA (2006). However, a few of these documents do have some implications or relevance for protecting agricultural land from been transformed to other land uses. Such legislation is the SALA which does not focus on the protection of all identified agricultural land in the country and also not address cooperative

governance principles. The NEMA EIA Regulations had the same aim as Subdivision Act of protecting agricultural land from been transformed. However the removal of activity 18 addressing the subdivision of agricultural land gave pre-approval of farmers and owners of agricultural land rights not to assess the impact of transforming agricultural land which resulted in the loss of agricultural land to other activities. This raised a question on whether the Subdivision Act would continue controlling the subdivision of agricultural land considering that the activity regarding the subdivision was removed from the regulations in 2010 and also not introduced in the 2014 NEMA EIA Regulations. An activity that addresses the transformation of agricultural land to other land uses has been introduced, however with threshold. Therefore, should the PDALF be enacted, this need to be addressed by the DEA and DAFF to prevent confusion on the implementation of PDALF.

The Subdivision of Agricultural Land Act (1970) is not a suitable legislation to effectively protect agricultural land from other development. The review showed that Subdivision of Agricultural Land Act is only applicable to privately owned land and when compared with other instruments, it was discovered that its effectiveness was limited by recent policies and legislations related to land use, land use planning and the environment, for example the GAPA policy, the NEMA and its Regulations.

The findings of the review of legislations and policies and also data collected from the participants further showed that fragmented structure is the main factor influencing fragmented legislation. Participants pointed out that there are potential clash of direction with regard to land use preference and need to be addressed. Therefore, in the view of addressing this fragmentation, legislation regulating agricultural land (environment) should be amended and mandated to one department whereby other departments would support and provide comments on matters affecting their departments. It was highlighted that integration of agricultural land into the NEMA EIA Regulations and GAPA would address the problem of the transformation of agricultural land. Furthermore, considering the responses of the participants with regard to the uncertainty of the department responsible for making final decision on the protection of agricultural land, the enactment of PDALF would address the issue of conflict of direction with regard to land use preference, however required to consider unforeseen challenges as a result of decisions made prior the development of the Bill. At the same time, the amendment of legislations would ensure there is clear mandate of authorities which would prevent confusion and duplication of effort in the implementation of legislation, ensure effective and successful implementation, appropriate management and protection of agricultural land from been transformed to other land uses. Based on the above, it could be concluded that the provision of Section 41(1)(g) of the Constitution (1996) need to be amended as well to allow spheres of government responsibility to administer

the environmental issues to perform their functions in a way that promote sustainable development within agricultural sector.

Chapter 5

Discussion

5.1 Introduction

The aim of this study was to assess the legislations that regulate measures on agricultural land use change through the decision made after the review of land use applications. To complete this study, it is important to analyse the data collected in order to test if the research questions were answered.

This chapter comprises of analysis and interpretation of the findings resulting from this study. The analysis and interpretation would be carried out focussing on the experience and knowledge of the participants and also consider the literature reviewed.

5.2 Assessment of the perception of participants reviewing land use applications

The bottom challenge in the implementation of legislations mandated to manage and protect the environment including agricultural land is the provision of Part A of Schedule 4 Constitution, which gives concurrent national and provincial functions on the environment, agriculture, urban and rural development. This led to the agricultural land use changes regulated by a variety of laws which play an important role in the final decision making about land use conversion from agriculture to other types of land uses. Furthermore, Section 41(1)(g) of the Constitution made the situation more difficult by consenting all spheres of government to exercise their powers and functions in a manner that does not encroach on the geographical functional or integrity of other sphere. The analysis of the above showed that the arrangements caused confusion, potential clash of direction with regard to land use preference or conflicting mandate, encouraged lack of cooperative governance and duplication of effort in the implementation of legislations. Thus, despite the effort put in addressing the transformation of agricultural land to other land uses through surveys, identification of agricultural land to be protected and the creation of policies, there is no influence to change and implement the policies, if the current states of the legislations are still mandated to various departments. Bray (1995) is of the view “that environmental governance in South Africa remains fragmented”. The researcher submits that this is as a result of weak institutional framework and a lack of cooperation and coordination of environmental activities among institutions that have been mandated to manage the environment. These further result in

difficulties to address the issues of fragmented legislations and improve cooperation between the departments. Kotze (2005) argued that “while these legislations and policies present methods and framework within which environment governance may be executed, structure which is fragmented and line functions at all three spheres which is disjointed remain”. It was further argued by Nel, Kotze and Snyman (2008) that this is as a result “of fragmented silo based legislations and policies, and uncoordinated use of policy tools at the operational level. At policy level, there may be interesting initiatives to address this disjointed and fragmented governance processes”. However at the operational level, disjointed, fragmented and increase governance process are still dominant (Kotze, 2005). This was alluded by Dlamini (2014) that land reform programme in South Africa failed because of silo based operation and fragmented structures of the departments. From the argument presented above about the silo based operation and fragmented structures, it could be concluded that there is a serious challenge in the implementation of the legislations in South Africa. This argument is based on the fact that there is provision of cooperative governance in terms of Chapter 3 of the Constitution and the National Environmental Management Act 107 of 1998, however, not taken into consideration. Therefore, the amendment of the Constitution focusing only on the abovementioned sections, integrating all environmental legislations and authorising a legislation that would manage and protect the environment including agricultural land would address this concern.

Further to the above, the analysis of data collected showed that the current state of South African legislations does not compel the reviewers of land use applications to know and understand other legislations mandated to manage and protect the environment including agricultural land. This was asserted by Scheepers (2000), presenting that “the responsibilities for natural resources are spread over different national and provincial departments and each carry out the mandate as specified by the Act they have to implement”. It was further asserted by several authors that different local municipalities and departments mandated to manage agricultural land had rights to enforce their own legislations and policies without united coordination. This is due to the structures of the existing legislations and will remain until the amendment of the Constitutions and legislations. The researcher submit that there is provisions in some legislations for consideration of cooperative governance, however, does not state that decisions would not be made without consent from other department. Therefore, the researcher is of the view that this concern could be addressed by the amendment of legislations.

The investigation showed that fragmented structure is the leading factor contributing to the ineffective implementation of legislations. The evidence has been shown on Figure 4.1 which shows that fragmented structure contribute 25% to the ineffective implementation of legislations. However considering the experience and opinion shared with the researcher, other factors

indicated on the abovementioned figure also contribute to the ineffective implementation of legislations; therefore cannot be ignored. On the other hand, not all factors had the same impacts on fragmented legislations as shown on Table 4.2. The results showed that there is cooperative governance between the spheres, which was reported that it take place between the GDARD and the Local Municipalities. From this, it is clear that there is potential clash of direction with regard to land use preference between the provincial and national department. This was promoted by Part A of Schedule 4 in the Constitution as mentioned above. From the evidence provided, it is clear that the amendment of legislations including the sections of the Constitution would ensure prevention of confusion and duplication of effort in the implementation of legislations, prevent the potential clash of direction with regard to land use preferences and ensure the administration process is simple and aligned. Thus because the creation of all environmental legislations mandated to administer the environment including agricultural by different departments is as a result of the Constitution. It is the view of the researcher that the amended Constitution should give provision one department powers to manage and protect agricultural land and other departments would provide supports on matters that affect their departments. It was observed that" South Africa does not have a central lead agent to direct and control environmental matters in an integrated way" (Du Plessis and Nel 2001). The "DEA does not have the strong role over all environmental matters" (Lawrence, 1999), it only acts as coordinator by providing guidance (Kotze, 2005 and Du Plessis and Nel 2001, 26-27). Bray (1995) also conceded to the central lead agent and further pointed out that the international countries such as America and Australia's approach to the protection and management of the environment favours the centralisation of powers when it comes to the environmental administration and that appeals are administered by national spheres of government.

5.3 State of legislations and policies regulating agricultural land

The investigations of the existing legislations and polices relating to the environmental management in Gauteng showed that they have similar objectives which is to protect agricultural land from been transformed. However, some have implications or relevance for protecting agricultural land from been transformed to other land uses. It was noted that the applicability of some legislations is only on privately owned land and not on all identified agricultural land in the country while some of the legislations do not promote cooperative governance. Thus, this resulted in other departments not consulting each other as each department operate as guided by their legislation. In addition, most of legislations are old and overridden by other legislations. It was further noted that the regulations introduced as a result of those various legislations are not similarly addressing the cause of the transformation of agricultural land to other land uses. For

example, in terms of the regulations of the Subdivision of Agricultural Land Act (1970), all subdivision of agricultural land requires consent from the Minister while the regulations published in terms of NEMA Environmental Impact Assessment has threshold that need to be triggered in order to request consent from the Minister or Member of Executive Council. Therefore, this result in confusion to the applicants or developer who also consider an option that is suitable for them and not found been compelled to follow the other procedure. An example relating to this was pointed out in previous chapter [see section 1.7.2.2 (a)], which showed that the main concern is the process undertaken during the land use application.

The investigations further showed that government officials are aware of the loss of agricultural land to other land uses. This was evidenced by surveys conducted in Gauteng Province to identify agricultural land with an aim of protecting it, which confirmed that agricultural land continues to be used for other land uses. The findings of these surveys were highlighted in Chapter 4 (see section 4.2.2). From the investigation of this study, the researcher is of the view that the government has no will to protect agricultural land from been transformed to other land uses. This is as a result of the commitment made with other countries, prioritising economic growth over protecting agricultural land. It was presented in the SDF (2011) that “economic growth of South Africa depend on the infrastructure development, which is what several authors pointed out that it contribute to the transformation of agricultural land” (Ranjith, 2011; Collett, 2013 and Ellis, 2013). Furthermore, it was argued that “prioritisation of development does not contribute to economic growth” (Knox and McCarthy, 2012) but the transformation of agricultural land. It has been noted that promotion of the conversion of agricultural land lead to more pressure of development which finally takes place in areas without municipal bulk services. Thus, this results in continuous poor planning of development by local municipalities.

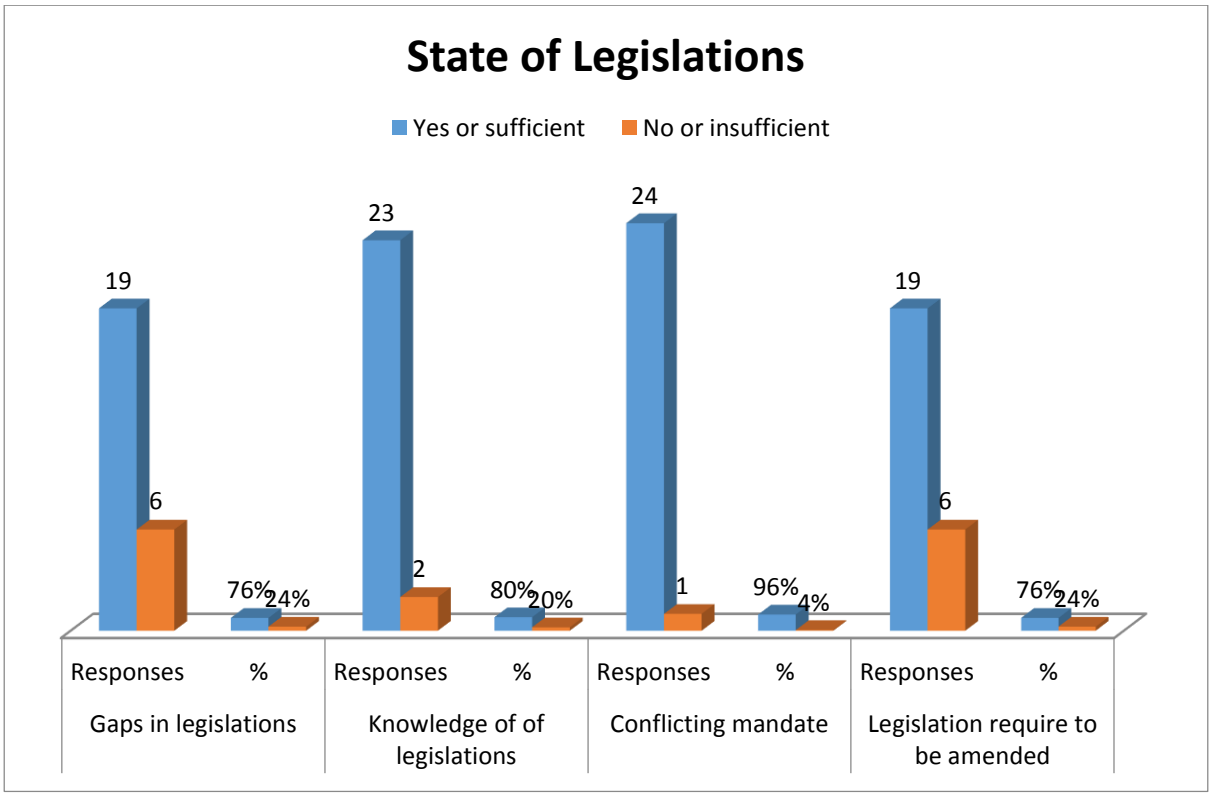
Table 5.1 Responses on the state of legislations

State legislations	Gaps legislations		Knowledge of legislations		Conflicting mandate		Legislation require to be amended	
	#	%	#	%	#	%	#	%
Yes or Sufficient	19	76%	23	80%	24	96%	19	76%
No or Insufficient	6	24%	2	20%	1	4%	6	24%
Total	25	100	25	100	25	100	25	100

= number of responses

Source: Fieldwork based materials

Figure 5.1 Responses on the state of legislations



Source: Fieldwork based materials

a. Gaps in legislations

The investigations showed that there are gaps in environmental legislations accounting for 76%. The researcher is of the opinion that this could be addressed through amendment of legislations to prevent inconsistency in the implementation of legislations and management of agricultural land.

b. Lack of knowledge of other legislations mandated to manage other environmental issues

The framework of the existing legislations showed that lack of knowledge of other legislations mandated to administer other environmental issues contribute to the loss of agricultural land. It is the researcher's opinion that knowledge of other legislations by the reviewer would help in identifying important issues that need to be considered in making decision and prevent transformation of agricultural land to other land uses.

c. Conflicting mandate

Table 5.1 shows that conflicting mandate between the departments account for 96%. This is due to Part A of Schedule 4 of the Constitution (1996) and Section 41(1)(g) of the Constitution as presented in the previous chapters (see sections 3.4.2. and 4.4 above). Therefore, these sections of the Constitution require to be amended to ensure effective implementation of legislations.

d. Legislations required to be amended

The analysis showed that the existing legislations are not sufficient to protect agricultural land and are considered ineffective (76%). The main reason is that there is potential clash of direction with regards to land use preference; there is lack of coordination and cooperative governance between the departments, which promote fragmented structures with the departments responsible for administering the agricultural land uses. Therefore in the view of the state of current legislations, it is important to amendment of legislations to prevent confusion and duplication of responsibilities in implementation of legislation and ensure the process is simple and aligned.

5.4 Planning for development

The use of agricultural land for other land uses in the study area is at an alarming rate due to pressure of development. The investigations showed that this is as a result of poor planning, leading to an increase in pressure of development that is considered to improve the economic growth by government. It could be argued that the main problem leading to the transformation of agricultural land to other land uses is the pressure from government to ensure that targets in terms of treaties made with other countries are met. The SDF (2011) presented that "South African government has entered into various treaties with its trade associates which impact on economic growth in the country and agriculture provides a marginal share (1%) of the Gross Domestic Products (GDP)". It has been noted that this agreement was taken serious by the spheres of government, as it was ensured that it forms part of the spatial planning tools. This led to an argument by Collett (2013) that an increase in pressure of economic growth through development is not effectively addressed, and result in the transformation of agricultural land to other land uses. Collett's (2013) argument was based on the fact that there is no integration of the environmental issues into planning and inputs from agricultural specialists are not incorporated into planning reports by the local municipalities. From this it could be concluded that the way legislations are implemented, shows that there is no balance of sustainable development factors such as social, economic and environmental issues; instead focus is more on economic development than protecting agricultural land for future benefits of the community.

It has been noted that poor planning led local municipalities consenting to development in an area that requires to be protected in order to support development and improve economic growth. For example, most land is still sold to rich people to use it for other land use activities such as residential and industrial, while poor black communities are not considered. This was evidenced by the amendment of EMM EMF in 2005, in order to expand the area along R21 highway to support mixed development. Several authors disagreed with the approach of promoting economic growth by supporting residential and industrial development in an area that should be used for other activities. The argument was based on the fact that there is no clear indication on how development promotes economic growth (Knox and McCarthy, 2012 and Lotter, 1987 and Dewar and Todeschini, 1999). In view of the above, the argument presented showed that there is no will from the government to protect the environment including agricultural land taking into consideration the priority of government which is infrastructure development. Furthermore, it could be concluded that lack of balance of sustainable factors and the limitation of political powers in ensuring continuous protection of the agricultural land from been transformed could block economic growth, considering that

agriculture plays an important role as it provides food security and alleviate poverty. Fuggle and Rabie (1992) reported that “agricultural land is the most important component of South Africa’s natural resource base and provides the source for future development of the country, in terms of food security of its populations”. It has been asserted by the United Nations (2002) that “agriculture is important in meeting the demands of future populations, especially in terms of eradicating poverty, providing food security and empowering rural communities in countries such as South Africa”, which was supported by Vink (2003) that “agriculture plays an important role for the communities by creating sustainable job opportunities; attracting foreign investment and benefiting the environment by maintaining biodiversity. According to Lyson and Olson (1999), “an adequate supply of quality agricultural land is essential for the economic, social and environmental well-being of the citizens of a country”.

An example that shows poor decision undertaken by the decision makers is a case study of the Ladkrabang District of the BMA whereby agricultural land was transformed as a result of an expansion of a city with the intention of supporting pressure of development, and this occurred due to poor planning. It was decided that an agricultural land be transformed to allow the transportation centre that support the Suvarnabhumi International Airport which is located adjacent to the land which is presently used primarily for agricultural purposes (Ranjith, 2011). The area was promoted to be Airtropolis to meet the needs of transportation, services, industrial and residential at an alarming rate, however, almost three decade of intervention by BMA resulted in the decline of residential development adjacent to the Suvarnabhumi International Airport due to excessive noise and air pollution by the operation of the airport (The Nation, 2009). The same concept was followed by the Ekurhuleni Metropolitan Municipality by supporting mixed development in an area which is in close proximity to the OR Tambo International airport. The question that arises is what would be the outcome of this approach in the next decade and what it is that would be different that the South African government would consider, and ensure the result of the approach is positive?

5.5 Analysis of government action on the protection of agricultural land

The willing seller-willing buyer was introduced by democratic led government but failed, targets were not met and land redistributed was not enough. The investigations showed that programme was initiated in 1980 by the apartheid government and also failed (De Klerk, 1991). This programme was first initiated in Zimbabwe in 1990 as well as in Namibia and the same results were occurred in South Africa. Lahiff (2007) pointed out that “the willing seller-willing buyer was a challenge on its own as it fully protect the interest of landowners, depend on the landowners

will to sell the land and also white farmer's decision on which land to be available to blacks" (Aliber, 2006). Furthermore, Moyo (2000) submitted that "the willing seller-willing buyer was never going to solve the problem given that it depends on the will of the seller". Moyo (2013) confirmed that "the outcome of Zimbabwe's first years of independence was copied in South Africa through income inequality along race and class lines". It was observed that the South African government spend a lot of money buying land at market value before handed it to original owner, who were evicted during apartheid era. This raised a question of why South African government continued to implement the willing seller-willing buyer considering the fact that it failed during the apartheid led government and was also not successful in Zimbabwe and Namibia. In addition, the investigations did not identify any new approach that was considered by the South African government that guided the implementation of the principle. Therefore, it could be concluded that the same approach considered by Zimbabwean and Namibian were considered by South African, hence the failure.

It could be submitted that the abandoning of the willing seller-willing buyer by all three countries based on the outcomes shows poor planning and weak institutional framework of the government. In addition, evidence was shown by the expropriation of properties which all the three countries had powers to execute, however, not used (Hall, 2004 and Moyo, 2001 and Ndala, 2009) (see section 2.3). The countries decided to follow the willing seller-willing buyer principle influenced by the European countries. Linnington (1999) reported that "the legal framework designed by the former colonial master appeared as a hindrance to an effective move towards black empowerment, hence the failure of the principle". The question that arose was that, what made South African government to believe that the implementation of expropriation would resolve land reform issues? The researcher is of the view that South African government should amend Section 25 of the Constitution and conduct a research taking into consideration the failure of the willing seller willing buyer principle, how other countries implemented the expropriation programme, its successes and failure as a lesson prior adopting and implementing expropriation in the country. Furthermore, the researcher is of the view that this would help to address the issues of racism which was not dealt with since 1994, which Moyo (2014) pointed out that the main problem resulting to land reform in Zimbabwe was that white racism was the result of capitalism, there was struggle against unjust system, exploitation, oppression and human equality. The creation of the Agricultural Land Reform Act (2001) in Namibia which introduced land tax, whereby the main aim of government was to penalise unproductive farmers and force them to sell the land to government (Werner, 2001) could be considered as a strategy to deal with racism, which could be argued that it was not a proper way to address land reform issues.
Based on the outcome of the expropriation in Zimbabwe and Namibia, the researcher is of the view that the same challenge would be experienced in South Africa, should it be implemented as

it is. This assertion is based on the fact that the consideration of the expropriation programme has been opposed that the process of compensation needs to be clear and fair to all the farmers and investors. Moyo (2001) reported that “the outcome of expropriation in Zimbabwe resulted in high profile land occupation, war and landless group” while Namibia is facing a challenge of landowners taking the Minister of Land Resettlement to court, challenging the process of identifying farms that should be expropriated. On that note, the researcher is of the view that the expropriation programme in South Africa if not adequately addressed, would fail just like the willing seller-willing buyer. This was also pointed out by Ntsebeza (2007) that “the issue of compensation could lengthen the expropriation process just like in Namibia”. Furthermore, it could be concluded that this is evidence of poor planning by government and reliance on what other countries are doing without understanding the implications to the country.

5.6 An overview of the research topic

This study acknowledged reasons that have been highlighted concerning the transformation of agricultural land to other land uses through different processes by various departments. Such reasons are fragmented structures, fragmented legislations, conflicting mandates and lack of knowledge of other legislations used to manage other environmental issues.

Before the researcher has communicated with different officials reviewing land use applications, the researcher had a perception that there was one department mandated to manage and protect the environment. However, after reviewing other legislations including the Constitution, the researcher realised the contradiction and confusion established by the Constitution. The Constitution was considered the creation of the fragmented legislations, fragmented structures and silo-based operation system within the spheres of government by supporting various legislations to be developed and mandated to different departments or spheres.

The cause and consequences of the transformation of agricultural land to other land uses are immense. Participants asserted this and indicated that it is because Gauteng Province is small and is economically the biggest in South Africa. In addition, the cause of the loss of agricultural land is as a result of the mismanagement by planners and the inability of planners to communicate fully with the affected parties or consider inputs from interested and affected parties. In chapter 2, Khan (1980) was quoted stating how planners make decision when it comes to planning for development. In addition, Collett (2013) pointed out that inputs from agricultural specialists are not considered during the creation of the spatial development report.

The investigations showed that there is no political will in South Africa to ensure continuous protection of agricultural land for agricultural purposes. The review of EMM EMF (2008) showed that “South African government has entered into various treaties with its trade associates which impact on economic growth in the country and agriculture provides a marginal share (1%) of the GDP”. The review of literature further showed that the South African economy is driven by infrastructure developments (see section 5.4). Ellis (2013) affirmed that “the improvements of infrastructure development contribute to the transformation of agricultural land around cities and along highways, leading to urban sprawl” which is what EMM is planning to execute along the R21 highway, to unlock the Aerotropolis initiative and allow mixed development along R21 highway.

There are legislations, policies and planning tools in place to ensure the protection and effective management of agricultural land; however, there are problems when it comes to the implementation. This has been proven by the apartheid led government and democratic led government which created various legislations meant to protect agricultural land, while on the other hand, introduced the land reform programmes to protect agricultural land however failed (Mathebula and Anseeuw, 2008; Mudhara, 2010 and Aliber, 2006). Therefore in the view of above, the spheres of government need to address the problem of lack of integration and fragmented legislations, lack of cooperative governance between structures, gaps in the environmental legislations and policies that conflict each other resulting in unsustainable land and resources use practices and clash of direction with regard to land use preference.

5.7 Conclusion

In South Africa, various legislations have been developed to manage and protect agricultural land. These legislations are mandated to different departments for its implementation. The legislations and policies have similar objectives of protecting agricultural land; however, some has serious influence on the spatial expansion of the area. Further, the investigation showed that there are other relevant legislations such as Subdivision of Agricultural Land Act 70 of 1970, however too old and overruled by new legislations and policies such as the National Environmental Management Act 107 of 1998 and Gauteng Agricultural Potential Atlas (2006) policy. This resulted in a negative effect with regard to the protection of agricultural land considering the fact that in South Africa, “there is no central lead agent to direct and control environmental matters in an integrated way” (Du Plessis and Nel, 2001) and making final decisions regarding the protection of agricultural land.

Furthermore, different local municipalities and departments mandated to manage agricultural land had rights to enforce their own legislations and policies without united coordination. Section 41(1)(g) of the Constitution gave provisions to the departments to exercise their powers and functions without encroaching on the functions of other spheres of government while Part A of Schedule 4 of the Constitution gave provision of concurrent environmental management responsibilities to the national and provincial department. Thus, this resulted in conflicting mandate and potential clash with regard to land use preference which has promoted the silo-based operation by the departments resulting in the transformation of agricultural land to other land uses, lack of cooperative governance between the departments and gaps in the environmental legislations.

The apartheid led government introduced the land reform programme in late 1980 and early 1990 but failed. The investigations showed that the law that was developed to protect agricultural land was used for the benefits of white populations. The democratic led government also followed the same path of the apartheid government and the Zimbabwean government approach in addressing the agricultural land issues. The South African government initiated programmes such as community food gardens, land reform and farmer's settlement, introduction of loans scheme for small holders and tractor mechanism scheme intending to promote agricultural sector, however, not successful. Moyo (2013) confirmed that "the outcome of Zimbabwe's first years of independence was copied in South Africa through income inequality along race and class lines".

The review of literature confirmed that South African government's focus is on the infrastructure developments which drive its economic growth than agriculture sector which contribute a marginal share (1%) of the GDP (see section 5.4). Therefore, this proves that there is no will of government in addressing the transformation of agricultural land to other land uses. Furthermore, this shows that despite the effort of addressing the problem through creation of policies, the problem would remain as the economic growth depend on infrastructure development that was argued by several authors that it contribute to the transformation of agricultural land.

CHAPTER 6

Conclusions and Recommendations

6.1 Introduction

This chapter present summary of the findings of this study. It further highlight the recommendations of legislations and policies in addressing the transformation of agricultural land and concludes with the recommendations for further research with regard to this research topic that would assist in the protection of agricultural land from been transformed to other land uses.

6.2 Summary of the research findings

The findings of the study showed that the main problem resulting in the transformation of agricultural land to other land uses in South Africa is the framework of the existing legislations including the Constitution. It has been noted that Part A of Schedule 4 and Section 41(1)(g) of the Constitution promote the silo-based operation by the departments mandated in terms of the law to manage and protect the environment including agricultural land. In addition, the Constitution supported the creation of various legislations that are mandated to different departments.

Further, the investigations showed that the structures of these legislations give powers the implementers to make decision without concern of other departments. However, the same legislations further showed contradiction as some encourage cooperative governance between the departments. Therefore, fragmented structure as a result of these legislations led to conflicting mandate, potential clash of direction with regard to the land use preference, lack of cooperative governance and duplication of effort during the implementation of legislations.

Based on the above, it is concluded that legislations require to be amended to ensure that administration process is simpler and aligned, prevent confusion and duplication of effort with regard to the implementation. This would help government to achieve objectives of managing and protecting the environment including agricultural land for the purpose of agricultural activities.
The review of literature further showed that the consideration of programmes and actions that are not suitable for the country context result in government not achieving its objectives. It is important not to copy and implement programmes and actions that failed in other countries. The review of literature further highlighted the importance of addressing the issue of poor planning or spatial

inequalities within the regions in the country. It was pointed out that this would prevent the overuse of resources in a specific area or region. It is important to balance the social, economic and environmental factors when addressing the issues of concern in the country instead of focusing more on economic growth which result in infrastructure development that contribute to the transformation of agricultural land to other land uses. In addition, in order to address poor planning or spatial inequalities, it is important for planners to consider inputs from the community's (specialists, landowners, stakeholders, academics and researchers) instead of deciding on what is good for people.

6.3 Recommendations for legislations and policies

Based on the discussions above, the South African government must consider amending the Constitution (focusing on part addressing environmental issues) to give provision the central lead agent to direct and control environmental matters in an integrated way. The leading Act and its Regulations must specify the competent authority, the authorisation application processes and procedures to be considered by the authority when reviewing land use applications and making decisions. The amended Constitution must give provision other sector's authorisation application to be submitted prior the lead agent department's decision is made. This means that the lead agent department may only issue final decision on the proposed activity if and when other sector's authorisation application has been decided on or significant issues are addressed.

The amended Constitution will address the problem of fragmentation of legislations, fragmented institutions and operational structures administering the management of agricultural land. In addition, this will address the problem of lack of cooperative governance between institutions, ineffective use of land due to conflicting environmental strategies and policies and potential clash of direction with regards to land use preference.

The spheres of government need to focus on the prevention of further deterioration or transformation of the available agricultural land by amending planning policies to support pressure of development. More emphasis should be on the demarcation of the identified agricultural land for agricultural purposes, better crops and methods of production, development of agriculture and enhance life conditions in rural areas. The South African government needs to focus on supporting large scale farmers in order to preserve more agricultural land for agricultural production and small scale farmers need to work together with large scale farmers in order to obtain knowledge and be able to use the experience on their own in future.

6.4 Recommendations for further research study

Due to the fact that data was collected from participants reviewing land use applications within the GDARD, the study cannot be seen as representative for the overall reviewers of land use applications. Therefore, another study on this topic that manage to collect data from all spheres of government mandated to administer land use applications need to be undertaken in order to understand challenges encountered by both the departments or spheres. The study needs also to focus on the findings of the Independent Advisory Panel (IAP) established on 19 January 2016 by the Speaker of the South African National Assembly which intends to assess the impacts of legislations passed by Parliament since 1994, to review legislations and assess its implementation, identify laws that require strengthening or amendments and changes, and propose actions in order to support the above recommendations.

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Appendix A

Questionnaires completed by participants

Participation Letter

Dear Sir/Madam

It would be highly appreciated if you could assist me by participating in this research project that forms part of my Masters studies through the University of Witwatersrand, Johannesburg, by completing this questionnaire. I am conducting research which its purpose is to investigate the transformation of agricultural land to other land uses within the Ekurhuleni Metropolitan Municipality in the Gauteng Province.

As reviewers of the land use (Environmental Impact Assessment and subdivisions) applications, you are invited to take part in this research study. The purpose of this survey is to understand how officials review and process the land use applications and the role played by the legislations in the protection of agricultural land and the effect it has on the agricultural land conversion.

Your response is important and there are no right or wrong answers. This survey is both confidential and anonymous. Anonymity and confidentiality are guaranteed by not required to enter your name on the questionnaire. Your participation is completely voluntary and involves no risk, penalty, or loss of benefits whether or not you participate. You may withdraw from the survey at any stage.

This questionnaire consists of four parts:
Section 1 This section comprises of questions that will help to understand the background of the participants.
Section 2 This includes questions regarding the knowledge of legislation regulating the protection of agricultural land in South Africa.
Section 3 This includes questions relating the participant knowledge about the impacts of the transformation of the agricultural land.
Section 4 This consist of questions about the participants opinion of the efficiency of existing legislations that manage agricultural land in South Africa, especially the Ekurhuleni Metro Municipality in Gauteng Province.

This questionnaire will take approximately **20 minutes** of your time to complete. Place an X in the appropriate box where there is an opting or otherwise type where information is required. The survey was approved unconditionally by the Wits University Research Ethics Committee (Non-Medical).

Thank you for considering participating. Should you have any questions, or should you wish to obtain a copy of the results of the survey, please contact me Olivia Letlalo on 012 399 8815 or 072 513 9360 or at oletlalo@environment.gov.za OR
My supervisor's name and contact details are: Dr D Simatele – Danny.Simatele@wits.ac.za or 011 717 6515

Kind regards
Olivia Letlalo
Masters Student: School of Geography, Archaeology and Environmental Studies
University of the Witwatersrand, Johannesburg

SECTION 1: Place an X in the appropriate box where there is an option or otherwise type where information is required

1.1. Which sphere of government do you represent?

National Government ☐ Provincial Government ☐ Local Government ☐

1.2. Which of the following sectors does your department /organisation represent?

Environment ☐ Agriculture ☐ Town Planning ☐

1.3. What does your job entail?

☐

1.4. How long have you been performing the job mentioned above?

Less than 12 months ☐ One to five years ☐ Six or more than ten years ☐

SECTION 2: Place an X in the appropriate box if you have knowledge of the following legislations regulating the protection of agricultural land in South Africa.

2.1. Section 24 of the Constitution of South Africa (Act No. 108 of 1996).

Yes ☐ No ☐

2.2. The National Environmental Management Act (NEMA) (Act No. 107 of 1998) (as amended) and its principles.

Yes ☐ No ☐

2.3. The Subdivision of Agricultural Land Act (Act 70 of 1970).

Yes ☐ No ☐

2.4. The Town Planning and Township Ordinance 15 of 1986

Yes ☐ No ☐

2.5. Are you satisfied with your current knowledge of the legislations relating to the management or protection of the agricultural land?

Yes ☐ No ☐

2.6. As per the legislations mentioned above, are you mandated to protect the environment including the agricultural land?

Yes ☐ No ☐

If Yes, please indicate in terms of which legislation?

SECTION 3: Your knowledge about the impacts of the transformation of agricultural land to other land uses on the environment. Place an X in the appropriate box where there is an option or otherwise type where information is required.

3.1. Is there any other legislations or decision supporting tools considered when making decision or recommendations that are mandated to protect the environment including agricultural land?

Yes ☐ No ☐

If Yes, please provide details of the legislations or decision supporting tools.

3.2. When reviewing and processing the land use applications, do you comply with the requirements of the abovementioned legislations and supporting tools, and also check if the reports submitted comply with the requirements of the legislations and supporting tools mentioned above?

Yes ☐ No ☐

If No, please provide the reasons.

3.3. Do you encounter any pressure from politicians when reviewing and processing the land use applications?

Yes ☐ No ☐

3.4. Do you **always liaise** with other Department or sphere of government affected by development proposed prior making decision or recommendation on the land use applications?

Yes ☐ No ☐

Please provide reasons for answer given above.

3.5. Considering the loss of agricultural land due to subdivision and resultant residential and industrial development, is there anything that your Department is doing or intend to do to protect the remaining agricultural land?

Yes ☐ No ☐

Please provide reasons for answer given above.

3.6. Provincial Department (GDARD) developed a policy, Gauteng Agricultural Potential Atlas (GAPA 3) in 2006 (as amended), do you have knowledge of it?

Yes ☐ No ☐

3.7. Do you support the above-mentioned policy and believe it is a good plan for protecting agricultural land?

Yes ☐ No ☐

Please provide reasons for answer given above.

3.8. Any further comments you might have on the impacts as a result of the transformation of agricultural land to other land uses such as residential and industrial development on the environment.

SECTION 4: Your views of evidence of the successfulness of the environmental legislations on management and protection of agricultural land in the South Africa – Northern Service Centre of the Ekurhuleni Metropolitan Municipality.

4.1. Are all spheres of government mandated to protect and manage agricultural land know their responsibilities?

Yes ☐ No ☐

4.2. Evidence that key requirements to prevent the transformation of agricultural land to other land uses are followed e.g. corporative governance prior making decision on land use applications.

Yes ☐ No ☐

4.3. Any further comments you might have on the evidence that environmental legislations effectively manage and protect agricultural land for the use of agricultural activities.

4.4. Please indicate as to whether in your opinion the following statement is the correct interpretation that efficiency an accurate representation that the existing environmental legislations are efficient in addressing the protection and management and protection of agricultural land in the Northern Service Centre of the Ekurhuleni Metropolitan Municipality. <u>Place an X within the appropriate box.</u>

4.4.1. Transformation of agricultural land is the activity caused by human being and require to be regulated.

Yes ☐ No ☐

4.4.2. The impacts of the transformation of agricultural land on the environment are so harmful and require effective legislation for the management thereof?

Yes ☐ No ☐

4.4.3. South Africa has sufficient environmental legislations that sufficiently control and manage the transformation of agricultural land to other land uses and its impacts thereof.

Yes ☐ No ☐

4.4.4. NEMA is sufficient in scope to address the concern regarding the loss of agricultural land to other land uses?

Yes ☐ No ☐

4.4.5. Subdivision of Agricultural Land Act 70 of 1970 is sufficient to address the concern regarding the loss of agricultural land to other land uses?

Yes ☐ No ☐

4.4.6. Town Planning Ordinance is adequate to address the challenges and impacts caused by the conversion of agricultural land to other land uses?

Yes ☐ No ☐

4.4.7. Amendments of legislations are required to strengthen the existing environmental legislations to efficiently manage and protect the transformation of agricultural land to other land uses.

Yes ☐ No ☐

4.4.8. The ineffectiveness of existing legislation is as a result of conflicting mandate between different departments.

Yes ☐ No ☐

4.4.9. DAFF has sufficient capacity to address the transformation of agricultural land to other land uses?

Yes ☐ No ☐

4.4.10. GDARD has sufficient capacity to address the transformation of agricultural land to other land uses?

Yes ☐ No ☐

4.4.11. Ekurhuleni Metropolitan Municipality has sufficient capacity to address the transformation agricultural land to other land uses.

Yes ☐ No ☐

4.4.12. Information to officials about the protection of agricultural land from other land uses is adequate?

Yes ☐ No ☐

4.4.13. The responsibility regarding the protection of agricultural land is not unclear between the spheres of governments.

Yes ☐ No ☐

4.4.14. There are differences in the environmental legislations on the protection of agricultural land.

Yes ☐ No ☐

4.5. The efficient implementation of environmental legislation concerning the protection of agricultural land in the Northern Service Centre of Ekurhuleni Metro Municipality (EMM) depend on the following factors. <u>Place an X within the appropriate box.</u>

4.5.1. All pieces of legislations relating to the protection and management of agricultural land must be integrated and consolidated.

Yes ☐ No ☐

4.5.2. Administrative requirements, procedures and processes by government department must be simpler and aligned.

Yes ☐ No ☐

4.5.3. There is good coordination and communication between department responsible for management and protection of agricultural land.

Yes ☐ No ☐

4.5.4. Is the mandate of relevant departments clear in order to avoid confusion and duplication during the implementation of legislations?

Yes ☐ No ☐

4.5.5. Are there systems and records available for the departments to efficiently address the land use issues?

Yes ☐ No ☐

4.5.6. Consistency in implementing the environmental law.

Yes ☐ No ☐

4.5.7. Co-operation and willingness by the developers, consultants and politicians to comply with the legislation to effectively manage and protect the agricultural land from been transformed for the benefits of socio-economic and environmental reasons.

Yes ☐ No ☐

4.6. What need to be done, if you are of the opinion that legislations on the management and protection of agricultural land is weak and inefficient?

4.7. Any other comments you would like to add or ensure the researcher is aware of?

Thank you for your participation

Appendix B

Semi-Structure Interviews Questions

1. There is pressure of development in the Witfontein area, denied and still proposed, what is the position of the GDARD regarding the transformation of the area?

2. Why the GDARD did denied development in the Witfontein area if there was an agreement made to amend the EMM EMF between the EMM and GDACE?

    a. What types of development was proposed to be developed in the Witfontein area?

3. Is there cooperative governance between all spheres government when it comes to the management and protection of agricultural land?

4. Is there any case to share with as an example that the GDARD made a decision on an Environmental Impact Assessment application without comments from other Department?

    a. Was the property considered viable for agricultural purposes?

    b. What was the decision made by the GDARD on the Environmental Impact Assessment application? Approved or Denied?

    c. Was the decision appealed or not?

    d. What was the outcome of the appeal?

    e. What is the lesson learnt from the case mentioned above?

5. In your experience, do you think that other spheres of government and senior management of GDARD consider the Gauteng Agricultural Potential Atlas version 3 (GAPA 3) policies when planning for development and making decisions on land use applications?

6. Have you been criticised of considering the GAPA 3 policy when making decision as a Department?

Appendix C

Proof of Authorisation to conduct Semi-Structured Personal Interviews at the Department of Agriculture and Rural Development

From: PHELANE, TEFO (GDARD)
Sent: Monday, July 20, 2015 12:28 PM
To: 'malito:721825@student.wits.ac.za'
Cc: 'Danny.Simatele@wits.ac.za'; riaan.beukes@gauteng.gov.za
Subject: APPROVAL OF ACADEMIC RESEARCH

Morning

Ms. O. Letlalo your request to do academic research at Gauteng Department of Agriculture and Rural Development (GDARD) has been approved by Head of Department. Could you please specify which units you want to interview, so that we could notify them?

Regards,

Tefo Phelane
Intern: Human Resource Development
Gauteng Department of Agriculture and Rural Development
Tel: 011 240 2608, Fax: 011 240 2770
Email: Tefo.Phelane@gauteng.gov.za
11 Diagonal St, 9th floor, JOHANNESBURG

" Vibrant, equitable, sustainable rural communities, food security for all, protected and enhanced environmental assets and natural resources"