Development opportunities in the land management process in Rwanda

In order to achieve a more effective and efficient land use

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Sammanfattning

Ett välfungerande fastighetssystem är ett kriterium för att ett land ska ha goda möjligheter i den samhällsutvecklingen. Denna studie tittar på en av utvecklingsmöjligheterna i Rwandas fastighetssystem och framför allt tillhandahållandet och uppdateringen av landets hantering av markanvändningen. Problemen i Rwanda beskrivs som en kombination av bristande kommunikation och kunskap från myndigheter och befolkning.

Metoderna i denna studie utfördes i form av kvalitativa intervjuer i kombination med en litteraturstudie. Detta för att få fram den fakta som krävdes för att kunna besvara forskningsfrågorna. Syftet var att hitta någon skillnad mellan Rwandas Master Plan och den fysiska verkligheten och kunna presentera förslag på utvecklingsmöjligheter för att få en effektivare och ändamålsenlig markanvändning i Rwanda. Tanken var från början att utföra en jämförelseanalys men när metoderna utfördes visade det sig att det inte var möjligt att utföra jämförelseanalysen, istället blev det aktuellt att göra en litteraturstudie i kombination med intervjuer för att kunna besvara arbetets forskningsfrågor.

Resultaten från metoderna presenteras i två steg, först resultaten från intervjuerna och sedan presenteras resultatet från litteraturstudien. De olika intervjuerna gav liknande resultat i de fyra huvudkategorierna vilket gjorde att slutsatsen blev uppenbar. Rwandas land use planning law måste ses över och the Ministry of Lands and Forestry har som det ser ut nu bristande möjligheter att förhindra olaglig och oönskad markanvändning.

Nyckelord

Fastighetssystem, Rwanda, markanvändning, Master Plan.
Abstract

A well-functioning property system is a criterion for a country to have good opportunities in social development. This study looks into one of the development opportunities in Rwanda’s real estate system, especially the provision and the updating of the country’s management in the land use process. The problems in Rwanda are described as a combination of lack of communication and knowledge from the authorities and the population.

The methods in this study conducted of a qualitative interview combined with a literature review. This in order to gain the fact needed to answer the research questions of this study were the aim was to find some difference between the Master Plan and the physical reality and suggestions in how to establish effective and efficient land use in Rwanda. At first the study aimed to perform a comparative analysis but while performing the methods it was showed that the comparison method was impossible to go through with, instead the study got depended on a literature review along with interviews to be able to answer the research questions of the study.

The results from the methods are presented in two steps, first the results from the interviews and then is the results from the literature review presented. The different interviews gave similar results in four main categories which made the conclusion obvious. The land use planning law needs to be reviewed and that the Ministry of Lands and Forestry have a lack of concrete tolls and power to prevent illegal land use.

Keywords

Land management, Rwanda, Land use, Master Plan.
### Terms

**Districts**  
The provinces in Rwanda are divided into a total of 30 geographical and administrative districts and these districts consist of a number of bureaus with their own specialty such as land, heath, infrastructure and more.

**Land administration**  
How the rules of land tenure is taken care of, applied and used by both government, authorised and citizens.

**Land management**  
The process in how to get an effective land use.

**Land use**  
The way the property of land is taken care of and been used both for society as well as the individual.

**Ministry of local government**  
Each district is controlled by a ministry of local government.

**National land use Master Plan**  
Rwanda’s National Land Use Master Plan, in this thesis called Master Plan, is covering the land use in Rwanda. The legal plan in how the land should be used and developed. The Master Plan is legal binding.

**Provinces**  
Rwanda is divided into five different provinces by area, north-, south-, west-, east- and Kigali city province.

**Real estate/ property system**  
In this thesis, real estate- and property system is defined as the same.

**Registrar of land**  
The registrar of land work under the Ministry of Local Government on a district level with questions concerning property changes, land use changes and other cadastral approvals. This person receives and approves the documents from the sector level.
Sector

The districts is divided into a total of 416 geographical and administrative sectors.

Sector land manager

Each sector has one Sector land manager who deals with all incoming document from the citizens in that particular sector.
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1 Introduction

The introduction chapter retains an overall background review of Rwanda and some of the country’s history. This is followed by the research problem, research objective, aim and research questions of this study, limitations, previous research and a short description of this paper’s structure.

1.1 Background and justification

This study looks into the development opportunities in the management regarding registration of land use that Rwanda stands before. Although over 90% of the population in the country earn their livelihood directly from land, the issue is poorly managed. The agriculture in Rwanda represents a total of 52% from the total surfaces of the country. Along with a steady population increase in the country that contributes to increased housing demand, problems arise when the agriculture has to be used for other utilities such as housing, infrastructure and other purposes. If the land registration isn’t updated correctly, problems arise when these interests cross (Republic of Rwanda, 2004). When investigating the aim of this study, this will have a great impact.

Furthermore, Rwanda is described as the most densely populated country in Africa, which makes the land in the country a critical resource. A combination of this, along with that the majority of the population earn their livelihood directly from land, has made the importance of land a major part of the vision developed in the country’s land policy by 2020. The most important foundation in the country’s sustainable development has been declared as land. As this vision was established in 1999, the government of Rwanda has introduced laws, regulations and other instructions that all aim to improve the property system in the country (Policy Notes, 2011).

1.2 Research problem

Rwanda has a tragic history of civil war and genocide. In 1994, the latest genocide in the history of Rwanda took place, a genocide that caused the life from more than 1 million tutsies (Levande historia, 2014). This has scared the country in more ways that can be explained, one of the terrible disasters is that the country lost almost a whole generation to the genocide and that has contributed to that over 50% of the population today is under 25 years old (Globalis, 2017). According to senior advisor at Lantmäteriet in Sweden S. Svenson (personal communication, 12 October 2017), Rwanda hasn’t that much trouble with the real estate registration as one might think, despite of the genocide Rwanda have manage to develop in this area fast and is ahead of a lot of other African countries. The problems faced by Rwanda are
described more as lack of knowledge among the citizens. Despite the fact that the land register in Rwanda is containing information over land use, this isn’t correctly updated; one factor may be that the authorities don’t reach out with the message about the importance of a functioning registry to the ones using it. Some of the citizens do not register their land ownership and land use changes which becomes problematically. S. Svensson tells that there is a possibility that they instead of conducting a proper execution, where the purchase of land use changes and changes in property ownership are recorded, this is done by agreement between the parties without professional impact. This believes S. Svensson will lead to problems for both future and current owners of the properties unless this is managed correctly. An additional aspect might be the fact that it costs money and a lack of knowledge makes this seems unnecessary bureaucratic (S. Svensson, personal communication, 12 October 2017).

1.3 Research objectives

The single greatest resource in most countries is described as land, this is also the case in Rwanda. Economic growth is commonly based on the question of land and how it is managed. The consequences for not administrate these questions in a country is many, among them is the government taxes, poor infrastructure, shortage of housing and bad security regarding proper owners as well as land use. The government as well as the citizens there for are affected by these problems and will benefit from a proper land management. There is no simple cause or simple solutions to this but it’s such an important area to tackle and it needs to be done from several levels and orientations (Nkwae, 2006). This study has done a research in one of the important parts of this bigger problem that B. Nkwae (2006) describes. If there where one less problem among the land use management, this would give an even bigger opportunity in developing in further step.

1.3.1 General objective

The general objective of this study consists in the benefits of a well-functioning land management system. In order to gain economic growth and establish trust among citizens. In centuries, real estate and legal systems have evolved and eventually have gotten their unique design (Riekkinen, Toivonen, Krigsholm, Hiironen, Kolis, 2016). The things we know today about the real estate system may not be as obvious tomorrow or something we even knew yesterday. This means that a property system should always be constantly changing to meet today’s needs as well as the needs of the future. Even the systems that are considered to be at the forefront are also in need of constantly evolving as society is in constant development (Reikkinen et al., 2016). This study will look into what opportunities in developing Rwanda’s
real estate system are facing, and, above all, possible improvements in the country’s land use management process.

### 1.3.2 Aim and research questions

The purpose of this study is to create conditions for Rwanda to be able to streamline and ensure the land use. The expected results in the study are first of all to find concrete differences in physical reality and the Master Plan, second to present some relevant development opportunities in the processes that address land use change. The result of the study is achieved by analyzing the answers to the research questions presented below.

**Research questions**

- Is there a difference between Rwanda’s Master Plan compared to the physical reality and, if so, how do they differ?
- How can unwanted land use change be prevented through improved property information and improvement of the processes that involve land use change?

### 1.3.3 Limitations

These are major questions to be investigated in this study only. To ensure that the study can be carried out within the timetable that’s been set, some limitations have been made. The comparison in whether the land use differs physical versus the Master Plan will be limited to certain area orientated by our contact person Seth Muhawenimana. The interviews have been limited to those who work with land use planning at the Ministry of Land and Forestry in Rwanda. To be able to answer research question number two with concrete suggestions of improvements the interview questions were limited to three main subjects, Master Plan, land use planning law and land use registration. Without this limitation done, the study would have been too extensive.

### 1.4 Previous research

This subchapter mainly contains a presentation of two earlier studies in the area to guarantee that this project is a current issue that should be investigated. At the end of this chapter, a summary of five articles is presented as further previous research. These articles are then thoroughly presented in the result chapter as a result of the literature review.
1.4.1 Land reform, land scarcity and post conflict reconstruction a case study of Rwanda

An article by Huggins and Musahara (2004) describes the challenges Rwanda faces regarding the new country policy, Huggins and Musahara writes about 10 future recommendations in order to implement a new and improved land reform. The article provides several concrete examples and recommendations on what’s going to be required combined with the introduction of the new land reform. The new land policy provides improved economic development in society and an improved agriculture, but the introduction also generates a number of challenges and risks. This land policy should therefore not be implemented on a compulsory basis. The government should ensure that it does not contribute to increased landlessness, there for it is strongly recommended to include those who have been suffering from land loss because of the civil war. For example, civilian organizations should be involved in the process and implementation of land policy, in order to bring in aspects from all social parts. Huggins and Musahara also concludes that more research on the effects of HIV and AIDS has an impact on purchases land and, if so, this in that case requires changes at political level. A functioning strategy at both regional and national level is a criterion that should be introduced as soon as possible. Introducing the new land policy in Rwanda will be a huge challenge, in order to streamline its implementation; Huggins and Musahara suggests that this should be done in steps. The government should focus the introduction in a limited area in order to evaluate what could have been better. This in order to apply the land reform to a greater extent with better results the following time (Huggins and Musahara, 2004).

This study will look more closely at further improvements that lies ahead in developing Rwanda’s real estate system, and what Huggins and Musahara (2004) describes as a need for an expanded composition in the country committee, where representatives from all society parts will be involved in the decision making. An inspection of the different stages will provide a wider understanding of the challenges in Rwanda and hopefully indicate suggestions in how to achieve more efficiency in the land management process.

1.4.2 Administration of land problems and disputes in peri-urban areas surrounding Gaborone, Botswana

In a previous study, Molund and Vestin (2014) wrote a similar thesis also concerning land management but in Botswana instead of Rwanda. The purpose of the study was to describe and identify the land related issues and related disputes that could be in two selected peri-urban areas. The administration of the two areas was studied to get a conclusion if any improvements could make the administration
of land any more effective. For those land related problems, their literature review and case study showed similar results. Disputes for those who are entitled to the land were usually due to multiple transfers or illegal settlements. The administration of the problems differed between the two areas. In one area, they patrolled the area to reveal illegal settlements. In the same area, they wanted to reduce number of disputes entering the legal process, so they adopted an approach with alternative dispute resolution to reduce the number. Molund and Vestin wrote that it seemed that the poor record keeping was the main cause for the land problems that occur in the selected areas. Further they explained that they believed both board members and officers, by training methods of alternative dispute resolution and adopting an approach that resolve disputes before becoming a legal matter, will not only save time but also reduce the costs in land administration.

1.4.3 More previous research

This subchapter is presenting a summary of the previous researches that is more closely presented later in the result chapter as a result of the literature review.

Huggins (2010) wrote an article about the policies that the government in Rwanda has launched were its decided what and where a specific crop should grow, this depends on what the government feel most suitable based on economic grow, climate and the season. This is further investigated by Pritchard (2012) where he explains how the large-scale reform helps the government to control and manage the agriculture and this helps to control Rwanda’s soil erosion and the population pressure in the country. Along with this, an article by Vishwanatha and Mutamuliza (2017) is pointing out the small farmers disability to gain microcredit of their property. The article further writes about the importance for these small farmers to gain microcredit and how this makes a huge impact on their income and possibility to earn a living. Small farmers income and their food security is more presented in an article by Habyarimana and Nkunzimana (2017) where a Land Use Consolidation programme that’s been introduced in Rwanda is investigated.

1.5 Disposition

This thesis has been structured according to IMRaD with an extra chapter concerning the theoretical background in chapter two. Chapter two will present a basic background from the history of Rwanda as well as basic knowledge from their land use administration and management process. Chapter three will present the chosen methods and strategies in this study as well as problems that appeared while performing the methods. Beside this the chapter contains ethical consideration and a description of in what way this study will have sustainable development in mind. In
chapter four, the results from the methods will be presented. The discussion in chapter five, the results will be analyzed along with a reflection on the chosen methods. The research questions will be answered in the conclusion in chapter six along with suggestions on improvements and some recommendations for future research. At the end, all above chapter’s references are presented in a reference list.
2 Theoretical background

The theoretical background consists in representing necessary background knowledge in the study to gain the most relevant information about Rwanda’s land use planning law, land management and the administration of land. There were discussions about also practice a legal method in order to investigate the land use planning law in Rwanda and to be able to notice if there are any possible difficulties and in that case, be able to present some development opportunities. The theoretical background will cover that, this study will depend on an overall knowledge of the land use planning law and will not depend on representing the law in total. In this study, the theoretical background consists in guttering relevant and necessary information about the land administration in Rwanda to be able to answer the research questions.

The literature gathered, where closely analysed and read, compared and valuated. This was especially compared against the answers from the interviews and the literature review which both are described in chapter number three. The findings were later proven necessary in the study when presenting possible suggestions in development opportunities.

2.1 Rwanda National Land policy

Land administration in a country is for registration, dissemination of information and land transactions, this process of using the land is described in Rwanda’s National Land Policy according to Republic of Rwanda (2004). The process includes both announcement of rights, land description and land ownership. A good structure of land management indicates;

- Property protection for the individual
- Security of property tax that indicates income for the government
- The property can act as security when the owner transcript for a loan
- Safe process in property transactions
- Protects public and private urban areas and ensures the efficient use of the country’s land resources
- Improves planning and development of infrastructure

The administration of land in Rwanda is based on an improved ordinance that includes mapping of all land and registration of it. Rwanda’s real estate register will ensure stability in society by protecting public interests and investors. Encouragement of the population to participate in the process will be introduced.
This in order to create greater trust in the system’s legal certainty and use. The government’s goal with the new land policy was to secure the ownership of property owners in Rwanda, while at the same time providing land management in the country with more efficient management and rational use. The policy was intended to provide guidance in future land reforms (Republic of Rwanda, 2004).

### 2.2 Land sub-sector strategic plan of Rwanda

The components of an increasing population and inheritance practices have resulted in a separation of land parcels especially in the agriculture (Ministry of Environment and Lands, 2010). This have made the government concern that the agriculture isn’t handle as it could and should be handled. The agriculture becomes more ineffective if the area is to small, that indicates that they can’t support the households with crops as it wishes. This is the biggest reason why the government don’t allow any form of land use changes in land meant for agriculture. Instead the government urges the applying to buy land in the nearest village. All of this, the demographic pressure along with that the population grows even more and the none acceptance from the government in change of land use, have made the people do this aside from the government’s notice according to the Ministry of Environment and Lands.

Besides that the households rent and borrow land from each other instead of buying, the local land markets are highly active. The overexploitation of land and its resources have led to deep modifications in land use which escalates with the population. Since all land use in Rwanda isn’t registered correctly, the ones who suffers from it is the owners who can’t benefit from their ownership and the local authorities can’t get the taxes they supposed to. Beside the National Land Policy and the new land law the government also increase a program of land tenure reform to ensure the security for all citizens and especially the poor and vulnerable people. The goal is an efficient and safe system of land administration and land management. Although this in particular is for the poor it is also a great benefit for the multi-sector, cause when the safety in real estate owners goes up, the more investors in sectors of trade, infrastructure and agriculture. Besides this the local authorities will be given the proper taxes when the improvement of land use management is being done (Ministry of Environment and Lands, 2010).

### 2.3 Rwanda’s land use planning law

This study will only be concerned by Law N°24/2012 of 15/06/2012 Relating to the planning of land use and development in Rwanda. A short description of the law is follow:
2.3.1 Purpose with the law

The purpose with the law is to govern the planning of land use and development in the changes of land use in Rwanda according to the Land Use Planning Law (2012). This is described in four different main objectives. First, it’s to ensure direct methods to determine, coordinating, monitoring and compare the planning of land use in order to develop on every level towards sustainable and equitable social, economic and environment development for the generations to come as well as the current. Second is to establish principles and ensure that the land use and development protects the natural resources in Rwanda in order to allow for a balance in nature, land use and biodiversity. Third is for the management of equal rights of accessing benefits related to the planning of land use and development. Last is a description of the transparent decision making. Which will include all Rwandans in the land use process to get all perspective in order to determining, processing, evaluating, revising and validating according to the Land Use Planning law.

The Land Use Planning Law describes land as “surface area with biodiversity like humans, animals, different plants and non-biodiversity like rocks, buildings, various infrastructures, rivers, lakes as well as the sub soil and its atmosphere”.

The fundamental principles are to manage to contribute the sustainable development for the benefit of the future as well as the present. The land use must handle the gender considerations are described in the law. The land use must try to minimize the development of energy and natural resources on land. The planning of land use must prioritize density and multi-family residential located in urban or rural area. The land use has to exclude urban sprawl, advocate mixed zoning and coordinate land use. In order to minimize distance between work and household the land use must integrate land use such as residential, commercial, light industrial and so on (Land Use Planning Law, 2012).

2.4 Rwanda national Land Use and Development Master Plan

2.4.1 The Master Plans purpose

The acceptance of the Master Plan in Rwanda is according to the Land Use Planning Law (2012), based on a presidential order that’s shall determine the plan to guide the enforcement of land use planning at a national level. The Master Plan in Rwanda have to; confirm with the rest of what’s written in the Land Use Planning Law, design the land use in each specific area according to their special needs and resources. The plan must also give guidelines to those who practicing the land use management and provide to the national visions, policies and strategies affecting land use and development (Land use planning law, 2012).

All the administrative entities shall monitor that the master plan is followed according to the Land Use Planning Law. The minister is the one that monitor the compliance of public institutions with principles written in this law, in order to secure the Master Plan on a national level.

Beside the Master Plan every district in Rwanda shall prepare their own specific Master Plan which is based on the districts development plan. The district shall also prepare an individual urban development plan also based on the districts own resources (Land use planning law, 2012).

2.5 The legal perspective from changing land use

To change the land use in Rwanda it is a must to apply and get an approval from the competent authority according to the Land Use Planning Law (2012). The one who wishes to change the land use of a piece of land in Rwanda must apply with an application in writing. Then the ministerial order shall accept or reject the application based on the modalities of change of the use. Whether the application is accepted or not the competent authority shall base: on what’s written in this law, the Master Plan, other guiding’s in Rwanda’s land use or other plans such as building plans and adopted plans. If there is any other law and plans that’s applicant in the matter, this should be considered. As long as the plans are not revised, they remain valid even though the plan has been adopted before the publication of this law (Land use planning law, 2012).

2.6 Official registration of land in Rwanda

Rwanda’s government has launched a land registration program in the country where the idea was that the right owner should be registered at the right property. Although the government has introduced laws and regulations that deal with the issue of land ownership in the country, knowledge has not reached the citizens of the country and there are still major shortcomings in the real estate registration (Kairaba and Daale Simons, n.d.). According to L. Lindgren, team leader at the
Ministry of Lands and Forestry, lent as an expert from Sweden, all land in Rwanda is registered. The register contains of registered area, land use, owner and the cadastral number. This information is governed by the Ministry of Lands and Forestry and is also public available, it can be reach using computer, cellphone or any technical advice that can handle the internet service (L. Lindgren, personal communication, 14 April 2018).

2.7 The Mission and Vision of the ministry of Lands and Forestry in Rwanda

According to the Ministry of Lands and Forestry (2017) the general mission for the Ministry of Lands and Forestry in Rwanda is to ensure protection, conservation and development in land and forestry in the country.

The Ministry is first of all responsible for:

Develop and secure the policies, laws and other strategies programs that aim at ensure optimal and rational land use. Second is to evaluate all human resources capacities in the sector of land and forest. Third is to monitor and develop the law, policies and other strategies and programs in order to ensure a sustainable land use. Fourth is to give guidance and oversee the institution and supervision to promote synergies between various actors and intervening in the sector. Last is to mobilizing resources for the development to promote rational utilization in the sector in order to ensure investments and development in the sector (Ministry of Lands and Forestry, 2017).
3 Research method

In order to collect the information that’s needed and be able to answer the research questions of this study, the work was depended on interviews and a comparative analysis. While performing the methods it was showed that is wasn’t possible to do the comparative analysis and a literature review was used instead. These three methods are detailed described below.

3.1 Interviews

When performing the interviews, a qualitative method was used. A qualitative method according to Biggam (2015) is evaluative, comparative and contains text data as opposed to the quantitative method that uses numbers and statistics to obtain a conclusion. As the subject concerns questions that in some respects may be difficult to find in a purely literature study, it became relevant to ask the questions that Biggam (2015) describes as qualitative, where the questions usually begin with “why” and “what does this mean”. This to get the answers that hopefully gives a wider understanding in the subject.

3.1.1 Data collection

A constantly communication was mainly held with S. Muhawenimana from the Ministry of Lands and Forests in Rwanda, the supervisor in field in this study. Interviews were also held with three of S. Muhawenimana’s coworkers at the ministry who works with land use planning. The choose of respondents were based on their main specialty and were contributed by S. Muhawenimana. More interviews weren’t possible because of the time set, the Ministry of Lands and Forestry was in the upcoming in reviewing the financial cost in order to implement the new Master Plan which made their employees unavailable. The interviews consisted of a total of 13 main questions and some more under questions. All interview questions were concerning the three most relevant objectives of this study and were divided into three groups and some general questions. First the questions concerned the master plan, then the questions was about the land use planning law and to finish it up the last part of questions concerned the land use change registration. The answers collected in the interview become relevant in order to get perspective and to be able to answer the research question number two as detailed as possible.

3.2 Comparative analysis

A comparative analysis in this study never got relevant though it was impossible to perform, either way a description of how the comparative analysis was supposed to be performed is described in this subchapter. A comparative analysis is described as
a comparison between two things; the ground for the comparison should be explained in order to make a reliable research study. The pick of comparison material shouldn’t be picked randomly; there should be an issue of two conflicted sides (Walk, 1998). The comparison in this study was supposed to be between the physical land use related to the Master Plan in order to notice any differences and to be able to answer research question number one. Question number one is if there is any differences between the Master Plan and the physical reality and if so, how it appears. The answer from research question number one was necessary to be able to present in what way unwanted land use can be prevented through improved property information and improvement of the processes that involve land use change in research question number two.

3.2.1 Data collection

The material for the comparison of the Master Plan to the physical reality was supposed to be contributed by S. Muhawenimana. The comparison was supposed to be done with satellite photos compared against what’s decided in the Master Plan in order to notice any eventually differences. The idea was that material for the comparison should have consist of the Master Plan over Rwanda’s land use and development combined with satellite photos. The choose of material was indented to be contribute by S. Muhawenimana though it was considered to be the most efficient comparison, in his opinion the comparison with the land register would have been too difficult to manage because of the big range (S. Muhawenimana, personal communication, 14 April 2018).

The differences that appeared were supposed to be recollected and obtained. First of all, the comparison would have tried to notice any differences between where in the Master Plan it was meant for agriculture and if the area in that case also in reality was in fact agriculture, if the land was build that had been obtained as a differ. The study wouldn’t have tried to compare if in reality the agriculture was forest, pasture or something that in a satellite photo seemed like agriculture. The comparisons focus would have been the land and whether if it was meant for agriculture and if in that case in reality was used for buildings and other exploitations such as factory, asphalts roads etc. That would in this comparison been recollected as a differ.

Another aspect would have been to decide in what scale the differ actually was a difference that should have been recognize in the study. In order to specify that the comparison was depended on measuring the object that didn’t match the Master Plan and decide if the differs was big enough to count as a difference. To be able to do that, there would have been a need of guideline from our supervisor in field to be able to establish how these differ is noticeable for him and the Ministry of Lands and Forestry. The study never got to this part because of technical problems with the Land Use Planning Portal that was supposed to give access to the Master Plan.
According to S. Muhawenimana, there was no other way for this study to get access to the Master Plan and it was unknown when the Land Use Planning Portal would start up again (S. Muhawenimana, personal communication, 5 May 2018).

3.3 Literature review

When it got clear that it wasn’t possible to perform the comparative analysis in this study, a literature review was used instead. A literature review is described as an overview in a specific topic of prior researches to show the reader what is already known about the topic and what is unknown according to Denney and Tewksbury (2012). They further describe that the literature review notice and present the topic in order to present why the subject is in a need of investigation (Denney and Tewksbury, 2012).

3.3.1 Data collection

The literature was depending on previous researches in order to present what is known about the land management in Rwanda today, how is the land use questions and changes manages today and what problems is presented. This in order to get perspective and an overview of the subject. In order to find trustworthy information, the literature consist mostly of science articles find in Discovery with access through the University of Gävles database. The search words in the database that was used was “land use Rwanda” in order to get relevant hits and presentable literature.

3.4 Case study area

The study took place in the capital of Rwanda, Kigali. Kigali consists of five difference provinces and Kigali City is one of them. The interview was held in Kigali city and the comparison analysis would have been located by our supervisor in field S. Muhawenimana. The Master Plan is for the whole country but only a chosen area was supposed to be represented and put against the satellite photos in the comparison analysis of this study. The study wasn’t able to perform the comparison analysis, although it is considered that the interviews brought the study a broad that give the study a wide that covers the whole Rwanda. The interview along with the literature review gave the study a depth that gave the study a result that’s both reliable and meaningful although the comparison analysis wasn’t performed.

3.5 Data analysis

The answers from the interviews along with the results from the comparison analysis was supposed to be put together in context in order to answer the two
research questions as detailed as possible. Instead the results from the interviews along with the literature review had to answer the research questions of this study.

### 3.6 Data collection challenges

The most critical aspect in the chosen method was the comparison analysis who was supposed to be based on a comparison between the Master Plan and satellite photos. This method was depended on the satellite photos contribute by our supervisor in field and the age of these photos was unknown. The critical parts were beside the quality of the satellite photos, the actually comparison and in what way we were able to know the differences between the Master Plan and the photos we were given. These aspects were out of our control. If the satellite photos had been too old or in another aspect un useful, the comparison analysis would have been used Google earth instead. As it turned out, the major collection challenges was in fact to get access to the Master Plan and this challenge made the comparison analysis impossible to perform. Besides this, there was awareness that it could have been fewer corporations while performing the interviews than expected and in that case, S. Muhawenimana would have been the one the interviews would have applied to and along with the literature review it was consider that either way, the research question would had been answered.

### 3.7 Ethical considerations

A big amount of consideration was given to the ethical aspect that was involved when performing the study in Rwanda and both authors lacked similar experiences. It was important to show consideration for both the new culture as the new custom. More directives and knowledge in this was before departure given in the form of a preparation course. The course was held by Sida Partnership Forum in Härnösand and included issues related to cultural meetings, health and safety as well as information on Swedish development cooperation and different countries (Studera, 2017).

### 3.8 Sustainable development

The university of Gävle is committed to sustainable development and is an environmentally certified company. Of the UN’s 17 Sustainable Development Objectives, this report was mainly concerned by numbers 11, sustainable cities and communities and number 12, responsible consumption and production. By studying the land use in Rwanda, targets 11 and 12 that are sustainable cities and communities, as well as sustainable consumption and production was affected.
4 Results

In this section the results from the methods will be presented. The results from the interviews is divided into four different categories, Master Plan, the land use planning law and land use registration plus one subchapter from the information gathered from an interview with an expert from Sweden, who works at the Ministry of Lands and Forestry on provision about the land management process. The results from the comparative analysis is presented in a subchapter, where the Master plan was supposed to be compared to the physical reality, instead the study got depended on a literature review which is presented last in this chapter.

4.1 Interviews

To be able to content views from the ones in Rwanda who actively deals with this sort of questions in their work, a number of interviews with various experts from the Ministry of Lands and Forestry in Rwanda were performed. After the last interview, it was established that the answer’s that was given had a similar main objectives, more interviews was there for considered unnecessary, and within the time schedule that was well addressed. The interviews that was made is presented in this subchapter. The subchapter consists of four different parts and the parts are divided into subchapters as well, to get a better view from the perspective from each interview in the four subjects.

4.1.1 Master plan

4.1.1.1 Interview with Land Use Planner

Four interviews has been conducted and one of them was held with a land use planner at the Land Management and Use Authority. He is constantly dealing with the Master Plan in his work and he describes that he practice the Master Plan elaboration by providing technical support to district or any other institution if that is requested. The interview was constantly bringing up that the most common land use problems that appear based on the Master Plan is the lack of provision of enough basic facilities while planning ignorance of current situation and population projections. The land use planner isn’t handling the appeal of the Master Plan in his institution but he is although familiar with the aspect and the difficulties appearing when approaching the Master Plan. To prevent the problems from appearing, it is suggested to go to the source of it and reduce the cause and that may be done by comprehensive planning. Although he is aware of some illegal land use changes in Kigali it’s not his place to take action in any way. In his working area this isn’t given any effect, but it does affect the land use development in Rwanda because the work done by the planner is nothing when it’s not implemented. To prevent this there has to be respect of the laws and regulation regulating land use planning. The biggest
cause of disputes is described as legal missing points as well as government issues. A badly manage of protection of agriculture during the Master Plan elaboration is mentioned. The ministry doesn’t take action when land use changes are taking place on land that is meant for agriculture but they intervene in cases of illegal forest removal.

4.1.1.2 Interview with Land Management specialist

Another interview was held with the supervisor in field of this work, who’s a Land Management specialist at the Ministry of Lands and Forestry in Rwanda. In his work he practice the Master Plan by preparing the Master Plan at a national and local level, monitor the implementation of those Master Plans to be able to confirm and reassure that every activity must follow the Master Plan. The most common land problems appearing based on the Master Plan the interview describes as the incompliance of land use plan implementation with the plan. When approaching the Master Plan, old plans in every district must match and one of the difficulties that appears is when the plans isn’t following the National Land Use Master Plan and the ministry has to advise institutions to match them. To make sure the future plans matches the National Land Use Master Plan the institutions in Rwanda constantly is reminded that every new adopted plan must follow the national one. Other than that, he wish to solve these sort of faults ever closer by inspections and monitoring of the Master Plan implementations and addressing the issues of incompliance.

There is awareness that there are illegal land use changes in Kigali such as places being constructed while they are reserved for forestry in the city of Kigali. This is recorded by monitoring the implementation of the Master Plan and actions that can be done is simply to advise the institutions to respect the Master Plan. These sort of illegal land use changes generates in conflicts of interest for anyone who wants to implement an activity which is not in compliance with the Master Plan. The effects for the land use development in Rwanda when illegal land use changes appear is described as consequences in land scarcity, as everyone somehow need to use land, and a lack of land management. To prevent this it is suggested to use powerful monitoring and auditing the implementation of the Master Plan and this because the biggest cause of disputes in the land use changing process is pointed out as conflicts and interest. If the Master Plan isn’t adopted correctly and followed by all institutes there will be a lack of agricultural land as it is affected by those illegal changes and that’s one of the biggest problems appearing since for example, Rwanda is the most populated country in Africa.
Interview number three was held with a professional of land use monitoring and evaluation at the Ministry of Land and Forestry. The Master Plan is practice in the way as regularly do monitoring of the Master Plans implementations, this is done by comparing the reality on field realizations with the plan of implementation by checking the compliance of urban plans with the Master plan Guidelines as well as the planning laws. The most common land use problems appearing based on the Master Plan in this interview was pointed out as the developments who takes place outside of Master Plan covered areas and these problems is reported to the custodian Authority of the Master Plan to be corrected. The professional of land use monitoring and evaluation told that he wished to solve the problems by putting in place a law that shall give Rwanda Land Management and Use Authority the power to undo illegal development outside the Master Plan covered area and to approve the Master Plan developments by different institutions. He tells us that there is awareness of illegal land use change going on in Rwanda right now and some of them he is able to record. These sort of problems gives a constantly feeling of ineffectiveness because of the lack of the right to require demolition of illegal houses or other infrastructures, the question in how this can be handled by review the land use planning law and law establishing to have that power is currently on the table.

The effects of these illegal changes of land use leads to catastrophic consequences and example of this is described in this interview, he explains what can and often is the follow up of when the Ministry loose fertile land for the profit of unplanned settlements that harms the environment, that causes disasters during heavy rain seasons. This, he wish to reduce by emphasizes the existing land use planning law that explain procedures of planning land use change and to give Rwanda’s Land Management and Use Authority the power to require demolition of illegal land use change. The biggest cause of disputes in the land use planning process is pointed out as a lack of knowledge combined with government issues for implementers. When the Master Plan and the land use planning isn’t followed correctly, problems arise at implementation level because they don’t have sufficient knowledge and means like software such as computers, the right measurement equipment to read the Master Plan shapefiles. Combined with this and that they usually is under pressure from the local authorities to accept the illegal land use changes makes is hard to provide this correctly. To protect valuable agriculture some of them have been mapped and there been given out guidelines of protection issued, but for urban plans, rural settlements plans that should implement the National Land Use Development Master plan, guidelines isn’t followed.
4.1.2 Land use planning law

4.1.2.1 Interview with Land Use Planner

Second part of the interview with the land use planner consisted of questions about the land use changing law which seems to fulfill its purpose although it’s in a need of a review in order to address new challenges ahead. In order to indicate and archive a more efficient land use is Rwanda he wish for the land use planning law to improve the aspects of environmental considerations as well as agricultural and rural land protection.

4.1.2.2 Interview with Land Management specialist

The interview with our supervisor in field, land management specialist, gave an input of concerns about the land use planning and development law and its lack of coordination in the implementation of land use Master Plan. It was pointed out that the Ministry of Lands and Forestry is going to review the law and hopefully put a coordination mechanism to implement the Master Plan. According to him, the law is followed but there is a lack of enforcement of the Master Plan and all citizens isn’t aware of the laws existents and therefore he suggests an awareness campaign to make this go public. The lack of awareness is indicating an unwanted ignorance of the law which would be preventing trough this suggested awareness campaign. Although there isn’t any punishment provided for the individual for not adapting the law there is still hope that the citizens are open minded for the campaign. The interview further points out that the land use planning law isn’t followed at all by the authorized according to him but that the institutions instead implements the activities they wish to without even consulting with the Master Plan and the Ministry of Land and Forestry.

4.1.2.3 Interview with Professional of Land Use Monitoring and Evaluation

In the second part of the interview with the professional of land use monitoring and evaluation the perception was that the land use law is not sufficiently fulfilling its purpose. To improve the law it was wished to give Rwanda Land Management and Land Use Authority power to interrupt and to undo activities that violate the National Land Use and Development Master Plan principles and also to have the power to approve urban plans and other land use plans. To do changes is the law, that would indicate that the Master Plan would match the land use, he think would be very complicated. He prefers clean steps for progressive legally binding Master Plans implementations. The most common problems appeal when the Master Plan elaboration doesn’t have the widely participative, principle of least effort applied by local authorities to avoid thinking of other solutions than Master Plan changes. Problems appealing among citizens is pointed out as the urban plans, rural settlements plans elaboration not fully participatory, sensitization of the population
on the Master Plans implementation and relative laws. This could cause problems for the individual in that case that they fall in Master Plan violation because they don’t know the way to change the land use they wish to change.

4.1.3 Land use registration

4.1.3.1 Interview with Professional of Land Use Monitoring and Evaluation

In the third part of the interview with the professional of land use monitoring and evaluation it was established that there in fact is a land use registration process to be followed in Rwanda but that the main problem is that it isn’t possible to register illegal land use changes. To improve this is was suggested to sensitize local authorities and population to the Master Plan implementation, to emphasize land use planning law and to integrate Master Plan in land administration information system to facilitate the population and the land administration access the Master Plans. Consequences that could be for the individual who doesn’t register their land use changes can risk losing the property in cases where expropriation is necessary. There is a risk of disasters because of illegal development does not follow standards. Working with these questions and dealing with the problems appearing is described as a challenge in this interview. The problem is that the registered land use isn’t the same as the planned one, but the land use is instead the one from the date of the land registration. This makes is difficult to help implementing the Master Plan for land administrators, they always consult land use planners to know the planned land use for every land transaction and ownership changes. Sometimes they approve subdivisions that aren’t suitable for some categories of land use.
4.1.4 Land management process

Figure 1: Land management process in Rwanda

Made by Albin Lindberg, author of this thesis after communication with L. Lindgren.

Terms to figure 1:
MINILAF  Ministry of Land and forestry
P. E  Province of the East
P. K  Province of Kigali City
P. N  Province of the North
P. S  Province of the South
P. W  Province of the West
RLMUA  Rwanda Land Management and Use Authority

Figure 1, is a draft of the land management process in Rwanda right now, done after an interpretation by L. Lindgren, team leader who is lent to the Ministry of Land and Forestry, as an expert from Sweden. It shows how the citizens start the process by applying to the Sector Land Manager in the Sector. In Rwanda, there is a total of 416 sectors and in each sector, there is one person who has the title Sector Land Manager. This sector is controlled by the district. Rwanda is divided into 30 different districts, these districts is governed by a Ministry of Local Government. The District contains a number of different bureaus and the Land bureau is one of them. For the application given to the Sector Land Manager has to go through all these steps to reach the final destination which is the Ministry of Land and Forestry. This is described as unnecessary (personal communication, 15 May 2018), it claims that the process isn’t effective enough and that the major problem is that the Ministry of Local Government has a lot to deal with and therefore can establish that the land bureau can’t just deal with the land issues and application but must help the other bureaus. According to L. Lindgren, some applications never even reaches the Ministry of Land and Forestry.

L. Lindgren presented and showed films from an awareness campaign going on in Rwanda right now. This is the government launched land registered program where the idea is that the right owner should be registered at the right property. This is done by a bus carrying the right equipment going to different sectors each week. Every sector has pointed out their contact person who’s been given a full lesson in the process and laws concerned. Later, when the bus arrives the sector is gathered for the whole population at that area to join and take part of the lesson. Here, they are able to raise questions and the contact person is supposed to be able to answer but there are persons from authorities there to support. At the end of the day the ambition is that every citizen there has the right certificate and that the right owner and land use has been registered (L. Lindgren, personal communication, 15 May 2018).
4.2 Literature review

In order to get an overview of the main subject of this study area the study got depended on a literature review which is presented below.

4.2.1 Agriculture policy in Rwanda

The agriculture in Rwanda is considered having a central importance to the economy in the country according to Huggins (2010). Either though this is established, he further describes in his article about the agriculture policies and that there are major challenges ahead to face for the agriculture. Along with a steady population increase, the highest population density in Africa, land scarcity is a common issue. The government has notice this danger and one outcome is the “Vision 2020” which aims to by monetizing and commercial the agriculture sector, establishes to replace subsistence farming. Huggins describe that activists has focused on the issue of land ownership in Rwanda and the question of the land use and the right for the property owners to use the land and benefit from it the way they see fit, has drowned less attention. The government states in the Agriculture Policy that there must be an economically rational and strictly based choose of the commodities in order to gain as much as possible from the agriculture. Therefore, the household in Rwanda order to grow specific kinds of crop based on the season, climate conditions and national economic priorities. This kind of “encouragement” according to Huggins, is called Regional Crop Specialization. The government promotes the individual households to plant the approved crop which indicates that owners of consolidated plots have to agree which crop, planting regime, schedule in how and when to weed in order to grow the crop the government meant for them (Huggins, 2010).

In an article by Pritchard (2012) it is clarified that for a postwar country, essential components are land tenure and agriculture reforms. This is established to be even more important in Rwanda where a great mount of the population on sustainable agriculture earn their livelihood directly from land. In order for the government to be able to manage the increase of the population pressure and soil erosion it has launched series of large-scale reforms to control and manage the issues. Besides the registration of land ownership and information regimes the government also implemented the agriculture reform that requires all farmers to intensify agriculture and consolidate their holdings by only plant the crop and seeds that’s been approved by the government (Pritchard, 2012).

4.2.2 Policy reforms and rural livelihoods sustainability

An article by Habayariamana and Nkunzimana (2017) is describing how those households in Rwanda that joins the Land Use Consolidation programme obtain food. It has been established that in fact, Africa’s poor rural household has
agriculture as a source of livelihood as well as economic growth. This makes agriculture in Africa to a critical resource and should be well managed, issues like land and water access, use and management, poor access to new agriculture along with poor infrastructures, global warming, both political and health insecurity makes manage of land a giant aspect to face. This is pointed out by Habayariamana and Nkunzimana to especially to be a big challenge in Rwanda, considering Rwanda’s high density of population and the big amount of citizen that earn their livelihood directly from land and its resources. The study conducted by Habayariamana and Nkunzimana (2017) is considering the policy reforms in the agriculture sector as a stepping stone for stimulation livelihood and secure food access in rural areas in Rwanda. The research questions in their study concerned the households in Rwanda and in what way the Land Use Consolidation have food security and how income from agriculture put against the total income in households that participated in Land Use Consolidation programme is showed.

The Conclusion in the article by Habayariamana and Nkunzimana (2017) states that land use consolidation has a positive impact on the household’s food consumption and sustainable food security for the households thanks to improvements of household’s income and crop yield. Second, it’s established that Land Use Consolidation programme can be the source of gaps in the different Rwanda household’s income from agriculture production but not in the total income for the household. This is explained such as the smaller households with smaller agriculture land areas achieve less than those agriculture areas that can produce more because of the extensive land amount. Another conclusion in this study is presented from the authors as happiness from the ones participating in the Land Use Consolidation programme which point at a successful programme, this because a research showed that 62% of the household were highly satisfied (Habayariamana and Nkunzimana, 2017).

4.2.3 Access to Microcredit for Smallholder Agricultural Producers in Rwanda

An article by Vishwanatha and Mutamuliza (2017) is handling the farmers right to take out microcredits from their properties. In a study from a total of 300 randomly selected smallholder farmers it was showed that over 50% of them didn’t access microcredit. According to this article it was established that the issues for smallholder farmers to get access to microcredit was because of challenges like lack of collateral, high interest rate, lack of knowledge, lack of information and indigence. Vishwanatha and Mutamuliza further writes about the outcome if farmers don’t get access to microcredit as they should, how this can increase that they can’t support their household and their land as they suppose. The microcredits are supposed to support the households as a source of income and help them to achieve
food security and less starvation. Other than that, the microcredit makes an important role among the agricultural development and help the farmers to maintain a well manage cropland which indicate economic security for the whole country (Vishwanatha and Mutamuliza, 2017).

4.2.4 Land record and administration in a post-conflict country

Todorovski, Manirakiza, Zevenbergen and Boerboom (2018) wrote an article where they stated that land administration and record always is given a negative effect because of conflicts in a country in post-conflicts context. The aim of their article was to identify how land record can solve disputes about land ownership and boundaries in support of land administration, this with focus on post-conflicts buildings in Rwanda. Further, its established by Todorovski et.al. (2018) that and record is containing information that concern ownership, value and land use. The definition of a good land record when it comes to land use, is described as when the land use works as an ensure in order to gain an efficient resource management. The conclusion in this article claimed that a good management land record has a positive input in supporting Rwanda in resolution processes in land questions that concerns post-conflict related buildings and land use considerations (Todorovski et.al 2018).
5 Discussion

This chapter contains two parts. First section discusses the chosen research methods and the problems that were faced implementing them. Second section discusses the outcome and results of the study.

5.1 Discussion of the chosen research methods

To be able to lay a foundation, get perspective and also to get a wider understanding from the findings in chapter two, the theoretical background, an interview method was conducted. Since we couldn’t be able to find the answers to our research question in a pure literature review without consulting with those who’s dealing with these sorts of questions as professionals and besides, in a foreign country, the interviews become very important. During this method the major problem faced was the time schedule. It wasn’t easy to go all the way through with a setup meeting without having to reschedule at least once. The time of arrival wasn’t the best chosen; the supervisor in field along with his coworkers and the persons set up for the interview was in the middle of planning the financial part in order to be able to renew the Master Plan. This made it difficult to meet in person and some of the communication was through email and phone calls.

If this research is wished to repeated, we are quite sure that the same result would be given even if the interviews were too held with other persons. Even though the answers could differ in some way, the major problems and the suggestions in reviewing and improve as well as the overall view where similar. The different professionals were showed within the interview answers, all the interview persons had major in different subject but in the same area which made the answers wide but with the same overall focus. With more time given, the interviews could have been even more and more extensive. A suggestion to dose who wish to repeat this study is to in an early stage make the appointments and to have in mind that there can be a quite big delay.

The comparative analysis that this work was supposed to perform was showed to be impossible to do. The idea was to be able to notice any difference between the Master Plan and the physical reality. This was supposed to be done with some satellite photos from reality put against the Master Plan. To be able to reach and do a research on the Master Plan this method become depended on the National Land Use Planning Portal where the authorize such as citizens can get a view of the Master Plan. This Portal was unknown before arrival and had technical problems during this research, this have made it impossible to do a comparison. Instead there had to be some changes and the research question number one in how and if there
can be notice any differences between Master Plan and physical reality, had to be answered with the results from the interview method as well.

Instead the study got depended on a literature review. This showed a wide interest in land management among agriculture and especially concerning Rwanda who is a postwar country, the most decently populated country in Africa and besides that, a great amount of the citizens earn their livelihood directly from land, which make the land a critical resource. This was proven necessary when establishing this study’s conclusions. The authors find the literature gathered enough considering the time schedule given and the size of this thesis.

If this study where to be followed the results could be a lot better with the access of a functional National Land Use Planning Portal. In that case the reality could really be put against the Master Plan and differs be noticed. With answers from the comparison analysis, the discussion of how the fault could be minimized and in the future totally improved could go on further with suggestions on fundamental based suggestions.

5.2 Discussion of the results

In this section the results from the performed methods will be discussed relative to the theoretical background. The discussion of the results is structured based on the two research questions that were answered in the results chapter to the able to present some conclusion in the next chapter.

5.2.1 Research question 1: Is there a difference between Rwanda’s Master Plan compared to the physical reality and, if so, how do they differ?

Due to the technical problems with the Land Use Planning Portal this question was depended on, the question couldn’t therefore be answered as intended. Instead this question also is answered using the first method, interviews. All interviews showed in an early stage that the main objective and difficulties was the same either though the interview was held with professionals from the Ministry of Land and Forestry with different majors. It is, based on the answers from the interviews clear that there is a difference between the Master Plan compared to the physical reality and it appears especially when implementing the Master Plan. This showed to be the main difficulties when implementing the Master Plan, that the reality of land use isn’t matching what’s planned for and that indicates a differ in the land use reality compared to the Master Plan. The main issue and the biggest cause in how the land use manages to differ is, according to the interviews, a lack of knowledge combined with government issues for implements. Institutions do not have access to the right
equipment to read the Master Plan shapefiles, and combined with that, they are usually under a lot of pressure from the local authorities. Therefore, because of rush, it is common that illegal land use changes are accepted, and becomes legal although they differ from the Master Plan and the planned land use. Another common problem based on the Master Plan and indicates illegal land use and a differ from what’s registered compared to physical reality, is developments taking place outside Master Plan covered areas. According to the interviews, there is almost nothing that could be done about it because Rwanda Land Management and Use Authority don’t have the power to undo illegal development in this kind of areas.

Another sign of that there is differs between the Master Plan and the physical reality is described by the Ministry of Environment and Lands (2010). The problems are described as the components of an increasing population and inheritance practices and that have resulted in separation of land parcels and especially in agriculture. The agriculture is considered by the government, badly managed. When agriculture is separated into to small areas it becomes difficult to grow crops and the agriculture can’t support the household as it wishes. This becomes problematic for the entire country and that’s why the government refuses any land changes applications on agriculture. Future problems are ahead when the population is in a study increase, and thoughts have to concern the fact that the country lost a whole generation to the genocide which indicates that the country is in for an even bigger increase. Over 50% of the population is less than 25 years old according to Globalis (2017) and in a short future are this generation going to have their own family and kids, which will make a huge impact on the interest of households.

5.2.2 Research question 2: How can unwanted land use change be prevented through improved property information and improvement of the processes that involve land use change?

To prevent unwanted and illegal land use change in Rwanda through improved property information and improvement there must be an serious investment in waking awareness among the citizens. How this can be done is besides the bus that L. Lindgren informed about, who travels to different sectors every week just to give the citizens a change to do a proper land use change and give them the legal document of their obligated rights considering their owned property. Along with this bus and the information given and the change for the citizens to raise their questions there is a possibility that there is some lack of interest and problems arise when trying to reach those people. According to A. Kairaba and J. Daale Simons (n.d.) the government in Rwanda has launched this land registration program in the country where the idea is that the right owner should be registered at the right property. Problems appearing could be a consequence because of the lack of legal consequences or punishment for those who refuse to follow the law, and there is
nothing that legally can be done to the once who not want to participate in this awareness campaign. To ensure that this campaign reaches everyone and everywhere there is a need of reviewing the law. Because as pointed out in the interviews, there is no guarantee that the awareness campaign will fully succeed because of establishment of punishment lacks in the law for those who isn’t adapting it, there is just hope that the citizens wish to participate anyway. According to the Republic of Rwanda (2004), encouragement to the population to participate in the awareness campaign process will be introduced, but how this would be done isn’t described any closer.

Another aspect that can be discussed is the power and superiority that the Ministry of Land and Forestry lacks over those adjusting the Master Plan. The lack of control over the institutions that all have their own priorities in mind and can easily sweep the land management questions aside. The gap is clearly to big between those practicing the Master Plan, those who establish it and those who supposed to follow it. In figure 1 this is presented. Besides that, it is established in the interviews that not just the citizens is ignoring the law based on unknowledge or ignorance cause the lack of consequences, but it’s also pointed out that the land use changing law isn’t followed at all by the authorized either. Instead they seem to implement the activities they wish to, without consulting with the Ministry of Lands and Forestry or check the Master Plan.

Habayaramana and Nkunzimana (2017) wrote in their article about the outcome of the Land Use Consolidation programme and how it gave benefits to those participating. This was supposed to support the household’s food consumption and sustainable food security thanks to improvements of household’s income and crop yield. According to the conclusion in this article, the Land Use Consolidation programme was considered as a success though 62% of those participating was highly satisfied. If this number is enough, and what the other 38% thinks, is in our opinion considered as an uncertainty. Another article by Vishwanatha and Mutamuliza (2017) shows that over 50% of smallholder farmers in Rwanda don’t access microcredit and this was showed was due to the challenges like lack of collateral, high interest rate, lack of knowledge, lack of information and indigence. Either though this microcredit makes a huge impact on the smallholder farmers total income the issue still stands. Maybe this will be proven more effective and give more farmers access to the microcredit when the Agriculture Policy, also called agriculture reform, gets accepted in a bigger range. If the government gets the control to be able to monetise the agriculture and crops, hopefully the government will have more security and can provide the smallholder farmers with microcredits. Based on this aspect the Agriculture Policy could be a success, but questions like the smallholder farmers right to grow the crop the farmer finds suitable raises and what
outcome it gives for the individual when the right to dispose the land as they want goes away.
6 Conclusion

In this chapter, the summary and conclusion is presented based on the discussion of the results. The conclusions are presented in two categories based on the research questions and have their own subheading and then the summary of conclusion is presented. This chapter ends with some suggestions on future research based on our conclusions.

6.1 Research question 1: Is there a difference between Rwanda’s Master Plan compared to the physical reality and, if so, how do they differ?

There is in fact, a difference between the Master Plan compared to the physical reality in Rwanda. The Land Administration Information System does not follow changes on the field nor adapted to the planned land use, is the land use that still is registered showed to be the land use from the land registration date.

6.2 Research question 2: How can unwanted land use change be prevented through improved property information and improvement of the processes that involve land use change?

For the government in Rwanda and especially the Ministry of Land and Forestry to get an improved property system and the process that involve land use change it is important to go to the source of the problems. Unwanted land use change appears in an area that lacks knowledge and where the one stop center at the land bureau out in the district is controlled by the Ministry of Local Government which in their case has a lot to establish and deal with, not just questions that concerns land. To improve the property process that is the base of a correct land management and could establish land use changes without any differs, this process is suggested to be shorter in order to notice any faults in an earlier stage. The Ministry of Land and Forestry should be the one controlling the land bureau and not the Ministry of Local Government.

To improve property information and reassure that citizens are aware that there is in fact a plan in movement. The bus that Mr. Lindgren described and presented films from is focusing on that and should be even more. This would be even more effective is there was in fact some consequences for those who refuse to participate, and the law should establish that. Another aspect could be the Agriculture Policy, if in fact the Policy where the purpose is that the government control all agriculture and crops, that may establish that the government easier could hand out microcredits that could make the citizens want to participate in the awareness campaign.
6.3 Summary of conclusions

In order for Rwanda to get a more efficient and effective land use, such problems as brought up during the interviews must be solved. Suggestion in how to improve them should be considered by the government in order to be able to laminate the faults.

First of all, the land use planning law should be reviewed, the aspect of the lack of punishment for those who doesn’t follow the law should to consider.

Second should be a renewed land management process for the individual and those who works at the ministry, in the districts and finally the sectors. This should be cut in half and the land sector as well as the land bureau out in the district should work directly under the Ministry of Land and Forestry instead of the Ministry of Local Government. This would make is easier for the Ministry of Land and Forestry to be able to notice any differs at an early stage be able to correct them.

Last conclusion evolves the awareness campaign. If the Agriculture Policy becomes a success and that establish that the government easier could hand out microcredit, that would lead to more participation in the awareness campaign. If the citizens gain microcredit thanks to the Agriculture Policy, it would definitely contribute to more interest among the people.

6.4 Recommendation for future research

Before the suggestions that have been declared can be implemented, there is a need of more research. There for the recommendation for future research is to focus on the land use changing process from a citizen perspective, that could be done by interviews in field among some of Rwanda’s 416 sectors. The comparison analysis that we couldn’t go through with, that could be done either with our method if the Land Use Planning Portal starts up again, but to take it even further, to do the comparison in field as well. Another aspect this study didn’t had resources to study, is the women’s right to own property and their right to inherit land.

One of the most urgent difficulties Rwanda stands before is the upcoming major population increase. Due to the former genocide that killed over 1 million of the citizens back in 1994, more than half of the population is now in under 25 years old and starting up their own family and kids. In a couple of years this will make a huge impact on housing and the housing policies have to be prepared for it.
7 References


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8 Appendices

8.1 Appendix A

Interview questions master plan

1. What’s your title?
   a. How do you practice the master plan in your work?

2. Which are the most common land use problems that appear based on the master plan?
   a. Do you experience difficulties when you approach the master plan in your work? And if so:
      i. How do you handle the problems appearing?
      ii. How do you prevent the problems to appear again?
      iii. How would you wish to solve the problems appearing?
   b. Are you aware of any illegal land use changes taking place in Kigali right now? And if so:
      i. Do you take action in some way?
      ii. Are you able to record the illegal land use changes that’s been made?
      iii. How does this affect your work?
      iv. How does this affect the land use development in Rwanda?
   c. What would you suggest to prevent the illegal land use changes?
   d. Is it allowed to build housing complex on agriculture?
      i. Is there any decided size on housing that’s allowed to build on agriculture?

3. What do you think is the biggest cause of disputes in the land use lanning process? Is it a lack of knowledge, legal missing points, government issues, etc?
4. How would you describe the biggest problem when the master plan and its land use planning isn’t followed correctly?

5. What consequences if followed for the individual if the master plan isn’t followed?

6. How does the master plan protect valuable agriculture?

7. Does the ministry in some way take action when land use change is taking place in land that the master plan meant for agriculture? And if so;

   a. How does the ministry take action?

### 8.2 Appendix B

**Interview questions land use planning law**

1. In your opinion, does the land use planning law in Rwanda fulfill its purpose?

   a. Is there something you wish to improve in the law to indicate a more efficient land use in Rwanda?
   b. Is there some changes in the law that could be done and would indicate that the master plan would match the land use?

2. Is the land use planning law in Rwanda followed by all authorized? If no:

   a. How would you describe where it differs?
   b. How would you describe where in the process, the problems appeal?

3. Is the land use planning law in Rwanda followed by the citizens? If no;

   a. How would you describe where it differs?

   b. How would you describe where in the process, the problems appeal?

   c. Do you think that all citizens in Rwanda are aware that the land use planning law exists? And if no.

   i. What problems could that cause for the individual?
8.3 Appendix C

Interview questions land registration

1. Is there a land use registration process to be followed in Rwanda?

   a. Would you say that the registration is well used? And if no;
   
      i. What would you say is the main problem?
      
      ii. How would you wish to improve them?
      
      iii. What consequences are there for the individual if they not register the land use change?

2. In your work, are there problems because of the lack of registered land use? And if so;

   a. How do they appear?
   b. What consequences are there because of the lack of registration?

3. Does the land use and land use planning suffers from badly managed real estate registration? And if so;

   a. How do you solve them?