The change of land-use and community character in a local neighborhood in Yogyakarta

The impact of urban sprawl on the change of land-use and community character

Frank de Gouw

Bachelor’s thesis Geography, Spatial planning and Environmental Sciences
Nijmegen School of Management
Radboud University Nijmegen
June 2016
The change of land-use and community character in a local neighborhood in Yogyakarta

The impact of urban sprawl on the change of land-use and community character

Author: Frank de Gouw
Student number: 4658973
Supervisor RU: Dr. L. Smith
Supervisor UGM: Dr. R. Rachmawati

Bachelor’s thesis Geography, Spatial planning and Environmental sciences
Nijmegen School of Management
Radboud University Nijmegen
June 2016
Foreword

I present to you my thesis about urban sprawl in Yogyakarta. This research and journey in Indonesia completed and complemented my first year at the Radboud University as a pre-master student Human Geography. I knew before starting this pre-master that most of my interests are mainly focused on the urban geography and urban processes. So after going through several optional subject for the bachelor’s thesis one of them stood out for me. The assignment in Yogyakarta, Indonesia which I could transform towards my own field of interest. Although I wasn’t planning on doing research abroad, I couldn’t help myself.

When I eventually got a green light for doing this research in Indonesia I started thinking about which urban form, process, problem etc. I could focus my research on. After a short time, I started thinking about the process of urban sprawl. At that point I knew already some things about it and remembered the suburban growth in the United States but also the rapidly expanding cities in the developing countries. After reading additional literature I made the decision to focus my research on this urban process. And after multiple discussions in Nijmegen and Yogyakarta the main aim of the research was going to be on the experience of people living in a neighborhood in Yogyakarta about the change in land-use and community character, caused by urban sprawl.

I would also like to use this foreword to thank multiple persons who helped me during this journey. At first my supervisor, Dr. L. Smith, for providing feedback and multiple insights along the way. Also my supervisor in Yogyakarta; Dr. R. Rachmawati from the Gadjah Mada University and her assistant Charina, who helped my conducting and processing the interviews. At last I want to thank the students who joined me to Yogyakarta; Dirk, Gijs, Lennert and Liza for their amazing company.

Frank de Gouw

Nijmegen, June 2016
Summary

The urban world is changing and urban sprawl is one of its main initiators. Urban sprawl can be defined as an urban process which mostly occurs as an undesirable development pattern. It can be explained as an extensive pattern outside the city that in the last four decades has become very dominant. It basically is as excessive spatial growth of a city. Because of this excessive growth on the outskirts of the city into the hinterlands it often occurs that rural land is converted into urban centers. These lands that have previously been used for non-urban functions are therefore likely to see these functions change.

Noticeably, urban sprawl causes multiple consequences whereas the change in land-use and the loss of community character are two of them. This research focuses on these two consequences in an Indonesian context, within the city of Yogyakarta.

Most literature however, seems to be written for the Western world and tends to neglect the urban sprawl occurring in the developing countries. This has slightly changed in past years, since the epicenter of urban population growth is not occurring in the Western world but in Asia, Africa and South-America. This is a good development since, the development patterns concerning urban sprawl might occur in a different form compared to the Western situations.

Indonesia is a good example of a developing country in South-East Asia which experiences a huge growth in population and in advance a strong increase in urban population. The city of Yogyakarta is no exception. With a growth of 1.1 million inhabitants in the last 45 years the city is expanding outside its own limits, therefore affecting the region that lies beyond the former city boundaries. In this research the experiences of people living in this region, which is affected by the growing city in Yogyakarta are gathered and analyzed. This phenomenology study compares experiences of different persons about the change in land-use and community character in their neighborhood in order to provide a clear image about their experiences with the phenomena.

The study is conducted using the next main question:

*Does urban sprawl cause a change in land-use in a local neighborhood in Yogyakarta, does this have influence on the character of community and how do people living in the neighborhood experience these changes?*

The choice of a case area fell upon the neighborhood of Pogung Lor in the Sleman Regency, situated just outside the boundaries of Yogyakarta City. Pogung Lor itself saw a huge increase in population after the completion of the ring road in 1984 around Yogyakarta City. This completion
is often marked as the starting point of multiple developments within this neighborhood. After this time the population in the Pogung Lor increased, because of a better connection with the city, the nearby Gadjah Mada University (UGM) and the still quiet and green environment. These newcomers caused a change in land-use while rural land became built-up area, therefore converting the original functions. In advance this also caused the dynamics or the community to change.

The change in land-use has a lot of causes on multiple levels. On micro-level, location specific characteristics within a neighborhood can change or the situation of the land-owner himself, socio-cultural characteristics can be influenced and changing demographics can influence a change in demand for goods. On macro-level, technology can develop new kinds of land-use and other changes on a larger scale, like the increase in income, a change in lifestyle and consumption trends, a change in the social construction of a community or a change in demand for goods. Consequences are for instance: the conversion from rural to urban land, the loss in community character of these rural communities and the intensification of segregation.

In Pogung Lor the root causes for a change in land-use where mostly micro-level changes within the neighborhood. The construction of the ring road as a location specific characteristic and the changes in demand within the community because of the newcomers. Consequences where, however that almost all rural land was converted into urban areas and that social fragmentation of segregation intensified because of the many boarding houses that were built for the huge flow of students. On the other hand, the demand for new goods, including those boarding houses caused an improvement of the economic situation of many of the native inhabitants. They adapted towards these new situations and most of the interviewees spoke positively about these new developments. Most land-owners sold their parcels to investors (who started to build houses and boarding houses) or kept their parcels and started to create businesses of their own. Although they miss the old days, they acknowledge that economically their position has improved. So it's really about finding a balance between economic progression and social regression, because socially Pogung Lor is affected by this change in land-use.

The 'sense of community', as one of the consequences of urban sprawl is thus affected by the change in land-use. This sense of community is determined by different factors such as: membership, influence, integration and emotional connection. Also the term social fragmentation, which indicates the degree of societal polarization is very important.
The interviewees agreed that the social construction of Pogung Lor has changed in the past year and that people have become more individual and egocentric. They also noticed the fragmentation between their community and the community the students created for their own. Besides these negative opinions they do however have positive relationship with most of the newcomers. A lot of these people are willing to adapt towards their new environment which in advance affects the community in a positive way. The solidarity among the members of the entire neighborhood is still good and real tensions between different groups are almost never occurring.

To conclude this study: Yes, urban sprawl is causing a change in land-use and a change in community character in a local neighborhood in Yogyakarta. It is however not this finding that can be called remarkable. Like mentioned, literature often speaks about urban sprawl as a negative phenomenon and as an unwanted, unplanned and uncontrolled growth of a city. Pogung Lor also experienced this growth as unplanned and maybe also uncontrolled. But the unwanted part is something different. Based on different opinions about the change in land-use and community character it is noticed that most people are quite satisfied with current developments. Of course there are also negative sides, such as the loss of rural lands and also a change of the old community but the economic benefits it caused are felt equally important. Moreover, the sense of community, however changed, is still good in Pogung Lor. While literature state that urban sprawl causes a loss in community character, Pogung Lor shows different results. Reason for this can be the strong community it already had combined with a smooth integration of new people creating close relationships and a close membership with the community. Or also possible, the neighborhood itself caused the good integration of new people because of its quiet environment, in which communicating with neighbors can occur very easy.

So the question rises, why is Pogung Lor currently dealing with urban sprawl in a good way? What are its secrets or/and (unintentional) processes? Other question rises for how long these positive minds remain. Maybe in 20 years the number of students will grow so high that the native people do begin to feel the downsides of this urban sprawl. In any case, at this moment urban sprawl, although having its downsides, creates opportunities for the inhabitants of Pogung Lor.
# Content

## FOREWORD

## SUMMARY

### 1. INTRODUCTION

1.1 **PROJECT FRAMEWORK**

1.2 **RELEVANCE**

1.2.1 **SOCIETAL RELEVANCE**

1.2.2 **SCIENTIFIC RELEVANCE**

1.3 **RESEARCH AIM AND QUESTIONS**

1.4 **RESEARCH MODEL**

### 2. URBAN SPRAWL AND ITS CONSEQUENCES

2.1 **URBAN SPRAWL IN INDONESIA AND YOGYAKARTA**

2.2 **LAND-USE CHANGE**

2.2.1 **LAND-USE INFLUENCES**

2.2.2 **LAND-USE CONSEQUENCES**

2.3 **SENSE OF COMMUNITY**

2.3.1 **EFFECTS OF URBAN SPRAWL AND LAND-USE CHANGE ON COMMUNITIES**

2.4 **CONCEPTUAL MODEL**

### 3. METHODOLOGY

3.1 **RESEARCH STRATEGY**

3.2 **DATA COLLECTION**

3.3 **DATA ANALYSIS**

3.4 **CASE STUDY EXPLANATION**

### 4. RESULTS AND ANALYSES

4.1 **LAND-USE CHANGE**

4.1.1 **DEMOGRAPHIC CHANGES IN THE SLEMAN REGENCY**

4.1.2 **DEVELOPMENT PATTERNS IN THE SLEMAN REGENCY**

4.1.3 **EXPERIENCES OF LAND-USE CHANGE**

4.1.4 **ANALYSIS**

4.2 **SENSE OF COMMUNITY**

4.2.1 **ANALYSIS**
5. CONCLUSION - 60 -

5.1 CONCLUSIONS - 60 -
5.2 RECOMMENDATIONS FOR FUTURE RESEARCH - 63 -
5.3 REFLECTION - 64 -

BIBLIOGRAPHY - 66 -

APPENDICES - 71 -

APPENDIX 1: SENSE OF COMMUNITY - 71 -
APPENDIX 2: QUESTIONNAIRE - 73 -
APPENDIX 3: INTERVIEWS - 74 -
3.1 OBSERVATIONAL INTERVIEW: BOIMAN THE GARDENER - 74 -
3.2 OBSERVATIONAL INTERVIEW: LENJANG THE LANDLORD - 75 -
3.3 OBSERVATIONAL INTERVIEW: TONI THE RT AND HIS WIFE LUSI - 77 -
3.4 OBSERVATIONAL INTERVIEW: WIDI THE CIVIL SERVANT - 79 -
1. Introduction

The urban world is changing. Around the year 2010 the world’s urban population was estimated around 3.2 billion people. To put this into perspective, that is more than the world’s total population in 1960. In the 20th century alone the size of the world’s urban population increased more than ten times its original number (Satterthwaite, 2007; United Nations, 2006). In the third millennium cities around the world still show this similar pattern of urbanization. This increasing urbanization has resulted in an extension of physical urban areas (Marwasta, 2010). Yunus (2005) states that urbanization is marked by the increase of urbanized population and the proportion of urban dwellers on a regional scale. To underpin this statement, table 1 shows the declining time which is needed for the adding of one billion urban dwellers. This addition of urban dwellers eventually results in urban sprawl.

<table>
<thead>
<tr>
<th>World’s total urban population</th>
<th>Time taken</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 to 1 billion urban dwellers</td>
<td>10,000 years (ca. 8,000 BC – 1960)</td>
</tr>
<tr>
<td>1 to 2 billion urban dwellers</td>
<td>25 years (1960 – 1985)</td>
</tr>
<tr>
<td>2 to 3 billion urban dwellers</td>
<td>18 years (1985 – 2003)</td>
</tr>
<tr>
<td>3 to 4 billion urban dwellers</td>
<td>15 years (2003 – 2018)</td>
</tr>
</tbody>
</table>

*Table 1: The time needed for the increase of one billion urban dwellers (Satterthwaite, 2007).*

In this first chapter the phenomena of urban sprawl are introduced, after which the focus shifts to one of the consequences of urban sprawl: the creation of segregated communities. First, the chapter starts with an explanation of the definition of urban sprawl. This begins by explaining the growing urban population, which highly influences urban sprawl. Next, multiple definitions are given and causes and consequences of urban sprawl are mentioned. After this clarification the context of urban sprawl shifts towards the developing world and therefore makes a turn towards the situation in Yogyakarta, Indonesia, where the research eventually is conducted. After the clarification of urban sprawl in developing countries there follows an explanation on two of the consequences of urban sprawl that are the main research factors. In the following paragraphs the social and scientific relevance is eluded and also the aim of the research in combination with the research questions and the research model.
1.1 Project framework

Urban sprawl mostly occurs as an undesirable urban development pattern (Clark & Harvey, 1965; McKee & Smith, 1972). It can be defined as a spatially extensive pattern outside the city that in the last four decades has become dominant in the current development patterns (Adaku, 2014). Therefore, urban sprawl can be recognized as the excessive spatial growth of cities (Brueckner, 2000).

Some researchers attempt to define urban sprawl in simple statements or terms, while others define it by giving it general attributes (Adaku, 2014). Ewing, Pendall & Chen (2002) for instance, define sprawl by taking into consideration the following characteristics: “a low density development with residential, shopping and office areas that are strictly fragmented; a lack of thriving activity centers and limited choices in travel routes”. Also Ewing (1994) states that: “Urban sprawl is a multifaceted concept, which includes the spreading outwards of a city and its outskirts to low-density and auto-dependent development on rural land”. Burchell & Mukherij (2003) see urban sprawl as a low density area at the periphery of a metropolitan area; it is every residential or non-residential development that takes place in a relative pristine or new environment. While Dieleman & Wegener (2004) recognizes that a whole range of unintentional consequences of urban sprawl are brought forward in many different literatures, they name three prominent consequences; the disinvestment in the urban centers itself and the therefore central city decline, the increasing reliance on motorized vehicles and the therefore growing road congestions and the decline of air quality, and last the loss of open space and green areas in the metropolitan region. Arbury (2005) mentions that urban planning has evolved in the twentieth century, which caused a huge variety of different urban forms. Most of these forms had little regard for the impact they possibly had on the environment and this is, according to Arbury, most evident in the form of urban sprawl. This urban sprawl not only have had negative environmental impacts but also social and economic effects (Arbury, 2005; Burton, 2000; Ewing, Page, & Haliyur, 1994; Newman & Kenworthy, 1989).

The Sierra Club (an American environmental organization) often refers to urban sprawl as leapfrog development. They state:

“... irresponsible, often poorly-planned development that destroys green space, increases traffic and air pollution, crowds’ schools and drives up taxes” (Sierra Club, 2001).

Other geographers mention especially the conversion of rural land use to urban land use. They define urban sprawl as:
Urban sprawl refers to the continuous expansion around large cities, whereby there is always a zone of land that is in the process of being converted from rural to urban land (Clark D., 1982).

Urban sprawl refers to the area expansion of urban concentrations beyond what they have been. Urban sprawl involves the conversion of land peripheral to urban centers that has previously been used for non-urban uses to one or more urban uses (Northam, 1975).

Urban sprawl can be defined of the growth of metropolitan area though the process of development of miscellaneous types of land use in the urban fringe areas (Domouchel, 1975).

And there are many more definitions or opinions about urban sprawl. Gordon and Richardson (2000) states that urban sprawl causes increasing job insecurity, housing costs, income inequality, environmental problems, extinction of species, loss of farmland, health issues and even the increase of murder rates. Downs’s (1999) viewpoint is that urban sprawl as development can be seen as an unlimited outward growth or extension. Furthermore, he sees a lack of centralized planning or control, a segregation of types of land, a fragmentation of powers over land use, and problems to provide housing for the low-income classes.

At last Burchell et al. (1998) lists, to define characteristics of sprawl, three distinct types: spatial patterns, root causes and the main consequences of sprawl. This list of Burchell is by multiple other researchers, like Neuman (2005) and Downs (1999), called the most comprehensive review of urban sprawl within current literature. This list is ‘completed’ with the viewpoints of other researchers (Bullard, Johnson, & Torres, 2000; Duany, 2000; Freeman, 2001; Kunstler, 1993; Popenoe, 1979).

Spatial patterns are:
- Low density
- Unlimited outward expansion
- Land uses spatially segregated
- Leapfrog development
- Widespread commercial strip development

Root causes are:
- No central ownership or planning
- Highly fragmented land-use governance
- Excessive growth in population
Main consequences are:
- Transport dominance by motor vehicles
- Great variance in local fiscal capability
- Reliance on filtering for low-income housing
- Loss of community character
- Insufficient, unplanned and uncontrolled change of land-use
- Increased traffic congestion
- Negative effects on the environment
- Segregation of communities (in some cases caused by leapfrog development)
- Higher public costs for services and facilities in the new urban areas
- The decline of the inner city as people move towards sprawled areas
- The increase of crime within these sprawled areas
- Emerge of widespread conflict of interest

According to the mentioned statements, viewpoint and opinions it is clear that urban sprawl does not possess a clear, straightforward definition and maybe it can be assumed that every definition of this phenomena is possibly correct. But almost all agree that urban sprawl is an unplanned expansion of urban areas.

But what maybe is most remarkable of these opinions is that they seem to be intended for the Western world. While the world population is growing, it is likely that urban sprawl could be a more common phenomenon and because this population mostly is increasing in the developing countries, these countries should experience this ‘undesirable’ urban form themselves (Seto, Güneralp, & Hutyra, 2012). Maybe the causes and consequences are different for these countries. Adaku (2014) already states that urban sprawl is a global issue and that it is not only visible in developed countries. He also states that the dynamics of urbanization (which is a cause of urban sprawl) are different than in the developed countries (Adaku, 2014; Menon, 2004). But maybe this Western viewpoint isn’t as strange as it might seem, while the urban sprawl in ‘The West’ started earlier than in the current developing countries. The United States for instance experienced a tremendous urban sprawl since the end of World War II, because of high speed development of urbanization, whereby richer people fled the inner cities and its problems and continued living in the suburbs. (Riddick, 2014; Brueckner, 2000; Brunner, 2012).
It was already mentioned above; the dynamics of urban sprawl are or can be different in developing countries instead of developed countries like the United States. Legates (2014) mentions that the epicenter of world urbanization is located in the developing countries and Adaku (2014) states that urban sprawl is one of the effects of this urbanization. Although a careful divide has to be made between legitimate urbanization in the developing countries and the undesirable urbanization in cities which causes the expansion. In his case study towards the differences between urban sprawl in the United States and Ghana he concluded:

“The impacts of urban sprawl in Ghana in terms of social problems, economic and population decentralization, poor accessibility and development dynamics appear to differ from the scheme impacts in the United States. This deviation is not accidental but can be explained by the adaptive failure of the modernist planning model” (Adaku, 2014, p. 205).

According to Bruckner (2000) in developing countries urban sprawl affects the poor because governments pay not enough attention to land, services, slums and transport. They also lack the ability to predict the urban growth in their land and cities. As a result of that, they fail to provide land for the urbanizing poor. In many cases these poor people are denied land rights, which is one of the main reason why they move towards the periphery of the city (Brueckner, 2000; Brunner, 2012). Brunner further mentions his case studies in South-Africa where in many cities precisely this problem is happening. The cities are expanding beyond the existing urban periphery but these new housing areas are relatively unplanned (Davis & Schaub, 2005). The result is that the new urban periphery consists of different pockets of housing developments which are separated from each other by open spaces and roads (Brunner, 2012).

Developing nations are currently passing through the process of this urbanization, which results in a very high growth rate of urban population. In advance, this huge urban growth is likely to cause uncontrolled urban growth which will result in sprawl. The rapid growth strains its capacities to deliver services like education, sanitation, health care, transportation and energy. Bhatta (2010) further states that in most cases governments aren’t able to keep up with the increasing costs for providing these basic needs for the new areas, resulting in massive uncontrolled urban sprawl and serious (environmental) problems. This formation of sprawl seems to have a lot in common with the thoughts of Sudhira and Ramachandra (2007), they stated about their case study in Bangalore:
“Urban sprawl refers to the outgrowth of urban areas caused by uncontrolled, uncoordinated and unplanned growth. This outgrowth seen along the periphery of cities, along highways and along roads connecting a city, lacks basic amenities like sanitation, treated water supply, primary health center, etc., as planners were unable to visualize such growth during planning, policy and decision-making”.

This research focuses on the urban region of Yogyakarta, Indonesia. Indonesia is a country with a fast urban growth which causes multiple problems, which is further highlighted in chapter 2. The main aim of the research is to focus on two major consequences of urban sprawl, also mentioned on the list of Burchell et al (1998) and by other authors. These consequences are the change in land-use and the loss of community character. Brook and Dávila (2000) concluded that the changes in land-use and land ownership are one of the most important consequences of peri-urbanization. They also state that this change of land use goes hand in hand with the coming of foreign investors, usually from the private sector, who replaces farmland for urban functions.

Simon, McGregor and Nsiah-Gyabaah (2004) and Ginsburg, Koppel and McGee (1991) recognize that urban development and urbanization in Indonesia has recently been marked by the transformation of rural towards urban land. These urban areas saw a massive growth since the 1980s and are still growing fast. The second consequence: the loss of community character also correlates with the change of land use because of the coming of different functions and residents in a specific neighborhood. Based on different literature it is believed that both consequences are a regular happening in local neighborhoods. The choice of the neighborhood itself is explained in chapter 3. This neighborhood is located in the urban region of Yogyakarta within the Sleman Regency. This Regency, north of the city of Yogyakarta, is ranked to have the highest rate of population growth and according to Pradoto (2012) this regency currently experiences a lot of land transformation from rural to urban land. More information about this Regency is given in chapter 2.

1.2 Relevance

1.2.1 Societal relevance

This research gains inside in the urban expansion and sprawl of Yogyakarta. It provides information about the current urban situation of the city and its consequences in the form of the changing land-use and community character. Like stated, urban sprawl can cause a lot of socio-economic problems which can have an effect on local communities (Brueckner, 2000; W. Burchell,
et al., 1998). Rural communities, with mostly a strong community, on the outskirts of the city could be affected by the urban expansion of the city, for instance by the change of land-use and by many new comers. By the change of land-use the old functions of the neighborhood can vanish. Most of all, new people can move towards the neighborhood to exploit those new functions, because in most cases rural land is converted into urban built-up areas which can be used for different economic functions. In advance, this can have a negative effect on the community character (Mantra, 2003; Pradoto, 2012). With this research it is hoped to give an insight in this process in a typical Indonesian rural neighborhood which feels the effects of new built-up areas and the changing of the land-use. The aim is to get to know their experiences with the phenomena and if they find this undesirable. There could be problems with possible newcomers or problems with new functions. If these problems are known then people of the neighborhood, newcomers and governments can act to work towards a better solution.

1.2.2 Scientific relevance

In the introduction it is mentioned that most of the existing literature on urban sprawl and its consequences is written about Western situations and Western cities in mostly (North) America and Europe. There certainly is literature about cities dealing with urban sprawl in developing countries but the amount of literature is significantly less. Maybe this is because the research of urban expansion in developing cities is only just beginning. In any case, we know that the urban population mostly increases in the developing countries, like Indonesia. Because of that uncontrolled and undesirable expansion, because of failing policies, might not be far away. On a smaller scale, studies towards Indonesia and Yogyakarta have also been done. But these studies mostly focus on the causes of urbanization and peri-urbanization of its cities and not so much on the consequences of urban sprawl let alone the consequences it has on the changing of land-use and community character in a specific neighborhood.

This research aims at providing a better inside on the changing of land-use and community character, caused by urban sprawl, in a developing East-Asian city. This study contributes towards a better understanding of the consequences of urban sprawl in a developing country and the experiences of people, who live in the city, have with it. Furthermore, it is hoped to provide such information that not only could be used for the specific case in the Yogyakarta region but also in other cities in the developing world.
1.3 Research aim and questions

The objective or aim of this research is derived from the introduction which describes the term of urban sprawl and its causes and consequences. It also gave an introduction into the research area in Yogyakarta itself. This research is a practical study with the focus on the experiences of people on two consequences of urban sprawl: the change of land-use and community character. This form of research means that knowledge and information are gathered to provide a contribution to current, maybe unwanted, situations. The aim is to learn about consequences of urban sprawl in the city of Yogyakarta and to learn about the experiences people have with this phenomenon. The aim of this study is:

*The aim of this research is to make clear the consequences of urban sprawl in Yogyakarta with the focus on the change of land-use and the loss of community character in a local neighborhood, thus providing a better understanding of the current situation of the effects of a developing city on a local community.*

To provide a sufficient answer for the aim of the research there need to be a central question which has the ability to achieve this objective. The central question of this study reads as follows:

*Affects urban sprawl the type of land-use in a local neighborhood in Yogyakarta, does this influences the character of the community and how do people living in this neighborhood experiences these changes?*

To answer this main question, three sub questions can be discussed that assist the research question and make sure that the question is answered properly:

1. How is urban sprawl occurring in the Yogyakarta?
2. How is the land use changing in the local neighborhood and how do people experience this?
3. Is the community character influenced by the urban expansion of the city and the change of land use?
1.4 Research model

![Research model diagram]

- Literature: urban development and urban sprawl in Yogyakarta and the Sleman Regency
- Literature: causes and consequences of the changing of land-use
- Literature: influence of urban sprawl and change of land-use on community character
- Research towards main subjects in context of Yogyakarta
- Conceptual model
- Analysis results
- Case study in Sleman Regency (interviews and observations)
- Analysis results
- Contribution towards understanding occurrence of urban sprawl in a local neighborhood in Yogyakarta

Figure 1: Research model (Own model, 2016).

Ad (a)

To start, literary information is collected about the main subjects. After the explanation of urban sprawl in chapter 1, the main consequences of this urban process need a literary foundation in order to create understanding for the eventual results of the study. First, information is gathered about the causes and consequences of the change in land-use and secondly information about the ‘sense of community’ is given. The information about the community makes clear what threats for a community and which processes are to make it function in a good way. This information about both the change in land-use and community character is used in the analyses of chapter 4.

Ad (b)

Based on found literature about the main subjects a conceptual model can be created, paragraph 2.4, about how urban sprawl influences the changing of land-use and community character in a neighborhood in the Sleman Regency. This conceptual model is executed by two actions. First information is gathered about the urban development of the Sleman Regency, in which the case area is located. Urban development patterns and the changes in population are elaborated in order to explain the change in land-use within the case area. Next, information about the experiences of the inhabitants of the case area about these urban developments and change in land-use are gathered as well as their opinions about the change in community character. This furthermore makes clear if these urban processes influence the change in community character. These experiences are collected through different interviews and observations in the case area.
**Ad (c)**
The next step is to analyze the results, collected at step (b). First, the different opinions about the change in land-use are compared and a general opinion is created. Next a comparison is made towards the literature; are there similarities in causes and consequences? Interesting should be whether this process is received with negative experiences or positive ones. The same goes for analyzing the second consequence: the change in community character. What are causes for potential differences in the community? How is the community changing? And yet again the question remains: are these changes good or bad for the neighborhood itself? In the end a conclusion can be made whether or not urban sprawl, like literature made clear, has a bad influence on the case area or not.

**Ad (d)**
At last an answer is given about the central question of this study. This has to result in the achievement of the overall goal or aim of this research; to contribute towards a better understanding of the influence of urban sprawl on the change of land use and community character in a neighborhood in the urban region of Yogyakarta.
2. Urban sprawl and its consequences

To provide a good literary foundation for the analysis in chapter 4 a sufficient understanding is required about the most important aspects of this study. After elaborating the meaning of urban sprawl in chapter 1 it became clear that its consequences: the changes of land-use and community character are the main points of this study. So in order to analyze and understand the empirical data, which is collected about these subjects in the context of a neighborhood in Yogyakarta, it is needed to provide a literary background for both subjects.

But first, in paragraph 2.1 the current status of urban sprawl in Indonesia and Yogyakarta is introduced. Briefly, the urban growth and urban expansion patterns are shown, whereby an image is made clear about the urban sprawl in Indonesia and Yogyakarta. After this explanation the two main consequences of urban sprawl, which are treated in this study, are highlighted in paragraph 2.2. First, the change of land-use is elaborated by explaining what exactly the change of land-use means and by naming its causes and consequences. Secondly, the ‘sense of community’ or community character is elaborated. This is done by explaining what exactly this sense of community contains, how a ‘good’ community should function and if social fragmentation is occurring. Also the effects of urban sprawl on both the changing of land-use as well as the changing in community character are made clear. At last the conceptual model, which is used in this research, is displayed and explained.

2.1 Urban sprawl in Indonesia and Yogyakarta

The epicenter of world urbanization are the peri-urban developing areas in East Asia (includes East and Southeast Asia and excludes Japan, Singapore, South Korea, Macau and Hong Kong). These developing peri-urban areas present both opportunities but also the most severe problems (Legates & Hudalah, 2014). An estimated 119 million people are likely to settle in these regions over a 15-year period from 2010 till 2025 (Webster, Cai, Muller, & Luo, 2004) and Indonesia is no exception of this urbanization. The Republic of Indonesia is the largest nation, both in terms of population and area, in Southeast Asia. Currently, approximately 257 million people live in Indonesia, see table 2 (Pradoto, 2012). The past decades Indonesia experienced a high level of urbanization and this increasing population and urban population is not expected to stop. During this time Java has become the economic, social and political hub of Indonesia, with the capital city Jakarta and other metropolitan areas like Bandung, Semarang, Surabaya and Yogyakarta. It led to a disparity between Java and the other regions of Indonesia in terms of socio-cultural facilities.
and economic infrastructure. People living in the other areas moved towards these metropolitan areas which led to a huge increase of population density in these major cities (Pradoto, 2012).

<table>
<thead>
<tr>
<th>Year</th>
<th>Population</th>
<th>% Change</th>
<th>Absolute Change</th>
<th>Median Age</th>
<th>Fertility Rate</th>
<th>Density (P/Km²)</th>
<th>Urban Pop %</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>257,563,815</td>
<td>1.29%</td>
<td>3,190,138</td>
<td>28</td>
<td>2.50</td>
<td>142</td>
<td>53.4%</td>
</tr>
<tr>
<td>2020</td>
<td>271,857,420</td>
<td>1.09%</td>
<td>2,858,721</td>
<td>29</td>
<td>2.36</td>
<td>150</td>
<td>56.7%</td>
</tr>
<tr>
<td>2025</td>
<td>285,504,973</td>
<td>0.91%</td>
<td>2,529,511</td>
<td>31</td>
<td>2.24</td>
<td>157</td>
<td>59.8%</td>
</tr>
<tr>
<td>2030</td>
<td>295,481,797</td>
<td>0.76%</td>
<td>2,195,365</td>
<td>32</td>
<td>2.14</td>
<td>163</td>
<td>62.6%</td>
</tr>
<tr>
<td>2035</td>
<td>304,847,101</td>
<td>0.63%</td>
<td>1,873,061</td>
<td>33</td>
<td>2.07</td>
<td>168</td>
<td>64.9%</td>
</tr>
<tr>
<td>2040</td>
<td>312,439,305</td>
<td>0.49%</td>
<td>1,518,441</td>
<td>34</td>
<td>2.00</td>
<td>173</td>
<td>66.9%</td>
</tr>
<tr>
<td>2045</td>
<td>318,216,067</td>
<td>0.37%</td>
<td>1,155,352</td>
<td>35</td>
<td>1.95</td>
<td>176</td>
<td>68.9%</td>
</tr>
<tr>
<td>2050</td>
<td>322,237,405</td>
<td>0.25%</td>
<td>804,268</td>
<td>37</td>
<td>1.91</td>
<td>178</td>
<td>70.7%</td>
</tr>
</tbody>
</table>

Table 2: Indonesia Population Forecast (United Nations, 2015).

Pradoto (2012) mentions that because of the high rate of urbanization, the issues of land use, planning and management in Java have become more critical. He states that there is no doubt that land administration in Indonesia is not efficient and that there is a lack of administration and of an accurate land database. Moreover, most of the urbanization is occurring through the transformation of rural areas into urban areas which are expanding outward from the city (Pradoto, 2012).

This research focuses on Indonesia and in particular the city of Yogyakarta and the Sleman Regency, which is introduced in chapter 3. The empirical data about urban sprawl and its two consequences are eventually elaborated and analyze in chapter 4. The urban region and the entire special region (figure 2) of Yogyakarta is the most dynamic metropolitan area in Indonesia after the metropolitan area of Jakarta (Legates & Hudalah, 2014). It was the capital of the great Islamic Javanese Sultanate of Mataram, which was established in the seventeenth century. This sultanate still exists and the sultan is appointed as the governor of the Yogyakarta Special Province (Legates & Hudalah, 2014).
The built-up area of Yogyakarta’s city region has seen a rapid expansion over the past few decades. A first analysis of this built-up area was taken in 1972 by Landsat MSS and measured that the built-up area of Yogyakarta was approximately 15.7 square kilometers with an administrative region of 32.5 square kilometers (Marwasta, 2010). Thus, around this time almost half of Yogyakarta City was covered by non-built up areas. But the Yogyakarta City region would eventually outgrow this administrative region. In 2000 the total built-up area was estimated at 63.5 square kilometers, mostly caused by a strong growth from the past 10 years (Marwasta, 2010). Figure 3 visualizes the expanding urban areas. Furthermore, the special region of Yogyakarta is divided into five different regencies (Pradoto, 2012) (see figure 2):

- Gunung Kidul Regency; 1.485 square kilometers with 683.389 inhabitants
- Kulonprogo Regency; 586 square kilometers with 374.112 inhabitants
- Sleman Regency; 575 square kilometers 1.008.295 inhabitants
- Bantul Regency; 507 square kilometers 879.825 inhabitants
- Yogyakarta City; 32,5 square kilometers 443.112 inhabitants
The urban population of Yogyakarta’s special region grew from 2,489,360 in 1970 to 3,594,290 in 2014, a little more than 1.1 million people in almost 45 years (KNOEMA, 2013).

2.2 Land-use change

Paragraph 2.1 showed that Indonesia deals with an enormous population growth which causes an increase in the urban population and the peri-urbanization. This peri-urbanization has a great impact on the change of land-use in multiple cities. Yogyakarta is not an exception for this peri-urban growth, as shown in figure 2 and 3, which clearly indicates the peri-urban growth of Yogyakarta city. The project framework, paragraph **Fout! Verwijzingsbron niet gevonden.**, made clear that the change in land-use is one of the consequences of urban sprawl and Pradoto (2012) stated that the issues of land use and land management have become more critical the past years. But what exactly is this land-use change how does urban sprawl causes this and what are the consequences of it? The theory collected within this paragraph is used to analyze the data which is elaborated in chapter 4. In this chapter the causes and consequences of land-use change are displayed on a smaller scale in the form of a case study in the Sleman Regency, on which more in chapter 0 while the previous chapter already shortly mentioned this regency.

2.2.1 Land-use influences

Changes in the land cover of Earth have been taking place since the beginning of time. This change has been mostly associated with natural phenomena but since the 1700’s the causes of the change shifted towards human interference (Briassoulis, 2009a). Briassoulis states:
Since 1700 the land cover and land use changes have been reported as begin human-induced changes, and these have caused diverse, mostly adverse, impacts on both society and the environment” (Briassoulis, 2009a, p. 127).

The changes in land use are influenced by a variety of factors and initially this change in land-use occurs at the level of (individual) land parcels. This happens when land managers decide that a change towards another function of the land is more desirable. These land managers mostly respond to internal or/and external influences of and changes in their local environment, such as the changes in land price, their own personal preferences as well as institutional, political and socio-economic settings in which the piece of land is embedded (Briassoulis, 2009a). There are two levels on which land-use can change: on micro-level (individual land parcels) and on macro-level (higher spatial/organizational levels). In her research towards the change of land-use Briassoulis distinguishes the following influencing factors on micro- and macro level (Briassoulis, 2009a; Briassoulis, 2009b). These micro- and macro-level changes are eventually important for the change in ‘sense of community’ the second consequence this research focuses on. These micro- and macro-level changes are also a vital part of the analysis of the empirical data in chapter 4. Interesting is the possible similarities between causes written in literature of land-use change and the real causes in a neighborhood in Yogyakarta.

- Micro-level
  The individual land unit mostly belongs to an individual or a group of individuals and consist of a parcel of land of any size. Most commonly these parcels may be under forest, housing, agriculture, recreation or another use. The geographical setting in which a parcel or piece of land is located mostly determines the choice for land use but is also an important factor which influences the choice of changing the use of land (Briassoulis, 2009a).

The first major influence of the choice for a specific use for land is the local biophysical environment. This environment constrains land managers in the choice for a land use and eventually it determines their final decision. Most important factors are for instance: the local climate and topography, the type of soil, the weather conditions, resources of water and the quality of land (erosion and contamination). Other location specific characteristics influence the decisions of the land manager. Characteristics like accessibility of the land unit and infrastructure (access to roads and other transports like airports and train stations etc.) are very important. Also the uses
of land and changing of land of neighboring land parcels, and trends in the greater region play an important role (Briassoulis, 2009a).

But there are more factors which influence the change of land-use. Briassoulis states:

*Numerous interdependent demographic, economic, socio-cultural, organizational, technological and institutional factors affect the decision of land managers to maintain or change the current use and utilization of the land*” (Briassoulis, 2009a, p. 131).

Important demographic traits include the size of the household of the land manager, the age and gender of household members and the status of the family. Socio-cultural characteristics of the managers can also be influenced by: education, place of living (urban vs. rural), status of employment, own values and personal traits (perception on alternative uses of land or on external influences on land) (Briassoulis, 2009a).

Other important micro-level considerations are the economic situation of the land owner, the technological factors he has to his disposal and institutional arrangements. In terms of economy, changes in the demand for a certain good a land manager is producing or not producing is a decisive influence. Because we already concluded in paragraph... that Yogyakarta is dealing with an urban growth and sprawl it is likely that because of these new comers in the city the demand for (other) goods as well as the economy is changing or will change. Also the profits which are determined by the costs and availability of labor, capital and raw materials are very important. Not to forget the competition from others and the support of state (taxes, subsidies etc.). The policies of governments are probably the most influential factors. There are different policies that might influence the change of land-use: environmental and resource policies and regulations, development policies and spatial planning, economic policies and social policies. “Informal institutions that influence land-use decision –especially in developing countries- are informal money lending institutions, informal labor markets, family networks etc. (Briassoulis, 2009a)

Important to know is that these micro-level influences interrelated with the macro-level influences. Socio-economic factors are not only operating on micro-level but also on macro-level, which also exert a significant influence on not only the change of local land use but also the change of land use on a larger regional scale. So macro-level phenomena influence the happenings on micro-level and in advance the decision of the land managers (Briassoulis, 2009a).
• Macro-level
The two major macro-level influences on the change of land use are the biophysical factors and the societal factors. Although biophysical factors are very important for the possible change in land-use, especially because of current event like pollution and global warming, this study will not give a further explanation of these causes while the focus remains on the societal factors. The societal factors which can affect the change of land-use include: population, income, technology, socio-economic organization, culture and institutions.

  o Population
In 1968 the biologist P. Ehrlich came up with the “population pressure hypothesis”. This hypothesis expressed the relationship between environmental impact and the 'product of three factors' assumed to be: Population, Affluence and Technology. This theory, or hypothesis, has been used to explain environmental degradation and land-use changes in areas where the population was growing rapidly by either natural increase and/or migration. Hence, land is converted to the land-use type which is necessary, to meet the new demands. So for example, because of the increase of world population farm land will replace nature and forests because of the increasing demand for food (Ehrlich, 1968; Briassoulis, 2009a).
But this process could also change other types of land-use according to Ehrlich. Another example of the influence of changing population is the agricultural land which is converted to built-up area. When the demand for functions rises, which requires new settlements in rural areas, farmland will disappear. So, in this case the migration of population, induced by economic, social, political and/or environmental factors, may cause land-use change (Briassoulis, 2009b; Ehrlich, 1968).
Macro-level happenings that could influence land managers to convert their land to built-up area or sell their lands to developers are for example the changing of the population structure or/and the increase of population either natural or due to migration, and the increase of land-prices due to the increasing demand. Like stated in the previous paragraph, Yogyakarta is encountering an increase in population, so therefore it is likely, according to the theory of Ehrlich that the land-use will change within this city.

  o Income
An increase in income is capable of generating a higher demand for food, services, mobility, recreation etc. So when the demand for a different land-use is high or when the demand for a good and/or service, which are relate towards a specific land-use, the land-use could change. This, however also works vice versa. When a demand for a certain function decreases but when
the usage of land still provides for that demand this land-use will change. For example, when an area is mostly used for hotels but tourists are not attracted to that area anymore, the hotels will disappear in time and make place for a different function. Because of the adaption towards a land-use whereby the demand is higher the income is likely to increase, which in advance, can have positive influences on the neighborhood. So when consumption trends, lifestyle and demand patterns change the land-use is likely to be affected (Briassoulis, 2009a). At the end of this research (paragraph 4.2.1) it appears that this is a very important aspect for the change of land-use in the case area.

- **Technology**

  Technology refers to artefacts, skills, knowledge, techniques and social and organizational knowhow. It is basically represented by manmade objects which are employed to make certain activities more efficient and/or easier. Technology and progression of technology changes the mode of production and in advance changes social relations and institutions. Hence organizations try to achieve land transformation that furthers the goals of society. For example, the developments in transportation and communication led to an increasing access in new lands, which enabled the expansion of trade and encouraged urbanization, suburbanization and urban sprawl (Briassoulis, 2009a).

- **Socio-economic organization, culture and institutions**

  Altered patterns of land-use can change the socio-economic organization and situation of a region. A shift from an agricultural area towards an industrial one or a touristic one has a tremendous impact on the social structures of an area. “The interplay between social organization and environmental setting determines the spatial distribution of social groups, the users of space, influencing profoundly the ways in which land is used and transformed. Space and land use is socially constructed, reflecting relations of class, race, and gender. As these relations change, so does the use of land” (Briassoulis, 2009a, p. 140). So this basically states that when social construction in a neighborhood change the land-use could also be affected.

At last, (inter)national and local institutions could have influence on the change in land-use by different laws and policies. International institutions like the United Nations Convention about international environmental treaties may prevent the change of land-use for the sake of protecting eco-systems. National policies about water management, air, forests, infrastructure etc. or state interventions in the land market through regulations, subsidies or land reform schemes could have
influence on the land-use change. Most influential institutions on local level are land tenure and ownership and land markets. The ownership of land is mostly divided in private and state property. Structures of property rights are very important. Property owners may, for instance, not have the right to change the use of their land. Or they may not have the right to change the use in anything they like. A lack of property rights most of the time leads to unrestricted exploitation and eventual degradation (Briassoulis, 2009a).

Table 3 gives a summary of the named causes on both levels of land-use change. In chapter 4 these changes are used to analyze the empirical data of the causes of land-use change in a local neighborhood in Yogyakarta. As well as the micro-level as macro-level causes play an important role, while as well the neighborhood is changing from the outside, by the coming of new people, the neighborhood is also changing from the inside, because of the changing of lifestyle and increase in financial supplies. So besides the ability to changes land use they also have can cause changes in the community. This ability of changing a community is one of the consequences of the change of land-use and an important one in this study. The next paragraph describes these consequences.

<table>
<thead>
<tr>
<th>Micro-level</th>
<th>Macro-level</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Location specific characteristics (access to roads, transport etc.)</td>
<td>• Because of migration or an increase in population the demand for goods can change which can influence the land-use</td>
</tr>
<tr>
<td>• The land-use of neighboring parcels can influence a landowners own land-use</td>
<td>• An increase of income can change the demand for other foods, services and mobility</td>
</tr>
<tr>
<td>• Changing demographics in own circle of landowner</td>
<td>• An increase of income can change the lifestyle, consumption trends and demand patterns</td>
</tr>
<tr>
<td>• Socio-cultural characteristics of land-owner (education, place of living, stats, own values and personal traits</td>
<td>• A developing technology can cause a change in current land-use or can lead towards new land-use</td>
</tr>
<tr>
<td>• Changes in demands of goods</td>
<td>• The change in the social construction and relations in a community can cause the land-use to change</td>
</tr>
<tr>
<td>• Changing policies of the government</td>
<td>• International, national and local policies can influence how land-use can change and into what extend it can change.</td>
</tr>
</tbody>
</table>

Table 3: Summary of causes of land-use change on micro- and macro-level.
2.2.2 Land-use consequences

Aside from the causes or influential factors land use change in general also has multiple consequences in different sections. There are for example environmental impacts but also economic and social impacts. The changing of land-use is one of the most important socio-economic developments which influence the degradation of ecosystems (Wu, 2008). Urban development and other human activities changed the Earth’s landscape and this disturbance left his marks on the processes and services of important ecosystems. Marland et al. (2003) states that urban sprawl “has substantially altered and fragmented the Earth’s vegetative cover”.

Furthermore, the farmland that is mostly converted to urban areas within the change of land-use provides space for wildlife because of the open spaces.

Urban development and urban sprawl are linked to multiple environmental problems, like the loss of wildlife and the pollution of water and air. Urban sprawl and the change of land use mostly contribute by converting farmland into urban areas which results, like stated above, in the loss of habitat. In consequence this increasing urban area causes its own problems like urban runoff and different kind of pollutions. Other impacts include the pollution of air and water, flooding, erosion and salinization of soil etc. (Wu, 2008; Czech, Krausman, & Devers, 2000).

Like mentioned previously this research focuses on the socio-economic impacts or urban sprawl and urban development and not on the environmental impacts. The aim of his paragraph is to identify multiple consequences of the change in land-use within a socio-economic context. Wu states:

Table 4 shows a short list of different consequences caused by the change of land use. First of all, urban sprawl causes multiple problems for farmers who live in the urban fringe. Major concerns for these farmers include conflicts with nonfarm neighbors, the possibility of them losing their land and vandalism (Lisansky, 1986). Furthermore, the loss of farmland and forests, caused by an increase of urban development results in the loss of open spaces, greenery and other environmental amenities in the neighborhood for local residents. Another major influence the change of land-use has, directs to the community itself. The urban development, whereby land-use change can exist affects the way in which societies are organized due to many newcomers in a neighborhood. The social structures within this area are also likely to change. Furthermore, this urban development affects rural communities in such an extent that their own identity gets lost. Moreover, the change in land-use can cause income segregation and economic
inequality among community members (Wu, 2008; Lisansky, 1986). Wu (2008) further mentions that peri-urbanization brings urban and rural people and its problems together. So basically the social structures of a community can be negatively affected by the change in land use which affects the local community itself.

There are naturally also positive consequences of the change in land-use. In the previous chapter the increase in income, due to adaption of the native people towards the new demands, was already mentioned. According to Briassoulis (2009b) it is however hard to define whether some changes will be positive or negative. She states:

“... the occupational and income status of the population changes, social and cultural change (from an agrarian to a bourgeois society) occurs, the education, job, and life opportunities, as well as the living and health conditions of the population, are altered. Whether these changes are socially beneficial or detrimental depends on the mode of urban development” (Briassoulis, 2009b, p. 202).

| • The conversion of farmland and forests to urban development areas reduce the amount of open space, greenery and environment amenities for local residents; |
| • The patterns of urban development also affect the ways in which societies are organized and not only individuals; |
| • Urban development has affected some rural communities in such extent that the community’s identity has been lost; |
| • Suburbanization intensifies income segregation and economic inequality among communities; |
| • Land use regulations that aim at curbing land development will raise housing prices, making it less affordable for the middle- and low income households; |
| • Excessive land use control may hinder the function of market forces. |
| • Income will rise due to the adaption of native people towards new demand |

Table 4: Summary of the socio-economic impacts of the change of land-use
2.3 Sense of community

The second consequence of urban sprawl that is a central part of this research towards a neighborhood in Yogyakarta is the change in community feeling and/or character. First, the definition about ‘sense of community’ is explained together with some important factors and subjects like ‘fragmentation’. This phenomenon can have a tremendous impact on the social status of a community and is therefore also used in the analysis in the empirical data towards the ‘sense of community’ in section 4.2.1. Secondly in section 2.3.1 the connection with urban sprawl and the change of land-use with the change in community character is explained.

The sense of community is a difficult phenomenon to describe because it is about a feeling a certain person has with other persons or objects within his own ‘community’. The phrase ‘Sense of Community’ was formed in a theory, developed by McMillan & Chavis in 1986. This understanding of sense of community has become the most widely accepted understanding of how a community works (Spinks, 2013).

“Sense of community is a feeling that members have of belonging, a feeling that members matter to one another and to the group, and a shared faith that members’ needs will be met through their commitment to be together” (McMillan D., 1976; McMillan & Chavis, 1986, p. 9).

In his later work McMillan, together with Chavis, continue to describe four factors which contribute towards the sense of community: membership, influence, integration and fulfilment of needs and shared emotional connection (McMillan & Chavis, 1986). Appendix 1 shows an extended explanation of these four factors.

- Membership is the feeling that a person can possess about belonging somewhere or sharing personal relatedness. McMillan and Chavis (1986) concluded that this element consists of five attributes: boundaries, emotional safety, a sense of belonging, personal investment and a common symbol.
- Influence can also be described as a sense of mattering. The community needs to have influence on the newcomers and the newcomers must have influence over the community. People, in general feel more comfortable in a community when they have influence (Spinks, 2013; McMillan & Chavis, 1986).
- Integration and fulfilment of needs is, according to McMillan (1976), about reinforcement. The success of a group brings if closer together. People are attracted to people who
possess certain skills that can benefit them and people come together when they find out they have similar priorities, goals or needs (Hester, Roback, Weitz, Anchor, & Mckee, 1976; Kelley, 1951; Zander & Cohen, 1955; McMillan & Chavis, 1986).

- Shared emotional connection is mostly based on a shared history although it's also about the ability of group members to identify themselves with the history of the community. Shared events, the quality of interaction, the investment in the community and the spiritual bond are according to McMillan and Chavis (1986) important attributes for a successful community.

Another important subject which influences the social cohesion within a neighborhood and might eventually have (negative) effect on the sense of community is ‘fragmentation’. Hoerning & Deffner (2011, p. 1) state: “fragmentation is used by scientists to describe the phenomenon of increasingly differentiated societal and spatial polarization within cities, thus fragmentation seems to represent a threat to social cohesiveness on a political-planning as well as on a subjective-perceptive level.

Navez-Bouchanine (2002) distinguishes different forms of fragmentation; the urban fragmentation and the socio-spatial form of fragmentation within cities. “It is the detachment of different parts and the establishment of internal boundaries that break with the cities” Navez-Bouchanine (2002, p. 57) states. Urban fragmentation can be understood as disorderly process of development that leads to the splintering of urban space and makes the city a mosaic without a distinguishable centrality (Navez-Bouchanine, 2002; Hoerning & Deffner, 2011).

From a sociological point there are at least two elements that defines socio-spatial fragmentation. “Fragmentation classifies the breaking, the reversal, the rupture with a social and political ensemble”. It also refers much more to a transformation in the public spaces than in the residential spaces and that is where fragmentation distinguishes itself from social segregation (Navez-Bouchanine, 2002). One of the defining elements of a fragmentary city is the privatization and surveillance of the public spaces (Siebel & Wehrheim, 2003). Moreover, fear and insecurity are also the main driving forces to this privatization and sometimes gating. These homogeneous segregated areas promote the physical fragmentation or the urban space and influences also the sociological fragmentation of a neighborhood (Sabatina, Caceres, & Cerda, 2001).

Borsdorf and Hidalgo (2009) conclude that physical fragmentation has a serious impact on the quality and the understanding of urban life. Each class develops its own homogeneous space with
its own lifestyle. The growing size between these classes and their more complex integration systems can create more tensions between classes. Fragmentation emphasizes the disconnection and exclusivity of different classes and their residential units (Caldeira, 1992). A well-known homogeneous space or residential unit created by a certain class are the gated communities.

2.3.1 Effects of urban sprawl and land-use change on communities

The beginning of this paragraph made clear that there are four major attributes which influences the functioning of a community and that fragmentation in a neighborhood could have negative effects on the social cohesion, whereas in the framework and in paragraph 2.2 the negative relationship between urban sprawl and the changing of land-use on the community feeling came to surface.

Urban sprawl itself has thus the ability to change (rural) communities. Wu (2006) states that in some rural areas, urban sprawl took place in such a degree that communities itself had been lost and that urban sprawl intensifies economic disparities and income segregation between urban and suburban communities. This suburbanization or peri-urbanization brings urban and rural people together and therefore also brings both their problems together. Rural populations are concerned about the pressure of the urban world on the natural world while different agencies have concerns about the use and condition of rural natural resources. Shared interests in this natural environment have important social, political and economic implications, which can have an impact on the future society.

Luther (2005) concluded in his research multiple negative impacts of urban sprawl on the social and economic conditions of communities:

- Increased community costs for maintaining roads, school bus routes, sewers, and other services needed when businesses and residences are spread out.
- Ongoing increases in property taxes to meet growing need for services, which may pressure rural landowners to sell to developers.
- Increased need for automobiles; increased noise, traffic, pollution; reduced potential for bicycling and walking.
- Isolation of the young, poor, and elderly who cannot drive or lack access to cars.
- Loss of agricultural and forestry jobs, and traditional land practices.
- Reduction of rural character or community sense of place.
- Different perspectives between newcomers in a community and original inhabitants.
2.4 Conceptual model

Figure 4 shows the conceptual model that is used during the literary and empirical research of this study. In the introduction of this research the definition, causes and consequences of urban sprawl where made clear. This indicated that two consequences of urban sprawl are the change of land-use and the loss or change in community character, which are the main themes of this study. This conceptual model clearly indicates the relation between urban sprawl and these two consequences. Furthermore, in the theoretical framework the urbanization of Indonesia and Yogyakarta was highlighted to prove the occurring of urban sprawl in both country and city. After that the two important terms of land-use and community character of ‘sense of community’ where explained. And in the meanwhile it became clear that besides urban sprawl, a change in land-use also influences the community character.

During the research it becomes clear how the change in land-use and the change in sense of community is occurring in a case area within the Special Region of Yogyakarta. An important aspect in this process are the collection and analysis of the experiences of inhabitants who live in this area to give conclusions about how urban sprawl, and its consequences, is received.

![Conceptual model diagram](image)

*Figure 4: Conceptual model (Own model, 2016)*
3. Methodology

In the previous chapters the framework of this research, core concepts, and used theories have been explained. In this chapter the used methodology is described. In the first paragraph the strategy of the research is elaborated. The chosen strategies for the research are explained and the reasons why to use them is defined. In the second paragraph the form in which the data during the research is collected is elaborated. This paragraph makes clear which form of data collection is used for each part of the research. In the third paragraph the manner in which the data is analyzed is explained. Eventually this chapter closes by mentioning the reason for the choice of a specific community that is analyzed during the research.

3.1 Research Strategy

In the book of Verschuren and Doorewaard (2015), three characteristics of a research are distinguished. A research strategy needs to make a choice between a broad research or a profound research. Also a choice has to be made between the use of quantitative data or qualitative data and between conducting an empirical research or a non-empirical research. For this research a choice is made to conduct a case study.

This research is a phenomenological study with the goal to describe the ‘lived experience’ of different event, which are the change in land-use and community character caused by urban sprawl in a local community in Yogyakarta. Because of the choice of this kind of study qualitative methods are used. The usage of quantitative methods can be applicable when the goal is to show relations or causality between a cause (urban sprawl) and a consequence (change in land-use and community character). However, the limited availability of secondary data and the possible difficulties concerning language when conducting a questionnaire were decisive in the choice for the usage of qualitative methods. Moreover, the experiences of the people with these phenomena are very important.

Next, a choice was made to perform a mostly empirical study where an important aspect is to experience the phenomena about the change of land-use and community character in the city in person. It is hoped, by performing an empirical study, to understand dynamics of these communities. A part of this study consists however, of secondary data on urban sprawl and in Yogyakarta to provide a literary basis for the empirical data. This empirical study is carried out through a case study.
Lastly, this study won’t be a study with a wide view and/or wide field. A choice is made for a profound study, which is expressed in a case study. The results of this study are therefore not automatically applicable for other situations or other communities. It gives at the utmost indications for other communities. But the benefits of this profound view is that a particular situation (case study) are that this case can be described in detail and therefore provides usable information with a minimum of insecurity.

3.2 Data collection

The study consists of two parts. The first part consists of secondary data about the change in land-use in the case area. The second part of the research consists of structured interviews with inhabitants of the case area about their experiences with the change of land-use and community character.

The data in the first part of this research is thus gathered with the usage of secondary data. This part focuses on the current circumstances of the changing of land-use in the case area and the possible causes of these phenomena. This secondary data is collected in the library of the Gadjah Mada University (UGM) in Yogyakarta within the Faculty of Geography and by searching for different digital literary articles and reports. Also information has been acquired by speaking with the supervisor at UGM, Dr. R. Rachmawati.

In the second part of the study the data is collected through interviews and own observations. After having drawn the current situation of the changing of land-use by the secondary data the experiences of the inhabitants of the case area about this phenomenon and the possible change of community character are researched. Like stated, the case study itself is a single case study. The downside is that only one case is researched, whereas cases cannot be compared to one another. But by using different methods in answering the main question it is hoped to suppress those downsides.

An important part of the empirical data consists of semi-structured interviews with inhabitants of the case area. The case area itself is Pogung Lor in the Sleman Regency which is situated in the Yogyakarta Special Region. This is further explained in paragraph 3.4. The choice was made to do in-depth interviews with people on the street instead of short interviews to really understand peoples experiences with the changing of land-use and the community character. Due to some
difficulties within the process of this study, which are explained in paragraph 5.3, four interviews have been done. Because conduction more interviews was not a possibility an attempt is made to interview different persons in order to collect different experiences and perspective. four persons thus stand for different processes within Pogung Lor.

- With Boiman a 73-year-old farmer who still cultivates a piece of land in the area of Pogung Lor.
- With Lenjang Supomo a 56-year-old boarding school owner who changed his land towards a built-up area to house students.
- With Toni (37) an RT of a neighborhood in Pogung Lor; who basically is a kind of a mayor of a small neighborhood and therefore knows the people and the events, and his wife Lusi (37).
- With Widi Sutikno (in his 50s) a civil servant of the Sleman Government within the Agricultural Department who is a relative newcomer in the neighborhood with only four years of living in Pogung Lor.

Furthermore, observations are an important part of this case study. The main aim of these observations was to obtain a feeling about the dynamics in the case area. So the appearance of the area in general and its dynamics and remarkable occurrences regarding the two main themes of this study, the change in land-use and community character. The observations where conducted together with an assistant of UGM University to help with the language barrier. The observations furthermore, mostly consist of pictures, which are an important part of the results in chapter 4. These pictures give a clear view of the main aspects of this study. The observation where obtained by driving and walking in the case area as a complete observer. This appearance as a complete observer only changed when interviews where done whit people living in the case area.

These observations are done on multiple occasions and are combined with the semi-structured interviews.

- Tuesday between 10:00 and 16:00 the 5th of April
- Wednesday between 16:00 and 21:00 the 6th of April
- Friday between 12:00 and 19:00 the 8th of April
- Saturday between 09:00 and 12:00 the 9th of April

So the study consists of secondary data and interviews to define the theoretical framework, after which the focus shifts towards the case study itself, where interviews and observations are the most important form of data collection. By using this method of triangulation it is hoped to improve the credibility of the study.
3.3 Data analysis

In this study it is tried to describe the common meaning of the interviewees about their experiences with the phenomena of the change in land-use and community character. Two main questions are asked: how have you experienced the phenomena? What context have influenced your experience with this phenomena? These main questions are divided in smaller questions, see appendix 2. With these questions it is hoped to gather the data that will lead towards a textual understanding and description of the experiences people have with the phenomena and to ultimately provide understanding of the common experience of the interviewees.

To reach towards this knowledge about the experiences the data itself is thoroughly examined and significant statements and/or sentences are highlighted in order to provide an understanding of these experiences. Next, a textural description is written based on these significant statements and/or sentences. This textural description is complemented by own experiences and observations about these phenomena and the way in which they are occurring. Finally, from this textural description an analyses that are written, presents the ‘essence’ of the phenomena in the case area. This passage focuses on the common experiences of the interviewees.

3.4 Case study explanation

This case study focuses on the area of Pogung Lor which is located in the Sleman Regency. The Sleman Regency has compared to the other regencies within the Special Region of Yogyakarta, see figure 2, the strongest growth in population. In the past years it became a popular destination for people to reside. These people included both local people as (regional) migrants. This increase in population changed the land use within the regency.

The Sleman Regency, is as shown in figure 2, one of the five regencies of the Special Region of Yogyakarta. It is located in the north of the entire Region and borders Bantul Regency and Yogyakarta City in the south. The northern and eastern part of the Sleman Regency borders with the Central Java Province and the uttermost northern point borders with Mount Merapi (Gunung Merapi). The regency itself consists of 17 sub-districts, 86 villages and over a hundred hamlets. The northern part of the Regency consists mostly of dry land with un-irrigated agricultural fields, except for the fertile hill slope of Mount Merapi. The southern part of the Regency is a more fertile lowland area. The population of the Sleman Regency increased from 677,323 in 1980 to 901,377
in 2000 to almost 1.1 million in 2010. So the past 10 years alone the population increased with approximately 22% (Sleman Regency, 2005; Badan Pusat Statistik, 2011; Pradoto, 2012).

Within the last years the most important economic sector in the Sleman Regency where and still are the trade, hotel and restaurant sector (22%), followed closely by the service sector (18.8%). The rest consisted of the secondary sector, like the manufacturing industry (15%) and primary sector (13.4%). This already gives some indications about the changing of land-use, while the Sleman Regency used to be an agricultural area. According to the research of Pradoto (2012) the first three sectors are still growing, while the agricultural or the primary sector is declining.

The Regency, furthermore, demonstrates the highest growth in (urban) population and shows different kind of development patterns within the past decades, these developments patters are described in paragraph 4.2. Because of that rapid growth, socio-economic features have changed in this district, which might have influenced the community feeling. Lastly, compared to other districts the peri-urban growth the Sleman Regency showed the most rapid change and therefore could have influenced the change in land use.

So next, a choice was made to conduct the research in the neighborhood of Pogung Lor within the Sleman Regency. Pogung Lor used to be a rural area outside the grip of the city center of Yogyakarta. Later, because of the expansion of the city it was integrated in the built-up area of the urban region of Yogyakarta.

Although the neighborhood is just situated in the Sleman Regency it borders with Yogyakarta city and is thus not far from the city center. As seen in figure 6 it is located on the ring road of Yogyakarta City and borders with UGM. In conversations with dr. Rachmawati a choice is made to conduct the research in this specific area because of her knowledge about the impacts of urban sprawl in the area and because of importance of this university campus for the development of Pogung Lor. In this case the samples were taken in the direct neighborhood of the university campus.
Figure 5, shows the university campus, located in the south of the picture. Figure 6 shows the location of Pogung Lor in almost the entire Yogyakarta region. The neighborhood remains inside the ring road around Yogyakarta and directly borders the University campus.

Figure 6: The location of the neighborhood Pogung Lor within the Special Region of Yogyakarta (Google Maps, 2016).
4. Results and analyses

So at last after all the theoretical information which was needed to build a strong foundation for the eventually analyses of the empirical data and to create understanding of different subjects and terms we’ve come to the results of the study itself. An attempt is made to write the results in such a way that it reads like a good story. This story is moreover completed by own pictures and observations to really dive in this Indonesian case and to give understanding about the perspectives of the people living in Pogung Lor.

This chapter starts with a literary review about the causes of the changing land-use in the Sleman Regency and Pogung Lor. These causes are corresponding with the causes, stated in section 2.2.1. In the second paragraph the development pattern of the Regency is explained. Multiple remarkable and important events for the development of this Regency are illustrated. Also the neighborhood of Pogung Lor becomes more important in this paragraph. A clear image about the land-use change is given in this section. In the third paragraph the experiences of the change in land-use by the inhabitants of Pogung Lor are elaborated. In the last paragraph the same is done but this time about the community character. In the end a clear conclusion can be given about the occurring and experiences of both the change in land-use as the change in community character.

4.1 Land-use change

To provide a good understanding of the experiences people in Pogung Lor have with the change of land-use it is important to prove whether land-use change in this neighborhood actually exists. The theoretical framework of chapter 2 showed different aspects or happenings that could cause the change of land-use. Different causes for instance where: the changing demographics in a neighborhood, the change of demands in goods, a change in lifestyle of its inhabitants, an increase in income, socio-cultural changes in the community etc. In this first paragraph the demographic changes of the Sleman Regency are elaborated. Pradoto (2012) also concluded that an important reason of the change of land-use was the changing demographics of a certain region. It was believed that because of demographic changes in a neighborhood of Regency, these named causes can come to exist. In advance the land-use of the neighborhood is likely to change. It is already stated that the Sleman Regency experienced the highest growth rate of all the Regencies in the Special Region of Yogyakarta and it is therefore plausible that in this region the effects on the land-use could be affected. Therefore, we start by elaborating the urban growth of the Sleman
Regency and its main causes. In advance, the experiences of the people living inside a community, Pogung Lor, further explains the main causes of the change of land-use.

### 4.1.1 Demographic changes in the Sleman Regency

In his research about the role of urban area as the determinant factor of population growth in the Yogyakarta Special Region Giyarsih (2013) distinguished three factors which played a role in the population growth: natality, mortality and migration. Natality and mortality are categorized as the natural factors which influences the changes in population. Migration is a non-natural factor of the changing population and consists of in-migration and out-migration. Other non-natural causes might include war, diseases, natural disasters etc. In practice a growth in population is often occurring because of natality and in-migration (Giyarsih, 2013; Mantra, 2003).

In this paragraph the main aim lies on the in-migration of the Sleman Regency. Pradoto (2012) as well as Giyarsih (2013) and Mantra (2003) states that migration has become the main factor for increasing and accumulation of population. It is also more likely to change the character of a community then the process of natality and mortality. To shortly appoint them anyway Giyarsih (2013) concluded that the natality had a positive influence on the growing of the population, however this positive contribution has dropped from an average of 4.4 children per mother in 1980 to 2.74 children per mother in 2010 (Bureau of Statistics (BPS) Yogyakarta Special Region, 2010). This is caused by a higher age for marriage, higher education and a higher socialization of the family planning program. Mortality has a negative impact on the growth of population and statistics of the BPS (2010) showed that the mortality rate decreased because of the advancement of health facilities. Furthermore, the Infant mortality rate (IMR) which measures the number of infant death compared to a 1000 life birth, is also strongly decreasing from approximately 210 in 1970 to 30 in 2010.

Like stated before, the population of the Sleman Regency has strongly increased and is still growing. And according to different studies migration is one of, as not the, the most important causes of this population growth. This migration plays a vital role in the urban growth in total and the peri-urbanization of Yogyakarta. The past year Yogyakarta has been characterized by a strong growth in the peripheral area and the increasing movements of people from the center towards the periphery which also increased the flows of information, goods and capital.
In his research towards peri-urban growth of Yogyakarta Pradoto (2012) found differences in the choices people had to migrate towards the Sleman Regency and not towards another Regency surrounding Yogyakarta City. These choices are mostly based on geographical and socioeconomic characteristics of that certain area. These motives could in advance cause macro-level causes of the change of land-use as discussed in section 2.2.1 such as the change in demand or a change in lifestyle. These different motivations, stated by Giyarsih (2013) and Pradoto (2012) to migrate, permanently or temporarily, towards the Sleman Regency are:

a. Seeking better living conditions / living quality
People migrate towards the Sleman Regency, especially in the region of the ring road, because of the better living qualities. These people are often from the middleclass and motivations for moving towards these areas are the green space, relativity cool climate, less traffic and better quality of water. Of all these people, 35% migrated from Yogyakarta City, 23% migrated from other regions within the Special Region of Yogyakarta and the dominant portion, 42% originates from Java or outside Java.

b. Opportunity to establish or engage in small industry
As stated at point 4, the agglomeration of (small) industries in several parts of the peri-urban area of Yogyakarta City, attracts new settlement. In this section in the Sleman Regency approximately 64% of these migrants originates from the Special Region of Yogyakarta. Interesting thing is that almost all those 64% from the Special Region were young families whose parents were engaged in agricultural activities. They obtained the land from their parents and changed the use of land towards an enterprise or industry.

c. Looking for cheaper land for housing
There are parts of Sleman were the prices of land has increased dramatically. In these high-end districts the well fortuned people settle. Sleman however, still as some areas were the prices of the land are still reasonable. Because Sleman has several advantages it attracts the lower-middle income group. These, mostly younger people, whose income is not that high or have workplace close to these areas or in these areas tend to buy a plot there.

d. Undertaking further study
One of the main identities of the City of Yogyakarta are its universities, with the most famous one UGM. It is the largest student city in Indonesia and is therefore known as a city of education.
In total there are 4 state Universities and 115 private universities and higher education institutions spread across the Special Region of Yogyakarta. This is the most important factor of all the in-migration flowing from regions all over Indonesia. Most of the private institutions are located in the Sleman Regency.

e. Means of property investment

Another major identity of the city of Yogyakarta are its different cultures and its tourism. Also the image of Yogyakarta as a quiet city/resort, especially in comparison to other major Indonesian cities like Jakarta or Bandung, makes that a lot of people are interested in buying a home there. From own observations it can be concluded that the city life of Yogyakarta indeed is more quiet then that of Jakarta and Bandung. The people who are buying houses do that with the intention to have a house for their retirement. Others buy a house that eventually will be used by their children if they study at one of the universities. Besides using it for family or for their own a lot of people think that property is very profitable, especially in Yogyakarta. This can be seen from the tendency of land and housing prices which rise dramatically compared to the prices in other big Indonesian cities. Due to many new residential areas developed by private realtors the interest of people to buy property in Yogyakarta is growing. They are convinced that the relatively high prices (for example in Sleman) reflect the high value of investment.
4.1.2 Development patterns in the Sleman Regency

The patterns of land occupancy, partly caused by migration and its different motivations, reconfigure the spatial structure. In this paragraph the transforming spatial structure is visualized by showing three maps about the land-use change from 1987, 1997 and 2007. This paragraph gives a clear image on how the land-use in the Sleman Regency and in Pogung Lor is changing.

1987 is often used as a reference point in the beginning of the development of the Sleman Regency (Pradoto, 2012). It was in this year that the construction of the ring road around Yogyakarta finished. This ring road fosters the development of the peri-urban area around Yogyakarta City. And this can be justified by taking a closer look at the maps. The map of land-use in 1987, see figure 7, obviously shows that the majority of the built-up area remains in the inner area of the ring road, excluded the Gadjah Mada University. The light green and green areas respectively resemble paddy fields and irrigated paddy fields. The orange areas resemble settlement area or built-up area. To already take a closer look towards the case study area. Pogung Lor, at this stage, mostly consists of green area which indicates the neighborhood is still mostly a rural community. At this time, it was probably the native inhabitants who still lived in these areas. Pogung Lor is situated within the dark and blue lines. The blue line resembles Jalan Kaliurang an important street in the development of the neighborhood.
After the ring road opened in 1987 gradual development of the fringe areas began. The pattern of growth between 1987 and 1997 is visualized in figure 8. According to Pradoto (2012) this especially happened in the neighborhoods located along the ring road or other important roads. Also the presence of UGM acted as an important factor in the changing of cultivated land. In comparison to figure 8, later on: figure 9 sees a further development of the built-up area in the peri-urban region of Yogyakarta City.

The change in land-use in the area of Pogung Lor is a remarkable one. Where the area in 1987 consisted of mostly green areas, which represent paddy fields, the neighborhood in 1997 already mostly consists of orange areas, which represents built-up areas. This indicates an already starting change in the land-use towards settlement areas.
The growth and development period of 1997 and 2007 of the Sleman Regency was mostly marked by the occupation of rural areas. The new middle and upper middle income groups were targeted by the development of new residential areas which gradually displaced the rural areas. Developers established new exclusive housing estates and in this process gradually purchased directly from the land owner/local farmer or from the persons who initially purchased and occupied the land. These estates range between 10 and 20 hectares (Pradoto, 2012). For the Sleman Regency in general this is the period in which most cultivated land was converted, see figure 9.

In this period of time it was made clear that a lot of local farmers who hold land in these regions of the Sleman Regency sold their land to investors or land speculators. This also instigated the period of the land speculation activities. This decade is also remarkable because large-scale developments vanished in this area and a pattern arose of in-between development in small areas (Pradoto, 2012).
So since the 1990’s a large area of cultivated land has been converted into settlement areas. An example of a farmer who sold his land is Sumanto. He is a farmer in the neighborhood of Jalan Kaliurang who cultivates his own paddy fields. He inherited four parcels from his father and has sold two of these parcels to investors from Semarang, Central Java in 1996. The money he gained from selling his parcels he used by setting up a laundry business and a phone shop by buying new properties around Jalan Kaliurang. In an interview with W. Pradoto he stated:

“Since 1995, there are many paddy fields lands that have been sold to the buyers. The buyers who come from the city of Yogyakarta usually purchase small-sized plots, mostly 1-2 parcels. The buyers from outside Yogyakarta, especially those who plan to establish a residential estate project, purchases bigger plots. There were investors from Magelang, Central Java who purchased 20 parcels or 5 hectares from several local farmers (Sumanto, 2009)”

Like stated, farmers like Sumanto sold their land to investors. A private investor, Jutata, who is a developer of medium scale housing projects in the Kaliurang region states:

“Yogyakarta is one of the destinations for the wealthy people in Indonesia to buy a second or third family house. The buyers are attracted by the potential for tourism and the Javanese cultural identity that still relatively is well-preserved in Yogyakarta. Large scale demonstrations in Jakarta during the fall of Suharto’s regime convinced the people of Jakarta that it was not an ideal city for living because of the unstable political circumstances. They want to reside in Yogyakarta when they retire. The region in Kaliurang is attractive for them as the consumers look for housing with a more natural landscape” (Jutata, 2009).

Another developer who creates small-scale residential areas for low and medium income groups said:

“The people who move to this area mostly work in the neighboring areas or they are looking for a new settlement in their price-range. The availability of infrastructure like the access to roads and telecommunication lines makes the people, predominantly from Yogyakarta, move here (Kaliurang area). The public infrastructure that every day becomes more complete attracts more migrants to come here” (Herwaskito, 2009).
As mentioned, a good example of the expansion and development of the city of Yogyakarta is Jalan Kaliurang, see picture 1. This road or jalan is the road connecting UGM with the ring road around Yogyakarta and lies directly next to the neighborhood of Pogung Lor. It can be seen as a landmark which visualizes the development of the built-up area around Pogung Lor. The road became increasingly important for students who migrated to these areas because of the nearby university of UGM. In the years passing the road developed different industries like shops, hotels and restaurants, thus became a lively, busy and vital road in the region, replacing the old activities alongside the road in its process. Picture 1 shows the current street life along Jalan Kaliurang which is determined by traffic, billboards and different kind of enterprises.

Figure 9: Map of land use in peri-urban area around Yogyakarta City in 2007 (Pradoto, 2012).
So in this time period from 1987 to 2007 the built-up area of Pogung Lor keeps getting bigger and bigger, replacing the old functions, like paddy fields, in its path. The figures clearly show an increasing amount of settlement area and a decrease in these paddy fields. So the trend of the change of land-use continued until 2007 and probably still is continuing. It is likely that these changes affect the dynamics of this neighborhood. Original inhabitants can be pushed away because of the increasing private developers who buy their land whereby new inhabitants migrate towards the neighborhood. It is even possible that these new migrants use the house as their second or third house or for their children when they go to college. In this case these people won’t be home a lot what may cause situations like ghost towns. What exactly the experiences of inhabitants in Pogung Lor are, is elaborated next.

4.1.3 Experiences of land-use change

Up on this point we have elaborated the causes and consequences of the change of land-use in the theoretical framework in paragraph 2.2. We concluded that there were several important causes which are summarized in table 3. After this theoretical approach the attention shifted towards the current situation of land-use change in the Sleman Regency and Pogung Lor in the previous paragraphs. First the demographic changes and its causes were elaborated to show why
people want to migrate towards this region, therefore explaining its urban growth. In the previous paragraph the change of land-use was visualized in the Sleman Regency and Pogung Lor. This gave clear indications about the change from rural land (paddy fields) to urban built-up areas. Especially the neighborhood of Pogung Lor almost completely transformed to urban land. In this paragraph already some causes about this change where named such as: the completion of the ring road around the city of Yogyakarta, the interest of private investors to create new settlements for different kind of income groups, the interest of people to migrate to these greener and natural place and the urge of people to buy a second of third home for their retirement or for their own kids when they should go to the university.

In this paragraph the experiences of inhabitants of Pogung Lor are displayed. In chapter 3, the interviewees have been shortly named. The outcomes indicate whether there are similarities or differences between the causes and consequences, named in paragraph 2.1 and the experiences of these interviewees. These experiences are completed with own material in the form of own observations and photographs. Summaries of these interviews can be found in appendix 2 together with the interview guide in appendix 1.

We start this experience with Boiman (see appendix 3.1). Boiman is a 73-year-old Indonesian man who is at this moment a retired gardener. His origins are not in the neighborhood of Pogung Lor but in Pogungrejo (an area next to Pogung Lor) but he comes here all his life, so he says. His direct connection to Pogung Lor is that he cleans unused areas or gardens in the neighborhood and still holds a piece of land of his own. Because of his age he knows a lot of the neighborhood and can without effort name what has changed in the last past decades. Picture 2 shows Boiman sitting in front of one of the gardens he cleans and cultivates.

On the questions: whether the land-use has changed in this neighborhood, he answers relatively short that it changed from paddy fields to settlement area. He furthermore points out that this is actually is the decision of the municipality who has a policy to change unused or unproductive paddy fields into settlement areas. This settlement area, is according to Boiman mostly converted into living space for college students. A lot of developers’ construct boarding houses for these students. He concludes by saying that the original kampongs have changes into a more urban form of living. Picture 2 of Boiman also slightly shows that his small piece of land already is surrounded by buildings. For how long this piece of land will remain a paddy field is unsure but
Boiman believes that I will not take a long time before the remaining paddy files will convert into urban lands as well.

So Boiman indicates that a lot of the new built-up area is converted into boarding houses for students. The next interviewee (appendix 3.2) was Lenjang Supomo, a 56-year-old landlord with his own boarding house in Pogung Lor. Lenjang is a native from Pogung Lor just like his family was before him. His dad used to have multiple paddy fields within this neighborhood and eventually Lenjang inherited those fields when his father was not able to cultivate those lands anymore. Instead of further cultivating those lands he decided to sell them and built a boarding house on one of the pieces he kept for his own.

He told us a similar story as Boiman: since 1983 a rapid change occurred within Pogung Lor when electricity became available in this area. The first boarding houses that were built in 1976 still used petromax (oil lamp). When electricity became available and UGM started to grow many native people saw an opportunity to build boarding houses for students and thus abandoning their current land-use of paddy fields. He states that the economic situation of the people bettered because many inhabitants, like him, sold almost all their lands and created a boarding house on the parcel they kept. This sold land became in the hands of private investors. He furthermore states that he
has no problems with the change of land-use in his neighborhood. But later he states that he sometimes wishes the old times could come back but he also realizes this isn't going to happen. He knows that a lot of other landowners had sold their land because of the increasing land prices. They saw a perfect opportunity to earn a good price if they sold their land to private investors. Picture 3 shows one of the many boarding houses located in Pogung Lor. An interesting fact about those boarding houses is that they are mostly cut off from the rest of the neighborhood and therefore creating small gated communities. The transition from paddy fields with their farmers and a gated community of students is obviously a major change within the dynamics of the community as a whole.

Next stop was Toni a 37-year-old inhabitant of Pogung Lor and RT of area 06/RW46 and his wife Lusi (appendix 3.3). Basically a neighborhood like Pogung Lor consists of several quarters. It starts with the Municipality → Kecamatan (districts) → Dukuh (village) → neighborhood (RT) → community (RW). So beneath the official heads of districts and villages are the non-official RT’s (Rukun Tetangga), heads of a neighborhood and the RT’s (Rukun Warga), heads of a quarter within the neighborhood. They all have appointed blocks within the neighborhood. And in this case Toni is the head of a neighborhood, numbered as 06 in Pogung Lor. On the houses of RT’s and
RW’s are small plates on which is stated that an RT or RW lives there and which quarter he is the head of. These RT’s and RW’s don’t have any political powers. They are however very important for the community, which is further explained in paragraph 4.2.

Toni acknowledges that the land-use is indeed changing and in some cases he finds that this is not the ideal situation. He states that the rice fields, which are still present in Pogung Lor, should remain its current function. He already sees problems of flooding in the built-up areas in Pogung Lor and thinks this gets worse when the rice fields, which are capable of absorbing water vanishes. Picture 4 shows a rice field in Pogung Lor which, in time, became isolated between built-up areas. This field is, as the picture shows capable of carrying water. He also finds the disappearance of green in the neighborhood a negative aspect of the increase in urban land. On the contrary he knows that the lots of people migrate to his neighborhood which means there is a higher demand for services. The native inhabitants can provide those services (like the boarding houses) and therefore have the opportunity to increase their income. Services include the boarding houses, warungs, laundries etc. At last he thinks a negative aspect is that some newcomers who buy houses which are constructed by developers, who bought these parcels from the natives, are sometimes not around. They use it as a house for later, for their children when they go to college or use it as an investment and want to sell it when the worth of it get higher.
The last interviewee (appendix 3.4) goes by the name of Widi Sutikno, a male in his fifties and only a four-year resident of Pogung Lor. Previous interviewees where either living in Pogung Lor a long time of where very familiar with it. Widi isn't that long an inhabitant of the neighborhood. So he might have different experiences than the previous interviewees. Widi himself is a civil servant of the Sleman Government working at the department of Agriculture.

Most of all, he sees Pogung Lor as a support area for different institutions. Not only UGM but also other universities in the Special Region of Yogyakarta, the Sardjito Hospital and offices in Sleman. They are, together with the ring road also causes of the development of Pogung Lor. Reasons for people to migrate to Pogung Lor also consist of the fact that it is a save and green area and thus is a nice place to live.

He knows that the changing of land-use started around 1980. He also knows that at the place where not his house is located there used to be a paddy field, a Melati (flower field) and a small cow farm. He also thinks that this change is going fast and that in no-time all the remaining paddy fields will vanish. He states that the neighborhood is changing from an agricultural society to an urban society. First there where normal houses with a small farm or paddy field but gradually more and more houses started to emerge, including the rise of boarding houses. Most of these newcomers came from Borneo. Picture 5 shows one of the remaining paddy fields in the near the house of Widi.

This increase in built-up area resulted in a positive economic flow for the native people because they could change their production towards the demand of all these newcomers (like boarding houses and warungs). He also notes a problem in the water conservation of the neighborhood. Furthermore, he states that Pogung Lor is at this moment a catchment area for Yogyakarta City. When the built-up area will increase even more he fears that this catchment will lose his function in Pogung Lor.
4.1.4 Analysis

After defining the demographic changes in Pogung Lor, the reason for migrants to move to this neighborhood, the change of land-use and the experiences people have with this change a few interesting facts rise to surface.

In paragraph 2.1 it became clear what different causes where for the changing of land-use. Reading the results of the interviews with four inhabitants of Pogung Lor it becomes clear that there are a couple major reasons the interviewees told that are also named in paragraph 2.1. First the location specific characteristics of the neighborhood got an upgrade by the completion of the ring road around Yogyakarta City. This caused a better access towards the neighborhood and researchers, section 4.1.2 mostly stated the completion of the ring road was the beginning of new development in this area.

The completion of the ring road led to multiple different changes in the neighborhood. Probably the most important is the coming of students in Pogung Lor. All of the interviewees conclude that the land-use changed because land-owners sold their parcels when the prices of land began to rise. The land they kept for themselves or the land they sold to investors mostly where eventually transformed into boarding houses to accommodate the huge flow of students. This isn’t strange
while the big university of UGM is situated next to Pogung Lor, whereby most of the native inhabitants saw a new opportunity to create in income. One cause of the change of land-use is the that neighboring parcels influences each other and that’s exactly what happened here. First there where the pioneers who saw a new business model and not much later other paddy field owners in Pogung Lor followed this example and converted their land into boarding houses or other small business. When driving through Pogung Lor it is obvious this happened on a large scale because boarding houses dominate the street image of many roads in this neighborhood. It tells that apparently many natives either sold their land, didn’t want to work on paddy fields anymore or saw that having a boarding house was a more lucrative business. So apparently the natives, like Lenjang, where willing to convert their land, inherited by their parents, to boarding houses. So in this case also the socio-cultural characteristics of the land-owners and families in Pogung Lor changed. Their status, values and personal preferences changed from generations of agriculture to a new form of living. Also their places of living changed by the transformation of agriculture to boarding houses by the pioneers.

So in the case of Pogung Lor it where the migrants who changed the demand for housing. It where the migrations who created this demand and the native people saw an opportunity and took it. This increase in migrants and, above all students created a demand for more goods like warungs and laundries. The native inhabitants also saw this development and opened different kinds of new businesses in order to meet this new demands. So basically the most important aspects are the students who undertake further study, the opportunity to establish or engage in small industry and the means of property investment (section 4.1.1).

The students see Pogung Lor as a good neighborhood for them to live temporarily, the native in return see an opportunity to construct boarding schools or to sell their land because of the increase in land prices and in advance these inhabitants see opportunities for the opening of new business in order to meet the new demand. That probably is the most important reason for the change in land-use in Pogung Lor.

So in some extent this corresponds with the causes of land-use change, named in section 2.2.1. in the first place it where micro-level causes changed which influenced local people to either change their land-use or sell their land. Because of the change of location specific characteristics (ring road), the willingness to change their land-use, the change in socio-cultural characteristics of the land-owners themselves and the previous change in demand in the form of boarding houses...
changed the characteristics of Pogung Lor. In advance the macro-level factors caused a further change in land-use because of the growing demand for other goods by new comers and students, the change in lifestyle and consumption trends in the neighborhood and the rise in income of native people.

So after concluding what the causes in Pogung Lor where to start the process of land-use change the second question is what the experiences of people where on this process. But first let's look back on what literature stated about the change in land-use. The framework in chapter 1 made clear that the change in land-use was one of the consequences of urban sprawl. This literature mostly spoke about urban sprawl as a bad process of uncontrolled, unplanned and unwanted urban expansion of the city which brought more negative aspects to these regions than positive. So the change of land-use was also seen as a mostly unwanted process, especially for the people who lived in neighborhoods where urban sprawl was taking place. This was echoed by the literature about the consequences of the change in land-use. Most of these consequences, table 3 in paragraph 2.2.2, had a negative character like the affects it had on local neighborhoods, the reduction of open space and greenery, the intensification of segregation and income inequality and the loss of community character. This loss of community character is elaborated in the next paragraph. Briassoulis (2009b) however stated that the change in land-use caused population changes, social and cultural change occurs, education, job and life opportunities and living conditions changes. Whether this is socially beneficial for a neighborhood depends on the mode of urban development.

This last statement seems exactly what happened in Pogung Lor. The interviewees where not directly negative on the change in land-use. They saw some bad sides of it, such as the loss of greenery, the individualization of people in the neighborhood and an increase in egocentric behavior, the increasing risk of flooding and the loss of native people in the neighborhood but they most of all saw opportunities. They for example note the increase in demand for other goods and the rise in income of the native people. They saw that the growth and development of Pogung Lor, especially after the completion of the ring road was inevitable. After realizing this, the native people did a good job in adapting to these new situations and most of them made a living out of this. So in this case the most people are pretty content about the new situations. The neighborhood itself is still a quiet, easy and safe neighborhood and through own observations it still seemed to be a great place to live if you compared this towards the busy city life in Yogyakarta itself. So apparently the urban sprawl didn’t cause a lot of negativities in this neighborhood when looking at the change.
in land-use. The changes where, as seen in the maps in section 4.1.2, pretty intense from rural to urban but the native people dealt with it in such a way that they made it into a positive development. Also when talking to these people it could be noticed they didn’t really have any hard objections about this development and are just going with the flow.

So when the urban sprawl took place in an uncontrolled and probably unplanned way the natives of Pogung Lor noticed this in time, therefore making sure they could deal in a good way with this urban development. They changed many paddy fields into boarding houses to accommodate the flow of students and they pretty much ‘controlled’ the newcomers in the neighborhood who either bought a parcel or bought a house constructed by developers. Newcomers who only buy houses as in investment or with the intentions to use this house later are however still a problem. But the newcomers who did come to live in their houses didn’t cause any real problems, tensions or conflicts, which is further explained in the next paragraph. Thus, although some interviewees highlight they miss the old days and the greenery in the neighborhood they do also acknowledge the positive progressions Pogung Lor has made since the beginning of the process of urban sprawl.
4.2 Sense of community

In chapter 1 it became clear that the change of community character was one of the consequences of urban sprawl. Chapter 2, in advance gave a further explanation of the effects of urban sprawl on the change in community character. Because of the increasing flow of new people into a neighborhood the dynamics are able to change. Also the change in land-use could affect the character of the community where the old functions of the neighborhood disappear and make way for new functions. In the previous chapter it became clear that in Pogung Lor itself there are multiple reasons why land-use is changing. Reasons given by the interviewees included: the presence of different institutions like universities, the improvement of infrastructure (ring road), the progression of technology (electricity) and the attractiveness of the area which attracts people to live in Pogung Lor.

Next to some positive remarks like the improvement of the economic situation of the native inhabitants of Pogung Lor they also shortly noticed some downsides of these developments like: the disappearance of green, the problems with water management, the disappearance of the old kampongs and the vanishing of the old agricultural community. Where they all agree on is that the people living in Pogung Lor have hugely changed. The question now rises whether this change has influence on the community feeling in Pogung Lor. In this paragraph the answer to that question is elaborated.

In this paragraph the experiences the inhabitants of Pogung Lor have with the changing of the community are begin compared towards the theory, elaborated in paragraph 2.3. In this paragraph four factors were given (influence, membership, integration and emotional connection) which a community should have in order to function, also the subject of ‘social fragmentation’ was mentioned. This process of fragmentation can in time affect the social cohesion of a neighborhood, therefore threatening the ‘sense of community’. As last consequences of urban sprawl on the change in community character where given (see section 2.3.1). Appendix 2 shows the questions which were asked about the change in community character.

We start again with our gardener Boiman. As a 73-year-old man he should be able to have detected changes in the local community. He firstly states that the neighborhood of Pogung Lor is not swallowed by the extending city of Yogyakarta but have kept its own identity. Furthermore, he argues that each block (8 blocks in total) in the Pogung Lor neighborhood has its own community and where able to keep these communities relatively intact. These blocks blend in together
whereby a strong community can exist. In these communities the traditions from the native inhabitants endured. He gives an example about the tradition when someone dies that the entire neighborhood will still come and visit the family.

When asked about the new people moving into Pogung Lor he is convinced that these new people should act the way the native people already do. Moreover, they should participate in events that are happening around the sector. For instance, if there is a wedding they should come. This is the way to make connections with other people and therefore create a better community. For the students who life in boarding houses the participation differs per student. Overall, he concludes that the reception of new people in the neighborhood by the natives are good, that it doesn’t cause any real problems and that the solidarity among community members doesn’t change.

Furthermore, he states that Pogung Lor is quite enough and it shouldn’t grow anymore. This can be confirmed due to own observations through the neighborhood. The small, green streets cause a quiet, peaceful environment without a lot of traffic. Picture 6 shows a road in Pogung Lor around 5 PM in the afternoon. Children are getting entertained by a monkey and enjoy playing outside in a quiet environment. This is characteristic for the peaceful environment of most streets in the neighborhood.

Boiman, however notes that he misses a center or special place for community to use. Despite the lack of such a center there are multiple meetings with the RT, there are still a lot of community works which are carried out and there are meetings for women called the PKK, which are all beneficial for the community.
Lenjang has a slightly different opinion about the change of the community. He does however agree with Boiman about the reception of newcomers in the neighborhood. He states that they blend in nicely and doesn’t create any real problems. He acknowledges that the community is changing but that it is inevitable. He argues that people become too busy and will get busier and busier. They don’t have the time anymore to commit themselves to do community work. Also because of the current lack of open and public spaces the amount of community work decreases.

Because of this he argued that the strength of the community is decreasing but that this also is inevitable. This is because more and more people migrate to Pogung Lor and native people migrate to somewhere else. The remaining native people are few in number and individuality is starting to show. He wants it to return to the past but he knows that this is not going to happen. For now, he wants the area to become nicer, cleaner and to accommodate more students. He does however acknowledge that the solidarity among community members is still good but that he feels that it is decreasing. Life on the streets itself remains also good, as indicated by picture 7, which shows a primary school in the neighborhood.
About the functioning of the community he states that there are some meetings each month with the RT and RW’s. These meetings are organized to collect the ideas and opinions about different subjects of people living in the neighborhood.

Toni and his wife Lusi also agree that traditions and habits in Pogung Lor and in their own quarter are changing. However, they won’t necessarily say that this is all caused by new people moving to Pogung Lor. They state that because of increasing knowledge of people their habits start to change. They get more understanding of their religion and tend to dismiss some, possibly, bad traditions. They agree that the knowledge of new people blend in properly with the knowledge of the natives and that they share and take over each other’s thoughts.

They argue that there are several types of newcomers; the one who can blend in with the local people (whom are well received) and the ones who have trouble to blend in (the locals in most cases just leave them alone). The people who can blend in mostly attend community meetings and other activities. With the people who doesn’t blend in or have trouble to blend in are, however no significant problems. The solidarity of the neighborhood therefore hasn’t changed that much and is still very good. They give an example about when someone in the neighborhood gets sick,
the people go visit him or her together. The same goes when someone dies. They hope that this solidarity will remain the coming years with or without the new people.

They furthermore state that the municipality gave them (the community) some money for the improvement of the neighborhood (such as local roads, irrigation, buildings etc.). The community decide where to spend that money on and so, together, they can improve their neighborhood. He is also content with the system of RT’s and RW’s. It gives them freedom on where to spend the money on.

Picture 8: A regular, small street in the Pogung Lor neighborhood with a warung on the right and the features of a laundry in the bottom right corner (Fieldwork data, 2016).
Widi, the civil servant for the Agricultural Department of the Sleman Regency, states that the social system had become more egocentric. This significantly have changed the daily life of members of the community. He argues that this is occurring because people get busier and busier. He names his neighbor who is a doctor. Because that man is so busy with his work he doesn’t come outside very often. He notes that the community feeling is still there but that its changing. Whether this is for the good or for the worse he doesn’t know, because he believes that this change is inevitable and that society and culture will change with it. He hopes however, that the community stays the way it is, he knows that progression is always occurring but he hopes that the structures within the community will remain more or less the same.

About the newcomers in the neighborhood he states that these new people blend in very good and that most of them are willing to do community work. By doing that they create forms of communication and are able to connect with other community members. About the students that live in the boarding houses in Pogung Lor Widi states that most of them don’t have the intention of blending in with the local community. They are too busy with their college and with their own life. He doesn’t however believe that this is really a problem because the people in Pogung Lor understand their situation. They live temporarily in Pogung Lor and create their own communities of students. Questions however rise about when it will become a problem? How many students can Pogung Lor take before the students get the upper hand? About that Widi believes that each community has their own social lives. So the community of the inhabitants of Pogung Lor and the community of the students. He doesn’t think there will be problems because when the community of the inhabitants of Pogung Lor has a problem with a student in any way they can speak to his or her landlord.

Communication in the community takes place through community meetings with the RT’s and RW. He furthermore states that there are some restricting spatial plans for Pogung Lor. For example, new buildings are not allowed to be higher than 10 floors. There is also an environmental assessment and traffic regulations for the development of the area to prevent traffic jams and increasing negative impacts on the environment. Inhabitants did have a say in this plans because a representative of the community was able to speak on behalf of its members.
4.2.1 Analysis

So based on the reaction of the interviewees it can be stated that the structures of the community are indeed changing. This mostly occurs due to flow of newcomers and the therefore changes in land-use. Compared to the consequences named in section 2.3.1, summarized in the table, it can be analyzed that the most important consequences for the changing within the community are the loss of agriculture and reduction of rural character and the therefore change of the neighborhood in an urban region. Also the differences in perspectives of the newcomers and the natives is an important aspect.

But is the community of Pogung Lor really that changed because of the effects of urban sprawl and the change in land-use to a more urban function? Boiman stated that the traditions of the native people endured so far, but the other interviewees agreed that change indeed have happened in Pogung Lor. But this wouldn't necessarily mean that this is a bad happening or process. They for instance, all agree that newcomers are well received in the neighborhood and that most of them blend in with the natives and participate in the same activities. For people who don’t participate, like the students the native people have understanding. These students create their own communities and so far there haven't been real incidents concerning newcomers in Pogung Lor. Solidarity among community members is still good according to both Lenjang and Toni. They however, also see some negative sides of these changes.

For instance, the process of individualization is starting to show among community members together with a more egocentric view of some. Also the decline of native people in the neighborhood is a process that other natives are beginning to notice. Furthermore, because of the progress the native people make in their own lives, such as better education and a higher income, the interest in the traditions of the community is decreasing. According to Widi everyone also gets busier and busier and this affects the contact and communication between community members as he explained in his example about his own neighbor. Toni also proclaims the pressing matter of investors buying a home in Pogung Lor in order to not live in the house they bought and thus leaving it empty. This doesn’t increase the community feeling and in advance more and more houses are becoming uninhabited. So there are certainly processes and events that have a negative effect on the community.

- Increasing community costs for maintenance;
- Increase in property taxes;
- Increased traffic;
- Isolation of young, poor and elderly;
- Loss of agriculture and jobs;
- Difference in perspectives natives and newcomers;
- Reduction of rural character and sense of place.
The students are a very important aspect in this development. They were one of the main instigators of the change in land-use as explained in the previous paragraph. The interviewees, although proclaiming they don’t have issues or problems with the students, state that most of them rarely participate in local events and also don’t really contribute towards a better community. This isn’t strange a strange fact, while the plurality of these students only temporarily live in Pogung Lor. Furthermore, the interviewees state that real incidents between students and the inhabitants of Pogung Lor are not occurring. Paragraph 2.3 however described the term of ‘social fragmentation’ and this is exactly what the students are causing. They create a community of their own, what in principle isn’t something bad, which is supported by Widi. These students however live in boarding houses and some of these boarding houses are similar in appearance as gated communities, as seen in picture 3. So for now this doesn’t cause any real problems but the question is; when does it? How much students do there need to migrate to Pogung Lor and how many new (gated) boarding houses need to be built before this fragmentation of inhabitants of Pogung Lor and the students does become a problem for both groups. When does the time come that there will be more students living in Pogung Lor than actual inhabitants? The communication between these groups at the moment isn’t bad or tense but there really isn’t that much communication. If there is any communication the landlord functions as an intermediary between those two groups, as stated by Widi. So maybe it is a matter of time before this fragmentation of these two groups does begin to create tensions in the neighborhood.

But as also stated above and affirmed by the interviewees the solidarity and sense of community is to this date still good in Pogung Lor. A question then rises; why is this still good? The coming of all these students and migrants to this neighborhood and the change into an urban area could have caused tensions and a loss of community character years ago, while the development of Pogung Lor started in 1984. So the community must have done something good in order to preserve its own values and traditions and to keep the spirit of the community intact. Moreover, urban sprawl talks, just like the change in land-use, about the negativity of the change in community character. And although some interviewees want to go back to the old days they don’t really seem to have that much problems with the development of the neighborhood. A possible reason is the economic progression the natives make because of the newcomers. In this scenario a tension point or breakeven point between the economic progression and social regression (if there is any) must be found. On this moment it is likely to think that the natives don’t see too much of a social regression and give more value towards the economic progression they themselves
make. But when does the time come when they do see the downsides of the social regression and really want to return Pogung Lor to the way it was?

Another reason for this relative positive views about the current community character is the way in which the urban sprawl is occurring in Pogung Lor. Urban sprawl, in some literature, sounds as a spreading stain of oil; which means that everywhere this process is occurring in the same way, as an unwanted process in which local people are displaced or communities entirely change. And although the community did change it didn’t happen as rigorous as might expected. Based on own observations and interviews it became clear that integration of the newcomers happened much more gradually. A possible reason for this was the already strong community feeling of Pogung Lor to begin with. The meetings with the RT’s and RW’s and other meetings within the community might have played an important part in this process. Moreover, the layout (as an old Kampong) of Pogung Lor itself might have been a decisive factor. As seen in the pictures and based on own observations Pogung Lor still is a quiet and green neighborhood. For new people who come to live in this area it would have been an easier environment to make contact with neighbors or for their children to make friends and to eventually feel more connected to the community.

At last the four factors about the functioning of a community, given by McMillan and Chavis (1986) come into play. Maybe these describe why the community character, however changed, isn’t experienced as a bad process in Pogung Lor. New people, for example, could create their own influence in the development of the community by attending the meetings with the RT’s and RW. They therefore feel appreciated and feel themselves a real member of the community and neighborhood. Because of the experienced openness of the native people the integration of these newcomers proceeded and still proceeds relatively smooth and people know they can depend on each other. At last, because of shared events, they create a connection towards one another. So despite negative occurrences like the change in lifestyle of both the newcomers as the natives, the investors who aren’t around, and the high number of students, these four factors possibly describe why the sense of community and solidarity among community members is still strong in Pogung Lor. So in the case of Pogung Lor the urban sprawl and the coming of mew people migration to Pogung Lor doesn’t crush the solidarity but maybe strengthen it. Because of the good communication with new inhabitants and the coming of new businesses (caused by a change in demand) the neighborhood went to a lot of changes. These changes are however not received bad.
5. Conclusion

Theoretical statements (Arbury, 2005; W. Burchell, et al., 1998; Burton, 2000; Ewing, Page, & Haliyur, 1994; Downs, 1999; Gordon & Richardson, 2000; Neuman, 2005; Sierra Club, 2001) in chapter 1 almost unanimously concluded that urban sprawl occurs as an unwanted process of city expansion. This conclusion shows whether or not the general imago of this urban process fits with the situation of urban sprawl and its consequences within the case area of Pogung Lor. First, the results from previous chapters forms the basis of this conclusion. With this data it is possible to give answers towards the main question and sub questions. In one narrative story the occurring of urban sprawl is concluded as well as the way in which the land-use and community character are changing. Moreover, the experiences of the people about these two phenomena are concluded and summarized. At last an answer of the main question is given which provides a clear impression about the researched subject. At last, recommendations for further studies and a short reflection about this study are provided.

5.1 Conclusions

The first question to answer is whether urban sprawl is occurring in Indonesia and moreover in Yogyakarta. The first chapter gave a clear explanation about urban sprawl itself to give understanding about the subject. According to various studies (Arbury, 2005; W. Burchell, et al., 1998; Burton, 2000; Ewing, Page, & Haliyur, 1994; Downs, 1999; Gordon & Richardson, 2000; Neuman, 2005; Sierra Club, 2001) the process of urban sprawl mostly occurred as an unwanted, unplanned and uncontrollable process which causes many unwanted consequences. Although there are several positive remarks about urban sprawl most opinions remained negative. Two main consequences of urban sprawl are the change in land-use and community character as stated in this chapter. These two consequences formed the main focus of this study. But first place the presence of urban sprawl in Yogyakarta had to be proven. Chapter 2 showed that Indonesia is dealing with a huge urban growth. In 2015 the urban population was just over 50% while this is expected to grow to over 70% in 2050. Moreover, the total population is growing also at alarming rates. This has it effects on the city of Yogyakarta, where the total population grew with approximately 1.1 million inhabitants in the last 45 years. This growth is mostly occurring in the peri-urban zones around Yogyakarta City and this gave clear indications about the presence of urban sprawl in this city.
This growth in the peri-urban zones is likely to cause a change in land-use. This change in land-use together with urban sprawl also cause a change in the community character or the ‘sense of community’ inhabitants have with their environment. In Pogung Lor itself the land-use is mostly changing because of a change in demand, Maps about the changing of land-use showed that almost all the rural lands are displaced by new urban built-up areas. This can be explained by the growing interest for people to live in Pogung Lor. The neighborhood is located next to UGM University and this attracts students towards this neighborhood. Moreover, Pogung Lor itself is experienced as a quiet and green area and this attracts other people as well. Because of this growing interest, land prices increased and most of the native people either sold their land, with profit, to private developers or changed their land-use towards the new demand that was created by the newcomers. This new demand included boarding houses for students and other facilities like small businesses. In time this new demand replaced the old functions of the neighborhood. In general, this change of land-use is not badly received by the native inhabitants. This is mostly because these people adapted towards this new situation and most of them economically benefitted from it by building boarding houses or created other earnings. It is however stated that some of them want to go back to the old days but they know that this time of development is inevitable. It is a tension between the value they give towards the economic benefits and the social degradation. So far, the economic benefits tend to feel more important while the degradation of the social aspects are not felt that negatively.

Chapter 2 showed a relation between the change in land-use and the change in community character. Based on the interviews this can be explained by noticing that this change in land-use is occurring because of newcomers. Like stated above, they created the new demand what instigated the changing in land-use (like boarding houses and small businesses). These newcomers brought different values towards the community, causing a change in demand for goods, a change in lifestyle experiences, and a change in perspective between newcomers and natives. So basically it is urban sprawl which instigated the change in land-use and it is this change in land-use that causes the character of the community to change.

The empirical data showed that the inhabitants of Pogung Lor are feeling a change in community character. They notice a change of new social groups who are now occupying new houses in the community. Especially the case with the students is often told. It is maybe therefore that there are not real tensions between those groups. The inhabitants however understand the way these students live. Most of them only live in Pogung Lor temporarily which in advance causes little
interest in the community itself. These students don’t really interact with the community members. So in this case social fragmentation is already starting to show. To this date real tensions have not occurred but the question is: when will there be tensions? Like mentioned in section 4.2.1, when will the number of students in Pogung Lor grow so high that they will gain the ‘upper hand’ within the neighborhood? If all of these students, when that day comes, still don’t pay attention towards the community, the community itself could fall apart. Moreover, the boarding houses that are built for those students are in some cases built as a gated community. This further segregate the students from other community members.

Other newcomers are on the contrary well received by the natives and most of these newcomers adapt themselves very good into their new environment. The only problems the natives have are with private investors who buy a house for a certain purpose, to not be around in advance. This causes empty houses which not benefits the community feeling.

So to close this study it is showed that urban sprawl is a major concern in both Yogyakarta and Indonesia and perhaps in more developing countries who faces the same problems. Urban sprawl did cause the change in land-use in Pogung Lor by the coming of many newcomers towards this peri-urban area and therefore replacing rural land for built-up area. This in advance caused the entire community to change showing already signs of social fragmentation between different groups and some tensions with newcomers.

Remarkably these changes are, based on the interviewees, well received. Like mentioned, the natives have adapted very well towards the changes and many of them saw these opportunities a long time ago. These pioneers had a good vision about the building of boarding houses for students and in advance, many other parcel owners followed their ideas. Together with the new demand, created by the newcomers, the economic situation of many natives of Pogung Lor bettered. And also the change in community, is so far, not seen as a negative change. Of course there are some events which the native rather not see happening but the general opinion is not negative at all. In this Indonesian case, urban sprawl is well received and the experiences of the inhabitants of the local neighborhood are positive. This contradicts most literature about urban sprawl which mentions it as a negative process with multiple bad influences. I believe in this case, that the strength of the community, the openness of the natives to the newcomers and towards new economic earnings caused the urban sprawl to occur in a relatively good way.
So to answer the main question: *Affects urban sprawl the type of land-use in a local neighborhood in Yogyakarta, does this influences the character of the community and how do people living in this neighborhood experiences these changes?*

Yes, urban sprawl causes the change in land-use by the migration of people towards this peri-urban zone, which in advance causes the community to change and in general, maybe different than expected, this is received more positively than negatively. This differs from the expectations, that urban sprawl in general is a negative form of city growth with consequences cities rather not experience. Based on data, collected in this single case, a different view of urban sprawl emerges. This view has a more positive relationship with the consequences of urban sprawl. Existing literature about urban sprawl is thus not able to relate towards this specific case. In general, more research is necessary to prove whether or not urban sprawl is a negative process and in which specific environments it is received with a warm welcome.

5.2 Recommendations for future research

Contrary to the general perspectives in urban studies that largely perceives urban sprawl as an unwanted form of city growth this study is less conclusive about such expansion having only negative effects, while also positives thoughts emerge. The framework within the introduction gave multiple insights in the phenomena of urban sprawl by mentioning different perspectives of different researchers. Most of the studies they conducted where, as stated, are intended for Western countries and especially for the United States. And although studies where done towards cities in the developing countries, the amount of it remains far less. So this beg the question; what if urban sprawl in certain occasions is a phenomenon that should be stimulated? In this case, for instance, the economic situation of the native people improved greatly, while the social degradation of the community remained within limits. On the other hand, we are all familiar with the cases of the major cities in India, where people migrating from rural lands create entire new urban areas, which in most cases results in entire slums. The situation of Yogyakarta is different, while the population of the city is considerably less. Yet this city faces the same problems as other major cities in the developing countries. Its population is also growing at alarming rates and in Pogung Lor itself this resulted in an almost complete transformation from a rural area to an urban one. But still this doesn’t cause any real problems or tensions so far. Why is that? It this situation so much different than at other growing cities in the developing countries? For future research it is advisable to compare this case towards other cases where urban sprawl is occurring. What are differences and/or similarities? Is urban sprawl and the additional consequences causing negative
impacts and is it negatively received? Maybe urban sprawl isn't that bad of a process after all for certain cities and/or regions. It is likely to think city planners need to have a good understand of the occurrence of urban sprawl. They need to know in which situations urban sprawl can function as positive influence in a neighborhood and in which circumstances it indeed cause negative consequences. Therefore, more research need to be conducted towards this Indonesian case in the first place, to get more understanding about the positive reviews urban sprawl receives.

5.3 Reflection

During the gathering, processing and writing of the empirical data, which is used for this study several issues occurred. However, an answer towards the main question and sub questions has been found. I believe that this answer does gave a clear image about the way in which urban sprawl is experienced in a local neighborhood in Yogyakarta. Although the way in which it is performed could have proceeded a lot better. Because of some difficulties with the conduction of the research in the first weeks in Yogyakarta the time available for gathering the needed information and data was limited. Four weeks in total were made available to collect this data. An inadequate communication between both student and university made it difficult to perform the study in the first weeks. In this time, it was tried to start the research but this wasn’t proceeding very smoothly. It wasn’t until 2 weeks before leaving, after the first discussion with the supervisor in Indonesia that a clear path could be drawn on which the study should evolve. In the time period left it was unfortunately not possible to conduct as many interviews as we liked it to see. Therefore, the primary data that is collected is only limited.

Because of this limited availability of primary data, it is only possible to give an idea about the opinion of the community members. In this case the opinions where on some points pretty much the same which indicated the general opinion about the community members. However, real statements and/or facts can’t be given. To give a real conclusion about the experiences of people it might be an idea to conduct a study using quantitative methods in the form of a questionnaire. For this study, with the presence of a barrier in language, this wasn’t possible.

Also the limitation about the presence of secondary data is one of the limitations of this research. In Yogyakarta itself there wasn’t much secondary data available in the form of maps and articles etc. Maps about the change in land-use or studies towards these processes in Yogyakarta where not available or could not be found.
This study only took into account the experiences of the people living inside a certain area. For the study chosen, a phenomenology study, this probably was the right thing to do, since the experiences of the people had to be analyzed. But for future studies it might be a recommendation to interview multiple experts about occurrence of urban sprawl in Yogyakarta or Indonesia to gain more insights in the process itself, as seen from these experts.

Despite the interesting results of this study, where urban sprawl is more positively received than was expected, it is not advisable to use the study as comparison towards another case. If one thing is learned about urban sprawl it is that this process is occurring in different forms and in different ways in their specific region. Even if more data was collected within this case study, then still an idea about the occurrence of urban sprawl in general in developing cities or in Indonesia could not be stated. For this, like stated above, more research towards other cities in developing countries is needed to seek for patterns or other similarities.

But despite these limitations an answer towards the main question is provided and gives, at least for Pogung Lor and idea about the perception of urban sprawl and the change in land-use and community character.
Bibliography


Giyarsih, S. (2013, June). The role of urban area as the determinant factor or population growth. *The Indonesian Geographers Association*, pp. 45(1), 38-47.


Herwaskito. (2009, June 01). (W. Pradoto, Interviewer)


Jutata. (2009, June 05). (W. Pradoto, Interviewer)


Appendices

Appendix 1: Sense of Community

- **Membership**
  Membership is the feeling that a person can possess about belonging somewhere of sharing personal relatedness. McMillan and Chavis (1986) concluded that this element consists of five attributes:
  - Boundaries; the question how people become members of a society and what are the boundaries that keep people out.
  - Emotional safety; by building the right boundaries it creates a trust and safety.
  - A sense of belonging and identification; new members must have the feeling that they fit in.
  - Personal investment; if newcomers contribute in the community it enhances their own sense of community.
  - A common symbol system; sharing a symbol like a shirt of a sports team.

- **Influence**
  This attribute can also be described as a sense of mattering. This has to work both ways: the community needs to have influence over the newcomers and the newcomers must have influence over the community (Spinks, 2013). The theory of ‘Sense of Community’ states:

  “People who acknowledge that other’s needs, values, and opinions matter to them are often the most influential group members, while those who always push to influence, try to dominate others, and ignore the wishes and opinions of others are often the least powerful members” (McMillan & Chavis, 1986, p. 11).

In overall McMillan and Chavis states that members feel more comfortable in a community where they can have influence on. They are also more likely to be attracted to certain communities. Furthermore, there is a significant positive relationship between the cohesiveness of the community and the community influence of members. So if members have influence it strengthens there is a positive effect on the cohesiveness (McMillan & Chavis, 1986).
• Integration and fulfilment of needs
The integration and fulfilment of needs is, according to McMillan (1976), about reinforcement. With this term he indicates that reinforcement works as a motivator of (good) behavior. For any group to maintain a positive sense of ‘togetherness’ it is vital the group efforts must feel rewarding for the members. Research towards the status of being a member have shown that the success of a group works brings it closer together and betters the groups process (Kelley, 1951; Zander & Cohen, 1955). Competence is another reinforcer which states that people are attracted towards other members who might possess skills or other competences that can benefit them in a certain way (Hester, Roback, Weitz, Anchor, & Mckee, 1976). The last important term is shared values. When people come together who have shared values, they will find that they have similar priorities, needs, goals etc. The effect of this is that those people with the shared values will believe that in joining together they will be able to satisfy those goals or needs. In advance shared values can provide an integrative force for a cohesive community (McMillan & Chavis, 1986).

• Shared emotional connection
A shared emotional connection is mostly based on a shared history, although this is not always necessarily. It is, however necessary that group members can identify themselves with the history. The interactions of members in shared events can enhance the strength of a community. These feelings and/or experiences are formed over a long period of time (McMillan & Chavis, 1986). That is why the emotion connection of a group with a shared history can be very strong. Communities who go through a crisis often come out much stronger than they were before because they share a same, in this case, difficult situation which forges a strong bond (Spinks, 2013). Shared events, the quality of interaction, the investment in the community and the spiritual bond are according to McMillan and Chavis (1986) important attributes for a successful community.
Appendix 2: Questionnaire

1. Who is the interviewee?
   - Name/age/work/gender

2. What is his/her connection to Pogung Lor? How long does he/she live in Pogung Lor?

3. Has he/she noticed some remarkable changes in the past years related to the urban expansion of Yogyakarta in Pogung Lor? With the focus on:
   a. The change of land use
      - Is the land use changing?
      - How is this changing?
      - Is this beneficial for the communities or not?
      - Do they have a problem with this?
   b. The changing of the community feeling
      - Is the community swallowed by the city?
      - Are they able to keep their own habits and traditions?
      - Are structures changed because of new inhabitants? (Do traditions and habits stay as they are? Or are they changing?)
      - Are newcomers well received?
      - Does the solidarity changes among community members?
   c. Do they mention or know any other remarkable changes?

4. Does he/she want to change anything about Pogung Lor? Stay with the traditional or progress with the expanding city?

5. Is there any contact with the municipality of Yogyakarta about future plans for Pogung Lor?
   - Do the people have any saying in these plans?
   - Are the inhabitants getting a change to let their opinions hear able?
Appendix 3: Interviews

3.1 Observational interview: Boiman the gardener

1. **Who is the interviewee?**
   - Name/age/work/gender
   Boiman; man of 73 years old and a (retired) gardener.

2. **What is his/her connection to Pogung Lor? How long does he/she live in Pogung Lor?**
   He is a gardener who cleans the unused areas or gardens in Pogung Lor Area and hold a piece of land of his own. He lives in Pogungrejo since birth, it’s an area besides Pogung Lor.

3. Has he/she noticed some remarkable changes in the past years related to the urban expansion of Yogyakarta in Pogung Lor? With the focus on:

   a. **The change of land use**
      - Is the land use changing? Yes. Apparently in his last 10 years
      - How is this changing? From paddy field to settlement. It’s actually the municipality decision. They have a policy to change the unproductive paddy field into settlement. For now, the settlement mostly used as a boarding house for the college students (majority from UGM). The change made from the original Kampong more to the urban.

   b. **The changing of the community feeling**
      - Is the community swallowed by the city? No. Pogung Lor has 8 blocks on total and each of them has its own community and they blend in to each other very well. The Identity of these communities endured.
      - Are they able to keep their own habits and traditions? Yes, they still have a lot of community works (gotong-royong in Indonesian), an RT’s meeting (once a month) and also PKK (meeting especially for the wives/woman). It’s good for the community.
      - Are structures changed because of new inhabitants? (Do traditions and habits stay as they are? Or are they changing?) Some of the tradition are still there like when people die, all the people from the neighborhood will visit the family members.
      - Are newcomers well received? Yes. But the case is the newcomer must do what the native already did.
        If there is some wedding or meeting they should come, it also the way to make connection between the newcomer and the native.
        For the student who live in the boarding house, it’s depend on the person.
      - Does the solidarity changes among community members? No
4. Does he/she want to change anything about Pogung Lor? Stay with the traditional or progress with the expanding city? Pogung is quite enough now. Just, maybe the community need a special place to meet; like a special building for community use.

3.2 Observational interview: Lenjang the landlord

1. Who is the interviewee?
   o Name/age/work/gender
     Lenjang Supomo; man of 56 years old and landlord of a boarding house

2. What is his/her connection to Pogung Lor? How long does he/she live in Pogung Lor?
   He is a native of Pogung Lor and has lived here since birth

3. Has he/she noticed some remarkable changes in the past years related to the urban expansion of Yogyakarta in Pogung Lor? With the focus on:

   a. The change of land use
      o Is the land use changing? Yes, at first most of the area here was a vacant land
      o How is this changing? It’s changing rapidly since 1983 and especially since electricity became available in this area. The first boarding houses were built around 1976, and they only used petromax (oil lamp). The change is also because of the presence of UGM. The native people here see opportunities to build boarding houses for the students of UGM.
      o Is this beneficial for the communities or not? Yes, the economic situation of the people here are bettering because they sell some of their own land and then use the money to build a boarding house.
      o Do they have a problem with this? No problem regarding the land-use change.

   b. The changing of the community feeling
      o Is the community swallowed by the city? No. most of the newcomer can blend nice enough with the community. But, yes, of course it’s changing slightly. But it’s inevitable. The people become too busy and they keep getting busier and busier.
      o Are they able to keep their own habits and traditions? There is a change in tradition and habit. And there is no problem with it. Like the amount of community work (gotong royong and kerja bakti – in Indonesian) is becoming less. People rarely do volunteer for community works anymore, because they are busy but also because there is no place to do the works. Empty space and public space vanishes because of new buildings.
      o Does the solidarity changes among community members? Yes, this solidarity is becoming less but that’s also inevitable.
In 2000, the solidarity here was still nice. But after that, it became the feeling decreased. It’s because the newcomer who migrate here and the natives migrate to somewhere else. This results in a low amount of native people who are still living in Pogung Lor. The will of the people to support the community is becoming less and the individuality of the people is starting to show. However, there are not real tensions in the neighborhood so far. Although the solidarity is changing its not that the general life in Pogung Lor is becoming worse.

c. Do they mention or know any other remarkable changes? Just that the land-use is changing and that the area is becoming denser.

4. Does he/she want to change anything about Pogung Lor? Stay with the traditional or progress with the expanding city?
   Yes, I want it to go back to the old days, but it’s not possible. For now, I want this area to become nicer, cleaner, and I want to accommodate more students. A problem for the future is that clean water is becoming more scarce.

5. Is there any contact with the municipality of Yogyakarta about future plans for Pogung Lor?
   There are some neighborhood meetings each month. They (RT and RW) collect the opinions about the developments in the dukuh (village). This is good, while people still have something to say about plans.
3.3 Observational interview: Toni the RT and his wife Lusi

1. Who is the interviewee?
   - Name/age/work/gender
     Toni; a man of 37 years old and RT of neighborhood 06 in Pogung Lor and Lusi; a female of 37 years old and living in Pogung Lor for 15 years.

2. What is his/her connection to Pogung Lor? How long does he/she live in Pogung Lor?
   He is native and has lived in Pogung Lor since birth and Lusi is not a native but have lived in Pogung Lor already for 15 years.

3. Has he/she noticed some remarkable changes in the past years related to the urban expansion of Yogyakarta in Pogung Lor? With the focus on:
   a. The change of land use
      - Is the land use changing? Yes
      - The landscape changes, what’s your opinion? I think we should save the remaining rice field. We have encountered multiple floods in this area after those built up development began. It doesn’t feel right that everywhere new buildings are constructed and the entire area becomes less green.
      - Is this beneficial for the communities or not?
        It has two impact for the communities here
        (-) The area here becomes denser, which is bad for the environment. There are floods and the wells becomes deeper which indicates that the ground water is becoming lower (now it’s 12 m, deeper than before).
        (+) a lot of people come to the area which means they need more service. The native function as a service provider and create their own economic advantages (increase in economy). The services such as laundry, warung (small shop), other small businesses and boarding houses create this economic progression. Most of the newcomers in this area have migrated from Borneo.
      - Do they have a problem with this? There is no personal problem, but sometimes there is some problem within the community, for instance if they want to build something the community doesn’t approve.
      - If some people built something but neighbors disagree with it, is there any problem? Yes, there was a case in which a parcel would be converted into a hotel on a location near the river. Furthermore, the owner wanted to build a park area around this river but the community disagreed. Eventually the plans didn’t proceed. Moreover, the newcomers must get an acceptance from the community members for plans they have for their parcel. They have to introduce themselves and have to say what their plans are. If they do not do that the local people put some pranks on them such as covering their drainage system.
b. The changing of the community feeling

- Are they able to keep their own habits and traditions?
  The traditions here are changing but this is not entirely caused by newcomers. It’s also about the knowledge from the native people which is increasing. They get more understanding about their religion and tend to dismiss some bad traditions or habits. This has its effects on the community as well. the natives, with their new knowledge can share their new ideas with the newcomers, thus creation better relations.
  A habit of the community is the community work (volunteer work to clean the neighborhood). The people who do this work are however mostly the same. The richer people are too busy and they don't have to time to participate, therefore rarely attending this community work.

- Are newcomers well received? There are several types of newcomers, the one who can blend with local people are well received by the locals, they attend some community meeting. But the ones who doesn’t blend in to get are left aside by the locals. There is however now significant problem of tensions between these newcomers who doesn’t blend in or have problems blending in. there are however problems with people who buy houses, land or property to never attend after it. They see it as an investment of buy this house for retirement or for the children when they go to college. In this case houses remain empty which badly affects the community.

- Does the solidarity changes among community members?
  Not so much. The solidarity here is still good. For example, if there is someone sick in the community, all the members will visit him or her together. The same goes when someone dies. In general, life on the streets is till good, many people still go outside.

4. Does he/she want to change anything about Pogung Lor? Stay with the traditional or progress with the expanding city?
   What we want, and what most community members want is that the solidarity among its members, with the newcomers, will remain strong.

5. Is there any contact with the municipality of Yogyakarta about future plans for Pogung Lor?
   Yes, the municipality gave us some money for the improvement of the neighborhood (such as building a village gate, improving local roads and irrigation). There is also money available for culture and arts. Our community will give report towards the municipality about how the money is used. The community members discuss where the money will be used on and in advance the neighborhood quality of live improves in the community.

   - Do the people have any saying in these plans and are you happy with how the municipality works now?
     Yes, in the local meetings (RT-RW) the people can speak their ideas. The community itself has its freedom to spend the money on where they want to spend
it on. The local needs are therefore better addressed. But the municipality should do more than just give money. They need to care for a local community.

3.4 Observational interview: Widi the Civil servant

1. **Who is the interviewee?**
   - Widi Sutikno; a male in his fifties, civil servant of the Sleman Government and living in Pogung Lor for 4 years.

2. **What is his/her connection to Pogung Lor? How long does he/she live in Pogung Lor?**
   - A relative newcomer in Pogung Lor, has lived in this area for 4 years now. He is a civil servant in Sleman Government function within the department of Agriculture.

3. **Has he/she noticed some remarkable changes in the past years related to the urban expansion of Yogyakarta in Pogung Lor? With the focus on:**
   - Yes. He sees Pogung Lor as a support area for the University (not only UGM but also other universities in Yogyakarta), the Sardjito Hospital and the Sleman offices. He states that the ring road caused the beginning of the development for Pogung Lor. Moreover, it is a green and safe area to live in and therefore attracting even more people.

   a. **The change of land use**
      - **Is the land use changing?** The changing here started around 1980’s. At first here were paddy fields, Melati (flower) fields and cow farms. These paddy fields are begin converting very fast and the remaining paddy fields will also probably vanish in no time.
      - **How is this changing?**
        - It’s changing from an agricultural society to the urban society. First there were just normal houses with a farm or paddy field but this gradually changed into more houses, boarding houses and other urban functions.
      - **Is this beneficial for the communities or not?**
        - Its economical beneficial for the local people. The natives create boarding houses, laundries, warungs and other businesses to meet towards the new demand created by the newcomers and to increasing demand of the natives as well.
      - **Do they have a problem with this?**
        - The problem is the water reservoir and conservation. Pogung is a part of the catchment area of Yogyakarta. If there are a lot of built up area this area will no longer function as a catchment area which will cause water problems in the future in Yogyakarta.

   b. **The changing of the community feeling**
      - **Is the community swallowed by the city?**
        - More or less yes but this is inevitable. The social system here is becoming more egocentric and this changes the daily life of the inhabitants of Pogung
Lor., while the people also get busier. Like the man who lives besides my house who is a doctor. He is so busy that I don’t see him very often. But because of the meetings in the community with RT and RW the habits and traditions are able to remain. These meetings must be should continue to be held in order to preserve the social system of the community. It serves as a place of communication within this diverse community.

- Are newcomers well received?
  Most of the newcomers can adapt very well to the traditions of the locals. Like they also do works for the community. But for the students it’s a different story. These students live in separate boarding houses and doesn’t want or are not able to blend in with the community because they are busy with their own lives. The community however, understands their situation, while they only live temporarily in Pogung Lor. They create communities on their own.

- What about the students that keep growing and they will live their own live without care for the community?
  They have their social lives like the other people in the community who also have their own social lives. So I don’t necessarily have a problem with them having their own community. If there are problems with students, we contact their landlord and in almost all cases the problems are solved quiet rapidly without real tensions.

- Does the solidarity changes among community members?
  Yes, but not that extreme. It’s inevitable.

4. Does he/she want to change anything about Pogung Lor? Stay with the traditional or progress with the expanding city?
   The community is fine as it is. Everything keeps changing but those processes can’t be stopped. They only can be guided so that the community won’t be affected to greatly. As the culture changes, society will change with it. For the land-use it would be nice if the local wisdom remains present in the neighborhood, like in the form of urban farming.

5. Is there any contact with the municipality of Yogyakarta about future plans for Pogung Lor?
   Yes, through community meetings. The results of these meetings go from the RW towards the municipality: RW→ RT (neighborhood) → Dukuh (Village) → Kecamatan (District) → Municipality.

   But there are not really futuristic and/or specific plans for Pogung itself. There are however some Spatial Plans (RTRW). These plans contain, for example, limitations for new buildings such as a maximum height. And there are also environmental regulations such as rules for traffic development with the intention of not having traffic jams in the future which has impact on the environment.
   - Do the people have any saying in these plans?
There is something called: “musyawarah rembug desa”. This means that someone in the neighborhood becomes a representative person for the community. He/she attends the development meetings for the village.