

# Peri-urban Land in Ethiopia:

## Genesis, Dynamics and Planning



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## **Dedications**

*To my mother Tsedalech W. (Abiye) and my younger sister Rediet T. who passed away while I was doing this project.  
Love you!*

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## **Abstract**

In Ethiopia, new settlement forms are emerging consequent to the nation's rapid urbanization and horizontal expansion of the urban centres. The growing significance of secondary and small cities and towns and the rapid proliferation of peri-urban settlements are among these new urban forms. Peri-urbanization became the dominant form of spatial transformations at the peripheries, which resulted in a severe state-community conflicts yielding resistance to urban growth and planning and protests that grew into deadly violence. Failures to recognize the peri-urban system and to focus just on the land governance underlie these challenges. This study explores peri-urban Ethiopia and its relationship to the on-going regularization policy. It focuses on understanding the nature and dynamics of the peri-urbanization of a fast growing secondary city. It answers why the regularization of peri-urban areas failed to yield the intended results and rather resulted in the growth of the settlements. It argues that the limitations of the regularization policy emanated from its focus just on the peri-urban land and overlooking all the other constitutes of the peri-urban system. Hence it was established on out dated presumptions and thus failed to address the peri-urban system and its dynamics. The research method was a cross-sectional exploratory case study. Hawassa city was taken as the case and its two peri-urban neighbourhoods were taken as embedded cases. Policy documents were explored and the ground reality was studied using primary data collected from household surveys, key informant interviews and field observations. The Drivers-Pressures-State-Impacts-Responses framework was used to assess the peri-urban systems and to explain their relationships. These allowed explaining its integral subsystems and understanding how peri-urban Ethiopia was formed, and transformed. The framework enabled to look in to the relations between the dynamics of the transition and the regularization intervention through time. This study found that Ethiopia's peri-urbanization was a socio-ecological transformation in the urban-rural region. The annexation-lead urbanization and the loopholes of the land policies drove peri-urbanization. It was an on-going socio-spatial transition that exhibited some peculiarities like market dynamism. It became a complex socio-spatial state highly influenced by external forces like the failures in the urban land systems. These created the systemic mismatch between the peri-urban system and the regularization policy, which made the regularization inefficient and brought unintended results. The peculiar nature and dynamics of peri-urban areas determined the efficacy of the regularization policy, which was highly focused on the land governance and disregarded elements of the peri-urban system. The study demonstrates the necessity to recognize the peri-urban system and shift to regional and settlement planning rather than just focusing on land governance and urban plans.

**Key words:** Urbanization, Peri-urban, Peri-urbanization, Peri-urban Dynamics, Settlements, Regularization, DPSIR, Hawassa, Ethiopia.

## Abstrakt

In Äthiopien entstehen neue Siedlungsformen infolge der raschen Urbanisierung und horizontalen Ausdehnung der urbanen Zentren. Zu den neuen urbanen Formen zählen, mit wachsender Bedeutung, Kleinstädte und sich rasch verbreitende stadtnahe Siedlungen. Die Peri-Urbanisierung wurde zu einer dominanten Form der räumlichen Transformation an den Peripherien, was zu heftigen Konflikten zwischen Staat und Gemeinschaft führte. Der Widerstand gegen städtisches Wachstum und Planungen führte zu Protesten, die zu tödlicher Gewalt führten. Die administrative Unfähigkeit, das periurbane System zu erkennen und sich statt dessen nur auf die Landverwaltung zu konzentrieren, liegt diesen Herausforderungen zugrunde. In dieser wissenschaftlichen Arbeit wird das periurbane Äthiopien in seinen Beziehungen zur laufenden administrativen Regularisierungspolitik untersucht. Fokussiert wird auf das Verständnis des Wesens und der Dynamik der Peri-Urbanisierung einer schnell wachsenden Sekundärstadt. Insbesondere der Schwerpunkt der Regularisierungen von Ballungsräumen wurde analysiert. Regularisierungen führten zu unbeabsichtigten Entwicklungen, die das Wachstum der Siedlungen förderten. Insbesondere wurde untersucht, ob wie angenommen die begrenzte Wirksamkeit der Regularisierungspolitik von ihrem Fokus auf das peri-urbane Land herrühren. Das periurbane System und seine Dynamik im Untersuchungsgebiet wird damit nicht im Sinne einer nachhaltigen Landentwicklung befördert. Die gewählte Untersuchungsmethode ist eine exploratorische Querschnittsstudie. Die Stadt Hawassa und die beiden umliegenden Städte wurden als Untersuchungsgebiet gewählt. Politische Dokumente wurden ausgewertet und anhand von Primärdaten aus Haushaltsumfragen, wichtigen Informanteninterviews und Feldbeobachtungen wurden Untersuchungen durchgeführt. Das Framework Drivers-Pressures-State-Impacts-Responses wurde verwendet, um die peri-urbanen Systeme zu bewerten und ihre Beziehungen zu analysieren. Dies ermöglichte es, die integralen Subsysteme zu erklären und darüber hinaus zu verstehen, wie das periurbane Äthiopien im Laufe der Zeit gebildet und transformiert wurde. Insbesondere die Wirkung von Regularisierungseingriffen wurde ausgewertet. Diese Untersuchungen belegen, dass Äthiopiens Peri-Urbanisierung eine sozioökologische Transformation war, die in der Stadt-Land-Region Realität wurde. Die durch Annexion bedingte Verstädterung und die Mängel der Landpolitik trieben sie voran. Es war dies ein fortlaufender sozio-räumlicher Übergang, der einige Besonderheiten, z. B. die Marktdynamik aufwies. Äthiopien wurde zu einem komplexen sozio-räumlichen Staat, der stark von den Misserfolgen der städtischen Landsysteme geprägt wurde. Diese führten zu einem systemischen Missverhältnis zwischen dem peri-urbanen System und der Regularisierungspolitik, was die Regularisierung mehr oder weniger unwirksam machte und unbeabsichtigte Ergebnisse erbrachte. Die Eigenart und die Dynamik von Ballungsräumen bestimmen die Wirksamkeit der staatlichen Regularisierungspolitik. Die zu starke administrative Orientierung auf die Landverwaltung führte dazu, dass die Konstanten des Ballungsraumsystems vernachlässigt wurden. Dies unterstreicht die zukünftige Notwendigkeit, das periurbane System in seiner Wertigkeit zu erkennen und die Regional- und Siedlungsplanung zu befördern, anstatt sich von der administrativen Seite lediglich auf Landverwaltung und die Beförderung von Stadtplanungen zu konzentrieren.

Schlüsselwörter: Urbanisierung, Peri-Urban, Peri-Urbanisierung, Peri-Urban-Dynamik, Siedlungen, Regularisierung, DPSIR, Hawassa, Äthiopien.

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## Table of Contents

<b>List of Figures</b> .....	<b>4</b>
<b>List of Tables</b> .....	<b>6</b>
<b>List of Abbreviations and Acronyms</b> .....	<b>7</b>
<b>1. Introduction</b> .....	<b>8</b>
1.1 Back ground.....	8
1.2 Ethiopia's Urbanization at a Glance .....	8
1.3 The Research Problem .....	10
1.4 Objectives of the Research .....	13
1.5 Research Questions .....	14
1.6 Significance of the Research .....	14
1.7 Scope of the Study.....	16
1.8 Limitations of the Study .....	16
1.9 The Organization of the Dissertation .....	16
<b>2. Literature Review</b> .....	<b>18</b>
2.1 Peri-urban: an overview .....	18
2.2 The Peri-urban System: a socio-ecological-system /SES/.....	19
2.3 Peri-urbanization: dynamics of peri-urban development .....	20
2.4 Drivers of Peri-urbanization: urbanization and polices .....	22
2.4.1 Urbanization Forces .....	22
2.4.2 Policy Forces .....	23
2.4.3 The Dynamics: how do these forces work? .....	23
2.5 The Peri-urban Transition .....	24
2.6 Planning and Management Policy Responses to Peri-urban Developments .....	27
2.6.1 The Quest for a New Response.....	27
2.6.2 Regularization: The Global 'best practice' .....	28
2.6.3 Regularization in Ethiopia.....	30
2.7 The Analytic Model of the Research.....	33
2.7.1 The Theoretical Stance: The Systems Theory .....	33
2.7.2 The Analytic Framework: The DPSIR .....	34
<b>3. Study Design and Method</b> .....	<b>38</b>
3.1 The Study Area .....	38
3.2 Research Paradigm, Design and Approach .....	39
3.2.1 The Research Paradigm.....	39
3.2.2 The Research Type: exploratory case study .....	40
3.2.3 The Research Design: mixed-method design .....	41
3.2.4 Sampling Techniques.....	42
3.2.5 Target Population and Sampling Frame .....	44
3.2.6 Methods of Data Collection .....	45
3.3 Data Presentation and Analysis .....	50
3.3.1 Data Presentation .....	50
3.3.2 Data Analysis.....	51
3.4 Ethical Considerations.....	53
3.5 Validity and Reliability.....	54
3.5.1 Validity.....	54
3.5.2 Reliability .....	55
<b>4. Peri-urban Hawassa: the state</b> .....	<b>56</b>
4.1The Essentials of the State of Peri-urban Hawassa .....	56

4.1.1 The Spatio-temporal State.....	56
4.1.2 The Socio-economic State.....	58
4.1.3 The State of Physical Structures .....	62
4.1.4 The State of Services and Infrastructure.....	64
4.1.5 The State of Local Governance .....	67
4.1.6 The Morphology of Peri-urban Hawassa.....	69
<b>4.2 The Complex State of Peri-urban Hawassa .....</b>	<b>72</b>
<b>4.3 Conclusions.....</b>	<b>80</b>
<b>5. The Drivers of Hawassa's Peri-urbanization .....</b>	<b>83</b>
<b>5.1 Hawassa's Urbanization and the Annexation.....</b>	<b>83</b>
5.1.1 Hawassa's Urbanization .....	83
5.1.2 Hawassa's Peri-urbanization.....	86
<b>5.2 National Land Policy Driving Hawassa's Peri-urbanization .....</b>	<b>88</b>
5.2.1 Land Classification: Rural and Urban Land.....	88
5.2.2 Land Ownership .....	89
5.2.3 Land Acquisition, Land Holding and Land Use .....	89
5.2.4 Land Development.....	90
5.2.5 Land Expropriation .....	91
5.2.6 Land Administration and Management .....	91
<b>5.3 Conclusion.....</b>	<b>93</b>
<b>6. The Dynamics of Peri-urban Land Transition: pressures on the peri-urban land .....</b>	<b>95</b>
6.1 The Transition of Peri-urban Land in Hawassa- Peri-urban Land Development .	95
6.2 The Stages of Peri-urban Transition in Hawassa.....	102
6.3 The Dynamics of Peri-urban Land Transition at Hawassa .....	106
6.4 The Major Dimensions of Transitions at Peri-urban Hawassa .....	107
6.5 Major Attributes of Hawassa's Peri-urban Transition.....	108
6.6 Conclusions.....	111
<b>7. The Impacts of Peri-urbanization at Peri-urban Hawassa .....</b>	<b>114</b>
7.1 The Impacts of Previous Expropriations .....	114
7.2 Land Use Land Cover (LULC) Changes in Hawassa (1985-2017) .....	116
7.3 Environmental Problems and Hazards in Peri-urban Hawassa .....	119
7.4 Conclusions.....	119
<b>8. Regularization of Peri-urban Settlements in Hawassa: The Response to Peri-urban Development .....</b>	<b>121</b>
8.1 Regularization of Peri-urban Hawassa: an overview .....	121
8.2 The Regional Regularization Campaign .....	123
8.3 The Regularization Process of Peri-urban Settlements in Hawassa (2015-2017) .....	123
8.3.1 The Identification and Registration Stage .....	123
8.3.2 The L/NDP Preparation Stage.....	124
8.3.3 The Stage of Determining the State of Individual Plots.....	130
8.3.4 The Registration and Title Deed Delivery Stage.....	134
8.3.5 The Provision of Development Permit stage .....	135
<b>8.4 The Theory of Change /ToC/ of the Regularization of Peri-urban Hawassa.....</b>	<b>136</b>
8.4.1 The Rationales and Presumptions of the ToC of the Regularization Policy.....	137
8.4.2 The Fundamentals of the ToC of the Regularization .....	137
<b>8.5 Conclusions.....</b>	<b>141</b>
<b>9. Conclusions and Recommendations.....</b>	<b>143</b>
9.1 Conclusions.....	143
9.2 Recommendations .....	149



<b>9.3 Future Areas of Research.....</b>	<b>150</b>
<b>Theses on the Dissertation.....</b>	<b>151</b>

## List of Figures

Figure 1.1 Global trends of urbanization growth rates .....	9
Figure 1.2 The emerging urban form of Ethiopian urban centers.....	11
Figure 2.1 The spatial organization of the urban-rural region .....	19
Figure 2.2 The five dimensions' framework for peri-urban dynamics.....	21
Figure 2.3 Urbanization and land policy driving peri-urbanization .....	24
Figure 2.4 The peri-urban transition model .....	26
Figure 2.5 The DPSIR model.....	35
Figure 3.1 Map of the study area .....	38
Figure 3.2 The flow of the research activities.....	48
Figure 4.1 Locations of peri-urban settlements at Hawassa (2017).....	57
Figure 4.2 Years of settlement and number of settlers in the peri-urban Hawassa (2017)...	57
Figure 4.3 Religious composition of residents of peri-urban Hawassa (2017).....	59
Figure 4.4 Ethnic compositions of residents of peri-urban Hawassa at each stages of the peri-urban development (2017).....	60
Figure 4.5 Population pyramid of peri-urban Hawassa (2017).....	60
Figure 4.6 Marital status of peri-urban residents of Hawassa (2017).....	61
Figure 4.7 Heads of households of peri-urban Hawassa (2017).....	61
Figure 4.8 Economic activities of the members of the household at peri-urban Hawassa (2017).....	61
Figure 4. 9 The level of income of employed members of the household in ETB/month/employed member at peri-urban Hawassa in 2017.....	62
Figure 4.10 Modes of transport at peri-urban Hawassa .....	66
Figure 4.11 Major types of plot use in peri-urban Hawassa (2017) .....	70
Figure 4.12 Major land uses in peri-urban Hawassa (2017).....	71
Figure 4.13 Land use layout of peri-urban neighbourhood- <i>Datto-Odahe</i> , Hawassa (2017) .....	72
Figure 4.14 The complexity map of peri-urban Hawassa, Ethiopia .....	73
Figure 5.1 Ways of land acquisition in peri-urban Hawassa .....	88
Figure 5.2 Ethiopia's land policy driving Hawassa's peri-urbanization .....	93
Figure 6.1 Informal peri-urban land development process at Hawassa.....	95
Figure 6.2 Phases of peri-urban transition in Hawassa.....	103
Figure 7.1 Hawassa LULC change 1985 (Left) and 1995 (Right) .....	118
Figure 7.2 Hawassa LULC change 2005 (Left) and 2017 (Right) .....	118
Figure 8. 1 L/NDP developed from a satellite image of peri-urban, Hawassa: <i>Dato-Odahe</i> /2016/ .....	127
Figure 8. 2 One of the new constructions with development permit at Tullo-Argo peri- urban (2017).....	136
Figure 8. 3 One of the new constructions without development permit at Datto-Odahe peri- urban (2017).....	136
Figure 8. 4 The ToC of the regularization of peri-urban land in Hawassa, Ethiopia (2015- 2017) .....	140

Figure 9.1 The DPSIR of peri-urban Hawassa .....	148
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## List of Tables

Table 2.1 The stages of peri-urban transition .....	25
Table 3.1 Respondents of the key informants interview (KIIs).....	45
Table 3.2 Reviewed national, regional and city's documents .....	47
Table 4.1 Land occupied in the peri-urban Hawassa (2016) .....	58
Table 4.2 Place of origin of Hawassa's peri-urban settlers (2017).....	59
Table 4.3 Types of houses constructed at peri-urban Hawassa (2017).....	62
Table 4.4 The floor area of built structures in peri-urban Hawassa (2017).....	63
Table 4.5 Estimated construction costs of the houses in peri-urban Hawassa (2017).....	63
Table 4.6 Construction materials in peri-urban Hawassa (2017) .....	64
Table 4.7 Participation of peri-urban residents in the CBOs (2017) .....	65
Table 4.8 Plots connected to different road types in peri-urban Hawassa (2017) .....	65
Table 4.9 Electricity meter distribution in peri-urban Hawassa (2017).....	67
Table 4.10 Rural administrative and development services accessed by the residents of peri-urban Hawassa (2017).....	68
Table 4.11 Plot land use in peri-urban Hawassa (2017) .....	70
Table 5.1 Population growth and contribution of annexed sub-city to Hawassa.....	84
Table 5.2 Reasons for settlement in peri-urban Hawassa .....	87
Table 6.1 Modes of land acquisition in peri-urban Hawassa (2017) .....	96
Table 6.2 The push-pull dynamics in peri-urban Hawassa.....	106
Table 7.1 The effects of illegal settlements at peri-urban areas of SNNPRS .....	115
Table 7.2 Land use changes in Hawassa (1985-2017).....	117
Table 7.3 Environmental problems and hazards in peri-urban Hawassa (2017) .....	119
Table 8. 1 Peri-urban land planning guidelines at SNNPRS-Hawassa.....	126
Table 8. 2 Modes for determining plot size, form and conditions of regularization at peri-urban SNNPRS-Hawassa (2015-2017).....	130
Table 8. 3 Modes of determining the plots for illegal landholdings at peri-urban Hawassa .....	131

## List of Abbreviations and Acronyms

Arc-GIS	Geographic Information Systems Software
ARUP	Cities and Urban Development Global Services
CBO	Community Based Organizations
CSA	Central Statistical Agency
CIS	Corrugated Iron Sheet
DPSIR	Drivers-Pressures-State-Impacts-Responses
EMA	Extended Metropolitan Areas
ETB	Ethiopian Birr
FDI	Foreign Direct Investment
FDRE	Federal Democratic Republic of Ethiopia
GTP	Growth and Transformation Plan
HCA	Hawassa City Administration
HCB	Hollow Concrete Block
KIIs	Key Informant Interviewees
L/NDP	Local/Neighbourhood Development Plan
LULC	Land Use Land Cover
MoFED	Ministry of Finance and Economic Development
MUDH&C	Ministry of Urban Development, Housing and Construction
MUDHCo	Ministry of Urban Development and Housing Construction
NPC	National Planning Commission
SDC	Swiss Development Cooperation
SDG	Sustainable Development goals
SES	Socio-Ecological System
SNNPRS	Southern Nations and Nationalities Regional State
SPSS	IBM, Statistical Analysis Package Software
TGE	Transitional Government of Ethiopia
ToC	Theory of Change
UD&HCoB	Urban Development and Housing Construction Bureau
ULG	Urban Local Governments
ULGDP	Urban Local Governments Development Program
UNDESA	United Nations Division for Economic and Social Affairs
UN-Habitat	United Nations Human Settlements Program
URTI	Upper Respiratory Tract Infection
URRAP	Universal Rural Road Access Program
WB	World Bank

## 1. Introduction

### 1.1 Back ground

We are living in the „urban age“ when more than 55 percent of the world’s populations are living in urban centers and global projections show that 68 percent will live in urban centers by 2050 (*UNDESA/PD, 2018*). Africa will be the home for two thirds of the upcoming global urban population. This urban age, the new urbanization project (*Angel, 2012*) and the consequent urban growth will consume nearby farmland at the peri-urban areas. These changes will demand unique interventions and planning responses (*Angel, 2012*). *Kinfu et.al. (2018)* argue that Africa’s current urbanization has been exhibiting emerging settlement formations and spatial configurations that yield mismatches between their layouts and the conventional planning responses. The significantly growing number of secondary and intermediate urban centers and the growth of peri-urban centers were among the emerging settlement formations and spatial configurations that resulted in the mismatch (*ibid*).

One facet of the mismatch was the failure of international policy response prescriptions. Urbanization became a significant global agenda of sustainable development that demanded the development and practices of credible approaches and systems. The development, adoption and dissemination of global best practices as policy prescriptions to address the respective urban issues became popular (*Gondo, 2011*). Many agree that the globally prescribed policies under the pretext of best practices are less beneficial than locally developed responses and failed because of the policy-context mismatches (*Cohen, 2006; Harrison, 2006; Watson, 2009*). To this end, *Gondo(2011)* explains that the knowledge of what works best for developing nations has been constrained because most of them reflected the contexts of the global North and highly were affected by complex processes of globalization. The global South demands context specific responses designed on the basis of adequate system scrutiny and understanding of the dynamics underlying the factors on the basis of system analyses.

Ethiopia is among the least urbanized but most rapidly urbanizing nations in the world (figure 1.1). Though it was not heavily urbanized, the absolute number of the urban population was a significant size given the hundred million plus total population of the country. Ethiopia has been exhibiting urbanization beyond all exception; in addition to the primacy of Addis Ababa, the rapid growth of secondary cities and smaller towns (*ARUP, 2006*) and the emergence of new forms of settlements are becoming dominant, among which are peri-urban settlements (*SDC, 2017*). Rapid expansion of urban centers and transformation of rural areas have been seen among the prominent transformations in the past two decades (*Pankhurst, 2017*). With the nation’s rapid urbanization and the growth of urban centers, peri-urban issues become increasingly significant.

### 1.2 Ethiopia’s Urbanization at a Glance

Ethiopia’s few oldest urban centers represented the some of the earliest urbanization practices (*Horvath, 1969*). Early urban centers were mainly administrative seats and war

garrisons, which later evolved in to cities and towns. This trend persisted until the recent socio-economic transformations that have resulted in the rapid growth of cities and rural transformations that has yielded to rurbanization (*Dorosh & Schmidt, 2010; Pankhurst, 2017*), urban sprawl and satellite towns.

Contemporary Ethiopia had low urbanization (20 percent in 2015) but rapidly urbanizing nation (nearly 3 percent growth per annum) (figure 1.1). Yet, Ethiopia’s urban population was projected to increase three times in the upcoming two decades (*UNDESA/PD, 2018*). As a result, it is estimated to reach between 30-35 million (27- 30 percent of a total population) by 2025 and will have escalated to 42.2 million (40 percent of the total population) by 2037 (*WB, 2015*). The rural-urban migration was among the identified drivers that induced the rapid urbanization (*MUDHCo, 2015*). This rapid urban growth was accompanied by the horizontal expansion of urban centers and the emergence of new forms of settlements.

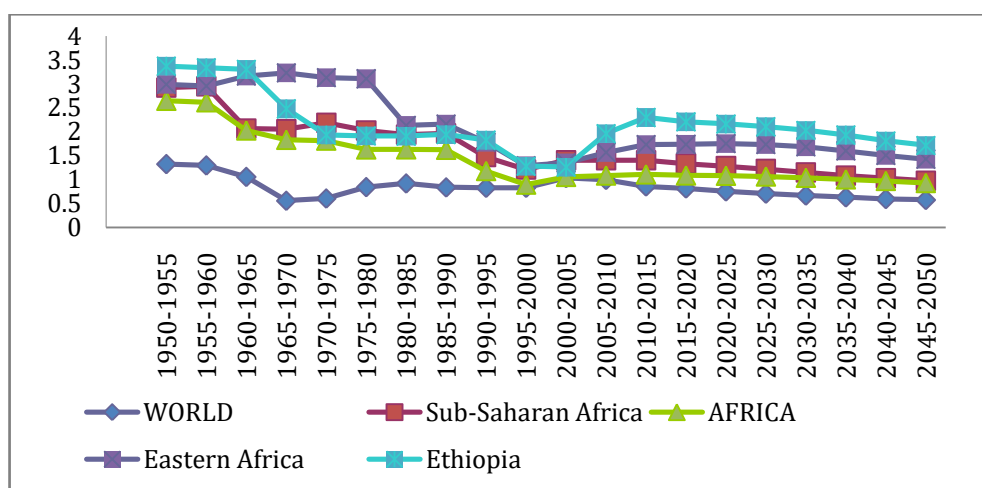


Figure 1.1 Global trends of urbanization growth rates  
(Source, UNDESA/PD 2018)

The capital city and scattering of small towns dominated the Ethiopian urban system. In 2015, there were 990 settlements designated as urban. The capital Addis Ababa was 14 times greater than the second larger city (*WB, 2015*). Small towns dominated the larger portion of the urban system and only 13 had populations bigger than 100,000 inhabitants in the early 2000s (*WB, 2015*). Yet, secondary cities like Hawassa, that functioned as regional and zonal capitals, were becoming significant because of their rapid growth and their new urban formations (*ARUP, 2006*).

Some peculiarities were found in Ethiopian urbanization. Some of these emanated, among other things, from the long-standing nation’s independency, such as the isolated state-hood system and the nation's complex land tenure system (*Horvath, 1969; Mamo, 2015; Alalou, 1973*). These peculiarities made Ethiopia difficult to fit into generalized theories developed to describe urbanization in Africa (*Mamo, 2015*). He further argued that Ethiopia is at a

junction of a shift in its urbanization and the consequent settlement structures. He has claimed that prevalence of rapid informality as the peculiar facet of this shift is happening within the newly developing socio-spatial, socio-economic and environmental configurations (2015). The new political configuration of ethnic federalism and the adoption of the new political economy ideology of the developmental state, as well as the decade old fast-growing economy coupled with the consequent socio-economic transformations and the effect of globalization was little considered.

Ethiopia's urbanization will continue to grow with all its peculiarities, shaped by emerging internal dynamics and global forces. The nation's on-going socio-economic transformations and the new political economy will result in various developments that could shape its urbanization and urban growth. Global forces will also have significant effects in shaping the nation's urbanization as, for instance, multimillion-dollar investment industrial parks are emerging in/near cities and towns. As a result, existing settlement forms and spatial configurations will persist; transforming, and new settlements will emerge. In any case, urbanization and its consequences will be among the critical issues in Ethiopia then after.

### 1.3 The Research Problem

Ethiopia's urban centers were rapidly expanding. *Wubneh (2018)* summarized that the capital Addis Ababa experienced 180.3 percent growth between 1986-2010; secondary cities like Bahirdar, Debre Markos and Gonder were increased by 168.7 percent (between 1986-2011), 84.4 percent (between 1986-2011) and 379.3 percent (between 1986-2004), respectively. *Wondrade et.al. (2014)* found that Hawassa grew by 234.5 percent in between 1987-2011. This growth was mainly undertaken through the consumption of adjacent rural and farmlands. It was also seen that the expansions not only constituted a linear inside-out sprawl, but also an outside-in development, because of the proliferation of spontaneous settlements at the peripheries and growth towards the city- and peri-urbanization and established the urban-rural region nexus spatial configuration. Peri-urban settlements became new phenomenon in urban Ethiopia (*SDC, 2017*) given the nation's urban/rural dichotomy and overlooking the urban-rural region spatial system.

The rapid urbanization and the consequent horizontal expansions coupled with other socio-economic, political and physical factors as well as the emergence of new settlement forms (mainly the peri-urban settlements) made Ethiopian cities and towns acquire tri-layered spatial configurations. This new configuration was seen based on the states of physical structures, planning practices and modes of development. The inner layer represented the deteriorated inner city. The middle layer displayed the relatively newly planned settlements. And the outer most layer shows the spontaneously growing peri-urban settlements (figure 1.2). The inner and middle layers usually fall within the municipal/plan city boundaries, while the outermost layer was found between the plan and city's administrative/or sometimes rural district boundaries.

The inner cities were deteriorating because they were comprised of the older structures mainly *kebele* /public/ houses that exhibited unplanned, underserviced, subdivided, derelict



and substandard structures (MUDHCo, 2015). The *kebeles* were occupied during the establishments of the cities and mostly grew without plan. The middle ring of the urban centers were relatively newly established with formal planned subdivisions consequent to the massive practices of urban planning and the adoption of modern construction techniques. However, the outer most parts were emerging either because of the transforming rural villages or the transforming farmlands through informal subdivisions and developments.

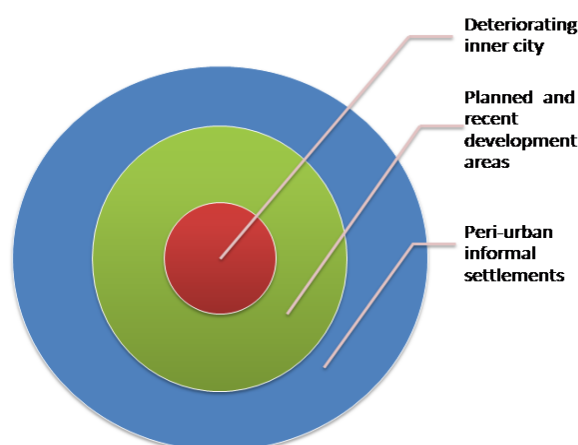


Figure 1.2 The emerging urban form of Ethiopian urban centers

The nature and dynamics of the developments and the policy response towards the peri-urban settlements growing at the outermost part of Ethiopian urban centers were the focus of this research. These peri-urban settlements were mushrooming at the planning/municipal boundary of cities and upon the land (typically classified as rural) found within the administrative boundary of the urban centers or jurisdiction of rural districts. This land has the potential to be reclassified in to the urban jurisdictions later: it is mainly comprised of rural villages and farmland and, in some cases, water bodies and forest. Socio-economic transformations and rapid growth of the cities has presented huge pressures to these areas and sudden expropriations were undertaken by the city administrations on the basis of public interest including urban development. Financial compensations were paid for the expropriated land but protested to be too small, as they affected the livelihood of the evicted farmers. Later, the rural villages started to grow and transform by themselves while, on the other hand, farm areas were little by little developed into built areas. New residents from the nearby urban centers acquired land for housing construction; for example, 27,256 new houses were constructed in these areas at Southern Nations Nationalities Regional State (SNNPRS) by 2015 ([SNNPRS,2015c](#)).

Subsequently, the government of Ethiopia adapted an integrated policy response to address this phenomenon. The policy was intended to incorporate the former developments, prohibit further constructions and reserve the land for effective urban developments (*FDRE, 2011 & 2015*). The policy consisted of three actions. One was regularization. As a result, hundreds of thousands were regularized until the end of 2015. For instance, 5,376 and 13,000 plots were regularized in SNNPRS and Dire Dawa respectively in 2015 (*MUDHCo, 2015*). The second policy response was expanding the administrative boundaries of the urban centers so that the new land would be controlled by the cities. The outcome did not match this intention, however, as most of the urban centers failed to control and new developments mushroomed hoping further regularizations. For example, in SNNPRS only 4,138 new houses were built in 2015 after the first phase of the regularization (*SNNPRS, 2015c*) and Dire Dawa reported greater numbers (*ARUP, 2006*). The expansion of the administrative boundaries were also challenged by the oppositions from the rural farmers and yielded the popular „Say NO to the master plan!“ movement which resulted in deadly political unrest throughout the nation (*The New York Times 2015; Marthe 2015; BBC 2015; VOA 2015*). The third response was demolishing of new constructions. The government enacted the legal provisions that allowed the demolishment of each new (post-2011, later tolerated for those build until July 2015) construction in these areas. 2,458 new houses were demolished in SNNPRS in 2015 (*SNNPRS, 2015c*). Very recently in February 2019, there was a massive (450 houses demolished in a day and nearly 12,000 houses were labelled as illegal to be demolished) demolishing of houses built in these areas at the Lege-Taffo locality, a satellite city nearby Addis Ababa. Reports in the national media claimed this as a legal policy measure by the state (*EPA, 2019*).

The policy makers presumed that illegal squatters created these developments. The rationale behind the national policy responses was to establish preventive mechanisms to prohibit further developments and to tolerate the already existing problems. The policy failed to consider peri-urban states as an inevitable spatial configuration and socio-ecological system that exists within the urban-rural region. The policy makers focused on the modes of land acquisition because of the land they demand for the urban expansion. As a result, they designed a policy that focused on the land aspect of the phenomenon.

The prevalence of peri-urban settlements became one of the significant challenges to the Ethiopian urban system given the rapid expansion of cities and towns, the need for potential land accommodating these expansions, the rapid growth of peri-urban settlements and the resistance of the nearby rural community. Local governments have experienced severe challenges in dealing with peri-urban settlements. The settlements mushroom quickly with dynamic interaction of various factors. The controlling attempts to ban their development, demolish the „illegal structures,“ or regularize them have backfired on to local governments and have yielded unintended results: the rapid growth of informal land markets. These have mainly occurred due to the nature and dynamics of the peri-urban development as well as the inabilities of the planning and management response to adequately address the issues. Moreover, these settlements result in long-lasting effects in land administration and

management, services and infrastructure, social cohesions and environmental pressures which have created an ineffective urban system.

Despite the prevalence of the phenomenon, little research has been done in Africa on peri-urban areas. In Western and Southern Africa (*Bolaane & Kalabamu, 2013; Chirisa, 2010; Gough & Yankson, 2000*) the focus has been on land markets, tenure security, environment, and livelihoods of metropolitan areas like Accra in Ghana. There is limited research focusing on Eastern Africa, and what is available is largely on the slums and squatters of Nairobi, Kenya. There were emerging research works about peri-urban Ethiopia, which focused on the different dimensions of the phenomenon: political economy (See *Hailu, 2016*), tenure security (See *Adam, 2014*), expropriation (See *Ambaye, 2012*), formalization of the informal (see *Fransen, Kassahun, & van Dijk, 2010*) and evaluating the land policy and practice (see *Wubneh, 2018*). These studies mostly focused on the spatial dimension of the phenomenon and mostly addressed the land governance and management. Yet little has been said about understanding the nature and dynamics of the peri-urban system. The practices of regularization and its compatibility to the nature and dynamics of the system have not been evaluated. These evaluations could have shown the system's dynamics that led to the development of relevant policy responses.

This thesis intended to understand peri-urban Ethiopia not only as a spatial phenomenon but also as a socio-ecological-system (SES) and to investigate its sub-systems and their dynamics. By doing so, it attempted to determine its sub-systems and evaluate the efficacy of the policy response-regularization in order to find out why it failed to resolve the problem and yield unintended results. It systematically dissected the peri-urban system and its dynamics, using the Drivers-Pressures-State-Impacts-Responses /DPSIR/ framework into sub-systems of the drivers, pressures, state and impacts. This was done in order to explore the sub-systems and to analyse the response's efficacy. The researcher presumed that the efficacy of the designed responses is determined by its ability to addresses the sub-systems and the underlying dynamics than focusing on the physical manifestations of the phenomenon. Various analytic tools were manipulated to examine the sub systems.

#### 1.4 Objectives of the Research

The principal objective of the research was to analyze the nature of the peri-urban system that determined the efficacy of the planning endeavors of Hawassa city, Ethiopia. To this end, it attained the following specific objectives:

- Described the existing state of peri-urban Hawassa as a complex socio-ecological phenomenon;
- Explored the underlying drivers of peri-urban development;
- Explained the dynamics of the pressures of peri-urban transition, which therefore defined the transition's development path, the current stages of the transition and the major aspects of the changes and the attributes of the transition;
- Assessed the effects/impacts of peri-urban developments in order to find out the major areas of potential improvement based upon the political nature of the system rather than only focusing on the spatial dimension;

- Evaluated the efficacy of the existing policy intervention in order to find out why it failed to address the intended results and rather yield unintended negative consequences.

The researcher concluded the investigation by examining the incompatibilities between the nature and dynamics of the peri-urban system and the policy responses in Hawassa. This information allows for the amendment or adoption of a more adequate policy response to address the issues of peri-urban areas.

### 1.5 Research Questions

The research work intended to explore how the nature and dynamics of peri-urban areas affected the planning endeavors of peri-urban Hawassa, Ethiopia. The research presumed that the response failure came from inadequate understanding of the nature and dynamics of the undergoing peri-urban system highlighted by the consequent mismatch between the system and the response. More specifically it intended to answer the following specific questions:

- i. What was the nature of Hawassa's peri-urban areas? (Of what were the peri-urban settlements constituted and how did they interact to form a complex system of peri-urban settlements?)
- ii. How did urbanization forces and land policy forces drive Hawassa's peri-urbanization? (How did the city's urbanization drive peri-urban development? Which urbanization forces were specific to Hawassa's peri-urbanization and why were they specific to Hawassa? Which land policy aspects drove the peri-urban development and how were these policies driven?)
- iii. What did the dynamics of peri-urbanization Hawassa look like? (How did peri-urban Hawassa grow? Which developmental paths did it follow? What were the developmental stages? How did the forces operate and what were the present dynamics? What major changes occurred as a result of the dynamic transitions? What major attributes did they exhibit?)
- iv. What were the major effects of Hawassa's peri-urbanization? (What spatial, socio-economic and environmental effects were happening in peri-urban Hawassa?)
- v. Why did the planning responses fail to address the peri-urbanization of Hawassa? (What was the policy response and its intentions and operations? How did all the previous factors affect the policy response? Where did the nature and dynamics of the peri-urban areas mismatch with the policy responses so that it failed to bring the intended results?)

### 1.6 Significance of the Research

This research project explored and defined the nature and dynamics of the peri-urban settlements of Hawassa. The project explained how urbanization trends and land policy factors *inter alia* underlie the development of peri-urban settlements. The state of peri-urban settlements was explained as a complex dynamic phenomenon in contrast to what has previously been perceived as liner spatial growth. The existing state of peri-urban settlements was defined and the dynamics that underlie the peri-urban transformation was explored. The impacts of the transitions were assessed. The efficacy of the regularization program as an urban planning response was evaluated, which was found to have failed to

achieve the intended objectives. Instead, despite the success in line with land titling, it was yielding unintended results that would have long-term effects on the city and its urban system. Thus, the research informs one about the peri-urban system in rapidly developing cities of Ethiopia.

This study explored:

- The relationships between land policies and peri-urbanization in rapidly growing secondary cities in Ethiopia;
- Established empirical evidence from the developing world;
- Defined the stages and attributes of peri-urban transitions;
- Explained the peri-urban state as a complex phenomenon.

The research evaluated the relationships between peri-urban systems and the effectiveness of planning responses based on the DPSIR socio-ecological system analysis framework. By doing so, it explored and analyzed the systemic pitfalls between the regularization practice and the peri-urban system. It highlighted the need to find new methods of compliance with the nature and dynamics of peri-urban systems. The mismatch between the existing regularization response and the peri-urban systems was inspected so that the policy framework could be adjusted in such a way that it would holistically respond to peri-urban developments.

Theoretically, the study explored the complex map of the peri-urban state. It explained its driving forces and determined the nature and stages of the peri-urban transition, its effects, and the peri-urban system planning response mismatch. The research thus provided an insight into peri-urbanization processes of the developing world, especially in Sub Saharan Africa and the Global South. This enriched the existing theoretical works and added further insights to the study.

Empirically, the study established baseline empirical evidences in the area (as this was commonly lacking in the literature) and will help to support future research. New research questions were induced, and areas of future research were identified.

Methodologically, the study introduced the use of the DPSIR framework to analyze the peri-urban phenomenon as a system beyond just a spatial phenomenon. This introduced a user-friendly analytic tool that enabled local policy makers to holistically scrutinize the phenomenon and design an integrated response to cover all dimensions of the phenomenon. The study also introduced the use of various analytic tools like complexity map and theory of change (ToC) for detailed exploration.

In summary, this research study benefits the scientific community because it explored the peculiarities of the peri-urban state and its growth in a developing African nation. It will also benefit practitioners who wish to analyze the local conditions of peri-urban state using easy-to-use analytic tools, such as: the complexity map, the transition system, the ToC, LULC and the DPSIR frameworks. It also indicated prospective areas of research for future

scientists and researchers. It serves urban local governments (ULGs) by exploring policy-system gaps in order for these policies to be adjusted.

### **1.7 Scope of the Study**

The study was confined to exploring the peri-urban system and evaluating the effectiveness of the planning and management response- regularization in Hawassa, Ethiopia. The analysis focused on peri-urbanization at the peripheries of Hawassa city and analyzed the development of peri-urban settlements, the transition process and the recent regularization response. It focused on the land policies enacted since 1991. This was due to new political-economic systems that have been introduced since then (such as the free market economy and the federal statehood). These policies have had significant effects on peri-urban land systems. The project analyzed the peri-urban land system and the planning response, presuming the peri-urban is a socio ecological system /SES/ and spatial phenomenon and adapting the DPSIR framework for analyzing the system.

### **1.8 Limitations of the Study**

The study suffered from the inherent limitations of the methodologies, the data type and collection methods. It was methodologically limited hence the mixed design approach has inherent limitations. The sequential exploratory strategy is highly dependent upon the researcher's decisions (*Creswell, 2014*) and is limited to the time and resources required, as the approach demands longer periods to undertake back and forth investigations. Thus, the researcher was constrained to undertake a cross-sectional survey and only two research visits. This may hamper some of the qualities of the conclusions and generalizations. Regarding data reliability, issues related with land transfer and transaction are confidential, therefore the willingness of the respondents to provide accurate data was to some extent limited. The absence of quantified and recorded data as a baseline also affected measurable progress, therefore the researcher mostly relied upon the cross-sectional data gathered for the study and focused on descriptive analysis.

Another limitation was caused from the methods of data collection. The household data was self-reporting, which made the researcher reliant upon the respondents' experience, survey interpretation and inherited bias. The field observations were to a certain extent affected by the researcher and interviewees' biases. A large dependency on qualitative data also limited the research to suggest more in terms of theory than quantitative inferences.

### **1.9 The Organization of the Dissertation**

The thesis was organized in to nine chapters. The organization of the last five chapters intended to follow another logical order than the logic of the analytic model of the research. It brought the description of the state of peri-urban Hawassa, which should have been set as the sixth chapter, to chapter four just to introduce the reader with what existed in the area as a peri-urban state of being before the reader look to the other aspects of the peri-urban phenomenon. This enabled the readers to acquaint with the phenomenon and aspire to find out the dynamics and other related issues.

Accordingly, the first chapter was the introductory chapter, which introduced the background of the research project. It highlighted Ethiopia's urbanization and elaborated upon the research problem. The research, objectives, questions, significances and limitations were also discussed in this chapter.

The second chapter presented a review of previous works. A theoretical and analytic thesis of the research was summarized and included in this chapter.

The third chapter discussed research methods and design used. It included a description of the research area and elaborations upon methodological and design issues.

The fourth chapter described the state of peri-urban Hawassa, which was the city selected for the case study. It scrutinized the spatio-temporal, socio-economic and physical states of peri-urban Hawassa and defined the complex nature of the city's peri-urban system.

The fifth chapter explored the drivers of Hawassa's peri-urbanization. It found out what was working beneath the city's peri-urban development.

The sixth chapter explained how the pressures operated on the peri-urban system in Hawassa. It also explored the main features and attributes of the transition as well as defined at which stage of peri-urban transition each pressure was formed.

The seventh chapter identified the effects and emerging impacts of peri-urbanization at Hawassa. Socio-economic effects, changes in land use-land cover as well as environmental problems and hazards were briefly assessed.

The eighth chapter presented the evaluation of the regularization program, which formed as a policy response to manage the emerging peri-urban settlements.

The last and ninth chapter contained the conclusions and recommendations of the research project.



## 2. Literature Review

This chapter presented the review of previous works and the theoretical perspective of the research project. The conceptual definitions, the guiding theories and existing practices on peri-urban system, peri-urbanization and regularization were reviewed. The review of the analytic models employed in each chapter and to conclude the major findings and the rationales for using each model were included.

### 2.1 Peri-urban: an overview

Peri-urban is a spatial state of being, constituting a multi-dimensional physical, socio-economic and environmental phenomenon (Sarkar & Bandyopadhyay, 2013, Allen 2003, Adell 1999) at various scales. It acquires the new horizon of spatial state from „the extension of urban activities beyond existing administrative boundaries in urban region (Woltjer, 2014) diffused to the already existing rural identity. The diffusion can occur due to the physical proximity hence most of the peri-urban areas are proximate to the city that will be finally either annexed or reclassified as an urban (Iaquinta & Drescher, 2000). In more holistic view, Sieverts (2003, p.3) describe the peri-urban as,

*‘A structure of completely different urban environments which at first sight is diffuse and disorganized with individual islands of geometrically structured patterns, a structure without a clear center, but therefore with many more or sharply functionally specialized areas, networks and nodes.’*

There is a lack of consensus in defining peri-urban (Allen, 2003; Buxton & Choy, 2007; Rauws & Roo, 2011). Among the difficulties in defining peri-urban are the varying emphases given to different features of the phenomenon (Buxton & Choy, 2007). Another difficulty stems from defining peri-urban based on the concepts of sprawl (Ravetz et al., 2013) that makes it challenging to understand and manage the peri-urban concept on the basis of urban perspectives. Thus, the term tends to be loosely defined (Ravetz et al., 2013; Winarso, Hudalah, & Firman, 2015) and there were many definitions given by different scholars focusing in different aspects of the phenomenon. Despite the lack of consensus, and the difficulties in defining the term, this research relied on the definition given by Ravetz et al. (2013), which describes „peri-urban“ as a transition zone, on a spectrum from rural to urban, the direct result of urban development and expansion resulting in a move from strictly rural to completely urban. This definition agrees with scholars that characterize the settlements as a unique, third type of landscape or transitional zone lying between the city and its hinterland (Rauws & Roo, 2011; Sarkar & Bandyopadhyay, 2013; Winarso et al., 2015).

There is an emerging and growing interest in the peri-urban. This is partly because it is a recent development in human geography and partly due to the emergence of various concepts explaining its development. The growing body of research demonstrates the shifting perspectives, from understanding the peri-urban as a zone-like structure, to a continuum of rural and urban, and a spectrum of complex mixtures of rural-urban elements (Allen, 2003; Iaquinta & Drescher, 2000; Woltjer, 2014).



## 2.2 The Peri-urban System: a socio-ecological-system /SES/

Peri-urban area represents distinct spatial organizations. It is 'a transition area moving from strictly rural to completely urban, related to a high pressure towards urban development' (Bertrand, 2007 as cited in Ravetz et al., 2013 p.16). It is an element of a rural-urban region and part of the functional urban area. The rural-urban-region system comprises three interrelated sub-systems: the urban core, the surrounding peri-urban and the rural hinterland each having fluid boundaries, which change because of different factors (figure 2.1). Peri-urban areas are places where physical changes occur (Rauws & Roo, 2011; Sarkar & Bandyopadhyay, 2013); social forms and arrangements form and transform (Woltjer, 2014); and changes in economy and demography also exist (Bryant & Charvet, 2003). They are situated as a subsystem within the urban-rural region system and exhibited specific spatial characteristics (Ravetz et al., 2013).

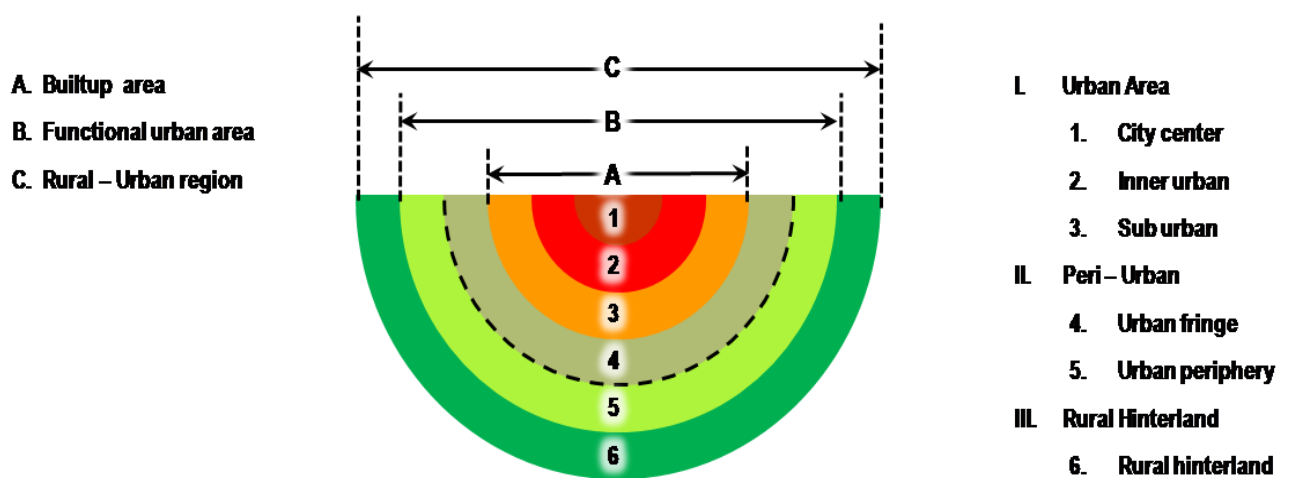


Figure 2.1 The spatial organization of the urban-rural region  
 (Adapted from Ravetz et al., 2013)

Despite of the fact that there are „little basis for a unified understanding of what constitutes peri-urban“ (Iaquinta & Drescher, 2000 p.2), the specific constitutes of peri-urban areas are results of the meeting of spatial, social, economic, physical and environmental elements of urban and rural. Allen (2003 p.136) argues that they constitute complex phenomenon usually characterized as a mixture of either „the loss of rural aspects“ and/or „the lack of urban attributes. Bryant & Charvet (2003) also assert the peri-urban area constitutes environments of living, employment opportunities, resources exploited, recreational and leisure activities and developments of important infrastructure. Moreover, peri-urban areas „often consist a large array of different functions, depending not only on demographic features, but on socio economic changes as well“ (Woltjer, 2014 p.6).

The peri-urban system comprises of various subsystems operating independently and/or interacting hence the peri-urban is derived from the rural-urban mixtures and interacting contextual factors. The peri-urban system illustrates the existence of complex spatial framework where different social, economic and cultural processes and inter-linkages

between the rural and the urban co-exist and interact (*Adell, 1999*). It describes the spatial, economic, social, political and environmental constitutes that drive and cause peri-urbanization (*Allen, 2003*). The subsystems can be derived from the factors and dynamics yielding peri-urban development. i.e land development, economic development, socio-cultural changes, governance and institutional structures, developments of physical structures. On the other hand they can be seen from operational perspectives: the causes/drivers, the development process, the effects and the output subsystems etc. In any case, given the systems theory, the subsystems dynamically interact within and among each other to yield the peri-urban.

Therefore, the developments in conceptualizing peri-urban system emerge from eradicating the traditional urban-rural dichotomy and understanding as a continuum that holds the two (rural and urban) in the either side of the continuum: putting peri-urban area somewhere in the middle and to view as a place where various urban-rural functions leave as a spectrum. This continuum is characterized by the existence of changes in the peri-urban area that range from urban physical expansion to the decline in rural economic activities (*Allen, 2003*). *Adell (1999)*, recognizing the unique spatial characteristics within the continuum, stated that „peri-urban areas exhibit physical characteristics: changes in densities and land use patterns, but also changes in social characteristics too- the spread of urban functions, lifestyles and ideology.“ Peri-urban is also stated as „discontinuous, lumpy and multidimensional arising from underlying social processes (*Iaquinta & Drescher, 2000 p.4*). *Rauws & Roo (2011 p.270)* argue that peri-urban are characterized by a „shift from divided urban-rural landscapes to highly integrated landscapes“ and *Woltjer (2014)* then concludes the need for considering peri-urban as the area between two forces: urban and rural, that make an interplay of dynamic developments, establishing the whole system as a complex and interrelated. Thus, the spatial, physical, social, economic and other functions/elements in the continuum work in harmony to yield the peri-urban as a SES.

It can, thus, be said that the peri-urban system exists as an extension of the regional spatial system, and it is a function of the spatial, physical, economic, socio-cultural, and institutional subsystems tied together to form the peri-urban SES. It is not only an extension and integral part of the region's spatial system, but also an essential of the system (*Bryant & Charvet, 2003*). *Chirisa (2010 p.2)* contend that the peri-urban concept is inimically embedded in „social, economic, political, environmental and institutional dimensions of the societal development.“ These all show the existence of various interrelated subsystems functioning in the peri-urban system.

### **2.3 Peri-urbanization: dynamics of peri-urban development**

Peri-urbanization is „a process in which rural areas located on the outskirts of established cities become more urban in character, in physical, economic, in social and environmental terms, often in piecemeal fashion“ (*Webster, 2002 p. 5*). It is the progressive transition of rural areas in to urban through the process of peri-urban development (*Ravetz et al., 2013*). They (2013) noted that peri-urbanization, as a peri-urban development; within the context

of the rural-urban-region system exists as the process of expanding isolated cities to their rural hinterland and engulfing rural villages in to the urban system. The process encompasses beyond physical and spatial changes. Salet (1996, cited in [Woltjer, 2014](#)) stated that it is about how residents of rural areas located on the outskirts of established cities become more urban in character because of the changes in their psychosocial-makeup. It emerges out of autonomous processes ([Rauws & Roo, 2011](#)) exhibiting multidimensional changes ([Rauws et.al., 2009; Woltjer, 2014](#)) and multistage developments ([Rauws et al., 2009; Sarkar & Bandyopadhyay, 2013](#)).

Peri-urbanization undergoes through dynamic transitions ([Rauws & Roo, 2011; Ravetz et al., 2013; Sarkar & Bandyopadhyay, 2013](#)). The dynamics emanate from the various context related factors and multiple interrelated autonomous process ([Jaquinta & Drescher, 2000](#)), and the increasing variety of urban-rural relationships in peri-urban areas ([Rauws et al., 2009](#)). These autonomous and/or interdependent interactions yield a transition process ([Rauws & Roo, 2011](#)).

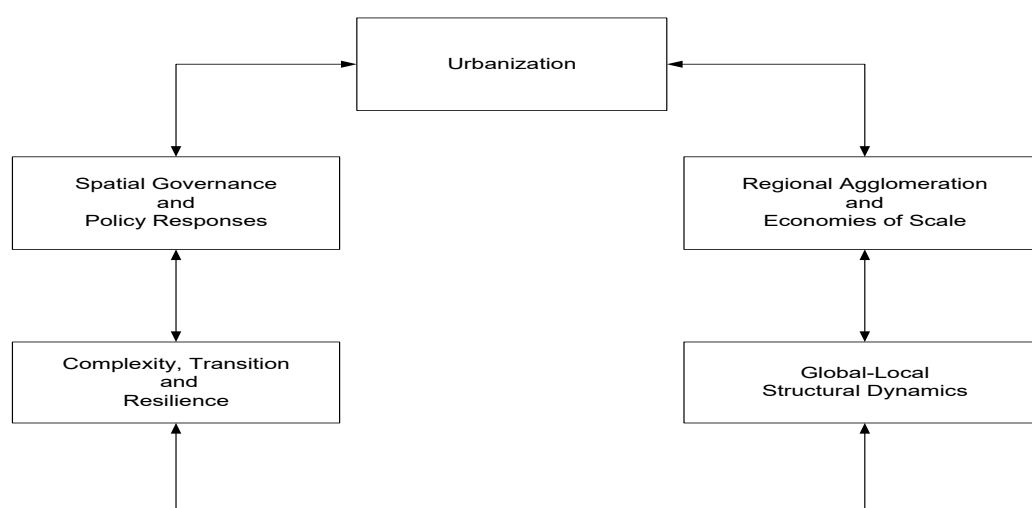


Figure 2.2 The five dimensions' framework for peri-urban dynamics  
(Adapted from [Ravetz et al., 2013](#))

[Ravetz et al. \(2013\)](#) discussed that peri-urban dynamics can best be explored by understanding the complexity of the system. They recommend the five-dimensional framework in order to understand the practical routes of the peri-urban complex situation and how the process takes place. According to the model, as illustrated in figure 2.2 in the first place urbanization occurs because of population growth and economies and consequently cities expand and form regional agglomerations so that changes in economies of scale take place. As a result, new type of peri-urban territory develops. Yet, underlying these developments are the effects of various deeper political and cultural forces that emanate from the global-local structural dynamics which shape the peri-urban territory. These result in rapid transitions of the whole urban system. These may call for policy responses addressing the changes on the one hand and become driving force of dynamics on the other ([Ravetz et al., 2013](#)).

Thus, peri-urbanization demonstrates not only physical developments but also emergence of urban activities and changes in lifestyles and psychosocial make-ups in rural areas. It thus highlights not only the transformation of rural areas but also the changes of behaviours of their residents because of the influences of integrating to the urban-rural system (*Ravetz et al., 2013*). Furthermore, *Iaquinta & Drescher (2000)* argued that it occurs in a settlement existing far away from a given urban center hence peri-urbanization has demographic, economic and psychosocial dimensions. Thus, „proximity to the city“ rather represents to further distinguish between types of peri-urban.

The development process exhibits divers aspects across regions mainly as global North and South. This happens partly due to the characteristics of the respective differences in urbanization and partly due to the role of various forces like transformation: „changing local economic and employment structures from agriculture to manufacturing, rapid population growth and migration, rising land values and mixed land uses“ (*Woltjer, 2014 p.2*). for instance, in the global south, it is an emerging spatial phenomenon occurring as a consequence of rapid urbanization (*Chirisa, 2010*).

## **2.4 Drivers of Peri-urbanization: urbanization and polices**

According to *Rauws & Roo (2011)*, peri-urbanization rarely has a single cause. It is a result of interplay of multi-layered contextual factors each encompassing various localized specific forces (*Bryant & Charvet, 2003*). The drivers have spatial, political, economic, social, institutional and environmental dimensions (*Bowyer-Bower, 2006*). The drivers stem from forces interacting at global and local scales (*Webster & Muller, 2009*). The following two forces were identified as he major drivers of peri-urban development in Hawassa.

### **2.4.1 Urbanization Forces**

*Golledge (1960)* considers peri-urban areas as an establishment of an outgrowth of a city that consumes its adjacent land. In recent works, peri-urbanization is simplified as a form of urbanization, both physically and functionally, expanding into the land adjacent to the city (*Ravetz et al., 2013*). Conceptualizing peri-urbanization as a phenomenon driven by the dynamics of urbanization takes its roots into two accounts: exurbanization and counter-urbanization (*Ravetz et al., 2013*). Both accounts focus on the outward movement of the city and on the labelling of the new spatial phenomenon resulting in an urban expansion (Hart (1991) as cited in *Buxton & Choy (2007)*). This is because of the increased demand for additional land for new urban functions (*Fahmi et.al., 2014; Ravetz et al., 2013*).

Forces that drive urban growth also affect the creation, nature and forms of the city“s/town“s peri-urban area. These forces include increases in urban population (demographic forces), urban economic growth (economic forces), expansion of urban infrastructure and services (physical forces), remaking of the urban core /gentrification/ (planning forces) (*Douglas, 2012; Fahmi et al., 2014; Ravetz et al., 2013; Simon, 2008*), changes in settlement patterns (spatial forces) (*Bryant & Charvet, 2003*), and changing neighbourhood structures (*Sarkar & Bandyopadhyay, 2013*). These urbanization

forces result in horizontal expansion and consequent land use changes at the peripheries, producing the peri-urban.

#### 2.4.2 Policy Forces

Policy forces driving peri-urbanization can be explained in terms of various policies that affect peri-urban developments. They incorporate macro-policy changes in the role and dominant ideology of the state (*Bryant & Charvet, 2003; Rauws et al., 2009*), the nature of land policies, national development policies including urban development policies, as well as the interaction between these. For instance, *Winarso et al. (2015)* argue that the introduction of capitalist economies and consequent emergence of real estate markets and private residential developments cause massive land development at the peripheries.

In relation to land policies driving peri-urbanization, peri-urbanization can, for instance, be driven by the right of public bodies to appropriate private land. This threatens farmers in the peri-urban areas and increases tenure insecurity (*Binns & Maconachie, 2006*). Wei & Zhao (2009), cited in *Tian et al. (2017)*, affirm that contradictory forces within urban and rural land policies can yield unhealthy land use competition exacerbating the urban spill over and sprawl leading to peri-urbanization. Urban development policies like relocations from both the center of the city for slum gentrifications and rural communities for large projects coupled with a lack of public housing or site and services schemes resulted in the proliferation of peri-urban settlements (*Webster & Muller, 2009*).

National development policies can also affect periurbanization. Liberalization of economic policies (*Dangalle & Narman, 2006*), public investments and locations of manufacturers and the nature and role of local government in peri-urban areas (*Webster & Muller, 2009*) are mentioned in this regard. There are ample empirical examples of the role of such policies driving peri-urbanization. For instance, *Tian et al. (2017)* find that in Shanghai, the top-down, centralized, state-led growth has significantly driven non-agricultural land use in the peripheries. *Fahmi et al. (2014)* observed that the adoption of liberal economic policies and the subsequent flow of foreign direct investment (FDI), especially in Asia, resulted in the growth of Extended Metropolitan Areas (EMA) and boom of DESAKOTA at the peripheries.

#### 2.4.3 The Dynamics: how do these forces work?

There are different perspectives on the dynamics of the drivers of peri-urbanization theories. *Webster (2011)* categorized peri-urbanization drivers as either centrifugal (those pulling towards the peri-urban) and centripetal (those pushing from the adjacent city). In terms of how the forces create the peri-urban system, *Rauws & Roo (2011, p. 274)* explain them as „pull“ and „push“ forces. The pull and push forces act at multiple levels, causing transitions over time. Laying the foundations for their arguments in systems theory, they stated that 'drivers for transitions emerge when dislocations exist between the functioning of the "system" and its context (due to internal mismatches), and when competitive alternatives to the 'system' arise.' They further note that the „push“ and „pull“ effects emanate from both 'contextual trends and case specific processes.'

Considering the above models, drivers of peri-urbanization can be observed from two perspectives. The first is the cause and direction of the forces driving peri-urbanization. The second is the effect of the forces in driving the transition of peri-urbanization. In both models the „pull“/ „push“ effects concept is used to explain the drivers.

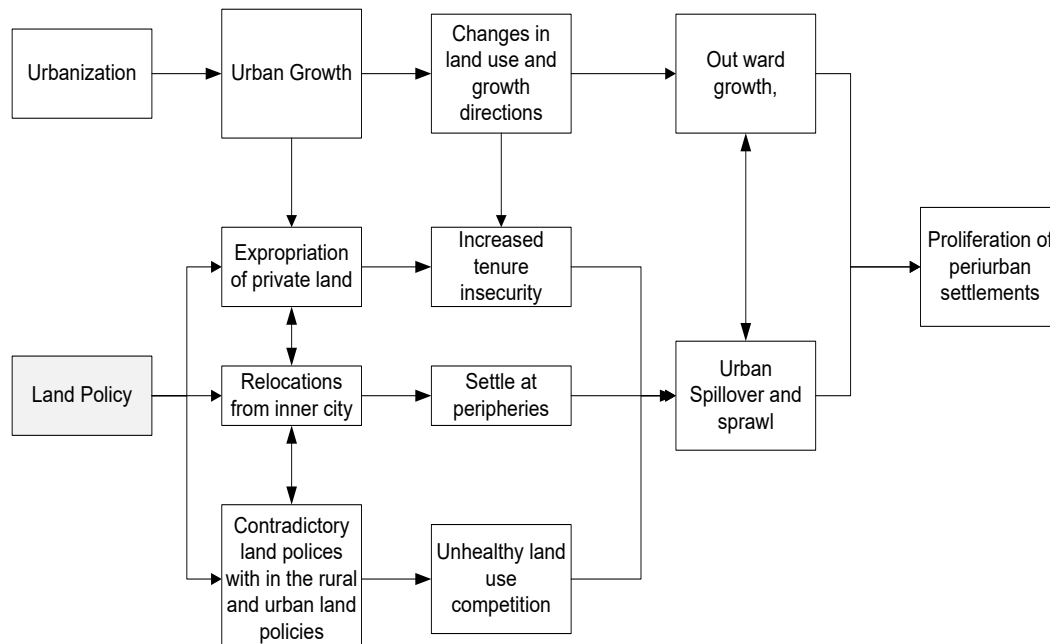


Figure 2.3 Urbanization and land policy driving peri-urbanization

Consequently, it can be concluded that urbanization and land policy *inter alia* are the two major drivers of peri-urbanization. The two forces followed the following paths of changes/effects that yield peri-urban. As portrayed in figure 2.3, urbanization forces lead to urban growth, which in turn leads to changes in land use, resulting in the outward growth of cities. On the other hand, land policies affect urban spill over and sprawl through expropriation, relocations from the inner city and the contradiction of policies, which can increase tenure insecurity and opportunities to settle at peripheries as well as unhealthy land use competition. Both have the potential to induce peri-urban settlements.

## 2.5 The Peri-urban Transition

Transition is a multidimensional, system wide change (Ravetz et al., 2013). Its concept is derived from complexity science and explains „a process of structural change from one level of relative stability to another' (Rauws & Roo, 2011 p. 5) representing various stages of development that affect the system as a whole. It yields a structural change that is not always predictable and linear but can be rapid, erratic and/or in some cases may result in catastrophic failures (Ravetz et al., 2013). The changes occur due to the shifts in the existing stage of stability and equilibrium (Rauws et al., 2009). These changes can be explained in terms of stages of development.



Because peri-urbanization is the result of the peri-urban dynamics, transition is at the heart of the process. According to [Rauws & Roo \(2011 p. 274\)](#), the dynamics of both internal and external factors cause the peri-urban transition. They create „dislocations between the functioning of the „system“ and its context through initiating competitive alternatives to the system“ that can be defined as a stage of development. Some factors can cause ever-increasing changes while others suppress maintaining the old level of relative stability. Thus, in simple terms, they play as a push or pull force. The push forces operate to „push out of the „old“ level of relative stability“- to initiate or amplify the transition. The pull forces operate to pull towards the old level of stability-maintaining the previous state and dampening the transition ([Rauws & Roo, 2011 p. 274](#)).

Table 2.1 The stages of peri-urban transition

S. N	Phases of peri-urban transition	Manifestations in the stages
1	Pre-Development Phase	<ul style="list-style-type: none"> <li>• „When the system is in dynamic equilibrium and the autonomous processes are emerging below the surface and have no effect at a systematic level“</li> </ul>
2	Take-off	<ul style="list-style-type: none"> <li>• „When the autonomous processes reinforce each other and together cause the system to be thrown off balance and the state of the system begin to shift“</li> </ul>
3	The acceleration	<ul style="list-style-type: none"> <li>• „When the system experiences fundamental, irreversible and multidimensional changes takes place on different aggregation levels and yet the system is still out of balance“</li> </ul>
4	Stabilization	<ul style="list-style-type: none"> <li>• „When the speed of change decreases and new level of dynamic equilibrium is attained.“</li> </ul>

(Source: Summarized from [Rauws & Roo, 2011 pp. 273-274](#))

The peri-urban transition is a multidimensional (spatial, economic, physical, social, cultural, and institutional) phenomenon. The spatial and physical changes can be seen from the progress of the city towards the rural countryside gradually transforming the nature of the countryside for example land use. This is enhanced by the development related initiatives like the physical infrastructure. Socially, earlier residents found themselves a midst of transition to which they need to adhere ([Sarkar & Bandyopadhyay, 2013](#)). At the centre of the transition is the functional change: the conversion of rural land in to built-up area and mainly for urban use (Morello 2000 cited in [Sarkar & Bandyopadhyay \(2013\)](#)). It also exhibits changes in psychosocial and internal institutional organizations through redefinitions and reclassification ([Iaquinta & Drescher, 2000](#)) and changes in uses, flows and activities, social and functional decompositions and innovations ([Woltjer, 2014](#)).

These changes can further be systematically categorized in to some major aspects. [Rauws & Roo \(2009\)](#) identified the three major aspects of peri-urban development: (i) functional changes: consisting physical changes, urban-regional dynamics, and catastrophic events; (ii) organizational changes: consisting changes of actions, cooperation and coordination influencing stakeholders and all actors; and (iii) institutional changes: altering frameworks

of meaning and rules of conduct. *Woltjer (2014)* also identified the following three dimensions as the major attributes of peri-urban development: (i) developments in peri-urban space: spatial expression of peri-urban; (ii) developments in peri-urban function: explained as causal and temporal perspective featuring flows and drivers of change; and (iii) developments in peri-urban life: explained in terms of functional appearance of land uses, activities and peri-urban innovations. Hence, the dimensions of changes discussed above by both authors constitute same elements despite where the elements were categorized. Thus, it can be concluded that peri-urbanization is explained as a tri-dimensional phenomenon. And the former classification is seen as comprehensive and encompassing the later and thus it is taken for the purpose of this paper.

Peri-urbanization as a transition process has various stages of development. Rachandran (1989 cited in *Sarkar & Bandyopadhyay (2013)*), considering shifts in economic activities from purely agricultural to other urban-based economic activities, identified five stages of peri-urban transition: (i) the rural stage; (ii) the stage of agricultural land use change; (iii) the stage of occupational change; (iv) the stage of urban land use growth; and (v) the urban village. Conversely, *Rauws & Roo (2009)* also, considering the transitions of the peri-urban system; identified five phases of peri-urban development: (i) the pre-development phase, (ii) take-off, (iii) the tipping period, (iv) the acceleration phase, (v) and stabilization. Later on, *Rauws & Roo (2011)* identified four stages of transition exhibiting developments summarized in table 2.1. It is possible to establish parallels between the two models of the stages of development and define a four stage peri-urban transition model.

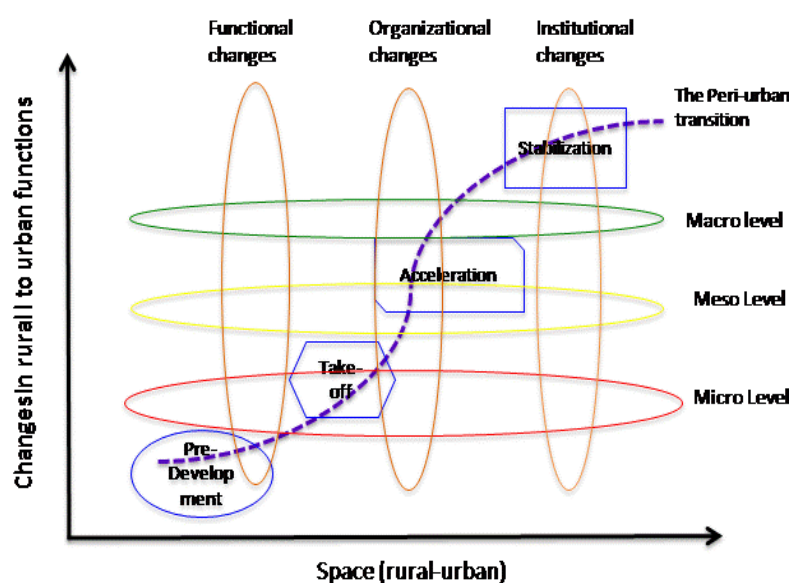


Figure 2.4 The peri-urban transition model  
(Developed based on *Rauws & Roo, 2011 & 2009; Ravetz et al., 2013*).

Accordingly, peri-urbanization could be portrayed in a model that explains its transitions as a complex dynamic process. The following peri-urban transition model is adopted



considering the presence of peri-urban drivers and their dynamics, the push-pull dynamics at each stage of the peri-urbanization process; the aforementioned three dimensions of peri-urban changes: and their effects at various spatial levels (*Ravetz et al., 2013*): Micro (plot), Meso (block and neighbourhood levels) and the Macro (peri-urban area levels). The model considers the co-existence of rural-urban functions along the continuum of rural-urban region at the peri-urban zone, with different levels of intensity; and continues to interact. As a result, various pull and push dynamics exist and yield micro, meso and macro spatial effects that exhibited four stages of instability and relative stability, which are progressively attained. Each stage exhibits respective functional, organizational and institutional changes. The previously stable stage begins to destabilize and the peri-urban continues to change until it reaches the stabilization stage that is a nearly fully urbanized stage. Figure 2.4 shows the graphic model that illustrates the peri-urban transition. The dynamics and the consequent transitions exhibit non-linear patterns overtime (*Iaquinta & Drescher, 2000; Rauws & Roo, 2009*). Moreover, *Rauws & Roo (2011)* identified that peri-urban transition, as a complex process, exhibits three basic features: context dependency; path dependent and self-organizing.

## 2.6 Planning and Management Policy Responses to Peri-urban Developments

### 2.6.1 The Quest for a New Response

Planning and management interventions and institutional responses to peri-urban areas are highly diverse due to the differences in conceptualizing the rural-urban linkages and underlying assumptions about advantages and disadvantages of urbanization. The responses also depend on the classical discrete intervention models of rural, urban, and regional planning (*Allen, 2003*). *Woltjer (2014 p.9)* summarizes four institutional responses widely employed for guiding peri-urban behaviour (i) efforts to strengthen the capacities of local government; (ii) maintaining integration of efforts and comprehensiveness of issues and interests across sectors as well as ensuring good governance; (iii) establishing coordinated institutional arrangements for peri-urban development; and (iv) efforts to rescale coordination through drawing expanded boundaries, merge existing municipalities, or establish a new regional authority of some kind.

However, interventions on peri-urban area fail because of two reasons: the inherent characteristics of the peri-urban areas and the systematic failure of the conventional responses. The challenges emanating from their inherent characteristics comprise geographic locations of the peri-urban areas (being neither rural nor urban), the dynamics of the peri-urban (*Sarkar & Bandyopadhyay, 2013*) and the institutional contexts of the peri-urban areas and their internal organizations (*Iaquinta & Drescher, 2000*).

On the other hand, the traditional conventional planning systems fail to adequately address the concerns of the peri-urban areas. This was due to the systemic failures of the planning and management interventions. The failure emanated from many reasons embedded either in the nature of the peri-urban system or the planning responses. One of the reasons was the dynamic and increasingly fragmented attributes of global urbanization and the dynamics of

peri-urban areas themselves (Woltjer, 2014) that the responses failed to consider. The traditional systems were unable to entertain the basic information about the complexities of the peri-urban areas (Sarkar & Bandyopadhyay, 2013) and to deal with the multiple functions (Bryant & Charvet, 2003). Allen (2003) found within the peri-urban development i.e the misinformation of the planning system innate due to the urban-rural dichotomy presumptions (Allen, 2003). They partially failed due to the inability to consider the dynamic nature of the peri-urban development (Rauws & Roo, 2011). They further argue that the conventional planning system is also unable to balance conflicts of interests, competing demands and the fragmented expansion of urban fabric; hence they focus on command and control rather than collaborative and communicative approaches. Moreover, they lack spatial strategy ensuring democratic participation and absences of uniform institutional framework (Rauws & Roo, 2011).

Consequently, there are demands to shift towards developing new approaches that make less emphasis on control oriented planning prescriptions and more increasingly adopting an iterative, participatory and flexible process (Allen, 2003). The new policies are required to bridge the rural-urban divide and turn liabilities into resources (Jaquinta & Drescher, 2000). Planners should also abandon their urban-rural bias and required to develop a context-specific approach that synergize from the three settlement planning approaches. i.e urban, rural, and regional planning (Rauws & Roo, 2011). They further recommend advancing the classical basic planning question (what to plan? and with whom to plan?) through incorporating the ways to make the plan adaptive. The upcoming planning approaches need to understand the multi-functionality (Bryant & Charvet, 2003), consider the cohesion and compatibility as conditions to reinforce the base for future development and balance the „dynamic and robust elements“ of the peri-urban system (Rauws & Roo, 2009 p.3). Moreover, the new approaches should be derived from „a non-linear perspective and considering the system as a transition“(Rauws & Roo, 2011).

### 2.6.2 Regularization: The Global 'best practice'

UN-Habitat (2006) estimated that 1.4 billion people will be living in slum/informal settlements by 2020 and consequently this became an international agenda that the SDGs aimed to address. The most popular policy response from the spatial point of view has been regularization of the settlements. Consequent to the works that advocated the formalization of informal by De Soto (1989) and the popularity of legal pluralism (Fernandes, 2011) regularization become a policy program adopted for formalizing informal settlements including those found in peri-urban settlements hence some of the definitions that characterize the informal settlements encompass some causes and characteristics of the peri-urban settlements.

Regularization programs, as a policy response to land development, presumed illegality at the heart of all its recommendations (Fernandes, 2011). It considers that the informal settlements used to violate the various dimensions of the laws. They use to violate the regimes of land governance, urban planning, development standards, and taxation etc. Thus,

most of the components of the regularization activities were underpinned by the theories of correcting this illegality.

*Fernandes (2011)* identified the two popular paradigms of regularization: The narrow paradigm- a program that encompassed titling of individual plots and the integrated paradigm- an approach that combined legal titling with socio-economic, cultural and upgrading activities. He noted that the former approach was about the issuance of individual freehold titles presuming that this initiates further private developments and the later is a socio-spatially integrated approach that integrated various aspects including employment creation, urban planning, physical upgrading and titling. The later was intended to retain the community at the localities ensuring their socio-economic developments.

Experiences, from Latin America, shown that designing regularization programs demand curiosity for various reasons. One, regularization was not a value neutral notion and thus highly subjected for contextual influences. Hence, the informal settlements had their own cause, nature and dynamics; the efficacy of regularization programs and their respective activities and strategies need to consider and fit to the contexts and the intended purpose. Its process should „reflect intrinsic expressions of national and local realities“ (*Fernandes, 2011 p.8*). Two, it was found on the basis of the burdens of the informal settlements- „just thinking as the settlements are harmful to cities, to the overall urban population, and to the residents of informal settlements themselves“ (ibid p.6) than also considering their benefits, the rights of citizens etc. as the rationales that drive the regularization. Three, the possibilities of the creation of unintended results due to the program including stimulating the emergence and expansion of another new informal settlements (*Fernandes, 2011*). He further noted that the unintended results mainly existed because the programs failed to address the nature and causes of the informal settlements.

The regularization programs, if needed to illuminate informality, were recommended to address two major aspects. One, it should resolve the existing deficiencies through the provisions of legal recognitions of possessions and ownership, public services and promoting local economic developments. Second, they are needed to prohibit further expansions of the informal settlements (*Fernandes, 2011*). But the question here should be how this could be addressed considering the dynamic nature of peri-urban settlements that have been growing as a result of urban-rural region dynamics than because of the mostly presumed cases of informality.

Thus, we need a context specific, purpose driven and program designed to fit the required purposes: to ensure the efficacy of regularization. To this end, peri-urban settlements, though they exhibit some forms of informality, should not be considered as purely illegal as they were mostly found on the basis of rural legal systems (*Kinfu et.al., 2019*). Their regularization demands to enhance the transition than eliminating the „illegality“. Their nature and dynamics demand a well-designed, fit-for-purpose (serving the peri-urban transition) regularization programs.

### 2.6.3 Regularization in Ethiopia

Ethiopia recognized the rapid proliferation of illegal settlements at the expansion areas of cities and towns, and adopted regularization as an urban land development and management strategy. It comprised of formalizing the developments at expansion areas in short run and strict prohibition and demolitions of developments in the long run (*FDRE, 2011 & 2013*). Regional states were vested with the power to establish a system for regularizing the settlements developed until July 2015 and a preventive system that controls the development then after (*FDRE, 2011*). Consequently, the SNNPRS through its Urban Development and Housing Construction bureau (UD&HCoB) enacted regional directions (Directive no. 123/2015) /which then after cited as SNNPRS 2015a/ and guidelines (Guideline No.08/2015) /which then after cited as SNNPRS 2015b/ that governed the execution of the regularization process.

Ethiopia's regularization was defined as a legal, land development and management system established to legitimize the old possessions, informal and illegal landholdings (*SNNPRS, 2016*). It comprised of the planning, registering and certifying, in general, legitimizing of the informal and illegal landholdings and to urbanize the farmers' land and land based resources which had not been in the urban plan; and to take legal measures on the post July 08/2015 constructions (*SNNPRS, 2015a & 2016*). It was intended to legitimize land holdings in the urban administrative boundary of cities (*SNNPRS, 2015c* and KIIs 2016, 2017). The program integrated the legalization of pre-July 08/2015 settlements and prohibiting the post July 08/2015 constructions.

City administrations, as a decentralized ULG form, were given the power to undertake the legalization component and *kebele* administrations and sub-cities were vested with the power to control further developments. The former had two integrated components: land registration and provision of title deed and urban planning: the preparation of Local/Neighbourhood Plan (L/NDP) (*FDRE, 2011; SNNPRS 2015a & 2015b*). The later, the *kebele* administration and the sub-city were vested with the power and responsibilities to prohibit the post July 2015 constructions, sue those caught handed and immediately demolish the constructions (*SNNPRS, 2015b*). This was expected to be strengthened by protecting susceptible areas through establishing a co-signed database for the newly annexed areas; personal files; providing temporary use certificates; prohibiting the provision of urban services unless the use certificate was presented, and prohibiting any constructions, transfer and sell of property in the absence of the use certificate (*SNNPRS, 2015b*).

Ethiopia's regularization had various objectives. The objectives tended to be more political and complex. It aimed at establishing an effective land governance system that expedite the right to use land and eliminating and preventing the rent seeking attitudes and practices (*SNNPRS, 2015b*) and to respond to the residents' complains of tenure security so that ensuring responsive governance (*SNNPRS, 2015a, 2015b & 2016*). The underpinning rationales were similar to the usual rights based approach. Different policy documents stated different rationales. The national policy documents stated that the regularization

policy was justified on the basis of the principle of formalizing the informal (*FDRE, 2013 & 2015*). The regional policies justify the need to accommodate the already established investments of the citizens and to resolve the questions of good governance by being responsive to the questions of the residents hence the resources invested belongs to the „nation and the citizens“ (*SNNPRS, 2015c*; KIIs, 2016).

The program was further justified by the need to address the emergence of new settlement trends, perceptions on urban growth, and efficient use of urban land found at the expansion areas. First, the policy makers admitted that the proliferation of these settlements coupled with farmers' incorrect perceptions about urban growth underlies the demand for corrective measure. The need to use urban land for optimal development and maintaining just distribution of an urban land to urban residents was also mentioned as the justification for the policy (*FDRE, 2011*; *SNNPRS, 2016*). Second, they believed that urban-land based rent seeking tendencies were the root causes of the proliferation of the settlements. And the program will usher the purpose to abolish the rent seeking tendencies and replacing with developmental state political economy (*SNNPRS, 2015c*). Third, the absence of local land governance system at the expansion areas demand the need for establishing a longstanding protective system (*SNNPRS, 2015c*).

Ethiopia's regularization partially resembled the integrated paradigm of regularization but not fully encompassed the up-grading and socio-economic elements. It had the titling component added with the development and execution of urban plans. The titling component was underpinned by de Soto's formalization (*Fransen et.al., 2010*) intended to stimulate individuals' further investments. The planning component was underpinned by the intentions to urbanize, modernize and guide the developments of the areas as they were covering larger and potential areas of urban development. The titling was guided by land registration and title deed provision modalities and the planning component was guided by the Local/Neighbourhood Development Plan (L/NDP).

#### **A. The L/NDP**

L/NDP is a detailed local level plan that guides multiple local development issues and translate the structural plans' objectives and specify its programs and regulations (*FDRE, 2008*; *MUD& HC, 2012*). It prescribes the functional and development standards; the urban design and upgrading principles; the institutional set-up and the required resources for implementation (*FDRE, 2008*).

L/NDP is an action plan prepared based on the contents and duration of the structure plan (*FDRE, 2008*). As an integral element of the broader plan- mainly the structure plan, it comprised of a derived vision, goals and objectives (*MUD&HC, 2012*). The L/NDP ushers a medium term /5years development agenda/ time horizon and describe and determine allowable land use categories including open spaces and land required for the necessary infrastructure and services. It intended to identify problems, device menses and set development priorities in a spatial framework (*MUD&HC, 2012*). It enabled local governments to develop „zoning of use type, building height and density, local streets and

layout of basic infrastructure, organization of transport system; housing typology and neighbourhood organization; green areas, open spaces, water bodies and places for common benefits, and other locally relevant planning issues” (FDRE, 2008 p. 4072). The land use planning is seen to be at the heart of the L/NDP and to follow an assessment of existing resource to determining the major functional types. It should consider various land use classes and zoning was the significant tool to this end (MUD&HC, 2012). It was considered to usher the purposes of effective urban renewal, upgrading and reallocation intervention (MUD&HC, 2012).

L/NDP as a legal plan was required to pass through the planning preparation and approval stages (MUD&HC, 2012). Its preparation should follow the highest level of public participation. It has to, finally, be approved by all respective bodies. The implementation of L/NDP prepared for the land area less than five hectare was recommended to have execution/action plans (MUD&HC, 2012).

Given these properties, the Ethiopian L/NDP approach made the regularization program to resemble the integrated paradigm as the purposes of the L/NDP consists of planning, upgrading and socio-economic developments aspects and enhances the process of titling. Yet, it was subjected to conditions that affected its efficacy in attaining the objectives of the regularization program as an integrated paradigm. These include the prior availability of broader plans-structure plan for the area where the L/NDP will be prepared which was commonly absent for peri-urban areas. And the lengthy preparation and implementation process required because the plans are detailed and demanded multiple approvals and participations which was overlooked because of multiple administrative and political reasons.

### ***B. Titling***

Titling is a multi-stage process of securing landholders’ rights. It is the process that identify the landholder; determine the location, size and regular shape of the land occupied; determine the land holding system and the value of the land rent; registering the land, and the provision of title deed (FDRE, 2011). In essence it was about ensuring tenure security of the landholder and in peri-urban areas it was about the urbanization of rural landholdings and shifting the land governance regime. The titling of peri-urban land through the regularization program was allowed only for the peri-urban land occupied before the new urban land lease proclamation was enacted and to be completed within the succeeding four years (until July 2015) (FDRE, 2011). The regional laws stated the details.

As a result, the SNNPRS enacted subsidiary laws for the land administration system and specified the land titling in details. Accordingly, it recognized three types of landholdings: old-possession, informal holdings and illegal landholdings. Old possessions were landholdings legally acquired before the lease system was introduced and remained under the rent hold system, or land delivered as a replacement for a land expropriated for public interest or a land legally permitted to acquire but not registered and remained under the freehold system. The informal landholdings were those acquired in different ways



recognized by an authorized party but not certified. And the illegal landholdings were those illegally acquired and not recognized by an authorized body (*SNNPRS, 2015 a&b*). The latter two types describe the landholdings in peri-urban areas.

The landholding types were further qualified in to four classifications that determined the modes of regularization and the titling. The first qualification classified the land holdings, based on the size of the plot, in to three types. One, sub-standard plot: a plot less than 100M<sup>2</sup> wide and function for commercial and other uses; or a plot which is less than the minimum plot size standard set for the respective city (150 M<sup>2</sup> for Hawassa) for residential use, or plots that lacked access road in all the four sides (*SNNPRS, 2015b*). Two, the standard size plots: plots, in minimum, wide equal to the size determined to the respective city for residential use (150-500M<sup>2</sup>). And, three the super-standard plots: plots wider than 500M<sup>2</sup> for residential use (*SNNPRS, 2015 a&b*). The second qualification classified the illegal landholdings based on their period of occupation: those occupied until July 08/2012; occupied between July 08/2012-July 08/2015, and the land occupied after July 08/2015. The third qualification was based on the location of the plots and the identity of the occupant: residential land occupied by farmers in rural villages in annexed areas; farm land occupied by farmers in annexed areas, and land occupied by squatters in expansion areas. The last qualification was based on the menses of income of the occupants, income level of the occupants and purpose of occupancy: farmers, low-income and the speculators (*SNNPRS, 2015b*). Most of the old possessions were identified as a land mainly found in the inner cities and/or older parts of the city and mostly wider than 200M<sup>2</sup>. The informal and illegal landholdings were identified as mostly situated at the expansion areas (peri-urban), developed out of plans, lack infrastructure and services and thus fall short of legality (*SNNPRS, 2015c & 2016*).

The titling component comprised of the following three activities. One, identification-registration of the landholder: registering the details required to define the landholder and the modes of regularization. Two, plot determination: proof of landholding of the applicant; surveying the ground reality; checking compatibility with the L/NDP; determining the shape and size of the plot, and determining the mode of registration. The registration: confirmation of payments; setting on the L/NDP, and issuance of title deed (*SNNPRS, 2015 a&b; 2016*). The registered plots were qualified for acquiring development permit.

## **2.7 The Analytic Model of the Research**

### **2.7.1 The Theoretical Stance: The Systems Theory**

The overall theoretical stance of this research was the systems theory (*Von Bertalanffy, 1968*) and especially the systems theory of urban planning (*Chadwick, 2013*). This was done because the systems theory considers that a whole has subsystems. It systematically uncover the subsystems, their dynamics, the underlying logics of their interactions and the governing principles (*Von Bertalanffy, 1968*). It gives out to scrutinize a spatially delineated natural or artificial phenomenon and to decompose it in to sub-systems that made the whole (*Chadwick, 2013*). It allows describing and exploring the structure and

nature of the phenomenon under scrutiny. Specifically, the system theory of urban planning considers the urban region as a complex socio-economic system, with functioning parts processing inputs and yields various socio-spatial results (*Chadwick, 2013*). The planner, as an intervention maker to shape these yields in to positive and more liveable ways, need to better understand how the system works and develop an integrative system- efficient urban planning system (*Godschalk et.al., 2006*). Thus, considering the peri-urban as a socio-ecological systems /discussed in sections 2.2 and 2.7.2 below/ and the purpose of the research that aimed to uncover the peri-urban system and its relationship to the efficacy of policy response on one hand /regularization/ and considering the aforementioned potentials of the systems theory on the other; systems theory in general and the systems theory of urban planning in particular was taken as the theoretical position that guided this research.

### **2.7.2 The Analytic Framework: The DPSIR**

The adoption of the analytic model for this research was needed to explore the cause and nature of the peri-urban system in order to evaluate the efficacy of the regularization program as a policy response. This begun with considering cities and their regions as a socio-ecological unit that exhibit a territorial entity (*Cammarota & Pierantoni, 2005*). A socio-ecological system (SES) is a concept that defined the interactions of the ecological state and the associated social systems (*Gari et.al., 2015*) that represent a complex system and a non-linear interaction and cross-scale dynamics (*Ness et.al., 2010*). According to *Lewison et al. (2016)*, the problems emanating from these interactions are often described as a messy or wicked one. These interactions and the system's constitutes need a framework that enables to describe, conceptualize, predict the change and support the interventions. The need for this framework is further justified by the nature of the SES which exhibit undefined boundary between the ecological and the social systems and demands an integrated approach (*Lewison et al., 2016*).

The DPSIR is an analytical framework adopted to analyse environmental problems and the effectiveness of the respective policy responses (*Gabrielsen & Bosch, 2003; Gari et al., 2015; Svarstad et.al., 2008*). The elements of the framework are linked by the cause-effect relationship logic (*Gari et al., 2015*). This relationship along the integrals of the system is at the heart of defining the DPSIR framework. *Smeets & Weterings (1999)* stated that the DPSIR frame work elaborates the relationship distinguishing between the drivers, pressures and the state of their effects and impacts as well as how parties responded to the drivers, pressures, state and the impacts.

The framework was praised for the various purposes it ushered and sustained to be used as an analytical tool (*Gari et al., 2015*). It helps to structure complex problems (*Bell, 2012; Ness et al., 2010*). It serves to structure and organize multidimensional indicators; discover their relationship; understand and conceptualize a phenomenon under discussion, and support decision-making to manage the problems and develop solutions (*Bell, 2012; Tscherning et al., 2012; Lewison et al., 2016; Ness et al., 2010*). It allows to find out policy options and to evaluate the efficiency of responses in relation to the drivers, pressures, state and impact of the phenomenon (*Gabrielsen & Bosch, 2003*). There were various modes of



utilizing the model. Some used it modifying its constitutes and the indicators within the constitutes (*Cammarrota & Pierantoni, 2005; Cooper, 2013; Gari et al., 2015*) and others used integrating other tools to the model (*Bell, 2012; Ness et al., 2010*). Utilizations of the DPSIR model with various modifications allows the model to focus on the intended specific objectives, create more clarity and avoid operational ambiguities and curb out some of the limitations and criticisms of the model.

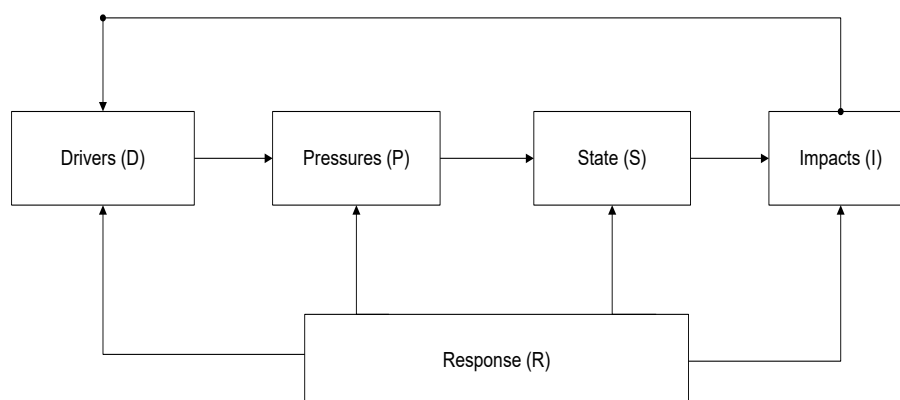


Figure 2.5 The DPSIR model  
(Adopted from *Gari et al., 2015*)

The DPSIR model constitutes five major elements. Each consisting of further indicators that can be stated based on the nature of the phenomenon under investigation and the objective of the scrutiny. DPSIR's constitutes are interlinked. The relations was defined as the drivers yield pressures that changes the state and create an impact leading to responses (*Cammarrota & Pierantoni, 2005; Smeets & Weterings, 1999; Svarstad et al., 2008*). Yet *Gari et al. (2015)* added that the relationship can be made bi-directional by adding a feedback loops describing a feedback relationship (figure 2.5). The conceptual definitions of each constitutes, their respective element and the analytic models used to analyse each constitutes are discussed as follows.

### A. The Drivers

These are, generally, the triggering factors that initiated the changes of the system and resulted in the initiation of the pressures. They are developments in social systems. They are independent external causes (*Ness et al., 2010*). *Cooper (2013)* argued that they are mainly instigated and driven by humans and may constitute social, demographic and economic developments in societies and the corresponding changes in life styles. They comprise of, among other things, population growth and changes in production and consumption trends (*Smeets & Weterings, 1999*).

The drivers of peri-urban development (chapter 5) were analysed using the thematic categorization approach (*Maxwell & Chmiel, 2014*). This was done because the two factors (urbanization and polices) were defined as the major drivers of the peri-urban development. In addition to the nature of the city's urbanization, the important themes of the land policy were defined, coded and briefly discussed. Their effects on the emergence and development

of peri-urban areas were analysed as a push or a pull factor. Finally, the contiguity among the themes and their effects were displayed using a figure that shown the networks of the effects based on the cause-effect relationships.

### ***B. The Pressures***

Pressures are changes in the condition of the basic system because of the drivers (*Lewison et al., 2016; Smeets & Weterings, 1999*). They are the manifestation over the system as a direct consequence of the drivers. These may constitute changes in uses of land and other natural resources, existence of new developments etc (*Cooper, 2013*). As a result, new state of being exists (*Gabrielsen & Bosch, 2003; Ness et al., 2010*).

The pressure of peri-urban Hawassa was analysed (chapter 6) using the peri-urban transition model adopted form (*Rauws & Roo, 2009 & 2011*). The model was further discussed in part 2.5 of this report. It was selected because the model enables to show the transition happening as changes in land use at peri-urban Hawassa. The researcher presumed that peri-urban Hawassa was under transition which had not reached the stabilization stage. Furthermore, this helps to see whether the policy response considered the transition nature of the peri-urban development and adequately addressed it.

### ***C. The State***

State describes the new state of being created as a result of the pressures. The new state can be explained in terms of the qualitative and quantitative characteristics of the system or the phenomenon (*Gabrielsen & Bosch, 2003; Smeets & Weterings, 1999*). It is about what happened to the parts of the system and the system as whole. The measurements of the state could better be quantified objectively (*Cooper, 2013*) so that the new state could be identified. The new state yields impacts on the system (*Gabrielsen & Bosch, 2003*).

Complexity mapping model was employed to analyse the state of peri-urban Hawassa (chapter 4). The model was opted because it allowed to analyse the nature of the peri-urban state and map the complex situations of the peri-urban system: look into the various factors interacted; understand their relationships; see the bigger picture of the peri-urban system, and convey the complex nature of the peri-urban system to the policy makers (*Holling, 2001*). The model presumed that SES are self organizing, emergent, non-linear, evolving dynamic, network based and interdependent (*Castellani & Hafferty, 2009*). These are the major characteristics of the peri-urban transition.

### ***D. The Impacts***

Impacts happen because of the changes of the state of beings (*Gabrielsen & Bosch, 2003*). Changes occur affecting the functions of the state of the system (*Smeets & Weterings, 1999*) for example the interactions of human beings, ecosystem, etc. This includes loss of resources (*Gari et al., 2015*); air pollution and then climate change (*Smeets & Weterings, 1999*), and measurable damages to the environment and human health (*Ness et al., 2010*). The impacts trigger responses like intervention policies.

The impacts of peri-urban transitions (chapter 7) were briefly appraised based on two approaches. The first was based on the general sustainability appraisal indicators (Ravetz, 2000): looking in to the socio-economic, physical and environmental effects of the transition. This allowed to look into the socio-economic, physical and environmental effects happened in the study area. The second was the Land Use Land Cover (LULC) analysis model, which enabled to quantify the effects on peri-urban land. The analysis here was brief and limited to show the effects hence impact analysis by itself is a big activity and it was assumed that it is too early to conduct the impact assessment. However, the impact analysis was done to show the link between the effects peri-urban development and the policy response- the regularization program.

### ***E. The Responses***

Responses are policy interventions intended to either compensate, prevent, avoid or reduce impacts' consequences (Gabrielsen & Bosch, 2003; Gari et al., 2015). These may include motivational, prohibition, compensative or managing acts like taxes, compensation fees, mitigating, adapting and managing programs (Gari et al., 2015), for instance, through stimulating the development and penetration of new technologies (Smeets & Weterings, 1999) or changes in policy, legislation and enforcement; behavioural change; institutional strengthening; investment, and new pricing strategies (Lewison et al., 2016). They could address the aspects of the phenomenon and in turn affect, in order to be efficant, the drivers, pressures, state and impacts. In some cases, responses can further be negative drivers of the system (Smeets & Weterings, 1999). The responses can be adaptive, mitigating, curative and preventive.

The efficacy of the regularization program, as a response /policy intervention/, to mange and prohibit the rapidly proliferating peri-urban settlements and mitigate their consequences was scrutinized and evaluated using the analytic model called Theory of Change /ToC/ (chapter 8). This was done because of the model's ability to serve as a policy evaluation tool. It enabled to commence exploratory evaluation of the dynamics and efficacy of a policy response (Funnell & Rogers, 2011; Mayne, 2015). Accordingly, it enabled to explore the nature of the regularization program in relation to the nature of peri-urban Hawassa. The ToC analysis intended to evaluate the impacts of the response program by looking after the behavioural changes occurred. It was an applied, effectiveness summative evaluation that assessed the actual implementation of the program, and look into the end results /both the intended and the unintended/. The ToC was taken because it allowed the researcher to get a series of steps for evaluation as it clearly states all the stages and their constitutes and to look into the underpinning logics (Funnell & Rogers, 2011). It best ushered the purpose of the research as it enabled to scrutinize and evaluate how interventions were meant to work (Mayne, 2015).

### 3. Study Design and Method

This chapter describes the study site, the research paradigm, approach and study design, population and sampling procedures employed and methods of data gathering and analysis.

#### 3.1 The Study Area

The study area of this research project was Hawassa city. It was founded in 1960 by the decree of Emperor Haileselassie-I, because of his intention to transform the lakeside-grazing field of Adare into a modern farm. Hawassa is a city that characterizes the ongoing rapid urbanization and urban growth of Ethiopian secondary cities. It is geographically located within  $38^{\circ}25'0''$  to  $38^{\circ}34'0''$ E and  $6^{\circ}55'0''$  to  $7^{\circ}6'0''$ N. The city is situated on the shores of Lake Hawassa within the Great Rift Valley, 273 Kilometres to the south from the capital Addis Ababa (figure 3.1).

In 2017, Hawassa had a nationally projected total population of 457,231, with annual growth rates of 4.8 and 2.8 percent in urban and rural areas respectively. The city's residents were heterogeneous both in ethnicity and religion (*Hawassa City Administration (HCA), 2016b*) the city thus represents the heterogeneous nature of most of Ethiopian cities situated to the south of Addis Ababa and constitutes more than half of the nation's urban system. By the same year, Hawassa had 15,720 hectares of land within its administrative boundary, while only 6,465 hectares (24.4 percent) were included within the municipal boundary and planned as urban land (*WB, 2016*). The rest was specified as rural land. The city's physical growth is restricted by natural obstructions: Mount *Tabor* and *Alamura* in the South and Southwest, *Cheffe* marshland in the East, the lake in the West, and administrative political boundary in the north.

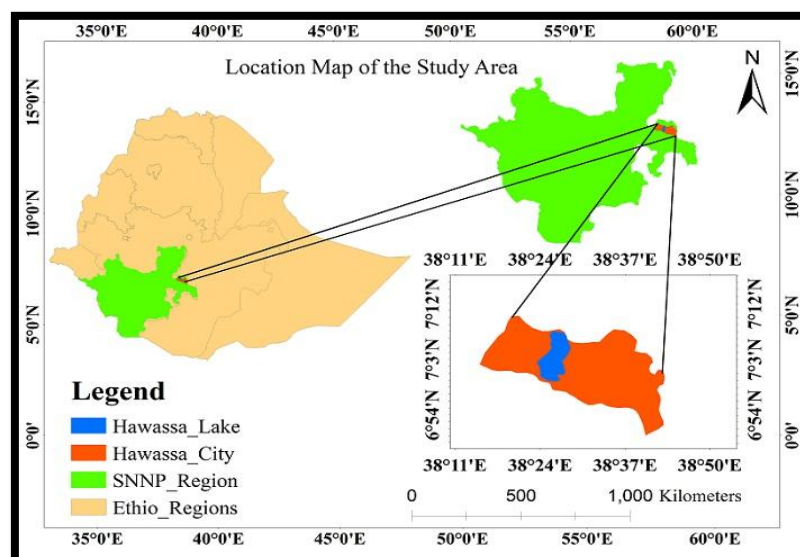


Figure 3.1 Map of the study area

Hawassa, despite the nation's lacking urban planning experiences, emerged and grew with the help of a series of urban plans. The city had relatively better urban infrastructure and

services. There were 134km of asphalt roads, 520km of all-weather road, 180km of earth pressed road, 240 km of cobblestone road and almost all were built in the past 15 years (HCA, 2016). Its spatial characteristics can be organized into three major settlement types: older and revitalizing congested inner city, recently established residential and industrial areas with lower density and planned space, and emerging peri-urban areas with growing density at the peripheries (WB, 2016).

Hawassa was a regiopolis city according to the regional state's urban grade. It was organized with three tiers of administrative bodies: city administration (including the main municipality), eight sub-cities, and 32 *kebeles*. Consequently, administrative functions were decentralized to the sub-city and *kebele* levels while municipal functions were held at the sub-city level. Among the eight sub-cities, *Hawella-Tulla* and its 11 *kebeles* were classified as rural (HCA, 2016).

Hawassa city has been an administrative center of southern Ethiopia. It has been serving as a seat for the administrative bodies and sub-regional and federal institutions, including NGOs. It has also been serving as a „growth pole“ for the regional economic development corridor. It hosts an industrial park, established in 2016. The park was a first of its kind and aimed at attracting FDI by increasing exports and enhancing the transformation of the nation's economy. Moreover, there were developments in the hotel and tourism sectors. All these made Hawassa an important city for the region and nation.

## 3.2 Research Paradigm, Design and Approach

### 3.2.1 The Research Paradigm

The study adopted a pragmatic worldview as its ontological and epistemological basis (Creswell, 2014). This was done because this paradigm explains, as Paton (1990; cited in Creswell (2014)) elaborates; “applications-what works and solutions to problems” (p.10). A pragmatic worldview was well suited to the aim of the study that was evaluating the planning response against the nature and dynamics of the existing peri-urban state. The pragmatic worldview serves as a philosophical foundation for the following reasons, among others (Creswell, 2014):

1. It opened an opportunity for the flexible use of various philosophical thoughts and conceptions of reality. This created room for the utilization of mixed-method approaches that drew on both quantitative and qualitative strategies and assumptions, which was an important method for this study.
2. It provided opportunities to choose from multiple methods, techniques, and procedures that best fitted the purpose of this research, and it encouraged mixed data collection and analysis. The mixed methods triangulated data to maintain a combination of different perspectives.
3. It enabled the establishment of contextual spatio-temporal facts based on the specific context of peri-urban Hawassa, Ethiopia. This also maintained a social and historical context-based look into the phenomenon.

4. It maintained the notion that peri-urban reality was independent of the observer. Thus, it enabled to understand the peri-urban reality per se than to find out to establish the reality on any other ways.

Consequently, the mixed-method approach was used because it fitted best with the pragmatism paradigm. It emphasized the research problem by employing pluralistic approaches to address the problem.

### **3.2.2 The Research Type: exploratory case study**

An exploratory case study was employed. A case study was selected because of multiple reasons inherent to its capacities. First, a case study enables the study of 'the particularity and complexity of a single case' by making a multi-perspective in-depth inquiry with 'rich descriptions and details' and 'instance in action' (*Cohen et.al., 2018 p. 375*). A case study enables the employment of multiple methods of data analysis. It provides an opportunity to understand a focused case that highlights the constructs of the meso- and macro-contextual levels in which it is established (*Cohen et.al., 2007*). It allows one to 'penetrate situations in ways that are not always susceptible to numerical analysis' and 'blend numerical and qualitative data - which is a prototypical instance of mixed-method research' (*Cohen et.al., 2018 p. 376*).

These made the methodology consistent with a philosophical stance of the study. A multi-directional inquisition was undertaken and it could „explain, describe, illustrate and enlighten' the issues under the peri-urban discussion (*Yin, 2009 p. 20*). The research type also best ushers the purpose of the study; for instance to establish the base line data for the future studies as it enabled to 'establish an archive of descriptive material, sufficiently rich, varied and complex' (*Cohen et.al., 2018 p. 380*).

A case study research type was preferred due to its methodological strengths and advantages. This type of study best ushers a development towards a 'rich and vivid description' of the peri-urban system and its development (*Cohen et.al., 2018 p. 376*). By doing so, the chronological narrative of the city's urbanization in relation to its peri-urbanization was developed. It allowed specific events to highlight the relation between the peri-urban system and its regularization response. It also complied to the philosophical stance of the research project as it provided an opportunity to conduct an in-depth study in the peri-urban setting, developed a focus on the processes, and discussed sub-system relationships as a complex phenomenon involving multiple data-collection methods. It captured the complexity of the peri-urban sub-systems and the system at large. The case study also explored cause-effect relationships within the system and defined how and why the peri-urban transition occurred.

The case study followed an exploratory approach more aimed to generate a hypothesis than to test the hypothesis. It ushered an interpretative approach that inductively developed conceptual issues in order to evaluate the initial assumptions of the regularization program as a policy response. This was an embedded single case study, as two villages were selected



for the study and multiple components of analysis were incorporated (i.e. the household/plots/, the neighbourhood/villages/, the state machinery). The purpose of the case study was to examine peri-urban Hawassa in order to gain an in-depth insight of the peri-urban system and its subsystem, with particular focus and the relationship to the planning policy response based on the DPSIR framework. This made the study more instrumental than cumulative. The city's case study commenced as nested cases in the two peri-urban settlements of *Datto-Odahe* and *Tullo-Argo*.

Hawassa city was selected as the focus of the case study and the administrative boundary was taken to identify the case boundaries. Hawassa was intentionally selected, as stated above, to represent the secondary cities of Ethiopia. The peri-urban settlements of Hawassa were the subjects and their DPSIR was the focus of the study. The peri-urban plots, their respective households and the blocks that formed the neighbourhoods were the units of analysis. The peri-urban settlements were defined as those situated in between the municipal and administrative boundary of the city.

Hawassa was selected to represent the secondary cities of Ethiopia based on some qualitative parameters: it has experienced rapid growth since 1991, high levels of migration and the highest levels of heterogeneity which was common in most of the cities found in the majority of the urban centers found in the Southern part of Ethiopia. Hawassa's administrative role also represented contemporary political economy, ideology and urbanization in Ethiopia. The analytic generalizability of Hawassa's case was to 'help researchers to understand other similar cases phenomenon or situation' and to 'contribute to the expansion of a theory' (*Cohen et.al., 2018 p. 380*).

The case study was planned as an exploratory sequential study. There were three stages of execution (*Cohen et.al., 2018*). The first stage was for open data collection where data was collected through interviews and a written documents survey. This method surfaced peri-urban issues from various macro- and meso-perspectives. The second stage of data collection was the progressive focusing stage, when key issues of research interest were identified after a tentative explanation and analysis of the interviews and surveys. Here, the first field observation was conducted, and household survey tools were established based on previous research works and the literature and the issues identified in the previous stage. The third stage was a draft interpretation. Household data was collected, and preliminary analysis and interpretation was presented to some of the Key Informant Interviewees /KIIs/ respondents, especially on a personal basis to the interviewees, as well as research fellows. The second field observation commenced as a follow up to the preliminary interpretations and previous field observation.

### **3.2.3 The Research Design: mixed-method design**

The researcher adopted a mixed-method research design. A combination of quantitative and qualitative methods of data collection and analyses were employed to achieve the intended research objectives.

With the intent to describe the state of peri-urban Hawaasa within the scope of the project, historical data was collected through key informant interviews, maps and a written survey. The household survey explained the existing spatio-temporal, socio-economic and physical characteristics of the residents in their peri-urban settlements. This was further compared to two less-structured field observations conducted in 2016 and 2017. Furthermore, the data generated in the two consecutive steps was complemented by the LULC analysis.

The factors of peri-urbanization were qualitatively defined from interviews, national and regional documents, and thematic analysis. The results were referenced with the household data survey and the KIIs conducted in 2016 and 2017. The regularization planning response was evaluated based on a DPSIR analytic framework and through in-depth data collected from the policy's documents. These were triangulated with interviews conducted with the policy makers, policy executing parties, and the beneficiaries-the peri-urban residents, as well as with the field observations. Quantitative data were also used from the regularization execution reports and the household survey.

In sum, the researcher organized and followed a sequential mixed-method design. Accordingly, qualitative data was first collected through survey of documents and KIIs in 2016 and early 2017. This was first followed by a field observation. The household survey commenced in September 2017 and was again followed by a field observation in late 2017. Theoretical rationales to pursue this design method were gained from [Creswell \(2014\)](#). According to [Creswell \(2014\)](#), a mixed-method design scheme could be best used when the researcher had initially explored the phenomenon and had intended to test elements of an emergent theory resulting from the initial qualitative phase and generalized various samples. The method could also be used when the researcher lacked measurable instruments or if existing instruments were inadequate ([Creswell, 2009 pp. 211-212](#)). Methodological convergence was essential for supplementation and comparison of data collected from documents and KIIs with that of the data from field observations and the household survey. Moreover, this mixed-method approach provided the following advantages, as mentioned by [Creswell \(2009\)](#): it provided a straightforward system to thematize and identify the variables required; it explored and expanded on qualitative findings in the research project; it allowed the researcher to build household survey instruments as significant themes of analysis were identified at the initial qualitative phase; it focused on identifying quantitative phases.

#### **3.2.4 Sampling Techniques**

As the mixed method research design was employed, both non-probability and probability sampling techniques were utilized. Overall, the data sampling was commenced based on the chosen exploratory case study. Hawassa was selected as a representative case study with two peri-urban villages taken as nested samples to fit the research purpose - to explore the peri-urban system and its sub-systems and its compatibility with the regularization policy response. The sampling methods differed across differing data collection sets.



The qualitative data was collected through interviewing the Key Informants /KIs/ listed in the table 3.1. All the KIs were selected by non-probability technique: purposive or judgmental sampling. This was done because it allowed to 'select a sample on the basis of knowledge of a population, its elements and the purpose of the study' (*Babbie, 2012 p. 128*). Purposive sampling was utilized because specific data types required the informants' experience.

The researcher believed that the authorities of urban development bureau, land administration office, and the urban planning institute and their experts in charge of Southern Nations and Nationalities and Peoples' Regional State /SNNPRS/, Hawassa city, and the sub-cities of *Haweella-Tulla* and *Tabor* were informed interviewees in regard to the peri-urban settlements and planning responses. The heads of the three regional bureaus, three experts from each of the regional bodies, the deputy managers, two experts from the city's land administration and planning core processes, and two-planner/urban engineers from the sub-city who were engaged regularization activities were purposively selected for the interview. Four local administrators (two from each) were purposively selected because of their positions' relevance and interviewed in 2016 and 2017. The local administrators selected the ten elder residents (five from each of the two peri-urban villages). Three land brokers were also informally interviewed in 2017 (table 3.1).

For the household survey, a probability sampling technique was used. The survey's population sampling frame included the 17,916 plots registered for the regularization process (see table 4.1). To determine the 400 sample households, a „Multi-phase“ sampling was employed (*Cohen et.al., 2018*). First, the peri-urban households were clustered in to their seven *kebeles* (where the peri-urban settlements were situated) to maintain the geographic clusters. Second, two *kebeles* (*Datto-Odahe* and *Tullo-Argo*) were randomly selected by the lottery method. Third, areal maps of the two *kebeles* were taken and the *kebeles* were sub divided into equivalent vertical transects (in order to represent both earlier and the later settlers as the peri-urban developments followed outside-in growth starting from the highways) and each transect was sequentially coded (Google earth maps accessed on August 02/2017 10:24 AM). The *Datto-Odahe kebele* had seven transects and *Tullo-Argo* had five transects because of their area. In the fourth step, one transect from each village was selected using the lottery method: transect number five of *Datto-Odahe* and transect number one of *Tullo-Argo* were those chosen. Fifth, the households residing on the plots of the selected transects were identified through systematic sampling. The first plots were numbered 1-10 and randomly drawn to determine the systematic starting point in the selection of the sample plots. *Datto-Odahe's* transect was started from 3<sup>rd</sup> plot and *Tullo-Argo's* transect was started from the 2<sup>nd</sup> plot. From these two starting points, every other plot was selected for the survey. Accordingly, 400 households (240 households (60 percent) from *Datto-Odahe kebele* and 160 households (40 percent) from *Tullo-Argo kebele*) participated in the household survey.

The two peri-urban *kebeles* were also places where the field observations were completed. Furthermore, all the pertinent federal, regional and city policies and legislative reports were studied.

### 3.2.5 Target Population and Sampling Frame

According to the data from HCA there were 17,916 plots registered as informal landholdings in the city administration (*HCA, 2016b*). Table 4.1 further illustrates this. The plots were mostly situated in the rural *kebeles* of the *Hawella-Tulla* sub-city and in the peripheral *kebeles* of *Tabor* sub-city. These were taken as the sampling frame for the household survey, therefore each plot had at least one household that resided in the house built on it.

For the household survey, as mentioned above, the researcher selected 400 plots based on a multi-phase sampling method from two *kebeles*. The sample size was determined by employing the *Krejcie & Morgan (1970)* sample size table and prepared considering the following formula:

$$S = X^2 NP (1-P) / d^2 (N-1) + X^2 P (1-P)$$

Where,

$X^2$  = the table value of chi-square for one degree of freedom at the desired confidence level (the table value of chi-square for 1 degree of freedom at the desired confidence level is 3.841)

$N$  = the population size

$P$  = the population proportion (assumed to be .50 since this would provide the maximum sample size)

$d^2$  = the degree of accuracy expressed as a proportion (.05)

Accordingly, the sample size table became 377 households since the total population ranges between 15001- 20000 (*Krejcie & Morgan, 1970*). Accounting for the attrition rate, 6% ( $0.06 * 377 = 22.6$ , i.e. approx. 23 households) was added to yield a total sample size of 400 households. The 400-sample size was then proportionally distributed to the number of the plots each *kebele* had. The number of sample plots of *Datto-Odahe kebele* was 240 (60 percent of the sample size) and the number of sample plots for the *Tullo-Argo kebele* was 160 (40 percent of the sample size).

Non-probability samples were selected from the respective offices and the two target *kebeles* (table 3.1). The KIs were selected based on their responsibilities and their involvements in the regularization process. The heads of bureau, office, institute and the deputy managers of the city were taken, as they were the just office holders who led the regularization process. The experts were selected after the list of all the available experts was compiled and the heads of their respective offices identified them based on their engagement in the regularization process. Their number was determined by considering different factors: the proportion of persons already found, saturation of response ideas, and their involvements in the regularization process.

The *kebele* leaders interviewed included the chairperson and the heads of security and administration, as they were directly connected to land administration issues. The elders interviewed were recommended by *Kebele* leaders, based on their age, and years they lived in the vicinity. The three brokers were met during the field observations and through personal communication.

Table 3.1 Respondents of the key informants interview (KIIs)

S.N	Administrative level	Sector	No. of Official	No. of experts	Remark
1	SNNPRS	Urban development bureau	1	0	
		Land development and management office	1	3	
		Urban Planning Institute	1	3	
		Dep. Manager for Land development and management			
2	Hawassa city administration	Dep. Manager for urban Planning	1	2	
3	Tabor Sub city	Urban planner/engineer	0	2	
4	<i>Kebeles</i>	Local administration	4	0	2 from each
		Elder residents	0	10	5 from each
		Land brokers	0	3	

### 3.2.6 Methods of Data Collection

Cognizant to the research paradigm and the research type selected and to pool sufficient and relevant data in line with the set objectives, the study employed a combination of the following methods of collecting qualitative and quantitative data (figure 3.2).

#### 3.2.6.1 Key Informants Interview (KII)

KIIs were selected as a data collection tool because of their methodological strengths that comply with the objectives of the research project. KIIs were used to understand the discourses of policy makers concerning the Drivers, Pressures, State, Impacts, and Response (DPSIR) of peri-urban areas, the rationale of responses, and evaluations of the policy response and its practices. The interviews were intended to identify the history and emergence of peri-urban settlements, to explore the nature, forms and transformations of their transitions, to describe the rationales of the settlers and the state of the settlements, to explain various discourses, to evaluate the DPSIR and to substantiate the quantitative data. Thus, the data gained from the KIIs further clarified the Ethiopian model of peri-urban development and planning.

To this end, the KIIs allowed flexible data collection through multi-sensory channels and enabled interpretations of the phenomenon under discussion. It ushered in purposes of assessing the peri-urban system from policy makers and executives' perspectives and helped develop the household survey by identifying the areas of major policy concern. It was significant to the project because it enabled „to do what surveys can't do- explore

issues in depth as they can be used to cast further explanatory insight in to survey data, or indeed to set-up a survey” (*Cohen et.al., 2018 P. 206*). The KIIs were generated in order to explore issues, perceptions, rationales and discourses that underlie the policy responses. It also best ushered the case study research type (*Cohen et.al., 2018*). Therefore, data on how Hawassa’s peri-urban land and SNNPR state evolved and intervened in terms of recent urban planning was collected through the KIIs.

The interview questions were semi-structured: major-issue topics were identified and the questions were organized thematically on the basis of the DPSIR framework. Open-ended questions were prepared with probes followed by in-situ prompts (Annex-ib). Question wording was adjusted to fit with the specific positions and responsibilities of the interviewee as well as the intended objectives of the interviews to each of the informants (table 3.1). The data from the KIIs was collected through a face-to-face interview method commenced in local languages: *Amharic* and *Sidamu Afo* (with translations). The responses were recorded in written notes, as well as audio for those who permitted recordings. All the recordings were filed in MP3 format, coded with abbreviated names and attached in a CD with this report.

In sum, the data from the KIIs guided the objectives of the research. Data collected through the interview method addressed the first and third objectives of the study. It also substantiated information that partly addressed the second and the fourth objectives of the study.

#### **3.2.6.2 Document Analysis**

Various national and regional policy and legislative documents pertinent to urban development, land administration, development and urban planning (table 3.2) were reviewed using a thematic categorization approach (*Maxwell & Chmiel, 2014*). Regional and city reports pertinent to the regularization process were reviewed to establish secondary qualitative and quantitative data. The review elucidated policy, institutional and execution issues related to the peri-urban settlements and the regularization process.

The documents reviewed established qualitative data, which included: the underpinnings of the policy, the policy directions, the policy strategies and the policy-praxis nexus. This identified the policy-borne drivers of the peri-urban state and was used to evaluate the efficacy of the policy. The documents also complemented the household survey and field observations data utilized in the second and third study objectives.

Satellite imageries of four years (1985, 1995, 2005 and 2017) were taken from Landsat Copernicus. The images were utilized for LULC analysis. This allowed to partly identifying the impacts of peri-urbanization on the peri-urban and rural land to be explored.

#### **3.2.6.3 Field Observations**

Two field observations, each taking 2-3 days, were conducted. The first observation was executed in July-August 2016 following the commencement of the interview collection and

the study of the document surveys. The second observation was made in October-November 2017 after the household survey was completed and a tentative interpretation of the survey data was executed. The former observation was mainly general and descriptive. The researched walked around the settlements and took field notes and photographs. The observations were later more focused on the physical and spatial structures and organizations and contained informal interviews with the brokers. The second field observation was intended to make further observations after the interview and household survey data analysis.

Table 3.2 Reviewed national, regional and city's documents

Hierarchy	Document Reviewed	Remark
FDRE	Constitution	1995
	A proclamation to provide for the expropriation of landholdings for public purposes and payment of compensation no. 555/2005	2005a
	Rural land administration and land use proclamation no 456/2005.	2005b
	A proclamation to provide for urban plans no.574/2008	2008
	A proclamation to provide for lease holding of urban lands no.721/2011	2011
	Urban development policy	2013
	Land development and management policies and strategies	2013
	Integrated urban plan policies and strategies	2013
	N/LDP guideline	2012
	Growth and Transformation plan of Ethiopia-I. Addis Ababa.	2009
	Growth and Transformation Plan of Ethiopia-II. Addis Ababa.	2014
	Urban development, industrialization and revolutionary democracy	2005
SNNPRS	New lease directive	2015a
	New Leas Regularization	2015b
	Regularization action plan Regional campaign document	2015c
	Regularization report	2016
HCA	City's profile	2016
	Regularization reports	2016 a&b
	N/LDP for the two peri-urban neighbourhoods	2015/2016

The observations were aimed to collect „first hand“ „live“ „in situ“ data directly from the peri-urban settlements and to discover spatial and physical characteristics (*Cohen et.al., 2018*). It enabled the researcher to collect „rich contextual information, first hand data“ and the physical and spatial state of the settlements (*Cohen et.al., 2018*). The field observations also provided an opportunity to realistically check whether the urban-rural phenomenon co-existed, as well as observe certain land transformations. The filed observations were aimed

to relate different factors and peri-urban processes. The action narratives and existing conditions observed in the field studies were utilized to explain the causations and transitions of the project.

Four major areas of observation were formulated to partly structure the task. The first was the physical setting. Plot organization, major land use, road access, physical unit characteristics, services and infrastructure were observed. The second observed area was the social setting. Local inhabitants, their languages and how the community integrated were observed. The third observation was of the morphological setting - how the spatial layout was organized. The fourth was the program setting, which answered what had been done in relation to the physical structures and the morphologies of the settlements since the regularization.

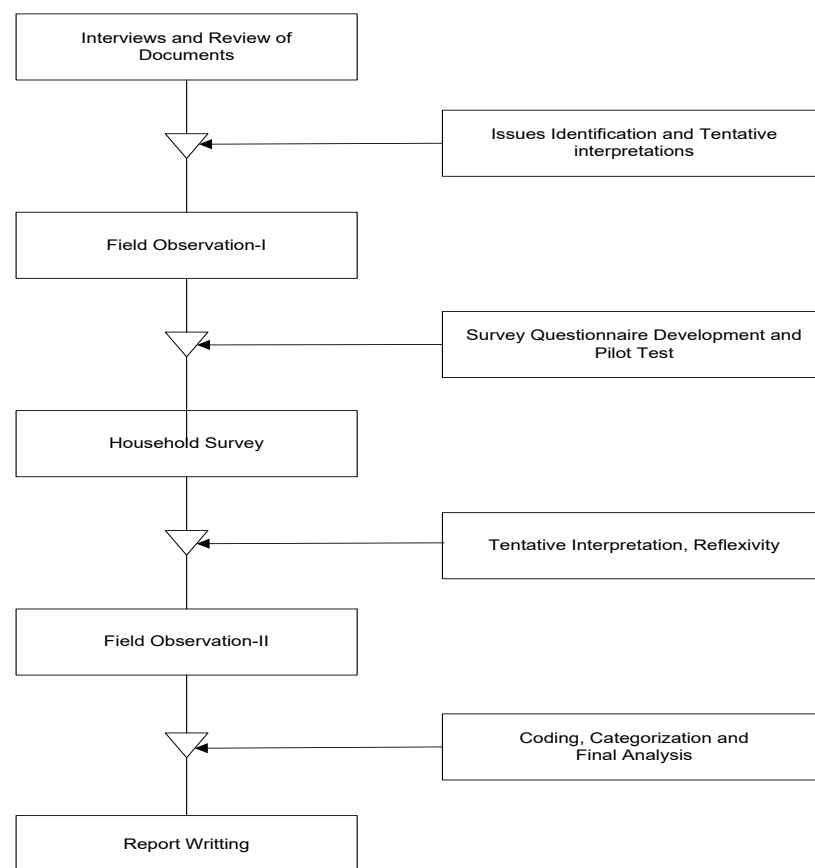


Figure 3.2 The flow of the research activities

The observations focused on both the individual-plot and neighbourhood/block levels. At a more local level, specific data about the plots, roads and physical structures were observed and the land and plots' uses were outlined. These observations included land use and plot layout, built houses, road dimensions, the means of transport, availability of services and infrastructures, etc. At a larger block and neighbourhood level, block organization, block dimensions, community interactions and the daily contexts and functions of the settlements were observed. The field study also allowed the opportunity for resident interaction and to crosscheck issues related with land transfer and land development. The observations also

provided the opportunity for informal interviews with land brokers to discuss settlement land transactions and developments.

The field observations contained a checklist that outlined the aforementioned major focuses, and field notes were taken in regard to these four areas. This less-structured approach was chosen for three reasons. Firstly, it allowed the generation of a hypothesis and the review of the observation data before an explanation was suggested (Cohen et.al., 2018). Secondly, it allowed the researcher „to go into a situation and let the elements of the situation speak for themselves,” and had no comparison concern. And thirdly, according to Cohen et al., „the approach provides a rich description of a situation which, in turn can lead to the subsequent generation” of hypothesis (2018).

The observation data were documented in four sets. One, field notes and photographs were compiled during the observations. Two, the field notes were immediately expanded into descriptive reports. Three, important issues under the DPSIR themes were recorded. Four, tentative interpretations were developed and presented for small-group discussions with research fellows at the Institute of Policy and Development Research /IPDR/ at Hawassa university, Ethiopia.

#### **3.2.6.4 Household Survey**

The household survey was intended to gather data aimed to identify the nature and characteristics of the settlers and settlements. The rationale behind selecting a survey method for data collection was based on its methodical strengths and advantages. It enabled to describe the nature of existing conditions and related specific events (Cohen et.al., 2018 p. 334). It allowed the existing state of peri-urban settlements to be captured through frequency counts. i.e the state of its systems” elements. It established time-based trends, which were later, associated with respective policy changes. The survey complimented the purpose of the research project and enabled a 'scan of wide field of issues, populations, programs, people, etc. in order to measure or describe any generalized features' (Cohen et.al., 2018 p. 335). The survey enabled the representation of a wide range of data, generated empirical evidences, delivered both descriptive and explanatory information and manipulated key factors and variables to derive frequencies and central tendency measures (Cohen et.al., 2018).

The household survey was cross-sectional, descriptive and exploratory. It was cross-sectional because it was a one-time snapshot of September 2017. It was descriptive because some questions were intended to describe certain variables of interest that established the state of the settlements and it enabled the researcher to collect both retrospective and prospective data (Cohen et.al., 2018). The survey was also exploratory because there were no pre-determined assumptions and postulated models to define variable relationships; rather, these were intended to induce a theory among the patterns and relations.

To this end, 400 households were selected (methods of selection discussed above) for the survey. A structured household survey sheet (Annex-ia) was developed, based on the issues



identified in the interviews, the document analysis and experiences (UN-Habitat's Household survey) in *Amharic* (a local language). It was drafted after listing a series of open-ended questions based on the research objectives, the theoretical and analytic framework, the interviews and the document survey. The survey draft was presented to the fellows with peri-urban experience and their comments were considered. The second draft was presented to PhD fellows who commented on its content, language and metrics. The final /third/ draft was prepared considering all the comments given and translated into the local language.

Six enumerators were recruited to execute the face-to-face interviews of the household survey. One supervisor was employed to supervise the data collection activities. All were employed on the daily allowance payment basis. They were university graduates and holders of bachelor degree who spoke the local language and had socio-cultural links to the community. The enumerators were trained on the survey sheet and each of them conducted a pilot test. Their comments, mainly on language issues, were collected and amended after the pilot test.

The survey gathered information about the states of the household, plots, neighbourhoods, etc. It provided primary data, which was later, aggregated to describe the spatio-temporal, socio-economic and physical characteristics of the settlements. It allowed relationships between the different subsystems and the peri-urban system to be explained based on the DPSIR analytic framework. This created some important generalizations to explain the drivers and pressures of peri-urbanization, which included the interpretation of the states of peri-urban settlements and the inhabitants' perspectives on the response-regularization program. By doing so, the survey covered the first, second and forth objectives of the study.

### **3.3 Data Presentation and Analysis**

As a general rule, all the data presentation and analysis techniques were adopted on the principle called fit for purpose- describing, exploring and explaining the peri-urban system and evaluating the policy response-regularization. As a mixed method research and the data collected comprises of both qualitative and quantitative data, the following presentation and analysis methods were utilized.

#### **3.3.1 Data Presentation**

The qualitative data presentation followed: data summary-data reduction-data display steps. In general the data summary and reduction was commenced based on a pre-ordinate analytic and theoretical framework- the DPSIR. All the data was coded, categorized and finally thematized under the five elements of the analytic model. Equally, the data presentation was influenced by the selected research method- sequential exploratory method. The data from interviews and the documents' survey were thematically summarized and indexed, coded and categorized and documented both in hard and soft copies; yet because of the page limitation of this document and the bulk nature of the qualitative data, both verbatim and written recordings were not presented here in a transcribed-organized format. Rather the summary of data was analysed from the



recordings and the important subjects were taken and inserted where necessary, hence the qualitative data was needed to explain the themes identified; to triangulate with the quantitative data, and substantiate certain arguments.

The data was; thus, presented in each of the chapters were organized using thematic/issue approach. Under each theme defined by the theoretical and the analytic framework, the thematic categories and sub-categories were clarified during the tentative interpretations and analysis of the interviews and documents survey. All the relevant data was collected under the five themes and used as constructs of the nodes organized under the themes. These were further qualified through integrating with the research questions hence the relevant data from various data streams were organized to answer the questions. The degree of systematization was maintained through organizing 'the numerical data first and followed by the qualitative and sometimes vice versa' (Cohen et.al., 2018 p. 662).

The quantitative data collected for the research project was a non-parametric data where 'no assumptions about the population was made' (Cohen et.al., 2018 p.727) and generated from the survey questionnaire. The research utilized descriptive statistics as this best fit to the purpose and objectives of the research and no predictions were required. The SPSS V.20 software was used to organize, present and analyse the data. Consequently, frequency tables, graphs and charts were used to summarize, organize and present the data.

### 3.3.2 Data Analysis

The qualitative data analysis entailed to establish thick descriptions through descriptions, understanding nomothetic features (frequencies, patterns and norms) discovering and generating patterns and themes, explaining relationships and exploring underlying logics and concepts. It followed the analysis steps recommended by Cohen et.al. (2018): Entailed description-understanding-explanation-interpretation and conclusion. The analysis was framed through 'progressive focusing' approach as this comply with the exploratory sequential method and guided by the emic analysis approach- focuses on the respondents and key informants own interpretations and perceptions as the data was majorly self-responding. On particular issues the researcher adopted a narrative approach analysis technique- key issues under the major themes were narrated, interpreted and further verified by survey and observation data.

In sum, the qualitative data analysis followed the directed content analysis method- an analysis where the coding was guided by the pre-developed theoretical and analytic frameworks (Cohen et.al., 2018). Because, the method enables to reveal the foci, codes, and described patterns and trends that were further explained by the quantitative data. It also enabled to reduce the texts and integrated them with the summary under the categories and allowed to use systematic coding of raw data in to the conceptually identified categories. It also ushered the purpose of the research through the uses of 'systematic, replicable, observable and rule governed forms of analysis in theory dependent system' (Cohen et.al., 2018 p. 674). To this end the 11-steps of content analysis, recommended by Cohen et.al., (2018) were followed during the analysis.

Accordingly, all the collected qualitative data was summarized, presented and analysed manipulating multi-stage coding process (Cohen et. al., 2018). As an open coding method the categories of interests were generated first. Then as analytic coding the categories and their constructs were interpreted and explained. An axial coding where the relationships between the categories were established using cause and effect diagrams, transition map and complexity map followed this. The selective coding was conducted in order to understand the story line and create the core category based on the DPSIR framework. Finally, theoretical coding were executed following the six Cs and process approach to analyse the underlying theories, causes and relationships of the categories and to evaluate the compatibility of the regularization program as a policy response.

The analytic induction technique was taken as a methodological tool for the analysis of the qualitative data as well. This systematic anal approach was applied to match the responses given in interviews and documents survey in with the field observations and the household survey data. Consequently, The researcher followed the six steps of analytic induction recommended by Cohen et.al. (2018 p. 666). All the qualitative data was scanned and the major categories of the five themes were generated. The relationships between the categories within each theme were established based on the theoretical framework. The summaries of the relationships were narrated. The summaries were refined manipulating the various analyses (both qualitative and quantitative) and conclusions were drawn and these were presented using various figures.

The coded data was analysed through extrapolation techniques where the trends, patterns and differences were explored; standards techniques were used where the contents were evaluated, and indices were used where the relationships and occurrences and co-occurrences were explained. The analysis was summarized in defining the core category, identified based on the DPSIR framework, that had the greatest explanatory potential. The analysis was presented through the descriptive text of the analysis of the narratives where the relationships were explained and discussed to produce thick descriptions. The analysis was followed and organized based on the thematic analysis techniques. The qualitative data analysis was triangulated with the quantitative data analysis.

The quantitative data analysis mostly relied on descriptive statistical analysis. Missing data was managed based on the principle of deletion method (Cohen et. al., 2018). The missing cases were excluded on 'excluding case pair wise' method: 'cases which are incomplete on only variables of interest for a specific statistical calculation' (Cohen et. al., 2018 p. 754) were deleted. This was done because the missing data were seen as randomly scattered and they were unable to seriously distort the overall findings.

Descriptive statistics, mainly frequencies and percentages were used for analysing the quantitative data. Frequency tables were used to summarize, present and analyse the survey responses. Some of the analyses of the frequency tables were further presented in the forms of bar charts, stacked bar charts, histograms, pie charts, line graphs and cross-tabulations.

Cross-tabulations were used to look into the relations between two or more variables and enabled to conduct bi-variate analysis. The percentage difference was utilized to explain asymmetric one-way associations that explained the extent to which the variables imply the main categories of the peri-urban system. Comparisons between the cells within the columns of the same row as well as percentage ratios were utilized to analyse the associations. The SPSS software 17.0 was manipulated to commence this descriptive statistical analysis.

Descriptive statistics i.e. measures of central tendency- means (for scales), mode (for nominal and ordinal data), and medians (for ordinal data) were calculated to show the middle values and the overriding characteristics of the observed phenomenon. These were mainly utilized to explore and describe uni-variable data, which in sum constructed the phenomenon under investigation. Range was used to calculate the dispersal of the data hence it was about identifying the distribution of size than identifying a standard measure of dispersal.

Visual data were also analysed utilizing ARC-GIS V13.0 for the LULC analysis using four maps accessed from Google earth and analysed in supervised classification approach. The standard classifications were adopted and the map analysis was supervised with a ground check. The software also used to quantify the use and cover change.

### **3.4 Ethical Considerations**

All respective ethical conventions and principles were acknowledged with the human subjects: consent, anonymity, confidentiality and autonomous decision by participants to withdraw at any time (*Cohen et. al., 2018*) were communicated to the interviewee before each interview. These were method-specific as stated as below.

The case study was briefly introduced to the city administration mayor's office head and an official administrative permission was granted. All the KIs were informed about the objective of the research and what was expected from them. Their consent was required for both participating in the interview and the audio recordings. On the occasion that recorded permission was not granted, interview responses were recorded with written notes only. All the records were coded with abbreviations and no introduction about the respondent was available in the records. All the data were anonymously coded and secured at the hand of the researcher.

The field observations were conducted after the local administrators were informed and permission was granted. The plot owners were told about the purpose and objectives of the research work and their consent was secured before any observations and informal discussions about their plots were commenced. Everyone who asked about the researcher's visit, photographs and discussions were told about the purpose and objectives of the research. There was only one exception to this rule – a discussion with one of the land brokers was conducted without telling him about the purpose of the research. This was to understand the dynamics of the land market concerning a sensitive and highly confidential

issue, as the other two informal interviews were seen as an inadequate look into the peri-urban land market. A small portion of this data was utilized in this report. All the responses from collected during the field observation discussions and the interviewees were reported using general terms like the KIIs or their positions in the offices.

The households selected for the survey were told about the purpose and objectives of the research and their consent was verbally granted. The identity of the respondents was avoided during the data entry to the SPSS and encoding. Only a sequential ID was attached to each survey. All the data collected was kept confidential as the survey sheets were coded by the sequence of the interview. This, coupled with the confidentiality of the sub division of transects, maintained the anonymity of the respondents. Only the researcher accessed the recorded data and all the hard copies of the survey documents were securely stored at the researchers places without any identification and will be burnt after two years of the submission of the report is submitted. This will maintain the non-traceability of the informants and respondents.

### **3.5 Validity and Reliability**

#### **3.5.1 Validity**

The validity of the research instruments was maintained through various methods. Internal validity was maintained by checking various parts of the data. For instance, Cronbach alphas ( $r_\alpha$ ) s was computed from the household survey sheet, which was measured at nearly 0.78 using the SPSS software (0.70 is the acceptable range). An objective-questions matrix was developed and used to maintain the validity of the interview questions. The face-to-face interview method avoided no-response answers and all the 400 sheets were collected.

The external validity of the data was maintained by its adherence to the theoretical framework of the study, its defined contexts, theory and domains of the issues of interest. Concurrent validity was established through cross-referencing methods and data sources to view various perspectives. Construct validity was maintained through the establishment of common concepts and vocabulary. The required understanding was maintained through enumerators' training on the survey sheet before and after the pilot test. The researcher conducted all of the KIIs, which provided an opportunity to clarify ambiguities and any misunderstandings in concepts and vocabularies.

The researcher attempted to minimize the risk of bias as much as possible. This was maintained by the establishment of fair and operationalized construction of indicators that become clear because of the discussions on concepts and words hence the researcher personally communicated in face-to-face on the plot and neighbourhood/block observations. Observations were developed before the fieldwork based on the theoretical issues identified during the interview and the local field observation blocks were randomly taken while wondering around. Due attention was given to observation locations based on the pre-prepared indicators. Field notes, coupled with the photographs and tentative interpretations,

were presented to fellow scholars for deliberation and to minimize the researcher's bias. Inferences about the peri-urban Hawassa were generated by referencing the field observation data and by data collected by the other means including the interview, documents' survey and household survey.

### 3.5.2 Reliability

Researcher's reliability, in relation to data collection, interpretation and analysis etc, was maintained through the establishment of peer reviews. The researcher (both formally and informally) presented data, findings and tentative interpretations to development study PhD fellows at Institute of Policy and Development Research in Hawassa University, and duly considered and recognized when the majority agreed their reflections and comments to avoid personal bias. Establishing the following three chains of evidence minimized researcher's bias. One, an interested external researcher (an associate professor of the University of Oklahoma) was engaged in all stages of the research: from the inception of the proposal, the mid-term field observations and comments on critical chapters of the report. Second, the supervisor supervised the day-to-day activities of the household survey data enumerators. And three, a secret code was given to the back of the survey sheets, which synchronized the survey sheet and the plot in order to recheck the duties of the enumerators in case of any doubts.

In sum, reliability of the data collection was ensured through fully, consistently and securely applying the pre-determined construct indicators to all observations; commencing the observation just by my own, and writing all the field reports immediately and making temporary interpretations.

## 4. Peri-urban Hawassa: the state

This chapter elaborates and introduces the existing conditions of the peri-urban settlements of Hawassa. It describes the spatial, physical, socio-economic conditions. It analyses how different factors interacted in yielding the existing peri-urban state. The complexity mapping was used to display the interactions.

### 4.1 The Essentials of the State of Peri-urban Hawassa

#### 4.1.1 The Spatio-temporal State

Peri-urban Hawassa was situated at the city's fringe in the land found between the municipal boundary and administrative boundary of the city (figure 4.1). It appeared in two sub-cities: *Tabor* and *Hawella-Tulla*. Those situated in the *Tabor* sub-city emerged along an urban fringe and its farmland. This remained adjacent to the land expropriated between 2003-2008 and was reserved for the future expansion. The peri-urban settlements in the *Hawella-Tulla* sub-city were established on the land annexed in 2005. This land is located between the administrative and the municipal boundary. The settlements were situated in seven *kebeles* (four in *Tabor* and three in *Hawella-Tulla*); 14 neighbourhoods (eight in *Tabor* and six in *Hawella-Tulla*), and on 1,531.65 hectares of land subdivided in 792 blocks and 17,916 parcels (table 4.1). This constituted 10 percent of the city's total area and nearly 30 percent of the built area. The peri-urban settlements were mostly situated on land annexed to the administrative boundary of the city and remained rural.

Peri-urban Hawassa started to emerge in the 1980s and has intensified since 2003 (figure 4.2) consequent to the transitions of rural villages established in the 1950s and 1990s. Nearly 32 percent of the residents settled between 2004 and 2010 (during the third phase of the city's urbanization) and 60 percent of the residents have settled since 2011 (in the fourth phase of the city's urbanization).

The former rural villages of peri-urban Hawassa had two origins. The first rural villages were established during the emperor (before the 1960s) (by the farmers and tenants of the landlords) and later during the villagization policy of the *Dergue* /socialist military regime/ in 1975 (as members of the Farmers' Association). These were situated at *Datto-Odahe* and *Tullo* in the sub-city of *Hawella-Tulla*. The villages were home for Sidama farmers who had opted to live nearby the lake and the plain land, which was convenient for cattle herding and maize farming (KIIs, 2016 & 2017). The farmers became part of the rural *Hawella-Tulla* sub-city established on the Hawassa administration's annexed land. As these villages began to grow, their physical and socio-economic structures were changed. Rural land began to transition into settlements with peri-urban characteristics. These settlements covered the larger area of the city to the northeast, East, South and southwest. 71.2 percent of the peri-urban settlements were situated in the sub-city (table 4.1).

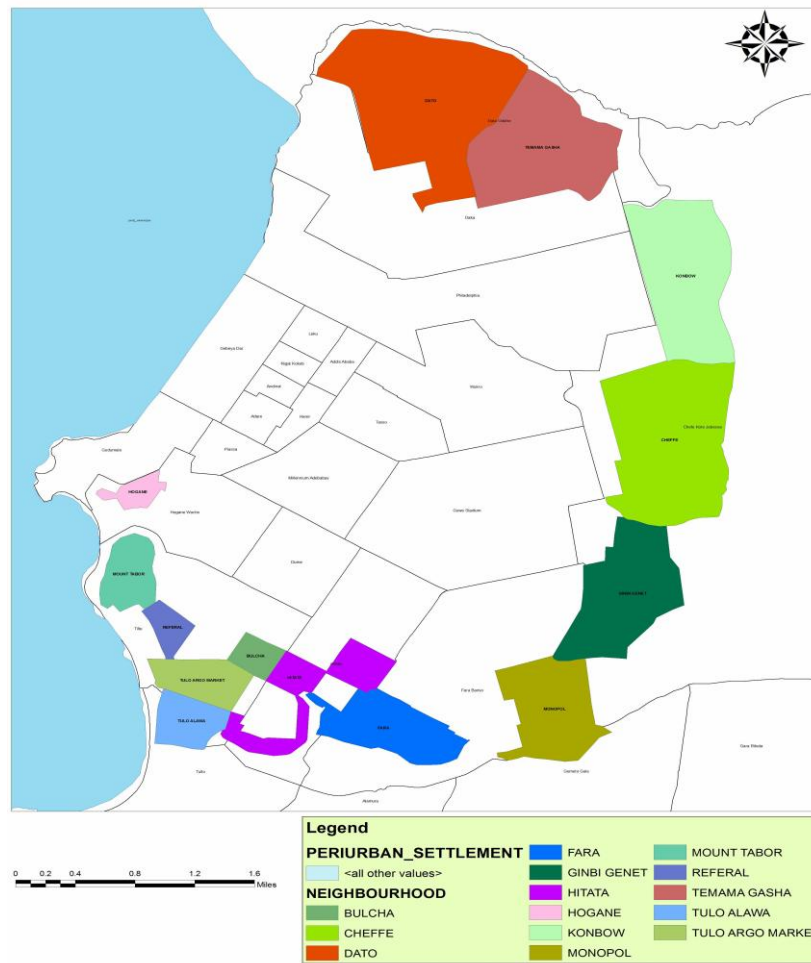


Figure 4.1 Locations of peri-urban settlements at Hawassa (2017)  
(Source: SNNPRS 2015 & HCA 2016a)

The second cause of peri-urban growth originated from a group of rural villages founded after the land distribution of 1993 (KIIs 2016). In the years between 1993-1995, the TGE had demolished the state farms circumscribed the then border of the city and distributed most of the land to the farmers living in the nearby *kebeles* and reserved some amount to the city's expansion (KIIs, 2016). Some of these farmers started to cultivate local crops like *Enset* (false banana) and established their residential villages with the rationale of ensuring farm security and cattle herding sites (KIIs, 2016).

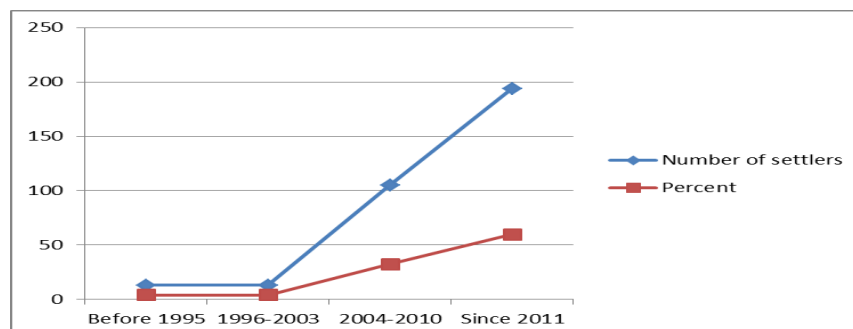


Figure 4.2 Years of settlement and number of settlers in the peri-urban Hawassa (2017)  
(Source: own survey, 2017)



Table 4.1 Land occupied in the peri-urban Hawassa (2016)

Sub-City	<i>Kebele</i>	Neighborhood	Area (Hectare)	Blocks	Number of Parcel s
Hawella- Tulla	<i>Datto-Odahe</i>	<i>Datto</i>	290.56		
	<i>Datto-Odahe</i>	<i>TemamaGasha</i>	186.39	314	5314
	<i>Cheffe-Kottejebesa</i>	<i>Konbow</i>	178.5		
	<i>Cheffe-Kottejebesa</i>	<i>Cheffe</i>	244.5		
	<i>Cheffe-Kottejebesa</i>	<i>Ginbi Genet</i>	148.18	47	1706
	<i>Tullo</i>	<i>TulloAlawa</i>	43	47	1046
Sub-total			1091.13	408	8066
Tabor	<i>Fara</i>	<i>Monopol</i>	111.4		
	<i>Fara</i>	<i>Fara</i>	92.72	176	4368
	<i>Hitata</i>	<i>Hitata</i>	78.08	84	2107
	<i>Tilte</i>	<i>Tullo-Argo</i>	49.78	49	1296
	<i>Tilte</i>	<i>Bulcha</i>	21.48		
	<i>Tilte</i>	<i>Referal</i>	21.72		
	<i>Tilte</i>	<i>Mount Tabor</i>	47.15	58	1419
	<i>HoganeWacho</i>	<i>Hogane</i>	18.19	17	151
Others					509
Sub-total			440.52	384	9850
Total			1531.65	792	17916

(Source: SNNPRS 2015 & HCA 2016a)

These villages were situated around the Mount *Tabor*, Mount *Alamura*, *Doro Irbata* (a state-owned poultry farm), *Tilte* and *Furra* vicinities of *Tabor* sub-city. Later, during the expropriations of 2003-2008, some of these were demolished and relocated while some remained and continued to grow (Field observations, 2016 & 2017; KIIs, 2016). These rural villages had been changing and became connected to the city's facility systems. As the built structures became dense, services and infrastructure were also supplied by the city administration. As a result, the settlements experienced rurbanization and continued to grow exhibiting an inside-out development as the rural villages expand outwardly. This transformation began to yield peri-urbanization. Yet, the peri-urban settlements lacked urban plans and the landholders had no tenure rights

The spatio-temporal state of Hawassa's annexed rural land functioned as a place for peri-urban transformation. More than 70 percent of the peri-urban settlements were situated in these areas. They were developing both as transforming rural villages /rurbanization/ and their extensions.

#### 4.1.2 The Socio-economic State

Quantitative base line data about early rural villages weren't available, which made comparisons difficult. The qualitative data about the earlier rural villages of peri-urban Hawassa indicated that these rural villages were home for the Sidama (majorly protestant) that lived in rural huts; engaged in farming and cattle herding, and less linked to the city systems (KIIs, 2016 & 2017). For example, 200 households at *Datto-Odahe* (which came from the then *Hawella-Wondo*, *Tullo* and *Alamura kebeles*) settled around the early 1930s



(KIIs, 2017) and continued to grow in a slow and relatively stable rate until 2003 (figure 4.2).

The Sidama's homogeneous and monochrome settlements changed following the rapid increase of new settlers. This especially started in 2003, when new settlers from different corners of the country settled in the villages. During the time of data collection 86 percent (N=398) of the residents were new settlers and 32 percent and 48 percent of the residents came from Hawassa city and SNNPRS and Sidama zone, respectively. A few (2.4 percent) came from the other regions (table 4.2).

Table 4.2 Place of origin of Hawassa's peri-urban settlers (2017)

Place of origin	Frequency	Percent
Born here	57	14.3
Hawassa City	126	31.7
Sidama zone/out of Hawassa City	67	16.8
SNNPRS/out of Sidama zone and Hawassa city/	124	31.2
Addis Ababa	3	.8
Oromia	15	3.8
Amhara	4	1.0
Tigrai	1	.3
Other Regions	1	.3
Total	398	100.0

(Source: own survey, 2017)

Consequently, the ethnic and religious composition of the residents was changed. The proportion of non-Sidama inhabitants was increasing, since 2003, and it was almost twice greater than the number of the Sidama inhabitants at each stages of the city's peri-urban development (the stages will be elaborated in chapter 6 later) (figure 4.4). The religious composition of the residents continued to be dominantly protestant (72 percent) when recorded in 2017. However, the number of Orthodox Christians, Muslims and Catholics reached 16.6, 4.8 and 4 percent respectively showing the rising heterogeneity (figure 4.3).

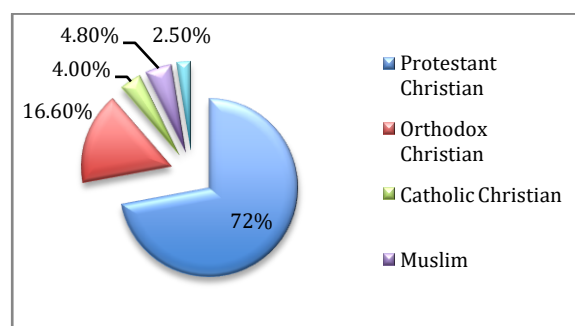


Figure 4.3 Religious composition of residents of peri-urban Hawassa (2017)

(Source: own survey, 2017)

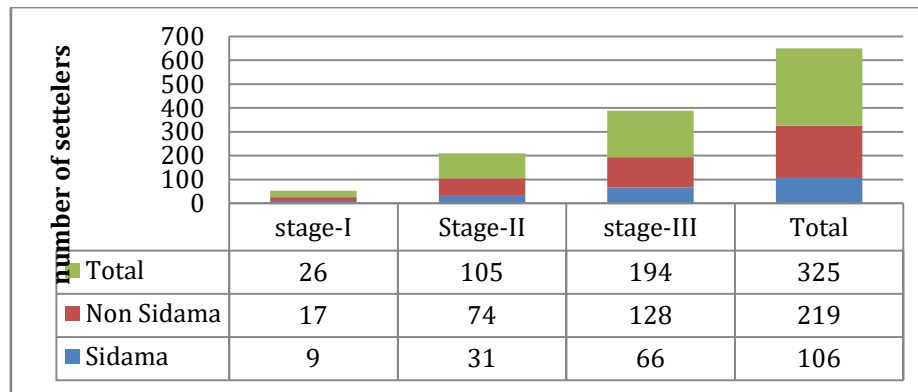


Figure 4.4 Ethnic compositions of residents of peri-urban Hawassa at each stages of the peri-urban development (2017)  
(Source: own survey, 2017)

Peri-urban Hawassa has changed its demographic characteristics. The demographic structure of the peri-urban households stipulated that the majority of households were young, married, male-headed and approaching to the urban-household size type. Peri-urban Hawassa was youth-dominated. Accordingly in 2017, 35.5 and 55.4 percent of the residents were in between the 0-15 and 15-45 age groups (figure 4.5). Most of the households were married (93 percent) and male headed (92 percent) (N=400) (figure 4.6 & 4.7). The household size is similar to urban households. The average amount of the larger four mode values of the household size was 4.5 (Annex-ii). This was near to the zonal urban average household size (4.3) and smaller than rural household size (5.0 percent) (CSA, 2017).

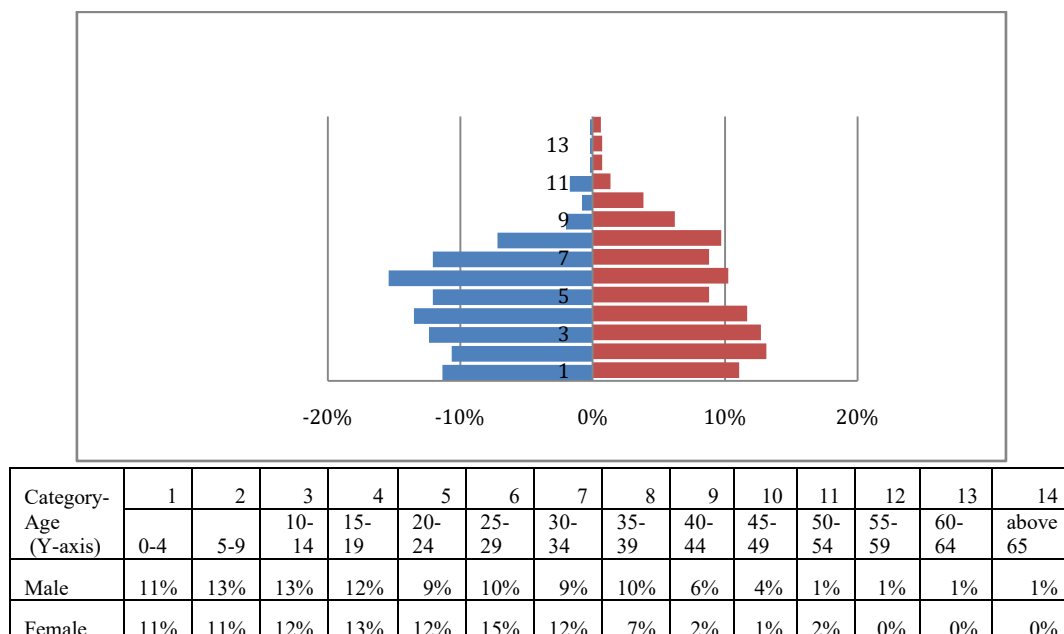


Figure 4.5 Population pyramid of peri-urban Hawassa (2017)  
(Source: own survey, 2017)

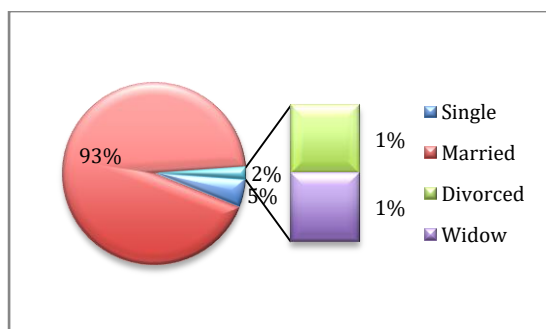


Figure 4.6 Marital status of peri-urban residents of Hawassa (2017)  
(Source: own survey, 2017)

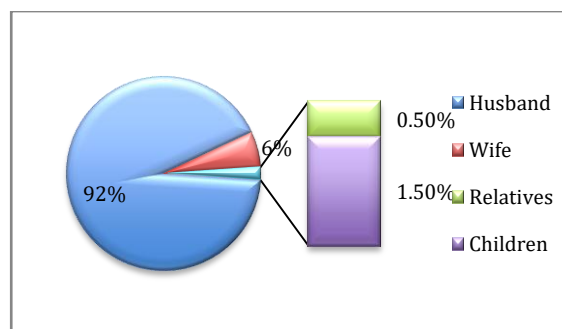


Figure 4.7 Heads of households of peri-urban Hawassa (2017)  
(Source: own survey, 2017)

Conversely, households and rural villages that were previously committed to agriculture, farming and cattle herding were engaged in diverse economic activities. Urban economic activities became dominant methods for income. In 2017, 74.7 percent of household members engaged in diverse urban economic activities: public service (29.8), commercial activities (27.6 percent) and daily labor (17.3) (figure 4.8).

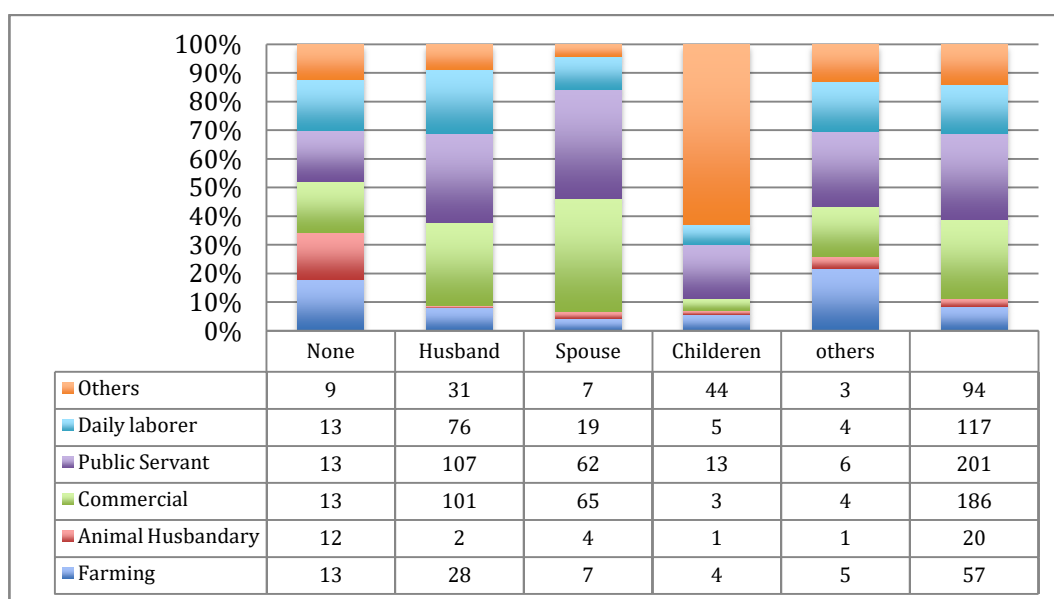


Figure 4.8 Economic activities of the members of the household at peri-urban Hawassa (2017)  
(Source: own survey, 2017)

The socio-economic changes of peri-urban residents implied the peri-urban transitions the previous rural villages were experiencing. The existing settlements became a transition zone where urban and rural economies and social characteristics co-existed. On the other hand, the area's growth exacerbated the demand for further development, as social characteristics changed and economies improved. It also demonstrated that peri-urban residences were not only home for the poor, but also for the emerging middle income as nearly 33 percent were getting more than 3360ETB- (figure 4.9) (as per the ILO category of household income stated that defined economic classes of the

developing world (*Kapsos & Bourmpoula, 2013*). This implies the growing possibilities for saving, investment including in housing construction.

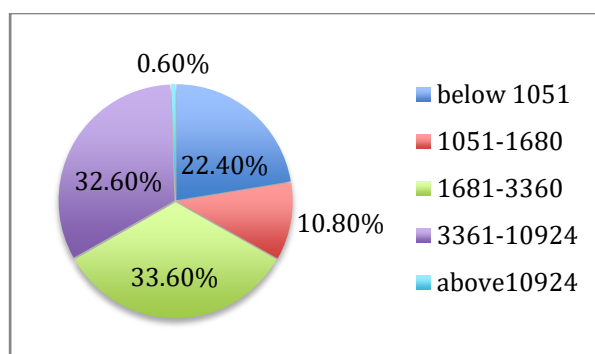


Figure 4. 9 The level of income of employed members of the household in ETB/month/employed member at peri-urban Hawassa in 2017  
(Source: own survey, 2017)

#### 4.1.3 The State of Physical Structures

The state of the physical structures of peri-urban Hawassa was explained by the functional typology of the houses: the floor area, the construction materials utilized, and the estimated construction costs. Regarding the functional typology of the peri-urban houses, 58.5 percent were service quarters, 24.0 percent were the main house only, and 16.5 percent constituted both parts of the main house and service quarters. The main house and service quarters combined accounted for 40.5 percent of floor area use; just 0.5 percent was rural huts (table 4.3). The KIIs (2016, 2017) argued that this was due to new landholders' initial investments after land acquisition. The settlements developed incrementally as the smaller structures (service quarters- small rooms constructed at the back of the plot as stated in table 4.4) were developed first and the larger (Main house) continued later (KIIs, 2016; Field observations, 2016 & 2017). The settlements were urbanizing as rural huts diminished and the urban type houses were remained. These highlight physical transitions and practices of incremental development strategies.

Table 4.3 Types of houses constructed at peri-urban Hawassa (2017)

Types of the house	Freq.	Percent
Main house	96	24,0
Service quarter	234	58,5
Main house and service quarter	66	16,5
Rural hut	2	0,5
Other	2	0,5
Total	400	100,0

(Source: own survey, 2017)

The built structures in two thirds of the plots had a lesser floor area ratio as 66.3 percent of the main houses and 65.7 percent of the service quarters were 20-60M<sup>2</sup> wide (table 4.4). As a result, most of the plots utilized only about nearly 7-20percent

of the 300M<sup>2</sup> plot (the mean average plot size in peri-urban Hawassa). This was mainly because of the investment capacity of the developers and the proactive risk management strategy of the new owners, as the threats to demolish the structures were evident (KIIs, 2016). The unanimity of the structures was shown in the comparison between the floor area and functional typology; two thirds of the floor and two thirds of the built structures fall in same range.

Table 4.4 The floor area of built structures in peri-urban Hawassa (2017)

Built-up floor area in M <sup>2</sup>	Main house		Service		Main house and service	
	Freq.	Percent	Freq.	Percent	Freq.	Percent
up to 20	14	12,4	30	12,6	10	17,2
20-40	38	33,6	94	39,3	4	6,9
40-60	37	32,7	63	26,4	13	22,4
60-80	8	7,1	26	10,9	4	6,9
80-100	6	5,3	14	5,9	6	10,3
100 and above	10	8,8	12	5	21	36,2
	113	100	239	100	58	100

(Source: own survey, 2017)

The estimated construction cost of 287 plots revealed that 70 percent of the structures had an investment below 100,000ETB and 20 percent of the plots had investments between 100,000 and 200,000ETB (table 4.5). This was far smaller than the city administration's minimum standard investment level of construction and engineering estimates, which was 250,000ETB per 250M<sup>2</sup> wide plot (KIIs, 2017). This was also seen from the type of construction materials utilized, as 89.2percent of the houses were built from wood, mud and CIS roof.

Table 4.5 Estimated construction costs of the houses in peri-urban Hawassa (2017)

Total construction cost in ETB	Freq.	Percent
Up to 100,000	202	70,4
100,000-200,000	57	19,9
200,000-300,000	12	4,2
300,000-400,000	6	2,1
400,000-500,000	8	2,8
500,000 & above	2	0,7
	287	100,0

(Source: own survey, 2017)

Thus, it could be said that peri-urban Hawassa was physically transformed as 16.2 percent of the houses had a floor area of 80M<sup>2</sup> and above.10 percent of the houses had an estimated construction cost greater than 400,00ETB. These resembled the floor area sizes and estimated costs of plots found in the inner city. In addition, 10.3 percent of the houses were built from Hollow Concrete Block (HCB), concrete and

Corrugated Iron Sheet (CIS) roofing (typical materials prescribed by the municipality). Rural construction materials like grass and wood structures were lowered (only accounted 0.3 percent) (table 4.6). These highlight the lesser relative density of the built area as the peri-urban areas were transformed by the innovative, incremental and proactive strategies of the developers.

Table 4.6 Construction materials in peri-urban Hawassa (2017)

Construction Materials	frequency	Percent
Wood, mud, and grass roof	2	0.3
Wood, mud, and CIS roof	354	89.2
HCB, cement plaster and CIS roof	41	10.3
Others	1	0.3
Total	398	100.0

(Source: own survey, 2017)

#### 4.1.4 The State of Services and Infrastructure

##### A. Socio-economic Services

Peri-urban Hawassa had better access to education services. Private owners established kindergartens and elementary schools were funded through churches and the public sector. Consequently, 76.1 percent (N=117) and 64.5 percent (N=219) of the households had accessed kindergarten and primary school facilities in their villages, respectively and the rest studied in Hawassa city. Yet, 90.1 (N=91) and 87.1 (N=31) percent of the students attended secondary and tertiary schools in Hawassa city (Annex iii-a). This was acceptable as per the national education service delivery hierarchy. The availability of education services in the villages was to some extent dependent on the city's education facilities because of the adjacent locations.

According to the Ethiopian government's health policy, primary health services (health extension services and health posts) should be available in the *kebele* areas and diagnostic and treatment services should be accessible in sub-cities. Referral services should be delivered at district and city administration levels. To this end, the residents of peri-urban Hawassa were deprived of even the most basic services. 64.8 percent and 31.7 percent (N=281) of the respondents accessed primary services out of their *kebele* and sub-city. More than half (55.2 percent) of the residents were dependent on the city's health services (Annex iii-b). On the other hand, these peri-urban residents have accessed more religious places in their local *kebele* than in Hawassa city (85.5 percent (N=399)). Religious institutions have bought land from farmers to establish their centres (Field observations, 2016 & 2017). Yet 89.1 percent of the residents accessed funeral places at Hawassa centre (Annex iii-c).

The residents were engaged in various Community Based Organizations (CBOs) that secured their social and economic integration and cooperation. Almost all of the households (94.4 percent N=338) were engaged in *Edir*- the strongest local social security scheme and CBO in Ethiopia. They also began to economically cooperate, as

65 percent (N=223) of the households were engaged in *Equb*- the well-known microfinance organization of the community in Ethiopia (table 4.7). These socio-economic associations /CBOs/could strengthen the social cohesion of the new and former residents.

Table 4.7 Participation of peri-urban residents in the CBOs (2017)

Types of CBOs	N	Freq.	Percent
Engaged in none	126	47	37.3
Edir	338	319	94.4
Equb	223	145	65.0
Ethnic community	137	34	24.8
Others	135	20	14.8

(Source: own survey, 2017)

Economic amenities such as market places and financial services were also better accessible. 64.2 and 18.1 percent of the peri-urban residents accessed market centres in the *kebele* for daily and weekly shopping. 81.7 and 90.2 percent of the residents accessed city market places for weekly and monthly shopping, and even more accessed city market places for occasional shopping (Annex iii-d). The residents were, by the large, dependent on financial institutions found in the city as 60.3 percent (N=262) of the residents were utilizing the commercial bank found at the adjacent *kebeles* of the city (*Addis Ketema* and *Tabor* sub-cities). 45.4 percent of the residents used the banks in the city. Peri-urban residents were also deprived of micro-finance institutions expected to serve the rural communities. Only 2.3 percent of the residents could access these services in the *kebeles* (Annex iii-e).

In summary, the relative accessibility of these social and economic services in the *kebeles* and the dependency on services found in the adjacent city improved the liveability of the peri-urban areas and attracted new residents to settle.

Table 4.8 Plots connected to different road types in peri-urban Hawassa (2017)

	Asphalt	Community built road	URRAP	Foot path	Earth paved	Others	Total
Frequency	8	101	36	106	134	2	387
percent	2,1	26,1	9,3	27,4	34,6	0,6	100,0

(Source: own survey, 2017)

### **B. Infrastructure, Transport and Amenities**

In peri-urban Hawassa, only 45.0 percent of the plots (N=387) had access to publicly built roads (2.1 percent asphalt, 34.6 percent seasonal earth paved roads, and 9.3 percent URRAP-built rural roads). The majority (53.5 percent) was dependent on sub-standard community constructed road networks (26.1percent) and footpaths (27.4 percent) (table 4.8). Footpaths dominated the intra neighbourhood road networks



(Field observations, 2016 & 2017). Though inadequate, there were functional road networks that enhanced the connectivity and accessibility of the communities.

The residents of peri-urban Hawassa relied on different modes of transport (figure 4.10). More than one third (39.3 percent) of the residents relied on walking while 30.2 percent utilized the three wheeled motorcycles locally called BJJ and 16.6 percent used horse carts (Annex iv-e). The use of new modes of urban transports such as private transport (4.1 percent), city buses (1.9 percent) and minibus taxis (7.0 percent) emerged (figure 4.10). These mixed modes of transport made transportation accessible, affordable and flexible.

Electricity was accessible in the peri-urban neighbourhoods, through the national rural electrification programme, which extended from the city's grid. Compliances were wider because of the lack of private meters to every household, adequacy of its power and repetitive blackouts (KIIs, 2016). 47.4 percent of the households had private meter access while 12.9 percent were accessed through common meters and 39.6 through extensions from private vendors through substandard transmission networks (table 4.9, Field observations, 2016 & 2017). Nonetheless, in peri-urban Hawassa, 90.6, 25.2, and 84.9 percent (N=387) of the households used electricity for light, cooking and as sources of power/charging electronics equipment/ respectively (Annex iv-a). Because the electricity was accessed through informal ways and was inconsistent, households kept candles (56 percent); solar PV (12.2 percent), and charged cells (7.6 percent) for light and 90.0 percents were dependent on wood/charcoal fuel for cooking. The limited access to electricity attracted the use of modern household technologies. These modern technologies contributed to transform the villages by attracting new settlers and improving settlement liveability.

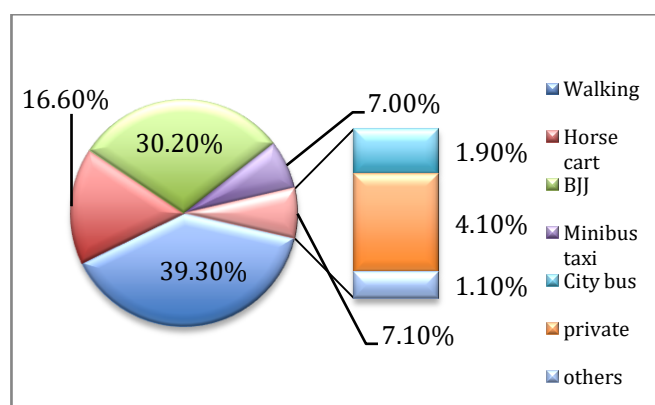


Figure 4.10 Modes of transport at peri-urban Hawassa  
(Source: own survey, 2017)

Residents of peri-urban Hawassa had better access to telephone services. 91 percent of the household members (96.6 percent husbands (N=355), 96.0 percent spouses (N=327), 93.4 children (N=121) and 78 percent of others (N=41)) were mobile phone users (Annex iv-b). The neighbourhoods had reliable mobile network towers (Field

observations, 2016 & 2017). The peri-urban areas also had an access for fixed landline and wireless home cell telephone networks, although they were not widely utilized. The phone services improved connectivity, accessibility and liveability of the settlements.

Water lines were delivered based on rural development plans as an extension of city services. Consequently, only 20.9 percent (N=387) of the households accessed water from private meter tap, while 1.8 and 36.9 percent of the households were dependent on communal taps and private vendors, respectively. Also, residents utilized borehole water (26.9 percent) and lake/river water (13.4 percent) (Annex iv-c). Though there was inadequate water provision in the areas, the limited supply was enough to support the liveability of the settlements and thereby supported the transformation of rural areas and the peri-urban settlements.

Table 4.9 Electricity meter distribution in peri-urban Hawassa (2017)

Menses	Freq.	Percent
Private meter	176	47,4
Common meter	48	12,9
Private vendor	147	39,6
Total	371	100,0

(Source: own survey, 2017)

Waste was infrequently collected and disposed of in peri-urban Hawassa, as waste management facilities were not available in the areas. Only a few donkey-pulled waste collector carts operated irregularly. The waste collectors complained that neighbourhood households hardly disposed solid wastes through their network. The collectors often used the city's dumping site as a final disposal point and less frequently disposed on fields (Field observations, 2017; KIIs, 2017).

The peri-urban households had poorly managed waste. 76.5 percent of the households collected the solid waste in their compound and 54.7 percent of them disposed it in nearby locations (on the field and at the roadsides). In addition, 75.5 percent of the households collected liquid waste in their compound and 73.25 disposed of it in their compound or at nearby (38, 36.5 and 17.5 percents in the compound, in the field and outskirts, respectively) (Annex iv-d). The poor waste management practices implied the negative health and environmental impacts of denser peri-urban settlements.

#### 4.1.5 The State of Local Governance

Local governments delivered many administrative services at the lower administrative tiers in peri-urban Hawassa. As a result, the residents relied more on *kebele* and sub-city administration as 81.0 percent (N=947) (67.7 on *kebele* and 14.3 on the sub-city) of the residents went to *kebele* administrations for the administrative services (Annex v-a). Yet municipal services were centralized at the main municipality, as 57.5 of the

residents visited the municipality and the higher administrative offices (Annex v-b). These visits occurred despite the decentralization of municipal services to the sub-city and the decentralization of rural land administration duties to the rural *kebele* administrations (FDRE, 2005a & 2013).

As far as local governance is concerned, participation on elections was seen as the other parameter. The residents had not adequately participated in local and national elections. On average, 56 percent of the residents had participated in nine local and national elections conducted in between of 1995-2015 (Annex v-c). The number of participants significantly increased since 2007's election after the annexation spurred by the defeat of the ruling party in the preceding election cause a rapid increase of new residents.

Converse to the peri-urban areas, rural *kebeles* of the city were deprived of rural services. Even though the majority of the peri-urban settlements situated in the 11 *kebeles* of *Hawella-Tulla* sub-city were coined as rural *kebeles*, the administrative hierarchies barely delivered rural administrative and development services. 72.2 percent (N=399) of the residents had access to none of these services. Among the 22 percent of residents that had benefited the rural services, 15.3, 50 and 5.5 percent accessed rural land registration services; rural health extension and rural water and road developments services respectively (table 4.10 & Annex v).

Table 4.10 Rural administrative and development services accessed by the residents of peri-urban Hawassa (2017)

Types of services	Freq.	Percent
No service	288	72,2
Rural land registration	61	15,3
Rural health extension	20	5,0
Agriculture development services	15	3,8
Rural safety net	4	1,0
Rural road	15	3,8
Rural water development	14	3,5
Rural administration	8	2,0
Rural justice and court	13	3,3
Other	5	1,3

(Source: own survey, 2017)

To conclude, the accessibility of local government services at *kebele* level improved the liveability of the settlements, despite of the deprivations of municipal and rural services. New residents' confidence was enhanced as they felt the existence of an administrative body in the settlements. On the other hand, the deprivation of municipal services also enhanced the expansion of informal developments, as few were following and/or enforcing construction standards. These enabled the practices

of incremental development functional and allowed the lower income residents to commence a phase-by-phase development.

#### **4.1.6 The Morphology of Peri-urban Hawassa**

The morphology of peri-urban Hawassa is explained here in terms of plot characteristics (plot size, plot use and floor area), block organization, road network and land use. In the planned areas of Hawassa city, a rectangular grid was the common morphology. The plot area was different in terms of the land use and the year of land development. The common plot area in the recent years was 160-250M<sup>2</sup> for residential structures and 1500-5000M<sup>2</sup> for other uses.

The blocks in peri-urban areas resembled rectangular shapes as most of them were organized based on the 1975 and 1995 land redistributions. These farm boundaries served as footpaths and later as community roads. Peri-urban blocks had longer length because individual sub-dividers were not motivated to maintain standards rather motivated by the income they got from selling the land (KIIs, 2016). The blocks suffered from the variations of plot length. New buyers were interested to ensure access to road thus the plot were dependent on the existing and the anticipated road network. A few landowners started to put aside land for roads. Blocks were majorly sub-divided in rectangular shapes (Field observations, 2016 & 2017).

The mostly-rectangular plot shape in peri-urban Hawassa was also determined by the intended use of the buyer (KIIs, 2016). The area of the plots used for residential and mixed-use varied from 14M<sup>2</sup> to 3000M<sup>2</sup> (Annex vi-a). Most of the plots were subdivided to resemble the area of residential plots found in the city. Hence, the mode value of plot area was 277.5M<sup>2</sup> and 90 percent of the average plots' area fall between 184-430M<sup>2</sup> (Annex vi-a). This enabled the settlement to form a rectangular grid. The plot area was very similar to the city's standards and highlights the dominance of residential land use in peri-urban Hawassa.

The plots had not only diverse size but also diverse dimension. The dimensions ranged from 40\*2 to 24\*336 meters. Yet 82.6 percent of the dimensions fall in to five types that ranged from 21\*8 to 24\*12 meters. These plots were similar to the dimensions of residential plots found in the city: 18\*10, 20\*8, 20\*10, 20\*15 and 25\*15meters. The width was less varied: only 20.3 percent of the plots had a more varied width than length, where 96.7 percent of the plots had varied length (Annex vi-b). Width determines road access and thus it was less varied. The sub-divider had more freedom to extend the length than extend the width hence all the new buyers demanded to access the road. Primary landholders owned the plots with longer width (Field observations, 2016). These owners started to retain these plots because they anticipated benefits from increased land values as they observed from the roadside plots in the city (KIIs 2016, 2017).

The other important plot characteristic that determined the morphology was the land use. Nearly half of the plots (47.5 percent) in the peri-urban Hawassa utilized only the back section of the plot, as stipulated in type A of figure 4.11 below. Another 20 percent slightly modified this layout and utilized the bottom back section connected with the side as presented in type B of figure 4.11. Nearly 80 percents of the plots made the front of the plots free. The front of each of the parcels was rarely utilized. Only 20.1 percent used the front side (table 4.11, Filed observations, 2016 & 2017). These also show the strategic, innovative and proactive development strategies of the developers as they intentionally did both for the reasons of risk management and incremental development.

Table 4.11 Plot land use in peri-urban Hawassa (2017)

Plot land use typology	Number of plots	Percentage
A	189	47,5
B	80	20,1
C	25	6,3
D	10	2,5
E	52	13,1
F	29	7,3
Other	13	3,3
Total	398	100,0

(Source: own survey, 2017)

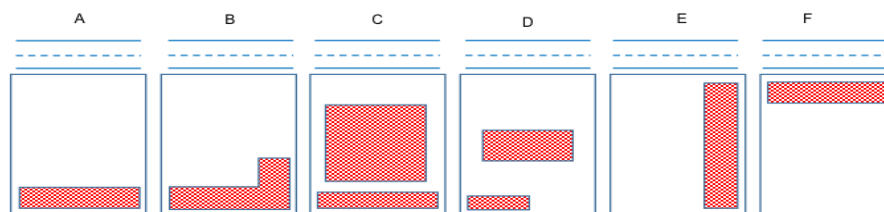


Figure 4.11 Major types of plot use in peri-urban Hawassa (2017)

(Source: own survey, 2017)

Peri-urban areas were predominantly residential. 79.4, 1.5 and 17 percent of the plots were used for residential, commercial and mixed (residential and commercial) purposes, respectively. A few plots were used for dairy (0.5 percent) and dairy and farming mixed (1.3 percent) use (figure 4.12).

The other constitute of the peri-urban morphology was its road network. The peri-urban road network comprised of arterials (14-30M wide on average), which were built as part of the national, city and rural road network (i.e. asphalt roads); collectors (8-10M) that were built as points of access to villages and farms during the land subdivisions, and footpaths (1.5-2M) established along the farm boundaries and as an intra-village network. The footpaths were also established as the sub-dividers intentionally left the access roads along the new plots. Most of the collectors and

footpaths exhibited *cul de sac* characteristics as they only intended to enhance intra-village networks (figure 4.13). Design standards were upheld in the design of the arterial roads built by the public body. The collectors and footpaths were sub-standard, earth-pressed and paved seasonal roads. The arterials improved connectivity and access to the city, while the collectors and footpaths improved neighbourhood access and settlements liveability, which, in turn, convinced new people to settle in peri-urban Hawassa.

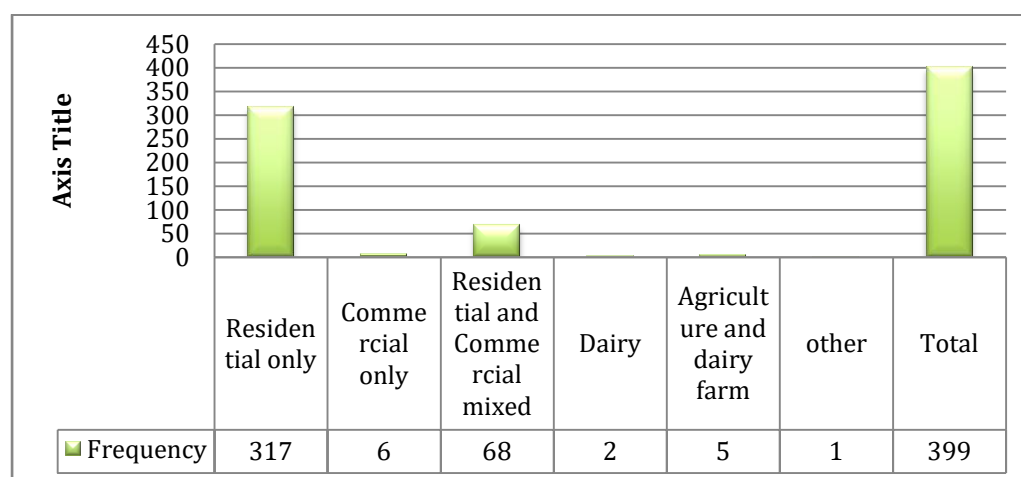


Figure 4.12 Major land uses in peri-urban Hawassa (2017)

(Source: own survey, 2017)

In sum, peri-urban Hawassa became an urbanized residential neighbourhood. The plots and blocks were regularly organized. Residential neighbourhoods were bounded by commercial (plots which consisted structures used for commercial services likes shops) and mixed (plots which consisted strictures used for commercial and residential services) uses adjacent to the arterial roads. The morphology of the peri-urban settlements demonstrated the adoption and extension of planning principles that enhanced the liveability and connectivity of the peri-urban development. The existing morphology also determined the plot sizing process as most of the land parcels were of regular shape and the plot sizes approached the standard area prescribed by the city administration. The intended land use influenced the built area and use of the plots. Some irregularities of the block formation, due to plot length variations, were affected by the road network, which later affected the standard and forms of roads. However, the existing morphology created a freedom of land use that attracted new settlers. i.e some of which wanted larger plots for dairy farms. The morphology minimized the risk of demolition because it affected the regularization process and enhanced the confidence of the new settlers. The existing road network also enhanced connectivity and access so that the new residents could buy parcels far away from the highways at a relatively lesser price.





Figure 4.13 Land use layout of peri-urban neighbourhood- *Datto-Odahe*, Hawassa (2017)

(Source: HCA, 2016 & Field observation, 2017)

## 4.2 The Complex State of Peri-urban Hawassa

The various implications of the aforementioned elements of that caused the growth of peri-urban Hawassa unveiled that the state of peri-urban was not just a linear spatial development, but also a complex dynamic phenomenon. Peri-urban Hawassa was the result of various forces interacting. The change in land use not only gave demand to land use planning. It was an output of various forces that existed, interacted and yielded a peri-urban state of being. The rurbanization of the previous rural villages, the urbanization of the city and its rapid horizontal expansion, and the following forces and their systems were among the major determinants of the state of peri-urban Hawassa. The complex dynamic state of peri-urban Hawassa caused from the interactions of the forces that existed in the peri-urban system was analysed here and presented in the complexity map shown in the figure 4.14 below. Their interactions and effects, given the aforementioned empirical evidences, were described as follows.

### ***Rurbanization***

The former rural villages, located in vicinities near urban areas in Ethiopia ([Pankhurst, 2017](#)) were transformed. This rurbanization contributed for the transition to peri-urbanization. The provision of rural services in these areas initiated socio-economic transformations. For instance schools were constricted and as a result the youth joined schools. Agricultural extension services were delivered and agricultural productivity increased which resulted in increases in household income. These and other socio-economic developments started to change the socio-economic dynamics of the rural community. For example, some of the residents had sold the land found along the highway and engaged in urban economic activities.



The rurbanization contributed to the densification of rural villages and the emergence of new settlements in the farming areas. As a result, the villages were connected and merged with the border of the city. This helped the villages integrate with the city's systems and, backed by the annexation, enhanced the urbanization of the city. Consequently, urban economic activities, functions and structures entered the rurbanized villages and new land uses that yielded the peri-urban land use emerged. The breadth of the rurbanization process initiated many to enter in to informal land sale and established informal land markets. Brokers (many of them the educated youth from the localities) emerged and initiated land sales and institutionalized the informal land markets.

As aresult, the number of settlers increased and the settlements were getting diversified and heterogeneous in ethnicities and religions. The rural land was transformed to urban use as rural villages became more dense with built structures. The nature of physical structures changed from rural huts in to wood-, mud- and CIS-made structures. The circular form of rural settlement, common in rural Ethiopia, changed to rectangular grid forms and shaped by the expansion of new rural roads. As the rurbanization intensified, settlement densification followed patterns that influenced the regularization process and the L/NDP. These factors were further structured by the recently introduced regularization-based L/NDP land use plans.

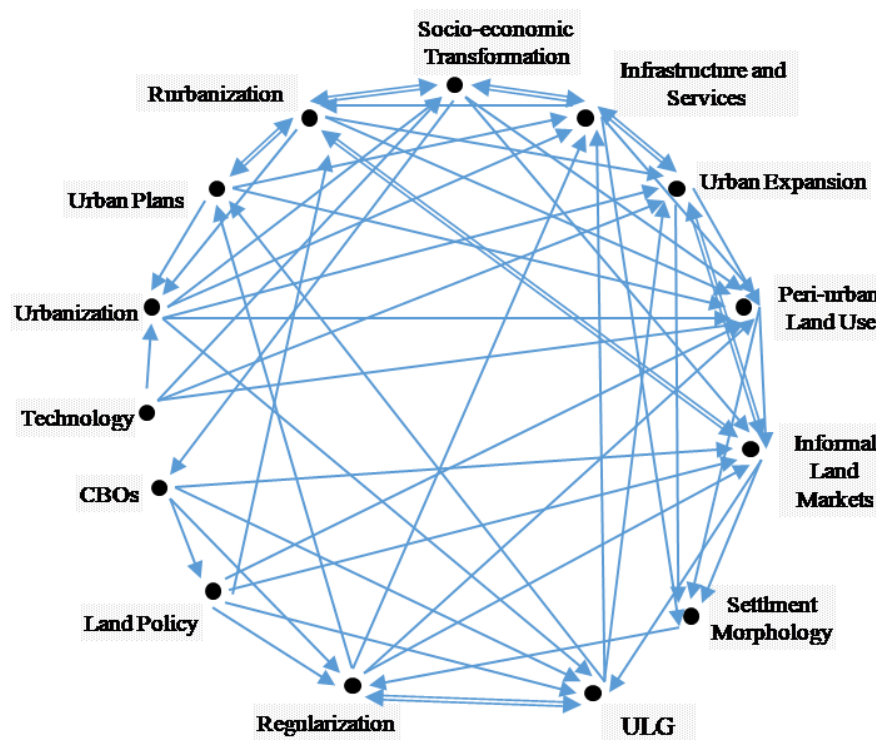


Figure 4.14 The complexity map of peri-urban Hawassa, Ethiopia

### ***Urbanization***

The recent assignment of Hawassa as a regional capital combined with the annexation of Hawassa's rural *kebeles* yielded rapid urbanization. This rapid growth introduced changes in economic activities and new opportunities for making a livelihood. The changes in turn introduced socio-economic transformations, such as the ability to rent rooms and manage trades outside farming. They introduced urban life styles that minimized, for example, the number of cattle allowed to live on a compound and land/property sales and brokering, to peri-urban areas. The rapid urbanization of Hawassa created new demands of land for residential and other uses and the expansion of infrastructure and services. This growing demand is fuelled by the growing land value and the rapid land use transitions of the inner city. As a result, massive land expropriation, pushing the city outward, were conducted which resulted in urban expansion that created new boundaries and the supply of urban infrastructure and services to the peripheries. This enhanced the connectivity of the peripheries to the center and the livability of the rural villages. The new land demand from rapid urbanization stimulated changes in peri-urban land use and the proliferation of informal land markets. These factors changed peri-urban land use from mainly rural functions to built-up area.

The rapid urbanization yielded the ULG, a new municipal boundary and the development of new structure urban plan. The structure plan indicated the urban growth trends and introduced urban planning principles later adopted by the peri-urban areas. It, thus, shaped the morphology of the peri-urban settlements. Peri-urban areas followed the planning forms of the adjacent part of the city and projected future roads by the principle of extension. The ULG engaged the peri-urban residents in administrative issues, like elections. This allowed them to benefit from the services and infrastructures of the city.

The annexation and the consequent new administrative boundary engulfed the rural villages and brought them to the city's administrative jurisdiction. This motivated the new residents to live in the peri-urban villages as there were evident advantages when one became part of the city. Connectivity and access to the city was enhanced because of the improved road and transport networks and the availability of new modes of transport technologies that in turn allowed commuters to easily travel to the city. The administrative boundary introduced new administrative structures to the peri-urban areas: rural-*kebeles* within urban boundaries, and urban sub-city administration. These governance structures enabled the city to reclassify itself as an urban-grade called regipolis. The details about Hawassa's urbanization are presented in chapter five.

### ***Urban Expansion***

Hawassa's rapid growth created horizontal expansion in the city. This mainly occurred through two venues. First, through the expropriation of the adjacent farmland that presented threats of eviction, and second, through the merger of the adjacent rural villages which were later annexed to the city. The horizontal expansions

due to both cases in turn enhanced the expansion of urban infrastructures (asphalt roads, rural roads, electric grids and mobile telecommunication networks) and services (schools and healthservices: health posts, stations and hospitals).

The multidirectional horizontal expansion pressured the rural land (mainly the farm land) to transition in to urban use. This coupled with the massive expropriations and the growing demand for urban land resulted in the proliferation of peri-urban informal land markets that enhanced the subdivision and transition of rural land into urban use. Land opened to peri-urban informal land markets to be subdivided, also in retaliation of the much-criticized expropriations. The city expansion yielded urban and rural infrastructure growth. Services that consumed and created pressure on the peri-urban land also benefited the area through improved access. This increased access improved the connectivity and liveability of peri-urban areas and many decide to settle therein. This is because, for example, the commute became easy via three-wheeled motor bicycles and communications were improved because of the use of mobile phones. Health and education services were also available in the neighbourhoods. These in turn improved the liveability of the areas. As a result, the peri-urban land use was significantly changed from farmland and rural villages to a relatively well-structured built area and urban-like settlements. The settlements acquired new morphology as the city's expansion guided the direction of the peri-urban development.

### ***Infrastructure and Services***

The expansion of urban infrastructure and services across the administrative boundaries of the city shaped the direction of the peri-urban development, as developments were primarily along the new roads because of the improved access and connectivity of the areas. New roadside developments further enhanced socio-economic transformations as the new residents, who could commute to the city, created diversified socio-economic opportunities. The liveability of the peri-urban villages improved as roads allowed varying modes of transport and phone service developed. These strengthened the connection between the neighbourhoods and the city. The new road networks built by the URRAP and the city administrations shaped the morphology of the neighbourhoods, as they dictated the direction of new development and introduced new block sizes and parcel structures.

### ***Socio-economic Transformations***

Socio-economic transformations in peri-urban areas resulted in the improved aptitude of peri-urban residents. The income level of households rose as the number of new residents grew and more than half of the household members were engaged in urban-economic activities. They earned more than 2USD per day. This implies the possibilities of the increase in investment of built structures. Socio-economic transformations affected the peri-urban land use as the residential income improved and farmlands were changed from rural to built-up urban functions.

Consequently, new organization like CBOs (*Idir, Ikub* and others were common in urban Ethiopia) functioned as both social and economic organizations were established. They strengthened social security and economic cooperation. For example, they served to strengthen the social cohesions between the new residents and the former Sidama inhabitants. These enhanced the confidence of the new residents to settle in the areas. The Sidama, who traditionally pass land through familial generations, changed their cultural values that prohibited the sale of land. They decided that land should be sold before it was expropriated, hence a new cultural setup was developed that enhanced land sales. The engagement of the family members and the local elders enhanced the legitimacy of the land transaction and thereby increased the confidence of the buyers to trust the informal land market.

### ***ULG***

The introduction of the ULG resulted in new urban administrative and municipal boundary, which engulfed the rural villages and the farmland. It began massive expropriations of farmland, which was administratively rationed to urban residents. After the farmers realized they might be evicted, they devised a proactive preventive strategy to sell their land before it was taken away.

However, the introduction of the ULG also allowed the expansion of infrastructure and services. Roads, telecommunication networks, the electric power grid, water and public transport, were delivered to the areas under the ULG jurisdiction. The ULG introduced a new urban structure plan, which determined the municipal boundaries and indicated the growth trends of the city. This information projected future development plans for the peri-urban residents within the administrative boundary of the city and guided their subdivision layouts. The ULG was engaged in regularization processes by preparing L/NDP and land registration. As the regularization process continued and title deeds have been provided since 2015, many remain confident to buy and sell on the informal markets. This could be seen from the enormous increase of the number of new settlers since this time.

### ***Land Policy***

The general land policy in Ethiopia and in Hawassa in particular was dichotomized as either urban or rural and peri-urban land was overlooked in the land policy governance system (*Kinfu et.al., 2019*). As a result, the peri-urban land in Hawassa was mainly governed by a rural land regime because of the political negotiations that had commenced during the time of annexation. The rural land regime encouraged further transformation of the previous rural villages. It allowed the landholders to subdivide, sell and develop the peri-urban land under the pretext of rural land transfer, property ownership and land development rights stated in the rural land law. The rural land policy also allowed new residents to change the previous use of the peri-urban land (which was mainly farmland) in to built-up area because of the rural land villagization and transfer rights entitled by the law.

The land policies enhanced the proliferation and establishment of informal land markets as they coupled property rights with transfer and development rights. As a result, most of the plots were acquired through transfer under the pretext of property sales and land development rights. Their provisions enhanced the establishment of new administrative boundaries; hence cities were allowed to acquire new boundaries based on political and administrative decisions. Accordingly, the city administration expropriated the adjacent land for public interest- urban development. This threatened peri-urban farmers. They believed that a compensation payment was by far lower than the market value of their land. Thus, peri-urban land holders devised strategic responses to dispose their land at a relatively better price. The urban land policy also introduced regularization as a new land management strategy to accommodate the peri-urban villages and ensured the tenure security of the new landholders. This motivated to sell and buy land in peri-urban areas. Therefore, the number of new settlers after the regularization campaign was tremendously increased.

### ***Hawassa's Structural Plan***

The structural plan prepared consequent to the establishment of the ULG and the new administrative boundary had introduced new municipal boundaries. The new boundaries engulfed some of the previous rural villages and farmland found at *Tabor* sub-city. Therefore, the municipal boundary brought about an immediate expropriation at low compensation payments and relocated many. This signalled threat of eviction to those who lived in the administrative boundaries and drove them to adopt the adaptive response –to sell their land, which in turn enhanced the peri-urban developments.

The plan indicated the trends, directions and methods of the city's growth. It determined the locations and dimensions of infrastructure and services and enhanced their developments. The peri-urban residents observed and adopted the plan's principles and standards and formed their subdivisions and developments based on these information. It was common to learn where the roads would pass, guided the subdivisions accordingly and, in many cases, to see land left undeveloped or not transferred because of the projections. The new landholders strategically located the new constructions considering all these information and mostly used the back of the plot (Filed observations, 2016& 2017).

### ***Peri-urban Land Use***

Hawassa's peri-urban land was mainly utilized for residential purposes. This made the plot size relatively dense, equivalent and subdivided in rectangular forms. These made the morphology of peri-urban neighbourhoods similar to the rectangular grid found in the city's plan. These significantly shaped the regularization process and the L/NDP. The subdivisions were dense and all the plots organized in such a way that the roads were accessible. The ways the new landholders developed the land plots (mainly utilizing the far back of the plots and primarily constructing the service quarters) made the peri-urban land development incremental and strategic. As the rural villages

and farmland were converted in to built-up area, land near villages and roadsides were developed first and the inner parts of the farmland followed. This made the peri-urban development dependent on the road networks. The growth initially exhibited a ribbon sprawl and lately gets dens as infill development proceeded. Thus, access and liveability were improved. These attracted the new settlers to the settlements.

### ***Informal Land Markets***

Most of the peri-urban land was acquired through informal land market transfers. Their size, locations, and values were subject for negotiation and largely determined by the parties engaged. However, certain regularities were observed. Plots adjacent to the highways were mainly used for commercial and mixed uses and retained and owned by the former owners. The plots found along the roads were initially developed and got a better price than the plots found within the farmland. Some social institutions like religious centers were also placed here. The inner part of the neighbourhoods was utilized for residential, dairy farms and other uses. The informal land markets supported the increased density of built areas and access to land. This enhanced the rururbanization of the formal rural villages and their transitions in to peri-urban. The quasi-legitimate nature of the informal land markets forced the ULG to act more accommodating than damaging.

### ***The Peri-urban Morphology***

The settlement morphology through the different development stages of peri-urban Hawassa also determined the state and nature of the areas. The existing morphology of the peri-urban areas influenced the recent regularization's land use planning. This is because regularization plans were prepared based upon aerial photos of the settlements and the intentions to minimize the number of demolitions and evictions. The plan compromised the national standards that determined the minimum dimensions of the roads and land use ratio. They largely followed the organization of the existing road network, land use, plots and blocks. So, the informal peri-urban morphology significantly influenced the L/NDP plans. Thus, the peri-urban areas continued to suffer from the lack and/or sub-standard levels of important services like providing green areas.

### ***Regularization***

The regularization of the peri-urban settlements was located in between the municipal and the administrative boundaries (71 percent of the settlements) and was conducted a head of the imminent meso or macro urban plans they will force the new plans to accommodate them with all their ills. The regularization will introduce many compromises that will affect the upcoming plans. They would force the new plans to lose some important planning principles that could shape the urban design, land use and land use ratio. For instance, a 30:30:60 Ethiopia's standard of land use (30 percent for infrastructure, 30 percent for greeneries and environmental services, and 60 percent for built-up). This compromise would yield „modern slums“ (KIIs, 2016)

which would attract more residents at peripheries and result in many other repercussions. i.e higher transport costs and commuting.

The regularization, since 2015, enhanced buying and selling plots, as many residents were instilled with greater motivation and confidence in the informal markets. The plan provided opportunities that supported neighbourhoods improved and maintained certain standards of the roads. For example, footpaths were widened to 10 meters from an average of 1.5-2.00 meters. The process designated a few plots for greeneries and other uses, though these plans were not executed because of inability to pay compensation to relocate the existing occupants. The regularization forced the ULG to negotiate and compromise its planning procedures and standards. For example, the ULG was forced and repeatedly revised its fining procedure for registration, due to the complaints of the landowners and the „illegal“ settlers about the registration procedures. It also repeatedly revised the number of reallocated settlers, which was the reason for the strong opposition against executing the plan. As a result, regularization became more about providing a title deed that ensured tenure security than about executing what the L/NDP prepared. The details about the regularization are presented in chapter eight.

### ***CBOs***

The CBOs at peri-urban Hawassa were enriched with heterogeneous groups and re-institutionalized consequent to the arrival of new residents. The former inhabitants utilized their strong social and cultural networks to influence annexation negotiations. This enabled the peri-urban land to remain under a rural classification. The CBOs functioned to strengthen the social cohesions between the former and the new residents. Their leaders and local elders were engaged in legitimizing the land transactions by serving as witnesses and by resolving conflicts. Therefore, the CBOs became sources of trust. Many of the new residents also trusted the transactions because of the strength of the social networks the CBOs established. They became platforms for social securities. Their leaders played significant roles during the negotiations and executions of regularization because CBO based documents and leaders functioned as proof of resident. They previously lobbied the *kebele* administrators not to follow-up on new developments, and because these networks were socially respected and their leaders had greater social influence (KIIs, 2017). The CBOs also supported the execution of the regularization programs, as their leaders were engaged in execution consultation meetings and influenced the municipality's proposals. The leaders of the CBOs supported the opening and construction of local roads made by the community.

### ***Technology***

The introduction and expansion of pertinent transport, communication and energy technologies enhanced the peri-urbanization of Hawassa. They reinforced the connectivity and liveability of the settlements. The introduction of three-wheeled motorcycles (BJJ), which are flexible to varying road, uses and cost effective (*Mains*



*& Kinfu, 2017*) allowed the peri-urban residents to commute, as most of them lived in the settlements and worked in the city. Mass transport was further enhanced when minibus taxis and city buses were introduced. The public transportation supported the dependency of peri-urban residents on city services. Also, the introduction of mobile networks made the areas more accessible and connected. The expansion of solar cells, charged cells and biogas technologies supported the household energy and power demand. This also contributed as another pull-factor for new residents to decide to live in peri-urban areas of Hawassa.

### 4.3 Conclusions

The state of peri-urban Hawassa was observed from spatio-temporal, socio-economic and physical perspectives. They were located at the urban fringe: a place that has a potential to urbanize and operated within the functional area of the city as stated by *Ravetz et al 2013*. They saturated within the administrative boundary of the city on a land found out of the planning area and where the planning rules didn't work. They covered wide area of the urban-rural region: 10 percent of the city's area and 30 percent of the built-up area. They were getting saturated since 2003. 60 percent of the residents arrived after 2011. 62 percent of the residents acquired the land through transfers highlighting the role of the informal land markets. 70 percent of the new settlers were driven by issues related to the land policies, which either pushed or pulled them to decide to settle at peri-urban areas. These show that peri-urban Hawassa was a recent phenomenon that became part of the city-rural region. They imply how the developments of peri-urban Hawassa associated with the city's growth and other socio-economic and political developments including the new land policy enacted in 2011.

There were also socio-economic transformations in peri-urban areas. The arrival of the new residents resulted in changes in demography and social structures. The once homogenous and monochrome residents were significantly changing since 2003 and overwhelmed by the new residents, as there were 87 percent new residents in 2017. The former rural villages and farmlands became home for young, married, male-headed and smaller size household families resembling the urban type household structures. The ethnic and religious compositions were also diversified unlike the nearby rural areas. These show the changes in social structures at peri-urban Hawassa. The peri-urban residents depicted emerging economic structures. Spouses and children engaged in economic activities highlighting diversification and improvements in employment and income and shifts from rural to urban economic activities. The settlements were becoming home for the emerging middle income. These highlight the economic diversifications and the possibilities for saving and investments in peri-urban Hawassa, which in turn shows the opportunities for incremental development rather than deteriorating and becoming slum.

The settlements were gaining urban physical structures and services. The rural huts were diminishing as 99.5 percent of the housing structures changed in to the urban-type houses and „modern“ construction materials were widely used. Many of the land holders built service quarters so the floor area ratio was smaller and the settlements were less dense. These highlight the ongoing physical transformations and the possibilities for further developments. The settlements had better access to socio-economic services than rural areas and they had the possibilities to access other urban services from Hawassa city hence they were situated in the city's functional area and connected to the city because of the expansion of roads and the growing menses of transports. These improved the liveability of the areas and attracted many to live there. Moreover, the growing access to electricity, the introduction of the three-wheel motor bicycle taxis and private motorcycles as well as the existence the rural modes of transports coupled with the access to the reliable mobile phone improved the connectivity to the city. Yet the settlements suffered from adequate supply of tap-water and private meters of electricity, which resulted in the introduction of private vendors to expensively supply. The waste management system is poor and traditional. These highlight the emerging impacts of the settlements on environmental and human health. In sum, the physical states proved the transition nature of the areas and the coexistence of rural and urban functions as well as the inadequacies of services and infrastructures as coined by (Allen, 2003; Ravetz *et al.*, 2013; Woltjer, 2014) and others.

In terms of access to local governance services, the settlers relied on the lower administrative tiers. Yet, they were deprived of municipal and some rural development services because of the centralized municipal functions. The rural services failed short because the areas were annexed to the city administrations and rural development services were not available. Both imply the systems' failure to recognize the peri-urban and its obsessions to the urban/rural dichotomy. The residents had growing participations in elections proving the tendencies of clientalism. This ensured the strengthening negotiating capacity of the residents with the ULG and the regional state as described later and this highlights the growing rights of the residents. The improved administrative services and engagements in local politics /election/ improve the liveability of the settlements and confidence of no eviction.

Morphologically, the settlements gained some regular shapes with variations in plots size adopting symmetric forms and resembling grid patterns. The blocks were longer. The former boundaries of the farms and the informal subdivision process determined both. The land uses were mainly residential and the plot uses were strategic, by using the back of the plots and left the road sides free. Many did this in order to avoid the possibilities of demolishing and loosing land. The road networks relied on considering extensions from the city. The intra-village networks followed organic patterns and exhibited *cul-de-sac* pattern. Yet all plots had an access to roads in one way or the other. These show the organic pattern of the settlements form that influenced the later planning activities. Despite of the prevailing organic pattern of the

morphology, the subdivisions consider and resembled the planning practices of the city and intended to follow the projected extensions. Most of the plots were used for residential purposes. Plots along the arterial roads were wider and were used for mixed uses resembling the city's pattern. These show that the peri-urban settlements were majorly residential places that highlight the inability of the city to accommodate the residents. These all determined the nature of the future plans; improved access and liveability of the settlements; lessen security of eviction and demolishing, and liveability of the settlements.

The scrutiny of the state of peri-urban Hawassa depicts that the phenomenon was not a linear spatial phenomenon rather the complex dynamic system. It was a by-product of various interacting factors. These include rurbanization, urbanization, urban-expansion, infrastructure and services, socio-economic transformations, ULG, land policy, Hawassa's structure plan, peri-urban land use, informal land markets, the peri-urban morphology, the anticipated regularization, the CBOs and the introduction of pertinent small scale technologies. These factors push or pull the residents to transfer their farmland, acquire peri-urban land and informally and incrementally develop the new structures. They also determined the morphology of the settlements. The factors enhanced the connectivity of the settlements to the city and improved the liveability of the settlements so that many decided to come and live. These highlight the underlying interaction of various factors that consisted of their own sub-systems and made peri-urban Hawassa a complex system that determined its state, nature and dynamics.

## 5. The Drivers of Hawassa's Peri-urbanization

This chapter discusses the major drivers of peri-urbanization of Hawassa. It explores how the city's urbanization and land policies drive the rapid peri-urbanization. Hence many of the residents mentioned that they came from Hawassa and the nearby and they were pulled or pushed by the land policies. It employed the thematic categorization method with cause-effect relationship analysis. This chapter was published in a journal of land and rural studies and referred as *Kinfu et al. 2019*.

### 5.1 Hawassa's Urbanization and the Annexation

#### 5.1.1 Hawassa's Urbanization

Hawassa is among the rapidly growing secondary cities and younger urban centers of Ethiopia. It was established five decades ago and has become a seat for the regional state. The city administration claims that the city has been urbanizing by 6.3percent on average, per annum, in the past decade (*Angel et al., 2015*), which is much greater than the national urbanization rate of 4.1percent (*CSA, 2017*). As a result, the population of Hawassa is projected to reach 1,204,098 by 2040, adding nearly one million people within the coming 20 years (*Angel et al., 2015*). *Wondrade et.al. (2014)* claim that Hawassa's rapid population growth is driven by rural-urban migration and natural increases.

The city started to rapidly expand after 1995, following its assignment as the capital city of the regional state (*Wondrade et al., 2014*). Its horizontal urban expansion growth, unlike the classic ribbon sprawl in most of the developing nations, is multidirectional. The city administration is set to develop an additional 19,421 hectares of land, based on the recent urban expansion plan. This will make Hawassa 34,691 hectares wide by 2040 (*Angel et al., 2015*). However, most of the expected developments will occur in areas that are already peri-urbanized. Hawassa comprises three major settlement types: older and revitalizing congested inner city, recently established residential and industrial areas with lesser density and planned space, and emerging peri-urban areas with growing density at the peripheries.

Recently, annexation has become a significant factor that determined the growth and the spatial structure of the city, which has political decision. One of the then officials said that „After the 2005 election landslide victory by the oppositions in urban Ethiopia, including Hawassa, the ruling party decided to overwhelm the urban centers, which are heterogeneously populated, with the original inhabitant ethnic community by bringing the nearby rural *kebeles* into the city's jurisdiction“ (KIIs, 2017). As a result, 12 former rural *kebeles* were reclassified as part of Hawassa city administration. The annexation resulted in the addition of 137,812 peoples and 12 *kebeles*: 11 rural (total population 136,586) and one urban (total population 1,126). It was a political response to urban voters (*Abbink, 2006*) under the pretext of urban growth.

This contributed an average of 35 percent of the city's total population each year between 2010 and 2018 (table 5.1). These population trends demonstrate the critical role of the annexation of rural *kebeles* and the underlying political forces to the city's urbanization. The annexation also resulted in the addition of 1,068.9 hectares of land (76 percent of existing Hawassa) and the creation of rural administrative regimes within the urban jurisdiction; i.e the 11 rural *kebeles* and their respective villages and farmland. This also brought more flat, and potentially suitable, land to Hawassa, a city partially contained by the natural and administrative obstructions. The land remained rural, due to the negotiation undertaken between the administration and the residents threatened by urban expropriation (KIIs, 2017). This was because of the intent of the annexation, which was to overwhelm the city with the original inhabitant Sidama people and give them the political upper-hand over those who had voted for the oppositions; assuming that the Sidama would have better political partisanship to the ruling party than the heterogeneous residents of the city (KIIs, 2017). Yet, this contradicts and compromised both the urban land policy and the urban development strategies, and conversely introduced the „land for vote“ tendency, which later „legitimizes“ the proliferation of informal land markets and coexisting rural and urban land regimes within the city. These in turn, as will be discussed later on, resulted in fertile ground for the city's peri-urbanization.

Table 5.1 Population growth and contribution of annexed sub-city to Hawassa (2010-2018)

S.N	Jurisdiction	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18
1	7-Urban sub-cities*	190926	202343	214459	227133	240482	254540	269351	284940
2	H.Tulla sub city**	113552	116750	119950	123328	126801	130373	134038	137812
3	Hawassa total	304478	319093	334409	350461	367283	384913	403389	422752
4	H.Tulla sub-city share in %	37.20	36.60	35.90	35.20	34.50	33.90	33.20	32.60

\* projected based on the 4.8% annual growth rate for urban Hawassa;  
 \*\* projected based on the 2.8% annual growth rate for rural Hawassa  
 (Source: CSA 2017; HCA 2010 and own computation)

This highlights the significance of the annexation process and its underlying political objectives in shaping and determining the growth of the city and its region. The new administrative boundary has included rural villages and farmland. The annexation process coupled with city expansion alerted rural residents that the land would one day be expropriated for urban development purposes, as they had observed from previous experiences in the urban fringe areas. As a result, they took pro-active measures to retain their land as rural when they negotiated about the new urban administrative boundary. This allowed them to, undertake self-devised measures that in turn formed and transformed the villages and the farmland and yielded peri-urban settlements.

In the history of Hawassa's urbanization, the years 1960, 1995, 2003, 2005 and 2011 are significant landmarks. They exhibit years when significant political decisions were passed and policy changes were happened and shaped the city's urbanization as summarized in to the following four phases and each depicting peculiar spatial characteristics which reflect the effects of policy dynamics.

**Phase I:** 1960-1995 (the city's establishment to the Transitional Government) This period comprises the settlement of the first migrants, the establishment of the municipality, and the relocation of the sub-regional administration to the city. The current inner city and its periphery (current *Mehalketema*, *Bahel-Adarsh*, *Haik-Dar* and some parts of *Addis-Ketema* and *Meneharia* sub-cities) were mainly occupied by these settlers. Land was acquired through permit hold and administratively allocated. State-owned factories and farms engulfed the city. Consequently, large tracts of land were occupied by public bodies reflecting the role of the city then: predominantly administrative and a hub for regional economic development. The growth was slow and at times stagnant (KIIs, 2017).

**Phase II:** (1995-2003) this period began with the establishment of FDRE and the subsequent formation of ethnic-based federal states and the introduction of the market economy. The city was assigned as the seat for the SNNPRS. As a result, a massive influx of new residents ensued. Most of the state farms were distributed to nearby farmers for private agricultural use and a small amount was apportioned for urban development (KIIs, 2017). The factories and most of the state-owned commercial firms were privatized. The city was under Sidama zonal administration and had no urban local government except the municipality. The municipality was adapted from the preceding systems and entitled to deliver municipal services including land administration. Administrative rationing of land for residential and commercial purposes were undertaken based on a fixed price leasehold system. New commercial land tracts were distributed along the major roads. The city started to grow and gained some of its current form. As a result, half of the current *Menharia* and *Addis Ketema* sub-cities emerged.

**Phase III:** (2003/04-2011) this was the most dynamic period of Hawassa's urbanization. Following the national urban reform in 2003, under the Public Sector Capacity Building Programme for Ethiopia, a decentralized form of self-administration was introduced. Hawassa acquired a city administration as an ULG, in which the administration and municipal functions were separated. The new city administration expropriated the land distributed to the farmers with highly criticized expropriation procedures i.e. none or limited compensation, and rationed it for urban use (KIIs, 2012). Large-scale land distribution through administrative rationing with a fixed lease price was commenced for residential and commercial purposes. The first industry village (serviced land only) was established on the outskirt and distributed to domestic investors. The city administration built asphalt roads connecting the inner city to the peripheries. A hospital and health posts, public and private schools were

constructed. Private, meter-based electric power and water lines were delivered. The numbers of fixed line telephone users tripled and mobile phone technology was introduced ([HCA, 2007](#)). The multi-million investments in urban infrastructure under the Urban Local Government Development Program (ULGDP) scheme began during this period. As described above, the 2005 election and resulting annexation of rural land took place during this period, resulting in the current administrative boundary.

The period was also known for the rapid change in office holders including the mayor and city manager. This was mainly due to malpractices associated with land administration. In October 2007, the regional government passed a guideline that prohibited administrative urban land rationing for individual applicants (Guideline No. SE/OP80/2137) and after 10 months, in July 2008, the regional government banned land provision for housing by municipalities (Letter no. SE/OP10/5664). The land administration was criticized for its unfair and unaccountable performance and for benefiting political affiliates and certain ethnic groups. This is a period when the emergence of informal land markets, mainly in the peripheries (KIIs, 2017). *Tabor* and *Hawella-Tula* sub-cities were established during this period.

**Phase IV:** (from the 2011 land lease law to the present) this period is known for the restricted delivery of urban land and the introduction of competitive leasehold as the primary mode of urban land supply ([FDRE, 2011](#)). The land lease price increased sharply. Informal land markets in the peripheries mushroomed and rural farmland within the administrative boundary was rapidly transformed into built-up areas. The city administration's attempt to demolish the structures built on the farm lands were strongly resisted by farmers who primarily owned the land. The regional government was forced to introduce a „regularization“ campaign based on the prevailing political objectives. „Regularization“ was adapted as a new urban land development strategy through which many have been provided with title deeds (KIIs, 2017; [FDRE, 2011 & 2015a](#)).

### 5.1.2 Hawassa's Peri-urbanization

Hawassa's expansion is characterized by horizontal expansion, and is occurring through the conversion of the peripheral farmland as a form of peri-urbanization. After various bulldozing, recently, they have endeavoured to regularize them based on a land policy aimed to accommodate (rather than evict) the residents ([SNNPRS, 2015c](#)).

#### *Why do people prefer to settle in peri-urban Hawassa?*

As presented in table 5.2, both „push“ and „pull“ forces drive Hawassa's peri-urban settlers. Two-thirds (N=380) of the settlers are driven by „push“ forces, which drive residents from their places of origin. This includes expensive house price, the inability to access land in the city, and high living costs in their places of origin. The peri-urban forces, including the availability of job opportunities, basic services and infrastructure in the area, pull only one-third of the settlers. Moreover, 69 percent of



the residents mentioned reasons associated with issues of land policy (table 5.2) that are either „push“ or „pull“. Yet, while nearly 50 percent of peri-urban residents are from Hawassa and the nearby areas (table 4.2), two-thirds of them preferred to settle in the peri-urban because of land-related challenges in their places of origin (table 5.2). It can therefore be said that the major drivers of peri-urban Hawassa are „push“ forces emanating from the nature of city's urbanization.

Table 5.2 Reasons for settlement in peri-urban Hawassa

S.N	Reasons for settling in the area	Frequency	Percent
1	Expensive housing price/scarcity of housing	83	21.8
2	Availability of job opportunity in the area	73	19
3	Inability to access land in the city	53	13.9
4	Relative availability of basic services and infrastructure	52	13.7
5	Expensive living costs in the former residential place	50	13.1
6	Job transfer to the city	25	6.6
7	Coming near to family-Kinship	13	3.4
8	Insecurity in the previous residential places	7	1.8
9	Others	24	6.3
Total		380	100

(Source: own survey, 2017)

#### *How did settlers acquire land in peri-urban Hawassa?*

Land in peri-urban Hawassa is acquired through different ways. 38 percent (N=262) of the residents occupied the land through legal means, based on the various land delivery systems. The remaining 62 percent acquired the land through „gift“, „transfer“ or „buying“ from the primary or secondary holders (figure 5.11). Even though law in Ethiopia prohibits the sale of land, peri-urban residents manipulate the right to transfer usufruct rights and property ownership to legitimize the peri-urban land transactions. They take advantage of the existence of rural land within the city's jurisdiction and of rural land rights for transferring to a third party. Peri-urban settlers thus manipulate loopholes in the rural land policy in order to acquire or transfer land to a third party. This will be discussed in more depth in the next section.

In sum, the significance of policy forces underlying Hawassa's urbanization and peri-urbanization is high. Hawassa's rapid contemporary urbanization and expansion is driven by the political objectives that underlie the annexation policy. It brought significant land to the city but incorporated rural areas and resulted in coexisting land regimes in the city's jurisdiction. This made the peripheries of the city ideal for mushrooming peri-urban settlements. Moreover, the nature and dynamics of Hawassa's peri-urbanization reveals the significant role of land policies in driving peri-urbanization. The peri-urban settlements of Hawassa are situated in recently expropriated farmland and the newly annexed sub-city, highlighting the opportunities created by the land policy. Therefore, it can be concluded that Hawassa's peri-urbanization became rapid as a result of policy changes that lead to the establishment of the city administration, land annexation, and the new urban land lease law.

In addition, the importance of land policies are demonstrated by the above data, which show the type of peri-urban residents, the years of rapid development, residents' reasons for settling in peri-urban areas, and how they acquired the land. Newcomers, mainly from the city and the region, occupy peri-urban Hawassa. This is, which, coupled with the time period in which they settled and their reasons for preferring the peri-urban, an evidence of Hawassa's failure to accommodate both newcomers and former residents. These are mainly a consequence of loopholes in national land policy, as is evident from their reasons for settlement and in the ways they acquired land. Accordingly, the key land policy forces are analysed below.

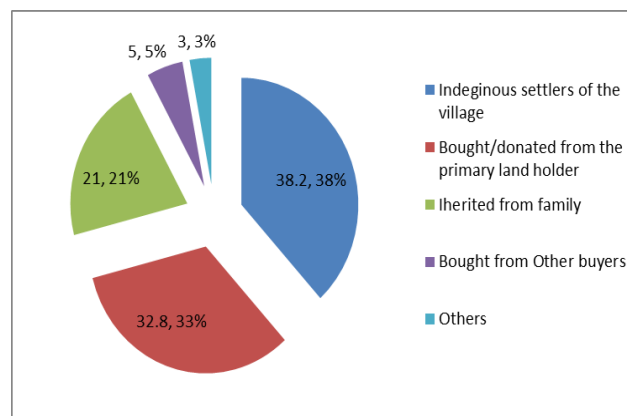


Figure 5.1 Ways of land acquisition in peri-urban Hawassa  
(Source: own survey, 2017)

## 5.2 National Land Policy Driving Hawassa's Peri-urbanization

Ethiopia's land policy has the following six land policy dimensions. Here, they are scrutinized on how they drive peri-urbanization of Hawassa.

### 5.2.1 Land Classification: Rural and Urban Land

In Ethiopia, land is classified as rural and urban based on its administrative jurisdiction. Accordingly, rural land is 'any land outside of a municipality holding or a town designated as such by the relevant law' (FDRE, 2005b) and urban land is „land allocated with in an administrative boundary of an urban center“ (FDRE, 2011). Thus, in Ethiopia land can legally be rural or urban. This classification has resulted in a dichotomized land typology that influences all dimensions of land policy. However, there is an emerging land use phenomenon that has demanded new classification: peri-urban areas. The rural-urban land dichotomy overlooks this emerging phenomenon and creates overlapping regimes of land administration. The peri-urban landholders prefer to categorize their land as rural (KIIs, 2017) while also benefiting from being in the urban jurisdiction. As explained below, new settlers in peri-urban areas are also taking advantage of the rural land holding system while claiming urban services and, later, urban land registration. These create a fertile environment for the emergence and expansion of peri-urban settlements.

### 5.2.2 Land Ownership

In Ethiopia, the state is sole owner of land and other natural resources and people are endowed with the usufruct rights to land (FDRE, 1995). This public ownership of land is justified by policy and economic rationales. The government aims to maintain just and equitable distribution and economic use of land, and to stabilize the price of land and housing in urban centers (FDRE, 2011 & 2013). Land sale is legally prohibited in Ethiopia, but there are nonetheless, ways for citizens to own, sell, and transfer property (FDRE, 1995; 2005b; 2011).

Despite the prohibition to sell land, rural landholders, including those living in urban jurisdictions, have gained „legitimate right“ to sell their land; meaning the right to transfer or donate rural land and the right to sell their built structure. This gives new settler's confidence to enter into land transactions. Accordingly, original inhabitants- the majority of land holders in peri-urban areas- who were using the land for farming and residential purposes prior to large-scale expropriation with „lesser“ compensation, have started to develop certain land manipulation strategies that benefit them. The strategies stem from their usufruct and transfer rights and the aforementioned outlaying „land for vote“ policy tendency of government. These lead to expanding informal land markets that facilitate the growth of settlements in peri-urban areas.

### 5.2.3 Land Acquisition, Land Holding and Land Use

Based on the usufruct right principle, Ethiopians have the right to acquire, hold, and use land, be it rural or urban. Accordingly, rural land can be acquired by citizens who 'prefer to engage in agriculture, free of charge', with no use time limit, through donation and inheritance or from a competent authority. Investors and organizations, including public bodies, are also entitled to acquire rural land in line with their development objectives (FDRE, 2005b). To this end, city administrations have the power to expropriate land for urban development activities.

According to the FDRE (2005b), Landholders have the right to use for the purpose of agriculture, and to acquire property produced on the land by his/her labour or capital and to sell, exchange and bequeath the same. The holder is bestowed with the right to use it in „a manner that gives better output“, maintaining a minimum holding size, for functions including housing construction and gardening. This use right, with conditions, is transferable to third party through inheritance to family members (FDRE, 2005b). Yet, the rural landholding and use rights are subjected to ambiguous interpretations, which drive to peri-urban land use practices. For example, they allow farmers in peri-urban areas to subdivide their land, transfer to third parties, and to develop physical structures, which facilitate the transition of rural/farm land uses to urban use. These create quasi-legitimate land market in peri-urban areas.

Since 1993, there have been various ways of acquiring urban land under leasehold. Currently, urban land can be acquired through lease with different modes: competitive tender, negotiations, administrative allocation and reclassification of old possessions

in to lease hold when properties on old possessions are transacted (FDRE, 2011). Conversely, there is recognition land occupied through permit hold before 1993 as legally acquired land and any new acquisition commenced against the leasehold is classified as illegal and is subject to legal sanctions (FDRE, 2011).

The current land bidding process, coupled with malpractices in the land administration, has increased land prices in bigger cities like Hawassa to levels that are unaffordable to low and middle income residents (KIIs, 2017). Consequently, residents opt for peri-urban areas with informal land markets with lower prices. Moreover, the availability of legal provisions to recognize the older possessions of rural villages and the provisions and practices of regularization minimize the threat of eviction and demolition. These conditions create fertile ground where informal land markets flourish in peri-urban Hawassa.

#### 5.2.4 Land Development

Three principles (plan-led use right, property ownership and sustainable use of land) govern land development in Ethiopia. Rural land development consists of altering the land for agricultural purposes, property development, and settlement/villagization. It demands prior preparation of rural land use plans that restrict the usage based on topographic factors (slope, gully and wetland), the preservation of environmental hazards, use for villagization and other social services, and the formulation of a settlement strategy (FDRE, 2005b). Yet, neither the rural land use plan, nor the settlement strategy, is applied to rural land within the urban jurisdiction. It is also unclear who should administer this land (KIIs, 2017). These issues make the peri-urban land easily converted to urban use without an adequate plan and administering body and causes developments to be haphazard and rapid (Field observations, 2016 & 2017; KIIs, 2017).

Urban land development also needs prior planning, with an exception for unplanned development if recognized by the respective regional or city administration (FDRE, 2011 & 2013). It has two phases: public land development, followed by private land development. Public land development consists of public investment that aims to ensure the supply of serviced land, and the allotment of land for various uses including education, health and recreational services, and amenities, such as water, roads, telecommunication and electric power, and affordable private development designs for housing (FDRE, 2013). These enhance access to services and the city, which peri-urban areas can use and benefit from.

Government documents recommend various urban land development strategies: urban renewal and infill development (FDRE, 2005a; FDRE, 2011), urban up-grading (FDRE, 2011), reallocation (FDRE 2008), regularization (FDRE, 2011) (National Planning Commission (NPC), 2016), development freeze, as well as land acquisition and reserve strategies (FDRE, 2011). These strategies serve to govern plan preparation and execution and to hold and reserve land for urban expansions *inter alia*.

The regularization, land acquisition and reserve strategies also enhance the peri-urbanization by either threatening their tenure security and/or creating hope for legitimization.

### 5.2.5 Land Expropriation

Based on the legal principle *eminent domain*, the government is entitled to expropriate both rural and urban land for public interest, paying commensurate compensation for the property situated on it only (FDRE, 1995; 2005a; 2011), with exceptions for land acquired by lease and through clearance of illegal occupations (FDRE, 2005a). The objectives for expropriation are maintenance of effective land supply and prohibition of illegal occupations (FDRE, 2011). The rationale for public interest centers on the promise of better development (FDRE, 2005a). Land expropriation threatens the urban poor who mainly occupy the inner city with a plot of land characterized by old, derelict structures and large tracts of land acquired either under the old permit hold or state-owned rent houses. They are subject to forced eviction with replacement homes at the peripheries or sell the land. Thus, if any expropriation in the name of public interest occurs, they will be compensated only for the old structure not the value of the prime land. While the city is rapidly growing, these laws also threaten the rural land holder because the farm land is expropriated with compensation only paid for the goods and produces and estimates of future production, not the land value itself (FDRE, 2005a).

The land expropriation policy has both „pull“ and „push“ effects in inducing peri-urbanization. Rural landholders are threatened by the inevitable expropriation of farmland adjacent to urban centers with lesser compensation payment and thus they will lose their sole means of livelihood. They are therefore encouraged to proactively dispose their land at the best opportunity rather than endure the 'anguish' of public expropriation. This usually means subdividing and transferring land through manipulation of the loopholes of the law (i.e. gift and inheritance). On the other hand, urban landholders in the inner city are subject to urban renewal and receive low compensation for older structures and are then relocated to the peripheries. Thus, they are forced to proactively sell their land and move to the peripheries. In this way the peri-urban is becoming a platform for mushrooming informal land markets where the threatened inner city residents and proactive rural land holders meet to strategically curb the damage inflicted by the expropriation system.

### 5.2.6 Land Administration and Management

Land administration and management duties are organized according to the three tiers of government structures: federal, regional and local. In the case of the federal state this is through its ministerial agents: The Ministry of Agricultural and Rural Development and the Ministry of Urban Development and Housing. It is entitled to establish the macro policies and laws (FDRE, 1995; 2011; 2013). Regional states, through the Bureaus of Agriculture and Rural Development and Urban Development and Housing, are bestowed with the power to handle regional matters and grant land,

limited to 5,000 hectares; to private investors (*FDRE, 1995*), and to enact land use law (*FDRE, 2005b*). Subsequently, the city administration, *woreda* and *kebele* land management institutions are organized at local levels and handle micro-issues, including land expropriation (*FDRE, 2005a & 2011*). Local institutions are required to handle the land measurement and registration issues as well as to arbitrate rural land related disputes (*FDRE, 2005b*). These local institutions are criticized for incapability, inefficiencies and malpractices (*NPC, 2016*).

According to the *FDRE (2005b)*, Ethiopia's rural land administration and management system aims to both conserve and develop land and natural resources. It is intended to consist of sustainable rural land use planning, land holdings' database, a legal framework for rural land registration and certification, and systematic land use, including a villagization strategy. Yet to-date, only a database for land certification with small land holdings is in place. What is lacking- rural land use planning and systematic land use strategies- make the system deficient in addressing issues of the rural land annexed into the city (i.e. how to make the process sustainable and to guide the future development of the villages engulfed to the city).

Urban land administration aims at the establishment of sustainable, transparent and accountable land markets and the supply of serviced land, mainly for low-income groups, to ensure fast development in urban areas (*FDRE, 2011 & 2013*). It employs the prior development of urban plans, development permits, development strategies and the establishment of land information systems (LIS) and cadaster (*MoFED, 2009*). Despite the established objectives, the effectiveness of the systems is compromised by the absence of an adequate LIS or cadastre.

The duties of urban land administration are also organized according to the three tiers of government. The federal and the regional parties and their respective duties are as stated above. ULGs and municipalities are bestowed with the power of expropriation, public land development, land lease auctions, the power to approve construction designs, to grant construction permits and to control illegal occupation of land. *Kebele* administrations, more specifically, are entitled with the control of private land occupation and development.

This dichotomized land administration and management system fails to address peri-urban areas, leaving them without a governing regime. There is no system that tackles the rural land within the urban jurisdiction at the peri-urban. There is no body responsible either for planning or guiding development based on the presumed prior planning. Thus, settlers benefit from privately and/or traditionally governing the land, while the public bodies/city administration have been indecisive, linked to the earlier 'land for vote' negotiation (KIIs, 2017). This was fuelled by the prevalence of malpractices. Authorities at local levels are entitled to control land development activities so that any new developments can be prohibited. However, rural *kebele* administrations in peri-urban areas, in particular, are often unwilling to prohibit any

development because they are either socially influenced and/or bribed (KIIs, 2017). Thus, „rural land“ in the peri-urban areas is being converted to new homes for migrants, empty houses, and fenced subdivided plots almost overnight. These implications of Ethiopia’s land policy as drivers of peri-urbanization, based on the case of Hawassa are presented in figure 5.2.

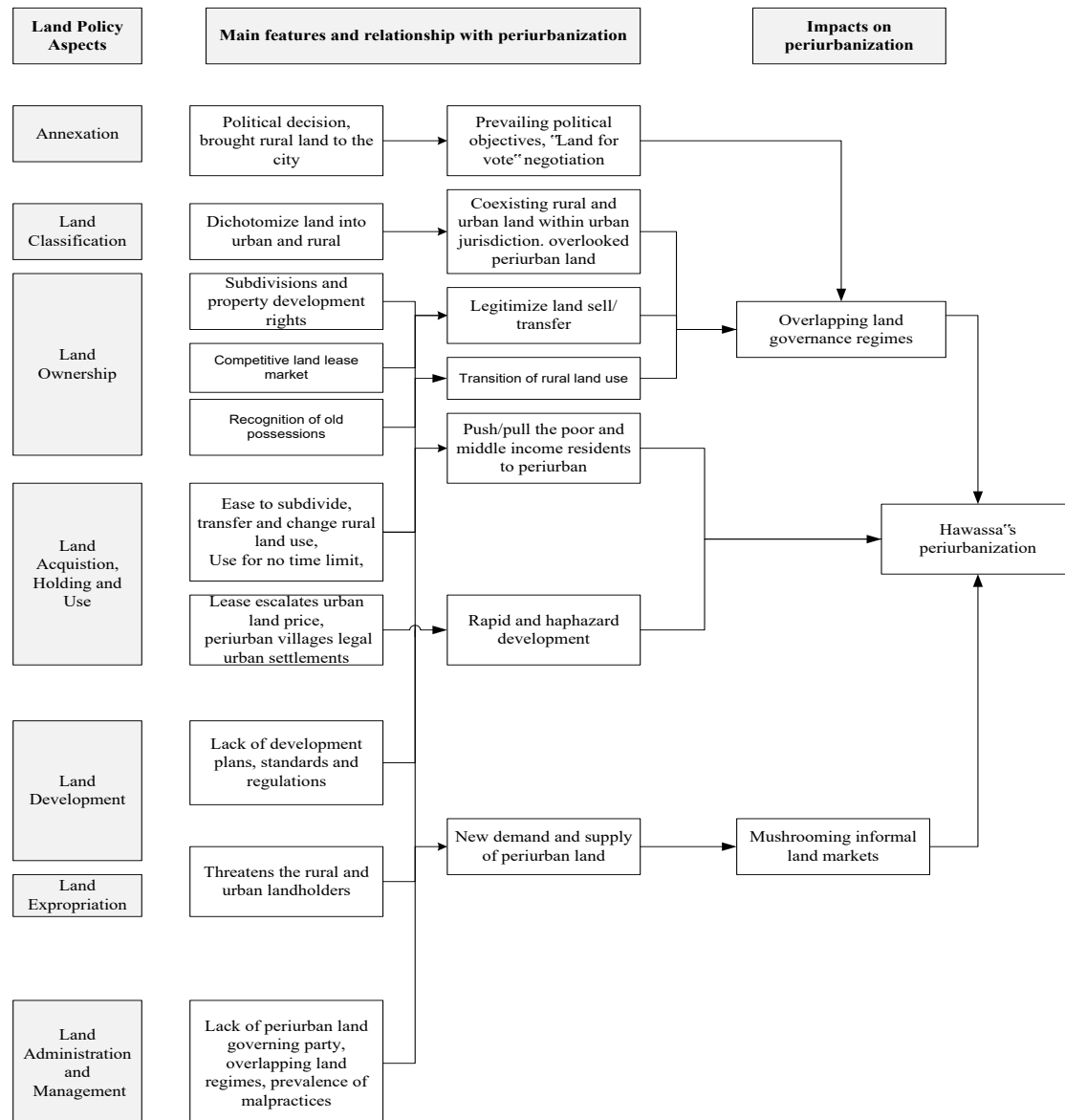


Figure 5.2 Ethiopia’s land policy driving Hawassa's peri-urbanization

### 5.3 Conclusion

Hawassa is neither metropolitan nor a city with suburbs that exhibit the Asian type EMR. It is a rapidly growing secondary city exhibiting rapid peri-urbanization (Scott, Ross, Blackett, & Hawkins, 2016). The city’s peri-urbanization, concurring with Ravetz et al. (2013) peri-urban’s definition, are transition zones at the peripheries of the city that emerged as part of the ongoing city's urbanization process where demographic and policy forces, explained by annexation-led urbanization, resulted in



rapid horizontal expansion and a conducive environment for the growth of the peri-urban. This brought not only the rural population but also the rural land to the urban jurisdiction and resulted in the emergence of coexisting land administration regimes. This demonstrates the importance of policy changes in shaping the nature of the city's urbanization, its stature and settlement structures and thereby the peri-urbanization. The policy of rural *kebele* annexation, driven by political objectives, highlights the role of land policy dynamics as a driver of proliferating peri-urban settlements. Moreover, city's peri-urbanization process also concurs with [Webster \(2002 p.5\)](#) designation to peri-urbanization; hence it demonstrates the process of 'rural outskirts become urban in character often in piecemeal fashion.'

The loopholes of the nation's land policy *inter alia* drive peri-urbanization. They, as [Rauws & Roo \(2011\)](#) outline, 'push' and 'pull' the city's residents, original inhabitants and new migrants to develop proactive responses to curb out the harms of the policy. The loopholes create conducive conditions for the original inhabitants and migrants to use rural land for urban uses. Therefore, peri-urban Hawassa is also a product of the political forces operating within city's urbanization and the loopholes of the land policy.

Hawassa's peri-urbanization reveals the nature of the current rapid peri-urbanization in Ethiopian secondary cities (for instance see [Adam, 2014](#)). As also stated in the nation's land development policy, squatting and proliferation of unplanned settlements have become typical characteristics of the peripheries of Ethiopian urban centers. Hawassa's peri-urbanization has a lot to highlight, especially the role of the nature of its urbanization and the loopholes in the land policy and the drivers of peri-urbanization of Ethiopian urban centers. It also suggests and substantiates, as seen in [Gough & Yankson \(2000\)](#), [McGregor et.al. \(2006\)](#), [Binns & Maconachie \(2006\)](#), and [Bolaane & Kalabamu \(2013\)](#), the nature of the ongoing peri-urbanization within the context of rapid urbanization, the annexation of adjacent rural areas, and the existence of both urban-rural land dichotomy and the dual land regimes in Africa. It suggests the need to revisit, as [Dávila \(2012\)](#) recommended, the land policies of the rapidly urbanizing African nations in order to address the issues of the peri-urban.

## 6. The Dynamics of Peri-urban Land Transition: pressures on the peri-urban land

The chapter discusses how the drivers of peri-urbanization created pressures on peri-urban land. This was seen through analysing the nature of peri-urban land development and the consequent transitions. The phases of transition, its attributes, the dynamics of the transition, the major changes associated the transition was uncovered under this chapter.

### 6.1 The Transition of Peri-urban Land in Hawassa- Peri-urban Land Development

Peri-urban land development denoted the progressive transformation of rural land into urban. The land at peri-urban Hawassa was rapidly transforming from a majority of farmland and rural villages to urban settlements and urban land use. This was explained by the increasing number of new settlers and built structures, which highlights changes in land use and rural functions. One of the processes of change was that the number of settlers in the peri-urban Hawassa was increasing. Figure 4.2 shows that nearly eight, 32, and 60 percent of the residents were settled before 2004, in between of 2004-2010, and since 2011 respectively (Annex vii). This rural land transformation was explained in terms of the land development process and its constitutes.

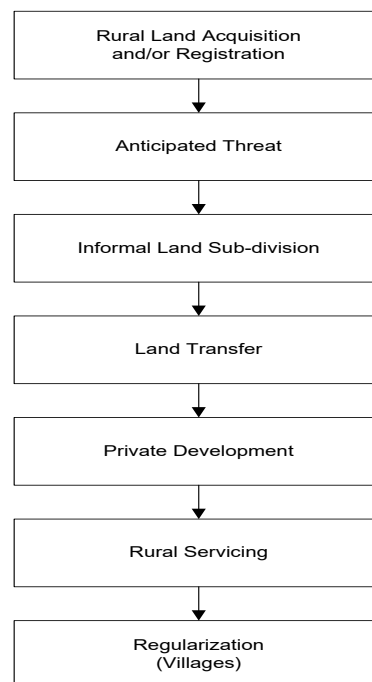


Figure 6.1 Informal peri-urban land development process at Hawassa

Land development in peri-urban area of Hawassa was a step-by-step process (figure 6.1) and evolved through time with active, experiential learning of the various actors who were engaged in shaping it. It was mainly aimed at avoiding the threats of expropriation and later yielded the development of peri-urban settlements.

### ***Rural Land Acquisition***

Land at peri-urban Hawassa was acquired through different mechanisms. In the rural sub-city, most of the earliest residents acquired during the national redistribution of farmland and the villagization programs that took place in 1975. A few of them lived in the villages that were established during the Imperial period (KIIs, 2016). Later, between 1993-1995, some formers acquired land during the distribution of the previously state-owned farmland situated at the city's fringe. Yet, the latest settlers, post 1993, obtained land through subdivision and transfer from these landholders. As a result, it can be said that land was acquired in four major ways: (1) farm land and rural villages during the emperor; (2) farm land distributed for the farmers during the 1975's land redistribution and the villagization; (3) land redistributed in between 1993-95 because of the privatization of the state farm; and (4) the one transferred by the former landholders via sell, gift or inheritance. This was also observed from the household survey. The present-day landholders were mainly those who acquired in the transfer mode: 62.8percent (table 6.1) were acquired through menses than other than the former three modes. Yet, 42 percent of the respondents were unwilling to disclose their means of acquisition hence land sell is an illegal act in Ethiopia.

Table 6.1 Modes of land acquisition in peri-urban Hawassa (2017)

Modes of land acquisition	Frequency	Percent
I don't want to tell	140	42.3
From government	15	4.5
Local inhabitant/indigenous	100	30.2
Inheritance	55	16.6
Bought from others	13	3.9
Others	8	2.4
Total	331	100.0

(Source: own survey, 2017)

### ***Anticipated Threats***

The earlier residents of rural land adjacent to Hawassa city had anticipated the threat of eviction, which emanated from various sources. Previous practices of rural land expropriations were mentioned as a major cause of the threat of eviction. The peri-urban residents mentioned that Hawassa had been rapidly growing horizontally and consuming adjacent rural land (KIIs, 2017). They claimed that expropriation was unjust. They said, „the government took the land with the lowest (15-25 ETB/M<sup>2</sup>) compensation payment and sold with highest price (more than 1500ETB/M<sup>2</sup>) having made little or no improvement to the land“. They also complained that, instead of being used for the city's development, much of the land expropriated and transferred to the urban residents was further transferred to third parties and became the source of speculation income for officials or those with political connections. Thus, they preferred to transfer and/or sell the land before expropriation took place.

The second source of concern was the propaganda of the land brokers. According to the residents (KIIs, 2016 & 2017), the brokers used to agitate by telling the women and youths different stories. One of the stories was about the imminent danger of expropriation. Another story was about the success of those who sold the land and „benefited more“. A further story was about secret transfers by the head of the household, disadvantaging other members of the family. The effect of these stories was exacerbated by the diminishing productivity of agricultural activities and growing unemployment among young people.

The third source of concern was the growing number of rural young people and the consequent demand for land. Peri-urban Hawassa has a similar demographic characteristic to the rest of Ethiopia and has been overwhelmed by the increase in numbers of young people (NPC, 2016). According to the household survey (2017), 55 percent of the population of peri-urban Hawassa was classed as „young“ (aged between 15 and 39). This profile further induced new demand for land for housing and farms, but the only way to get land was as a gift or inheritance from family through subdividing existing residential land and farmland. This subdivision affected the productivity of farm activities and pushed the new owners to look for other possibilities, including selling the land and engaging in other economic activities. Respondents (KIIs, 2017) claimed that most of the youth sold the land and bought motor bicycles and engaged in taxi businesses. Thus, it was becoming common to see the young people engaged in driving motor bicycle taxis in peri-urban Hawassa.

The fourth source was the growing economic diversification and increasing return on investment from non-farm activities in the peri-urban areas. There were success stories about those who engaged in urban economic activities, and the most famous was about people who sold their land while reserving wider plots at their place of residence to build service quarters for rent. These residents earned more income than when they were engaged in rural economic activities, such as farming. A single room 12 M<sup>2</sup> rented for services earned on average 400ETB per month (Field observations, 2016). This level of income motivated mainly the women to sell farmland and construct service quarters. A few were also engaged in low-level trading to fund their daily living expenses. Many of the traders claimed that the income from non-farm activities was better than from farm-based income (KIIs, 2017).

The fifth source was peer influence. The resident respondents (KIIs, 2016 & 2017) reported that their peer group influenced some rural residents. Those who lost their land because of the 2003-2005 expropriation told of the negative effects of the expropriation and advised their relatives or clan members (as social networks are strong in Sidama) to take proactive measures, mainly in risk mitigation. The other aspect of the influence was the story about the benefits gained from selling the land. For example, those who sold larger tracts of land bought land in the city and gained a better income from renting. Young people were also influenced by the experiences of older friends who sold their land and engaged in non-farm economic activities.

### ***Land Subdivision***

After the households reached a consensus to sell land, the next step was to subdivide the land into plots. People started to subdivide the land that was most exposed to early expropriation, which included rural villages and farmland. However, farmland at the outer fringe and the hinterland zone was also subdivided because of the growing demand for larger plot sizes. Speculators, and those planning bigger projects, were engaged in buying the larger plots as information about the new routes of express and railways was leaked (KIIs, 2017; Field observations, 2017). The sizes of the subdivided plots were different, based on the location of the land and on planning information about the roads and future use of the land. If the land was near to existing highways, the size of the parcels was usually smaller, and the price per M<sup>2</sup> was higher. Otherwise, if the land was not near existing highways, or was even adjacent to the anticipated highways, the common plot size was 300M<sup>2</sup> (10x30) and the price per M<sup>2</sup> was lower. The plot size in the farmlands was higher than in the villages and was negotiable, based on the needs of the buyer; the land within the village was primarily subdivided for family members and only the remaining land was subdivided for sale. Land within the villages also had the opportunity of faster regularization and servicing (KIIs, 2016 & 2017; Field observations, 2017).

One important feature of the subdivision was the extension and adoption of regular planning principles and concepts, which projected the extension of road networks from where they were stopped at the plan boundary. Accordingly, the sub-divider intentionally left the land for the projected road and farmed it until regularization took place. A few people built small structures anticipating better compensation payments later. When the expected road existed on a boundary between two owners, they shared the intended amount of land equally. Moreover, after selling the land and until the new road was opened during the regularization process, owners opened walkways that enhanced access (Field observations, 2016 & 2017).

Owners organized parcels based on the symmetric concepts of regular planning, which were evident in the morphology of peri-urban neighbourhoods. Private developers also adopted the plots' land use and built area setup from the planned settlements. Plots adjacent to the arterial roads were dedicated to businesses and mixed-use (Field observations, 2016 & 2017). Many of the respondents (KIIs, 2016) agreed that peri-urban land subdivision at Hawassa was backed by information from professionals, including planners, many of who had connected economically or socially with the brokers and the peri-urban residents. Thus, it was becoming hard to find any irregular setup of plots and blocks that would be in severe danger of demolition during regularization, and this also enhanced the credibility of land transactions in peri-urban Hawassa.

The parcel size was intentionally structured to 10x30m, while the regular plot size in the planned areas was 10x20m. According to one of the KIIs (2016), this approach was taken for two major reasons. Firstly, it would allow the risk of land loss to be

managed due to possible changes during regularization; the new owner would at least be able to maintain the minimum parcel size and thus relocation would be proactively avoided. Secondly, it would make the land size more attractive as a marketing strategy as the price was increasing.

### ***Land Transfer***

Massive land transfer in peri-urban Hawassa was evident; nearly 63 percent of the peri-urban land was acquired through some mode of transfer (table 6.1). After subdivision, the owner would transfer the land on the basis of the provisions of the rural land administration law and the constitutional provisions of property rights. In Ethiopia, rural landholders have the right to use, develop and transfer their land (*FDRE, 1995 & 2005b*). These rights were utilized by the rural landholders within the urban jurisdiction of Hawassa to transfer their land to the third party (KIIs, 2016).

The first mode of land transfer was as a gift, mainly as a means of transferring land to family members. The landholder transferred the subdivided rural land within the villages, as well as the farm, to family members and any other person he/she chose. This transfer was legitimate based on the rural land administration law. The transferor notified local elders and announced the gift, and indicated the plot using natural or artificial landmarks. Both parties signed an agreement, and the elders also signed as witnesses. This agreement was attached with an application letter and submitted to the sub-city's land administrator if the land had been registered. The applicant requested new land registration as per the law. However, most of the peri-urban land was not registered, and the common procedure was to sign an agreement and keep the documents until the regularization arrived (KIIs, 2016 & 2017).

The second mode of transfer was to sell under the pretext of a property sale, meaning that the sale was constitutionally illegal; this was a common practice to transfer land to non-family third parties (KIIs, 2016). The person who decided to sell the land passed the information to the local brokers (those living in the village), who were connected to the brokers living in the city (KIIs, 2016). Without using brokers, there was no available platform that allowed the land seller and buyer to meet. Even then, it was only after negotiating and agreeing the deal with brokers that the buyer could meet the seller. Many agreed (KIIs, 2016 & 2017) that it was these brokers who set the ever-escalating land price and that the brokers' benefits were determined by the price of land. Once the buyer had seen the land, under the broker's guidance and without communicating with the seller, a price was agreed in principle with little possibility of amendment. The brokers brought the buyer to the seller, and the final price was negotiated and agreed. Then, the parties signed an agreement in the presence of local elders as witnesses, to maintain the legitimacy of the agreement. The agreement was all about the sale of partially constructed houses, and was legitimate before the law even though no house was constructed. This document made the transactions (quasi)legitimate and served as an ownership-proving document during the regularization process and as legal evidence when conflicts arose (*SNNPR 2015*,

KIIs, 2016). There were opportunities for instalment payments on negotiation. The transactions were celebrated with food and drink as the elders witnessed the agreement, adding cultural legitimacy to the process.

### ***Private Development***

New constructions were legally prohibited in peri-urban Hawassa unless ratified by the sub-city's rural land administration office. However, no permission was given (KIIs, 2016&2017). The *kebele* administrations were vested with the power to control development and prohibit those without permissions (FDRE, 2005b). The city administration demolished more than 500 houses in the *Hawela-Tulla* sub-city. Nonetheless, hundreds of new houses were constructed every month (KIIs, 2016 & 2017).

The new landholder, after making payment and concluding the agreement, started to negotiate about constructing a house. The sellers were very cooperative in facilitating the constructions. They applied on behalf of the new landholder for planning permission if the land was in the villages; however, no successful applications were reported. Thus, the new landholder and the former owners negotiated with the *kebele* administrators not to watch the construction work. All agreed (KIIs, 2016 & 2017) that there were networked bribes for not acting against the construction. Nights with full moons, and weekends, were preferred for undertaking the construction in order to avoid the risk of being caught by patrols and the building demolished by the city administration. Some of the owners also reported that they paid a total of 60,000ETB for a local contractor to carry out the negotiations and construction (KIIs, 2017).

The private developments were carried out in a phase-by-phase fashion. Fencing was the first activity and, on average, the fence stayed in place for a month or two; this was done because it helped to demark the boundary and show that the land was no longer farmland (KIIs, 2017; Field observations, 2017). The majority planted permanent fruit trees and *Enset* plants while leaving space for the construction of the service quarter at the rear of the plot. This was done to minimize the risks of demolition; any bulldozing would happen during construction or regularization, and so opportunities for compensation were maintained. Next, the construction of the service quarter started. After negotiations were concluded, the construction materials were deployed in late hours and the superstructure (the wood and CIS) of the typical 3x8M<sup>2</sup> wide service quarter was built overnight. The mud plaster was applied within two weeks on average (KIIs, 2016 & 2017). Almost all were built from wood and mud, and the foundation of the wooden structure was reinforced by masonry (Field observations, 2016 & 2017). After a few months (3-5 on average), finishing works started, with plastering and the fixing of doors and windows (KIIs, 2017). This work was carried out after avoiding the risk of demolition, with recognition of the development by the *kebele* administration. Times of election and political turmoil were exploited for construction. More than 300 houses were built in a weekend at *Tullo* during the 2016 national political turmoil (KIIs, 2016); this was because the



local government did not want to create grievances at the time of the vote. The previous three years were also marked as periods of rapid development of construction because of national political instability and crisis (KIIs, 2016 & 2017).

One important aspect of private developments was the similarity of design. The service quarters had one living room, one bedroom and one multipurpose room (Field observations, 2016 & 2017). The local contractors adopted this design based on the rationale for land use described above in order to maintain the future use (at least in the short-term) of the house; these were the minimum rooms required by the households usually residing in peri-urban Hawassa as tenants (KIIs, 2017).

### ***Public Servicing- Rural Development***

Hawassa city administration reclassified the 11 *kebeles* of *Hawella-Tulla* sub-city to administer rural development plans. Accordingly, in 2013-2015, the city administration built 17.5km of earth-pressed road that connected the *kebeles* under the universal rural road access programme (URRAP) (*HCA, 2016a*) (Annex viii-a). This was a national programme financed by the World Bank. These roads improved the intra-village network and their connectivity to the city, and the roads were connected to the highways of the city's road network. It was also noted that the width of the road has shaped the morphology of the peri-urban settlements and guided the future routes that new developments follow (Field observations, 2016).

Potable water was provided using common points based on the rural provision standard. Recently the city administration has provided private meters as demand was increasing from the community; however, both the common points and the private meters were not supplying adequate water (KIIs, 2017). The residents were dependent on private boreholes (for cleaning), private vendors (for drinking), and those who sell water using donkey carts (for drinking and construction) (Annex viii-d). The electric power grid network was established based on the rural electrification programme. Only a few residents had private meters, as there was a national shortage of meters and transformers. It was common to share a private meter using informal extension lines with a 20-30ETB payment per lamp per month (KIIs, 2017). Users complained about inefficiency and poor power that could not be used for other purposes except for lighting. The mobile telecommunication network was accessible in these areas, and almost all of the households used it for various purposes (Annex viii-c). Primary health care and education facilities were available. Private kindergarten schools were operating in either their own facilities or in rented service quarters (Field observations, 2016).

Pity markets were available along the roadsides. Small shops were built attached to residential units or within the compound. Religious institutions also bought larger tracts of land and built their places of worship (Field observations, 2017). The number of private vehicles, motorbikes, and bicycles was growing, while the number of horse

and donkey carts was decreasing as a means of transport. However, many people were dependent on tri-wheel motorcycles, horse carts and walking (figure 4.10).

In general, the relative availability of infrastructure and services was enhancing the connectivity of the settlements to the city and improving the liveability of the settlements, so many preferred to live in the settlements and commute to the city for employment opportunities.

## **6.2 The Stages of Peri-urban Transition in Hawassa**

The peri-urban area of Hawassa demonstrated a transition from rural to urban through the peri-urbanization process. The transition was seen from the thickening of built structures, growing urban functions and the diminishing of rural functions, mainly farm activities. It can be said that as more new settlers came to the area, the more transition that occurred. The graph presented below (figure 6.2) shows the trends in the number of settlers between 1985 and 2017. Different phases of peri-urban development can be observed. The period between 1985 and 2004 was seen as relatively stable, and numbers of new settlers were not significant. However, in 2004, the number of new settlers started to increase rapidly, and this trend persisted until 2008 before it started to decrease in 2009. Again, from 2009 to 2014, there was an increase in the number of new residents, and then numbers started to decrease between 2014 and 2015. After 2015, numbers started to increase sharply. Given these periods of relative stability and increase and decrease in the number of new residents in peri-urban Hawassa, three (labelled I-III in figure 6.2) major phases of transition can be identified.

The chronology of policy shifts changing the urbanization of the city, the urban and rural land governance, and other significant development interventions underlying the dynamics of the transitions (labelled a-e in figure 6.2) are also indicated. The data received from residents, planners and local administrators through the KIIs also complemented these generalizations.

### ***i. Peri-urban Development (until 2003)***

These were the years when the dynamics of peri-urban Hawassa were in relative equilibrium. During this period, conventional rural life continued. The number of new settlers was constant and no significant increase was observed. This situation prevailed for a number of reasons. Firstly, the recent peri-urbanizing land (the then state farmland) was redistributed at that time, and the city also received adequate land that was reserved for urban expansion. Secondly, the city was at an early stage of the rapid urbanization. Thirdly, there was tight administrative rationing of land for new urban residents and the land demand was met. Fourthly, the economic capability to build houses was low and the national poverty level was very high. Lastly, no expropriation was initiated, and the farmers faced no anticipated threat.

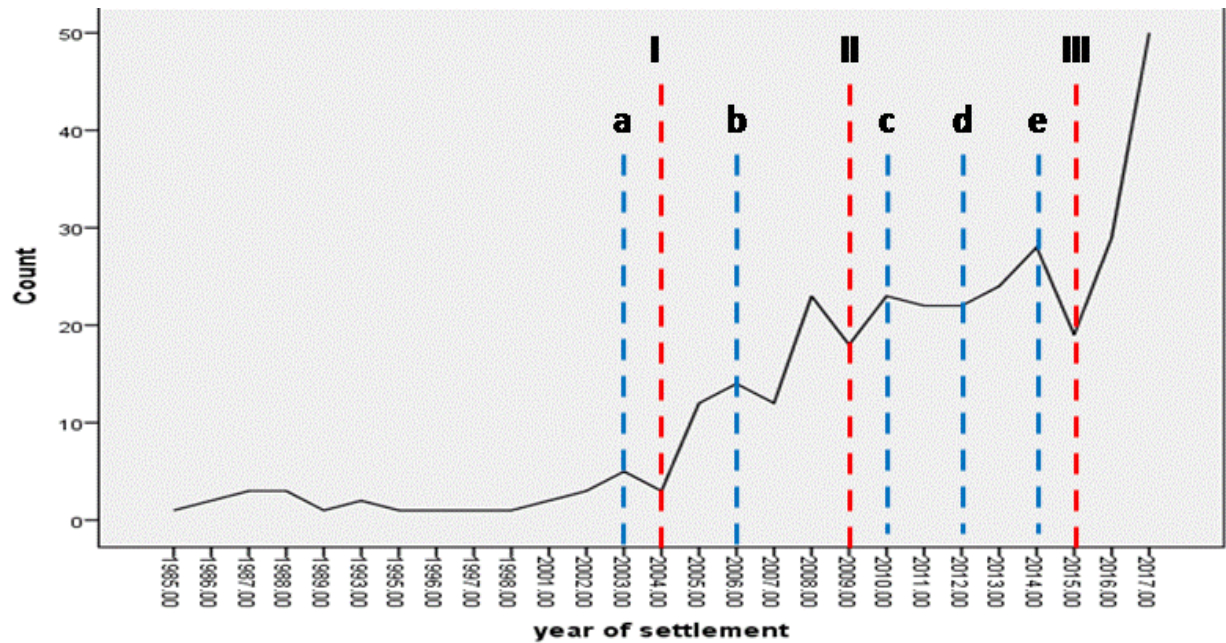


Figure 6.2 Phases of peri-urban transition in Hawassa

Below the surface, there were various forces operating that later pushed the stable state into the next peri-urban transition phase. One was the increasing rate of urbanization of the city. Since its assignment as the capital of the regional state in 1993 and the establishment of ULG in 2003 (year 'a' on figure 6.2), Hawassa started to grow rapidly (*Wondrade et al., 2014*). New residents came to the city as civil servants and were assigned in the new administrative structures to support the growing economic activities in the city. The average annual population increase was estimated to be higher than the national urban population growth (*HCA, 2016*). The second force was the restructuring of the municipality as a ULG in 2003. This change provided the city with new administrative capacity and administrative territory. With the new capacity, the city administration started to prepare a new urban plan that later resulted in the setting of a new municipal boundary that included the redistributed state farmland. These changes were followed by expropriation at the fringes. The expropriate residents were paid 'unjust' financial compensation and given plots of land. Those living within some of the rural villages were relocated to the outskirts. The third force was the emergence of private land markets and local actors: the young expropriated farmers were engaged in informal land markets as brokers (*KIIs, 2016*). Farmers who were given plots of land as a replacement and compensation, along with some of the new landholders, started to sell their plots in the private-private land markets under the pretext of property selling. The fourth force was the expansion of asphalt and earth-pressed roads (*Mains & Kinfu, 2017*) and of electric power and mobile telephone networks (*KIIs, 2016*). All these forces were operating in the city and signalled to the residents at the peripheries that they should develop some sort of proactive response.

### ***ii. The Take-off Period (2004-2010)***

This period started consequent to the changes in type and intensity of the underlying forces. The rural residents at the peripheries started to take proactive measures in response to the dynamics they observed in the previous phase. They saw that the market price of the land sold ahead of expropriation was far better than the compensation payments and land offers. They also found that there were some loopholes in the rural land administration policy and the constitutional rights that they could use to sell the land, though land sales were illegal. The brokers learned how to sell the land under different 'legitimate' pretexts and propagated these methods. They also observed that there had been a growing demand for land, and so they engaged in establishing informal land markets and facilitated the transactions (KIIs, 2017). Conversely, there were changes in urban land administration policies. The ruling party decided to ration land for local inhabitants after its 2005 election (year 'b' in figure 6.2) defeat in Hawassa (KIIs, 2015) and allocate land to non-Hawassa residents to bring new voters to the city; the rationing of urban land contributed to the expansion of the informal land market (KIIs, 2016). Later, the regional government banned any administrative rationing of land by the city administration (year 'c' in figure 6.2) (*SNNPRS, 2008*), which, in turn, pushed many residents of the city to look into acquiring peri-urban land. As a result, the number of new settlers started to grow.

Thus, it can be said that the pushing forces at this stage of transition were the anticipated tenure insecurity of rural farmers, broker propaganda, the emergence of quasi-legal informal land markets, and the growing demand for peri-urban land coupled with the banning of administrative urban land supply. On the other hand, later in this period, there were pulling forces that made the land transfer slower and attempted to dampen the transition. These forces included the cultural values of the Sidama in that land sales were not a culturally acceptable act, as well as the threat of the newly-introduced legitimization of the transaction and the demolition of some new structures by the city administration.

### ***iii. The Acceleration Phase (since 2011)***

In 2011, the federal government enacted a new land law that stated that there should be a competitive land lease market as the sole mode of urban land supply (year 'd' in figure 6.2). The ban lasted until the regional lease guideline was enacted in 2015. As a result, Hawassa city administration did not supply land mainly for residential use during this period. Moreover, national economic growth was rapid, and the city also experienced the growth of economic activities coupled with rapid urbanization (*HCA, 2016a*). These changes, in sum, created the mismatch between the rapidly growing land demand and the stagnant supply that made the residents look for options in the informal markets that emerged in the previous stage (KIIs, 2016). The new land lease law also introduced regularization of informal settlements; this created hope for legitimization and lessened the threats of demolition.

However, Hawassa failed to deliver adequate amounts of land in the lease market. Only about 1,870 plots of land were delivered in 10 rounds between 2014 and 2016 (*HCA, 2016b*). More than 2,000 competitors were applying for 180 plots per round, on average, and the average winning market price was 1,410 percent higher than the base price. This factor, coupled with the backlogs and growing demand, made the lease system inefficient and „systematically [excluded] the middle and low income“ residents from the system (KIIs, 2016).

In addition, in 2015, the regional guideline for regularization of 'illegal' settlements was enacted as a new policy response in place of bulldozing, and the regional government launched a campaign to commence massive regularization of unplanned pockets of the city) and „peri-urban settlements within the administrative boundary of the city“ (year 'e' in figure 6.2 ) (*SNNPRS, 2015c*) As a result, 17,916 plots of land were registered in 2015-2016 for regularization (*HCA, 2016b*). The registration process increased the confidence of the new settlers to buy land under the pretext of a property sale, thus documents for legitimizing landholding were the agreement signed and the receipt for land use tax payment. This change motivated many to enter the informal market and the number of new residents started to rise.

This period was also remarkable for the expansion of both rural and urban infrastructure and services connecting the periphery to the city. Roads, water lines, electricity, city buses and telecommunication networks were delivered to these areas. The rural road project improved the connectivity of the settlements both internally and to the city. The increasing expansion of rural public services, the positive experiences of earlier developers, and the improved connectivity to the city because of the use of private motor bicycles, three-wheel motor bicycles and the city bus attracted many to move to peri-urban Hawassa. On the other hand, the economic dynamics in the city, for example, the changes in land use along the new asphalt roads (*Mains & Kinfu, 2014 & 2016*), the escalating land price in the inner city etc., also pushed many to sell their houses in the inner city and buy at the peripheries (KIIs, 2016). This tendency was further fuelled by the limited supply of land in the lease market and the escalating lease bid price. The only threat observed during this period was the reallocation proposal and delayed provision of title deeds to some of the previous landholders due to the regularization. There were also repetitive meetings with the administrators, including the regional president, aimed to persuade the rural residents to stop selling their lands (KIIs, 2017).

#### ***iv. The Stabilization Phase***

This period is marked by the decrease in the magnitude of change and attainment of new levels of dynamic equilibrium and fully-fledged level of urbanization. It can be said that peri-urban Hawassa has not yet entered this phase. Hence, consequent to the execution of the regularization project, new developments and changes in land use are underway. One important question here, is where will be the boundary of the peri-



urban settlements that could be allowed to determine the transition? Another theory and further work will be required to answer this question.

Table 6.2 The push-pull dynamics in peri-urban Hawassa

Phase	Push	Pull
I	Rapid urbanization and growth of the city New administrative capacity Expropriation at the urban fringe Reduced compensation Reallocation of farmers and rural villages Emergence of informal land markets Expansion of asphalt and earth-pressed roads	Threats of loss of livelihood - farmland The socio-cultural value of land
II	Growing tenure insecurity Brokers' agitations Higher land value and growing demand for land at the periphery Changes in land policies - banning of administrative land supply Introduction of new means of transport: three-wheel motorcycle etc and communication: mobile telephone	Reallocation and bulldozing Lack of confidence in the land transactions
III	Growing private developments yielding positive experiences Lack of formal land supply and a growing Mismatch between demand and the stagnant supply of land The regularization campaign and planning National rapid economic growth Expansion of rural services and infrastructure Established informal land markets Escalating lease price Provision of title deeds and construction permit, upgrading of private developments and changes in land use	Fine for the „illegal“ acquisition of land Agitation by politicians Proposed reallocation as per the regularization plan

(Source: compiled from SNNPRS, 2015c; KIIs 2016 & 2017; own survey 2017)

### 6.3 The Dynamics of Peri-urban Land Transition at Hawassa

The dynamics of each phase of the transition occurring above were the results of the interplay of the forces stated. The forces played a push-or-pull effect at each stage. These are summarized in table 6.2. The different factors stated above interacted to determine and guide the peri-urban land development pushing and pulling the former peri-urban landholders to transfer or not their land. These push-pull forces yield

changes in the levels of the stages of peri-urban transition. The push-pull forces at each stage are stated below in table 6.2. It was evident that the push forces outweigh the pull forces and allowed the transitions occurred at each stage.

#### **6.4 The Major Dimensions of Transitions at Peri-urban Hawassa**

The transition of peri-urban Hawassa demonstrated the following three changes:

##### ***a. Functional Changes***

The functional changes in peri-urban Hawassa were manifested in the spatial, physical, and economic aspects. Spatial changes occurred in terms of land use. The once purely rural land, which constituted rural villages, farms, grass and forest land has significantly changed into an urban built-up area. Nearly 4,000 hectares changed to built-up area between 1985 and 2017 (LULC analysis, section 7.2). The annual average rate of conversion was 23.5 per cent. In addition, rural villages were transformed into dense settlements and attained regular structured forms. The once rural huts were changed into urban-type structures built from cement and CIS. The land use of individual plots was dependent on the existing or anticipated road network. Shops, churches, private schools and clinics, youth recreation centre (pool houses and game zones) and small market areas also emerged.

Physical changes were exhibited in the form of construction of roads, bridges, drainage lines and the expansion of electricity and telecommunication facilities. The road network enhanced the establishment of the regular grid urban form. The expansion of the telecommunication network, mainly the mobile network, has improved the liveability of the peri-urban areas because of the improved connectivity and access to the city. The recent introduction of L/NDP through the regularization process is also yielding new forms of settlement morphology because it restructured the spatial organization, landholding and development rights.

##### ***b. Organizational Changes***

Peri-urban Hawassa exhibited various organizational changes and there were shifts in social structures. CBOs emerged in the peri-urban villages and became a nexus that maintained the social relationship between the previous inhabitants and the newcomers. *Idir* (social-organization for social security and cooperation), *Ikub* (the traditional microfinance institution), and other ethnic organizations were formed. 86 per cent of households were engaged in these social structures (own survey, 2017). As a result, the neighbourhoods became accommodating to the newcomers and harmony and security was strengthened, though heterogeneity was increasing. These institutions also served to strengthen the credibility of informal land transactions.

The local inhabitants, mainly those who sold their land; were engaged in protecting the newcomers and their property from eviction and bulldozing (KIIs, 2016 & 2017). The landowners applied to the *kebele* administration for the issue of identity cards and



the process of land use tax payments so that the newcomers could meet the legal requirements for regularization. The landowners helped the new owners to build the new structure. They also applied to the rural land administration as owners of the new structure when the transaction had already been concluded, and influenced the local administration to conduct and enhance the regularization programme. Sidama elders were highly praised for their impartial and credible engagement in maintaining peace, security and effective conflict resolution when some conflicts occurred (KIIs, 2016).

### *c. Institutional Changes*

The institutional changes in peri-urban Hawassa were demonstrated in terms of changes in frameworks of the meaning and rules of the peri-urban community. The most fundamental change was the adoption of land sale practices in the Sidama. According to the elders (2016), land sale was a culturally unacceptable practice. Sidama used to either retain land across generations or give it back to the member of the clan in any case where the landholder abandoned to use the land further. It was after expropriation that the Sidama started to sell land. Subsequently, changes in cultural and legal systems started to emerge. The community established quasi-legal (informal) land markets under the pretext of property sales and challenged the formal land sale prohibition provisions. The community elders started to engage in approving the land transactions. This development highlights the changed cultural values of the community. Moreover, the local government also preferred to adhere to local practices rather than the formal laws. They became supporters of the local transactions in preference to the laws the regional state declared. However, many agree that corruption was institutionalized and affected all levels of informal peri-urban land development.

In addition, there were changes in economic institutions. Urban economic activities started to become the major sources of household income in place of farm activities. The once agriculture-dependent households shifted to engaging in petty trades, renting rooms, motor-bicycle taxis and land and estate brokering. This change was not only because of the loss of agricultural land; those who sold their lands earlier bought farmland in distant locations and partially shifted their families. Those who sold later were engaged in urban economic activities.

## **6.5 Major Attributes of Hawassa's Peri-urban Transition**

As a complex transition phenomenon, peri-urban Hawassa exhibited the major attributes described below; three of which were common to the complex dynamic spatial phenomenon (*Rauws & Roo, 2011*), and the fourth is peculiar to Hawassa peri-urban transition.

### *a. Context Dependency*

The transition in peri-urban Hawassa exhibited structural changes because of various contextual factors. The peri-urban change was strongly dependent on the city's

expansion that brought rapid horizontal growth with the consequent expropriation and the latest annexation of rural areas. The dynamics of local politics, which are driven by maintaining the ethnic majority and the ruling party's agenda to control the city's power, underlie the annexation process. These were further enhanced by the constrained supply of land from the city administration and the consequent escalation of land value. Moreover, the inefficiency of formal land markets coupled with loopholes in the land policy created the context of peri-urban Hawassa and its transitions (chapter 5).

#### ***b. Self-organization***

Peri-urban Hawassa exhibited self-organization in the way it was formed and structured spontaneously without external coordination. The self-organization was manifested in various ways. Peri-urban land was mainly supplied, transacted and developed in informal ways. Informal land markets were the main modes of land acquisition by the new landholders. The owners subdivided the land and informed the brokers to sell the land. The buyer could only know the identity of the owners after they agreed to buy the land, and at a late stage, at the verge of the conclusion of the transactions. Mostly, the brokers determined the value of the land, using parameters such as distance from the existing or anticipated road or existing villages, and the level of neighbourhood development. The owners of the land, during the subdivision, had put aside land for roads. The new landholder defined the plot use and the new development. Private developers considered the trends in previous developments and the trends in the city. Rural elders played significant roles in building confidence in land transactions and resolving peri-urban land conflicts. The provision of services and amenities also exhibited self-organization. Private water and electric meter holders used to sell water to those who did not have private options. The electric power lines were stretched in informal ways using substandard lines.

No planning intervention for land use was formulated, but different activities emerged. Marketplaces sprang up along the roadsides. Those attracted established private schools and health services by growing demand. Youth recreation centres, mainly pool houses and game stations, were opened using simple canopies. Religious institutions, including the Catholic Church (that has the least number of followers even in the city) constructed their chapels through buying land from the informal markets; thus, they observed the difficulty of getting land in these areas because of the new landholding trends.

The ways in which the brokers and the local community established the informal land markets also highlighted self-organization. Local contract documents were adopted by these actors and imposed even on the regularization process. Agreements were neither registered nor signed before the public bodies as per the law. The local community took responsibility to prohibit demolition and other political measures and repeatedly resisted public policies.

### *c. Path-dependent*

The transition of peri-urban Hawassa was also path-dependent. New stages of development emerged as a result of the dynamics in the preceding stage of development and anticipated interventions. Peri-urban developments followed either the earliest rural villages or the adjacent urban villages. To meet the planning forms, they developed as a symmetric replica of these settlements and later amended themselves to maintain the regular shapes of settlements based on the rectangular grid, rather than the traditional curved settlement organizations. They also considered the provisions of the anticipated regularization program.

The private land subdivision referenced the earliest villages and maintained the relative permanency of these settlements. Subdivisions mostly followed the inside-out expansion rather than the spontaneous subdivision that happened later because of the demand for larger plots. The road networks followed the existing footpaths and the predicted extensions from the adjacent boundaries of the city. Land development and land use were also dependent on the existing road network, the predictions of future regularization plans, and local practices. It was observed that almost all the new developments had similar designs and used the same construction materials and development patterns. Considering various planning standards from the city, and following the trends of expansion plans, were at the heart of the path-dependency attributes of Hawassa's peri-urban area.

### *d. Market Dynamism*

This was a peculiar attribute of peri-urban Hawassa land dynamics that emerged to cope with the national land policy; namely state ownership and its consequences. Market dynamism is the existence of market forces interacting and shaping the nature and price of production and marketing. Farmers in peri-urbanizing Hawassa established a functioning and quasi-legitimate market, which ushered land demanders and suppliers as the city was suffering from growing demand and stagnant supply. Thus, they forced the local administration to negotiate instead of taking legal measures. These attributes were apparent in terms of the nature and attributes of the market as well. The rural farmers, as suppliers of land, given the legal prohibition of selling land, had established a working informal quasi-legitimate land market. They were innovative in such a way that they utilized the loopholes of land policies to legitimize their practices and respond to the law. They adopted a land subdivision that innovatively mitigated the risks of anticipated land size loss and demolition by adjusting the size and dimensions of the plots.

They were also innovative in that they adopted the planning principles from the municipal boundary based on geometric extension. They were proactive producers of land for the market, and they forecasted the growing demands, risks and opportunities as well as developed mitigating strategies and adhered to them. Moreover, they

maintained the credibility of the market by establishing local security, conflict management and legitimization processes.

## 6.6 Conclusions

The pressures on peri-urban land were seen from the nature of land development and the consequent transitions. The peri-urban land development at Hawassa was a step-by-step process that followed an informal land development path. The development began with land acquisition through four different modes based on the rural land holding systems including the transfer through inheritance, gift and sell under the pretext of property rights. These accounted nearly two third of the modes of land occupations. Second, the former landholders established an adaptive response-transfer, because of the signalled threats of eviction emanated from the recent expropriations and the later annexation. These were coupled with the internally growing demand for land because of the demographic changes. The amount of the land transfers was exacerbated by the inefficiencies in the urban-land system, the agitation of the brokers and decreased productivity of farmland and shifts to economic diversifications.

Third, the former landholders engaged in informal land subdivisions. They subdivided using some strategies that enabled to manage risks of expropriation. They retained the 500+ M<sup>2</sup> land that was legally permitted to the landholding household. They intended to manage the risks of demolition, in addition to the plot use mechanism, through increasing the length of the plots. They considered some planning approaches and the urban form to shape the road networks and determine the plot size. The fourth was the land transfer. The transfers were commenced under the pretexts accepted by the law. The prohibited sell of land was even legitimized through the quasi-legitimate mechanisms and the involvement of social structures- elders. Fifth, the new owners commenced private developments while this was also legally prohibited. Negotiations between local authorities and local elders as well as cooperation of the land sellers made the new constructions possible. The developments were made in a phase-by-phase fashion in a way that avoided risks of demolishing, secured ownership and ensured functionality of the developments. Politically hit periods: elections, and unrest periods as well as off-job times were used for the constructions. Finally, the settlements were supplied with infrastructure and services as well as amenities under the rural development programs. They acquired schools, health centres, electrifications, mobile networks, access to water and roads. These all shaped the settlements, made them liveable and enabled to attract many to come and settled in the areas.

Consequently, Peri-urban Hawassa undergo through the first three stages of peri-urban transition, as stated by *Rauws & Roo (2011)*, in between of 1985-2017. This was observed from looking into the increasing and decreasing trends in the number of residents and the associated chronology of the city's urbanization; changes in land

governance systems, and other development interventions. The first phase /peri-urban development/ stayed until 2003. This was when the settlements had remained rural villages; the farmlands were used for farming, and the increasing number of residents was relatively stable. The second phase /the take-off period/ was between 2004 and 2010. This was when some of the expropriations were commenced and the new administrative boundary was set. The city also shown remarkable growth. Administrative land rationing was massive and later banned in 2008 because of the complained corruptions. The former peri-urban landholders perceived present dangers of expropriation and subdivided and transferred their land. Thus, many started to settle in the areas and the number of new residents started to escalate. The third stage /the acceleration phase/ started in 2011 and is undergoing. New urban land policy and the regularization were introduced during these periods. The informal peri-urban land market was partially legitimized; the urban residents were pulled out of the formal urban land market because of the inefficiency of lease markets and the hoping for the regularization. The number of new residents started to sharply increase. Thus; the settlements have been growing, getting dens and changing. New forms of development are expected because of the introduction of regularization program. Thus it can be said that the stabilization stage has not yet been attained. The transitions resulted because of the dynamics between the pull-push factors and the outweighing magnitude of the push factors that motivated the former peri-urban landholders to take the next measures at each stages of development. These show that Hawassa's peri-urbanization was mainly driven by the city's urbanization and factors emanating from the land policies. It also implies the dynamic transition of the phenomenon that demands an adequate response that could address the dynamics than just the spatial manifestations.

Hawassa's peri-urban transition had three major dimensions of change. First, it exhibited functional changes. There were significant spatial changes. The once rural land was converting in to urban both in terms of land uses and physical structures. Rural villages and farmlands were changing in to dens settlements and built areas. The rural huts were diminishing and replaced by urban type structures and construction materials. These were coupled with provisions of urban services and infrastructures including mobile phones, private schools etc. Second, it exhibited organizational changes. New social organizations emerged in the areas and have been playing significant roles in determining the nature of the settlements. CBOs were linking the new residents and the former inhabitants. They were maintained social harmonies and security in managing conflicts and building trust. Sidama elders were actively engaged in the socialization process. Third, it exhibited institutional changes. The transitions introduced changes in socio-cultural values of the former inhabitants. The Sidama accepted and engaged in land transaction activities. The transitions also yielded the establishment and well functioning of informal land markets and the quasi-legitimate systems that enhanced the confidence to settle. New economic activities and opportunities emerged; as a result employment structures were changed

and the former inhabitants diversified their livelihood and engaged in urban economic activities.

The peri-urban transition at Hawassa depicted the three common (*Rauws & Roo, 2009 & 2011*) and one unique attributes of transition. The transition was context dependent. It was an adaptive response to the city's rapid horizontal expansion; the dynamics of local politics that underlie the annexation; the loopholes of the land policies, and the growing demand for urban land because of city's limitations to supply adequate land. It was a self-organization transition. The settlements emerged and structured spontaneously and took forms through dynamic process without the coordination of external parties. Local actors, engaged in the informal land markets, mainly the sub-dividers and the brokers; played significant roles in shaping the form and nature of the land development process and the nature of the settlements. They developed various modes of ensuring securities i.e. establishing quasi-legitimate systems of land transactions. Local modes of delivery of services and amenities emerged out of the growing demands and the role of private vendors. All highlight that the internal capacities to the settlements" were self-organizations. The transitions were also path dependent. The new stages of developments emerged out of the dynamics in the preceding stages and the anticipated conditions. They followed extensions of existing roots, planning forms and principles at the adjacent settlements of the city. They established roads network considering the extensions and they maintained the minimum plot size and parcel-block organizations as portrayed in the planned areas of the city. New construction designs and materials also resembled the prominent developments in the city.

Uniquely, Hawassa's peri-urban transition exhibited a market dynamism attribute. Market forces and mechanisms badly operated within the transition. Informal land-markets emerged and grew within the prohibiting legal environment. The sellers and buyers established land markets and legitimized it using the pretexts of legitimate activities. This system enabled the market mechanisms to effectively operate in the area. Land values and uses were determined by not only the size but also considering other variables including the location values. The risk minimization and conflict management practices backed the market to operate with some form of guarantee. Moreover, the market dynamism forced the legal system to negotiate and accommodate the informal land market system as it was later seen in accepting the local contracts as proofs of landholding (chapter 8) and register the landholding.

## 7. The Impacts of Peri-urbanization at Peri-urban Hawassa

This chapter briefly reviewed the effects and perceived impacts of the peri-urbanization process. The study didn't cover a fully-fledged impact assessment. This was because of two major reasons. First, it was too early to detect long-run impacts after the observation. Hawassa's peri-urbanization has been a decade old phenomenon; it had not attained its maturity. It was a development under progress. Second, the scope of the impact assessments, by nature, should be wider and multi-dimensional. This demands a comprehensive approach. The impact assessment of peri-urbanization in the localities would be a comprehensive study that assessed the various dimensions of the phenomenon: socio-economic, spatial, environmental and political inter alia. The researcher was confined to focus on the qualitative effects of previous expropriations based on rapid appraisals of socio-economic effects, the LULC analysis and environmental problems and hazards occurred in the settlements. These were taken to show the effects of on-going peri-urbanization in the city and to evaluate some of the impact aspects in relation to the policy response-regularization program.

### 7.1 The Impacts of Previous Expropriations

All the respondents unanimously agreed that Hawassa's peri-urbanization was yielding various positive and negative socio-economic impacts (KIIs, 2016 & 2017). Among the positive impacts, the engagement of rural residents to the urban system, which allowed residents to change their socio-economic status, was included. Many (who transferred their land by themselves and did not expropriate) received better income, and farming economies were transformed to urban-based economies. Inhabitants benefitted from the expansion of social and economic services and infrastructure; women were engaged in income generating activities, and a few had built houses in the city. Conversely, the policy makers mainly the political officials condemned peri-urbanization for its outweighing negative impacts. The policy makers generalized the peri-urbanization process as an illegal development with political, spatial, socio-economic, and physical negative consequences (table 7.1) that ended up with yielding slums and undergo through squatter settlements-slum settlements-slum people process (*SNNPRS, 2015c*). This conclusions and presumptions underlie the derivation and enactment of regularization as a policy response as discussed in the next chapter.

The respondent elders and residents agreed that it harmed most of the farming households. The previous expropriations (between 2005-2007) were like 'a sudden death' because no adequate amount of compensation was paid (KIIs, 2016). Most of these expropriated households migrated to far areas in the Sidama zone. Searching for employment that wasn't available, some of them became beggars and their children lived on the street. Some of them lived in state-built sub-standard housing at the peripheries of the city. The policy makers recognized these problems in the KIIs and



they responded that these were later corrected with the new lease law. This land expropriation directive made compulsory for the government to provide a 90 days' notice before expropriation and to provide new compensation methods that allowed youth to receive a portion of their household's farmland (KIIs, 2017).

Table 7.1 The effects of illegal settlements at peri-urban areas of SNNPRS

Political	Spatial	Socio-economic	Physical
Encourages illegality	Yielded defects on urban plans- because of their spontaneous development	Evicted farmers- affected their livelihoods, As they were forced to sell the land because of the brokers	Creation of slum developments
Unstable urban administration- conflicts between ULGs and the new settlers	Extravagant use of land resource- uneconomic and unplanned	Affected farmers and national productivity- decrease in agricultural land size	In sum, squatter settlements- slum- settlements- slum people
Continuous illegal and substandard developments	Proliferation of illegal brokers and rent seekers	Increased insecurity and number of crimes	
	Discourages/affected urban centers' growth and developments	Deterioration of socio-cultural values	
	Affected the competency/capacity of urban centers	Increased tenure insecurity- new Land holders are highly threatened	
	Lack of infrastructure and services- deficit of land and budget	Affected economic values of land and Housing markets because of the lack of title deed	
	Defective urban-rural linkages	Socio-economic instabilities because of the demolition of illegal developments	

(Source: SNNPRS 2015c)

Elders protested that the 'unjust expropriations' destroyed the socio-cultural values of the Sidama (KIIs, 2016 & 2017). The Sidama used to pass land through family. Because of fear of expropriation, the Sidama had been widely engaged in selling land. The elders stated that the expropriation law destroyed the cultural value the Sidama once had to never sell their land. According to the elders, this will have a significant effect to the Sidama in two ways. One, the Sidama will be evicted from the urban areas, as most of them were farmers and have no capabilities (Skills and knowledge) to integrate with the urban economy. Two, it will make the Sidama poorer, as the only trans-generational asset of their community members was land. The elders also

mentioned that the land's sell practice affected household cohesion, as many youth requested to subdivide the land early and sell their portions, which conflicted with the family (KIIs, 2016).

One city administration official mentioned that the expropriations seriously affected those expropriated Sidama households. He added, 'previous expropriations amounted forced evictions. They damaged the households, as most of them were suddenly expropriated and less compensated.' He added that 'most of the households have been struggling under severe poverty. They lost all their land and became poor. Their children became daily labourers and street children. Most of the marriages were affected and even divorced because of the failures to manage the small compensation money.' The regional officials (KIIs, 2016) also agreed that the former expropriations had some inherent limitations: the legal framework failed to consider sustainable livelihoods of the farmers and family members within each household. The negative impacts of the land expropriations lead the elders to develop land selling practices as an adaptive preventive response to the evictions (KIIs, 2017).

The physical and spatial and political effects (table 7.1) have the capacity to lead to the growth and proliferations of substandard and unplanned developments. If this will not be addressed with the adequate and relevant interventions they would lead to physical deterioration and becoming slum. These effects will also affect the urban system and the regional linkages and functionality.

## **7.2 Land Use Land Cover (LULC) Changes in Hawassa (1985-2017)**

Another impact of peri-urbanization involved a change in land use and land cover. This was observed from a 22 years (1985-2017) LULC analysis of the city. This period was studied because of the rapid growth of the city during this time. The city's LULC analysis helped to explain peri-urban impacts because of two reasons. First, Hawassa depicted a horizontal, mainly inside-out, growth trend that lead to the expropriation of farm/rural/ land at the peripheries. Two, the growth in the later decade engulfed the individually growing peri-urban villages.

The LULC analysis maps (figure 7.1 & 7.2) stipulated that Hawassa had an outward horizontal expansion towards the rural hamlets. These rural hamlets were later engulfed by the city while they were individually growing. This was seen from the growth of the built areas in between the administrative and the municipal boundary (see figure 7.1 and 7.2 the lighter orange colours on the maps). Later, these hamlets merged with the multidirectional, continuous outward growth of the city that followed the expansion of roads. This merging and annexation yielded the new peri-urban settlements within the city's functional area.

Table 7.2 Land use changes in Hawassa (1985-2017)

Land Use Classification	In kms square				%change		
	1985	1995	2005	2017	1985-1995	1995-2005	2005-2017
Built-up	1026	2410	3265	6088	135	35.5	86.5
Forest	2334	2005	1991	1636	-14	-0.7	-17.8
Farm Land	7842	7185	6712	5137	-8	-6.6	-23.5
Grass Land	4698	4299	3919	3035	-8	-8.8	-22.6
Water Body	60	60	72	63	1	19.8	-12.9
Total	15959	15959	15,959	15959			

(Source: LULC analysis 2017)

The built area of the city grew by 257 percent between 1985-2017 (table 7.2). This resulted in significant changes in land use that had socio-economic, geographic and environmental effects in the city-rural region. It consumed the surrounding rural land. 698 hectare of forestland, 2705 hectare of farmland and 1663 hectare of grassland was rezoned and converted in to built-area between 1985 and 2017. The consumption shows a conversion of 32.5 percent of the forestlands, 38.1 percent of farmland and 39.4 percent of grassland. Most of these land-use changes were situated at the peripheries where peri-urbanization was occurring. Eastern and southern expansions affected marshy grasslands, and southwest growth consumed the forest. This highlights the effects and impacts of the growth of the built area because of the consuming peri-urban and adjacent rural land used for various purposes that maintained the ecosystem. The expansion of the built area had various implications. For example, the increase in built area and changes in land use resulted in changes in sedimentation transport and water level rises in lake Hawassa (*Belete, 2013*) that highlights the environmental effects. The changes in land use land cover in the absence of adequate planning and management interventions also imply the potential risks for the associated socio-economic and spatial impacts. i.e urban sprawl, slum, and social segregations and conflicts.

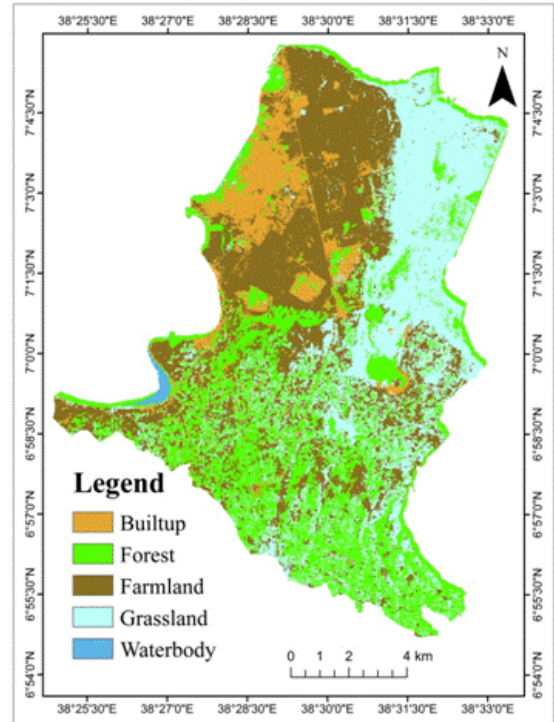
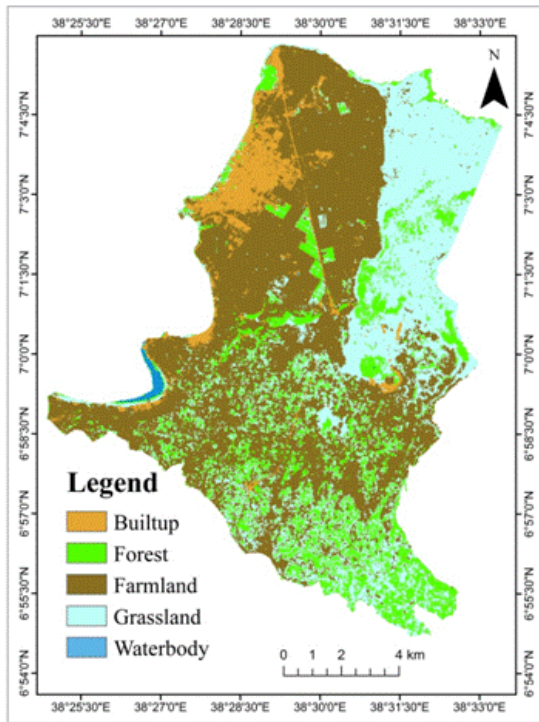


Figure 7.1 Hawassa LULC change 1985 (Left) and 1995 (Right)

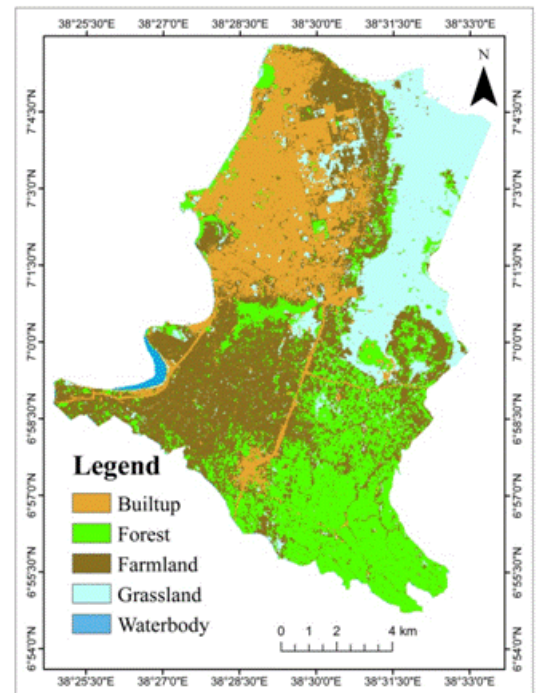
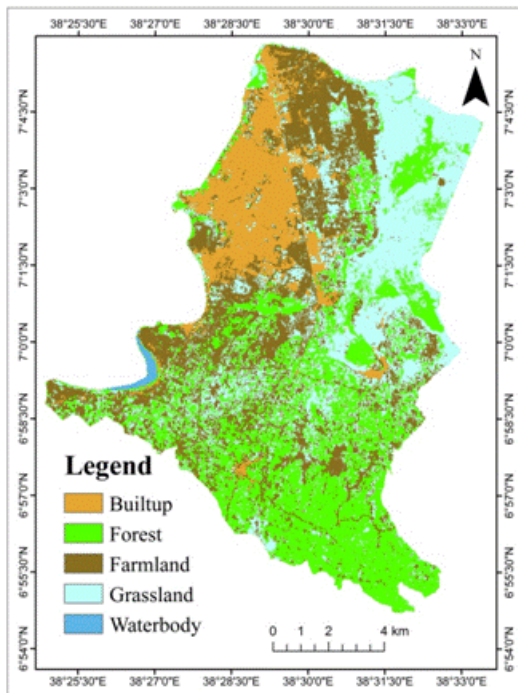


Figure 7.2 Hawassa LULC change 2005 (Left) and 2017 (Right)

### 7.3 Environmental Problems and Hazards in Peri-urban Hawassa

Other impacts of Hawassa's peri-urbanization were observed from the emerging environmental problems and hazards occurred in the settlements. Data from the household survey shows that the residents of the settlements started experiencing some environmental problems and hazards now days.

Accordingly, among the respondent households suffered from inundations(7.9 percent), landslides (7.0 percent) /those living around the mount *Alamoura* and the gorges of *Tikurweha* river/, environmental problems borne health problems (14.6 percent) (mainly upper respiratory tract infections), fire (9.1 percent), collapse of construction structures (8.2 percent) and others (8.2 percent) problems (table 7.3). Earthquake occurred in the region in 2015/2016 and an extreme value (44.8 percent) was reported. These small proportion sizes of the problems highlights the emerging status of the problems, hence the adequate services and planning and management interventions were not in place.

Table 7.3 Environmental problems and hazards in peri-urban Hawassa (2017)

Peri-urban stage	Inundation		Land Slide		Environmental problems borne health problems		Fire		Collapse of construction structures		Earth quack		Others	
	Freq.	Percent	Freq.	Percent	Freq.	Percent	Freq.	Percent	Freq.	Percent	Freq.	Percent	Freq.	Percent
peri-urban development phase	5	10.9	4	9.8	7	8.2	7	13.2	5	10.4	22	8.4	6	12.5
Take-off period	18	39.1	17	41.5	33	38.8	21	39.6	18	37.5	98	37.5	18	37.5
The acceleration phase	23	50.0	20	48.8	45	52.9	25	47.2	25	52.1	141	54.0	24	50.0
Total	46	7.9	41	7.0	85	14.6	53	9.1	48	8.2	261	44.8	48	8.2

(Source: own survey, 2017)

The location of peri-urban settlements, coupled with the limited delivery of socio-economic services and infrastructures, would exacerbate the environmental effects, which in turn would in turn yield the impacts. The lower proportions also show the greater growing possibilities of the effects when the developments attained the maturity stage/stabilization phase unless adequate interventions will be taken. Almost all these problems were associated with the locations of the settlements, lack of adequate services and infrastructure, and the prevalence of substandard developments in the area (chapter 4).

### 7.4 Conclusions

Hawassa's peri-urbanization, even though it did not attain the stabilization/maturity stage; started to yield both positive and negative socio-economic, spatial, political and environmental effects and impacts. The policy makers assumed that the negative effects and impacts outweigh the positive ones and the policy interventions were

designed to curb out these effects. The socio-economic effects were attributed to the effects on the former inhabitants evicted from their land and exposed to social crisis. The economic effects were seen from lose of land which was the just means of livelihood for the unskilled rural labour and destined at the city's streets. The physical and political problems were attributed to the spontaneous and substandard nature of developments and the challenges they created to the city's administration respectively. This highlights the potentials for the creation of substandard and slum developments and effects on the urban-rural linkages.

The second effect was seen from the changes in the land use land cover and its consequent effects. The city's rapid horizontal growth engulfed the individually growing peri-urban settlements and put them under pressures. This growth consumed rural land with various functions including environmentally sensitive areas- forest and wetlands. The unplanned expansion of the built areas, in the absence of planning and management interventions, highlights the potential to socio-economic, spatial and environmental effects. These imply the possibilities for slum development and emerging trends towards environmental effects like the increasing of flooding and sediment transport to the lake.

As a result, environmental problems and hazards were emerging in the areas. These were coupled with the lack of adequate infrastructure and services as well as planning and management interventions. The continued increase of the number of residents and its consequent expansion of the settlements and the built area enhanced the possibilities to attain the saturation stage show the possibilities of the growth of environmental effects in to the environmental impacts.

## **8. Regularization of Peri-urban Settlements in Hawassa: The Response to Peri-urban Development**

This chapter briefly introduced the regularization program as a policy response to peri-urban land planning, development and management. It described the legal framework and the practices of regularization of peri-urban settlements at Hawassa. The theory of change model was used to analyse and evaluate the efficacy of the policy response.

### **8.1 Regularization of Peri-urban Hawassa: an overview**

Regularization was a policy program established to legitimize the informal and illegal landholdings at peri-urban Hawassa. It was adopted after the proclamation of the new lease law and its subsidiary regional laws. The program created a process to legitimize the illegal land holdings within the urban administrative boundary (*SNNPRS 2015*) and (KIIs 2016 & 2017). It defined the modalities for planning, registering and certifying the peri-urban landholdings. Regularization policy proposed to urbanize farmers' land which had not been included in the urban plan and to take legal measures against illegal constructions (those constructed after July 08/2015) in these areas (*SNNPRS, 2015a; 2016*).

The policy had two major presumptions about the causes, nature and growth of the illegal landholdings at peri-urban areas. First, the policy makers recognized the rapid growth of the settlements and presumed that the growth was mainly driven by the increased of rent seeking tendencies and the consequent failures in local government leadership- emergence of corrupt leadership (*SNNPRS, 2015c*) and the consequent growing number of land speculators (KIIs, 2016). However, residents and experts argued that the settlements were rapidly growing because of the system's inability to deliver adequate housing schemes and the failure of the lease system to accommodate the middle income (KIIs, 2016 & 2017). The urban planners interviewed for this study estimated that nearly 95 percent of the residents and the landholders were those settled because of the housing shortage. One of the planners said that 'even what motivated the estimated 5 percent land speculators was the unmet demand and failure in the housing supply side.' Thus, the policy failed to consider the growing demand for urban land and the increases in urban land values.

Second, the policy presumed that the settlements had started to yield only negative spatial, physical, socio-economic and environmental consequences both on urban development activities and on the socio-economy of the residents (reviewed in the preceding chapter and summarized in table 7.1). It focused on the urbanization effects on residents' livelihood as farmers, as farmers were selling their lands and unable to pursue agricultural activities which were the sole menses of the household income (*SNNPRS, 2015c*). The policy stated that illegal and rapidly growing new housing structures threatened urban development because the city followed no urban



development growth plan. Not following a growth plan was believed to create difficulties in infrastructure and service provision and affected future of urban centers.

Hawassa's regularization program, in addition to the one stated in the national policy, had five main and multifaceted rationales. The first rationale was the need to accommodate the already established investments of the citizens and to resolve the questions of good governance by being responsive to the questions of the residents. They agreed that the resources invested into the physical structures belonged to the „nation and the citizens“ (KIIs 2016). Second was the need to address the emergence of new settlement trends and use of urban land found at the expansion areas (resource efficiency and sustainability) (*SNNPRS, 2016*; KIIs, 2016). Third, the need to ensure the optimal use of urban land and maintain a just distribution of an urban land was acknowledged (Equity, efficiency and justice in resource allocation) (*SNNPRS, 2016*). Fourth, Hawassa's regularization program highlighted the need to demolish the supremacy of rent seeking tendencies rooted deep within the urban land market. The policy intended to devise a tool for abolishing the supremacy of a rent-seeking political economy and replaced it with a developmental political economy. This was created because the policy makers believed that a large rental market drove illegal landholders to buy land at the expansion areas (therefore land was taken to serve as an instrument to establish the developmental political economy) (KIIs, 2016). The fifth rationale was the need to establish a longstanding preventive system for administering the urban land found at the expansion areas of urban centers. The regularization program discussed how to distinguish between urban boundaries and ways to prevent illegal constructions at expansion areas (*SNNPRS, 2015c*).

The regularization program had complex and political objectives. The regional state admitted the need to establish a land development and management system that accommodated and legalized the informal landholdings (*SNNPRS, 2016*). Landholding was recognized as a citizen's right and the program valued the resources and investments in peri-urban areas as a nation's wealth (KIIs, 2016). As a result, the program was adopted to respond to the problems of good governance associated with the informal landholdings at the expansion areas and as a tool used to abolish the urban land based rent seeking tendencies and clear the expansion areas from rent seekers (*SNNPRS, 2015c*).

The program had short-term and long-term objectives. In the short-term, it aimed at establishing an urban plan system for the peri-urban settlements and secure the tenure of 17916 plot holders. In the long run, it aimed to establish a local land governance system and protect peri-urban land from rent-seekers and inefficient developments through the abolishment of the urban-land based rent seeking practices and prohibition of any further illegal developments in the expansion areas (*SNNPRS, 2015a, b & C*; KIIs, 2016). It thus had the following two major integrated components and one supportive system that established local land governance system at the peri-urban areas (*SNNPRS, 2015a, b & c*):

- i. urban planning- the preparation of Local/Neighborhood Plan (L/NDP); and
- ii. Land registration- the provision of title deeds.

## 8.2 The Regional Regularization Campaign

In 2015, the regional state launched a regularization campaign that mobilized the political leaders to execute the regularization program and 'close the cases related with illegal settlements emerged at expansion areas of urban centers once for all' (KIIs 2016). The campaign aimed to accomplish the aforementioned objectives of the program. It was guided by a step-by-step action plan created in order to attain the objectives. These included the identification, registration and regularization of informal and illegal landholdings, the preparation of urban plans, the demarcation and documentation of an urban-rural/district boundary, the establishment of a task force who prohibit illegal constructions on the expansion land and the establishment of regular evaluations and monitoring platforms (*SNNPRS, 2015c*). The city level task force and the technical committees were organized to lead and undertake the program. The task force was expected to coordinate all the stakeholders and the local */kebele/* authorities in order to create a consensus among the stakeholders about the negative impacts of illegal settlements, prohibit the illegal practices and establish transparent land development and management systems (KIIs, 2016; *SNNPRS, 2015c*).

In May 2015, HCA organized a taskforce of two technical teams comprised of urban planners and surveyors that led the regularization activity program. The city administration also prepared an action plan that parallels to the regional campaign (KIIs, 2016 & 2017). The task force conducted a meeting with the residents of peri-urban settlements and informed them about the modalities of the process. They elected representatives of the community who were intended to closely work with the taskforce and represent the voice of the residents (KIIs, 2016).

As a result, 46263 and 17916 plots of land were identified as illegal land holdings in SNNPRS and Hawassa city respectively (in 2016) (*HCA, 2016b; SNNPRS, 2016*). Only 5942 (36.5 percent) of these plots were regularized in Hawassa up until 2016. Conversely, 2458 houses were built on new plots and 599 were demolished in the same year (*SNNPRS, 2016*).

## 8.3 The Regularization Process of Peri-urban Settlements in Hawassa (2015-2017)

The regularization program and the consequent task force introduced a multi-staged process. The process comprised of the following stages.

### 8.3.1 The Identification and Registration Stage

At this stage the location of the plot (neighborhood and block), type (informal or illegal) and nature (area and ways the plot was acquired) and the recent plot holder (identity and proof of documents) were identified and listed. The task force had a consultative meeting with the „informal and illegal landholders“ and introduced the regularization system and the representatives of the community were jointly

nominated. The task force requested the landholders to support the technical team. The two technical teams were subdivided into seven sub-teams with the addition of *Kebele* administrators and community representatives. These teams each undertook identification registration in their seven respective neighborhoods. Here, the technical team was expected to identify the name of the landholder, period of occupation, plot's location, plot's area, land use type and the available proof of landholdership (KIIs, 2016; *HCA, 2016b*). These elements were expected to determine the landholding type and the modes of regularization.

The *kebele* administrators and the representatives actively checked landholder identity and resolved some conflicts of ownership between former holders and those who bought the land (KIIs, 2016). However, registration documents only consisted of the name of the owners, the plots' locations and partial the proof of landownership (*HCA, 2016b; SNNPRS, 2016*). The reasons for not registering all the information required were not clear. The members of the technical team were also unwilling to tell the researcher the reasons why they were unable to record this information. However, regional experts explained that the reason for not registering all the required information was that it was to keep the information mainly confidential. The secrecy was because of the high level of engagement between owners and local administrators because of the ethnic based governance structures (KIIs, 2016).

The identification and registration stage occurred when the current landholder was identified and proved to get a title deed. Proof of plot ownership through the task force was given through the presentation of land holding documents, such as: an application for registration, traditional contractual agreements of transfer, receipts for paying land use tax payments and other documents of approval (*SNNPRS, 2015b*). 90 percent of the identified and registered landholders presented the traditional contractual agreement and receipts of payments for amenities like water and electric meters (*HCA, 2016b*). The sizes of the plots were not physically surveyed; they were registered based upon the contractual agreement of transfer (KIIs, 2016). It can thus be said that the identification stage was limited to identifying the landholder and plot location; further details were kept more confidential by the landholders. Yet, the hidden information was the significant determinants of the modes of registration. This implies the lack of trust and confidence in the system.

### **8.3.2 The L/NDP Preparation Stage**

#### **A. The Planning Process**

The L/NDP was prescribed as a planning tool to guide the regularization process (*FDRE, 2008; SNNPRS, 2015a & b*). Despite the national purposes of the L/NDPs to translate the objectives of city's structure plans, the intention here was to restructure and guide the already existing settlements at areas outside of the planning boundaries. The L/NDP guided the land registration process more than serving the other planning purposes (KIIs, 2016 & 2017). Hence it was prepared in the absence of the supreme plans like structure plans that should have guided its developments.

The regional policy stated various L/NDP preparation and execution directives. Preparation directives were determined by the locations of the settlements (whether found within newly annexed areas without plans or villages reclassified with basic plans), the size of the settlements (whether the settlements cover wider areas) and the harmony between the nature of the settlements and the L/NDP proposal (compatibility of the plots vs. incompatibility). These determined the procedures and actions to be followed based on the size, function and nature of the built area of the plots. The overall directives were summarized in table 8.1 below. The newly annexed areas located out of the plan boundaries were subject to the national land use planning standards and the reclassified within the preparation of basic plan standards were subject to basic plan standards. The L/NDP for settlements that covered the wider areas were to consider the development of infrastructure and services and subjected to the provisions of land registration as stated in the lease directive and the guidelines to determine the shape and area of the plots based on the plot nature. It was recommended to keep physical structures' demolition to a minimum in order to minimize socio-economic crisis (*SNNPRS, 2015b*).

In parallel, the other determinant to the preparation of the L/NDP was landholding classification at the peri-urban areas. Plots found at the annexed areas were classified as either informal or illegal land holdings in three ways. First, based upon the location of the settlements found: either in areas formerly included in an urban plan boundary or areas recently annexed. Second, based upon recent functions of the land use: those found in farmers' villages or farm areas intended for future development. Third, the identity of the landholder: those occupied either by farmers or squatters (*SNNPRS, 2015a & b*).

Based on this L/NDP preparation guideline, the city's regularization tax force decided to follow the directions set in the first, third, fourth and fifth guidelines. This was because they believed that the land was found in the administrative boundary of the city and beyond the existing municipal/plan boundary (KIIs, 2016 & 2017) and the settlements covered wider areas. The plan preparation was intended to consider the development of infrastructure and services (KIIs, 2017). Accordingly, land use plans (as an L/NDP) partially followed regularization guidelines and national standards. L/NDPs highly compromised these standards because of the intentions to minimize socio-economic crisis (KIIs, 2017).

As a result, the L/NDP prepared for the regularization of peri-urban settlements of Hawassa focused on maintaining regular shapes of the blocks and land parcels and on the legitimization of land uses and landholdings (KIIs, 2016 & 2017). It hardly followed the national planning processes and principles. The L/NDP was initiated only to resolve the 'problems of illegal settlements' (KIIs, 2016) and it focused on land use planning. The plan intended to establish a small amount of land for greenery and social uses and while maintaining road networks accessible to all plots. No socio-

economic and physical surveys commenced to prepare for this plan. Instead, satellite imageries were taken to determine the ground layouts and the land use. Road networks plan was developed in office mainly on the basis of existing roads. This was later corrected by physical supervisions that were conducted only when complaints were raised (KIIs, 2017). In this process, the technocrats (planners and geographers) tried to integrate the satellite imagery with GIS to align the coordinates and the physical plan along block base subdivisions (figure 8.1). The plans maintained nearly 80 percent of the existing roads and adjusted some dimensions of the roads (KIIs, 2017). This saved planning and construction time, reduced demolishment of built structures and reduced 60-70 percent of residents' complaints (KIIs, 2017). According to the planners (2016) the planning process was full of problems. It suffered from lack of real data (such as a ground survey). Some other shortcomings of the plan and execution were that it also overlooked preserved places like cemeteries and cultural fields, rapid construction occurred after the imagery was taken and conflicts with satellite imagery and ground reality occurred.

Table 8. 1 Peri-urban land planning guidelines at SNNPRS-Hawassa

	<b>Location of the settlements</b>	<b>Planning recommendation</b>
1	Within a newly annexed area, because of the plan boundary	Prepare L/NDP and follow the parcellation standards
2	Villages annexed with basic plans	No need of L/NDP, prepare parcellation standards
3	Covers wider area with no plans	Prepare L/NDP with services and infrastructure and apply the modes of parcellations stated below in table 8.3
4	Given 3 above, if the plan and the developments are in harmony	Maintain parcellations and regular shapes and follow planning procedures
5	Incompatible with plans	Demolish, no compensation payments

(Source: SNNPRS 2015b)

Peri-urban Hawassa's L/NDPs were based upon existing settlements and followed organic urban forms. The L/NDPs consisted of expressways, arterials, collectors and access roads and followed a mix of grid and organic patterns. Expressways were considered extensions of the city's road networks and kept the dimensions of the original roads. Despite of the intentions to maintain the hierarchical nature of the roads network, all the planning experts (2016, 2017) agreed that the dimensions of the roads were compromised to maintain the socio-economic effects of the L/NDP to the lowest possible level. Thus, planners largely kept the existing road networks and ensured and improved access as much as possible. This kept the urban road network resembling a naturalistic pattern, rather than classical planned „chessboard“ morphology (figure 8.1).



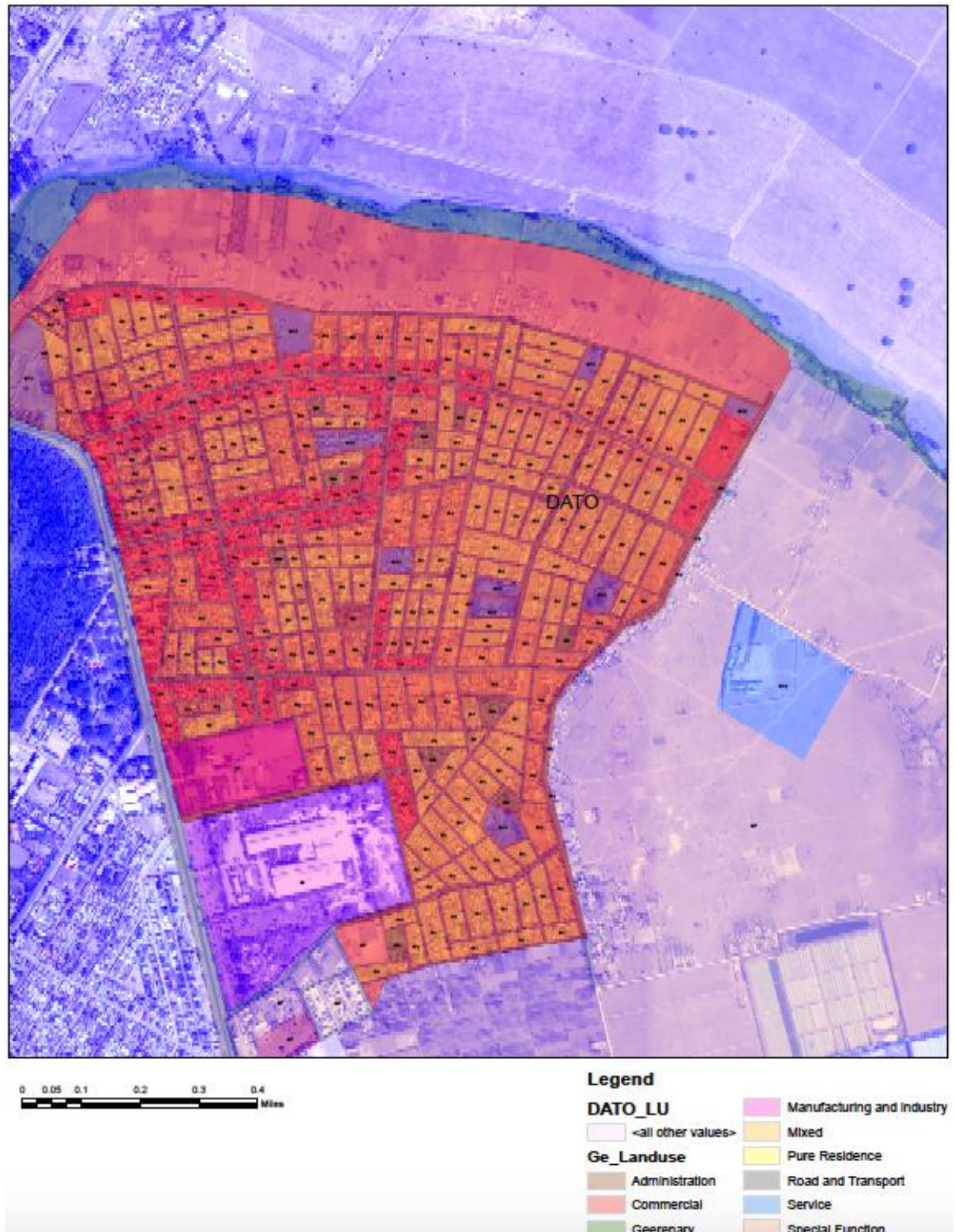


Figure 8. 1 L/NDP developed from a satellite image of peri-urban, Hawassa: *Dato-Odahe* /2016/  
(Source: HCA 2016)

The plans compromised the land use planning standards /even the national one/ because of the density of the settlements and the naturalistic patterns of the road

networks. The 40:30:30 land use ratio (built area-infrastructure and services-greenery) (*FDRE 2013*) was not maintained. The planned green areas per L/NDP average accounted for 10 percent. The built area covers 70-80 percent and remaining 10-20 percent was left for road networks (KIIs, 2016). Satellite image-based plans recognized the existing plots, blocks and land uses, which were 90 percent residential and 10 percent mixed and other uses (KIIs, 2017). Only the arterial and collector roadsides were reclassified as mixed use to accommodate existing residential uses and predict transitions in land use (KIIs, 2016 & 2017).

The dimensions of the roads, despite of the intentions to keep the hierarchical organizations, were highly compromised: the collector roads were 12-14 meters wide, local roads 8-10 meters and access roads 6 meters wide on average. The width of the roads typically deviated from the standards by 2-4meters on average (KIIs, 2016). Only the arterial roads found adjacent to the city were kept according to standard because they extended from the city and the settlements already recognized. The blocks were typically rectangular. The plots were often not proportional but mostly symmetrically organized. Dimensions highly varied as stated in chapter six (KIIs, 2016 & 2017; Field observations, 2016). Residential land use dominated the region

No community participation during the preparation of the plans was recorded. Only the technocrats' /planners'/ proposal were later told to the plot owners and the plan proposals were kept as top secrets. This was because of 'the political nature of the program' said one of the interviewed city officials (2016). The regularization process was a campaign-based activity and there was a rush to meet the deadlines set by the proclamation and regional campaign action plan (KIIs, 2017). However, the peri-urban community had an interest to participate in the plan preparation and have all planning the information openly accessed and discussed (KIIs, 2016). In this way, the representatives of the community did participate during the land registration stage. Their major roles were to provide proofs of landholder's identity if conflicts and doubts occurred during the registrations and to resolve complaints during the title deed acquisition (KIIs, 2017). The city planners reported that complaints were resolved though various amendments, which later yielded more complaints, which included impartiality due to differing ethnic identities and political affiliations (KIIs, 2017). The community also complained that there were repetitive changes in the planning office without justifying the reasons for change (KIIs, 2016 & 2017).

Regional planning experts complained that the sketch-drawing plans prepared for the regularization of peri-urban Hawassa didn't fulfilled the standards of the L/NDP (2016). They also argued that the planning process failed to fulfill legal planning processes and procedures. According to the interviewees, the plans failed to follow the principles of sustainable planning and good governance as they only came up with office-based technocratic drawings and the participation of the community was minimal. They added that the plans were illegal because they were not commented and approved by the authorized parties, which included the regional planning institute.



The plans failed to be based upon socio-economic and physical surveys, ensure the participation of the community and followed the legal procedures (KIIs, 2016).

The city administration admitted the limitations stated by the regional experts, yet they mentioned the nature of the campaign processes and political deadlines as well as the decisions to minimize the socio-economic crisis as causes for the limitations (KIIs, 2017). However, the regional planning experts mentioned several other reasons for the limitations of city administrations. One was the problem with who initiated the planning. The land development and management office initiated the planning without considering the planning issues. The second was planning objectives succumbing to political objectives, rather than balancing both. The third was the high level of engagement of officials in the land markets and the political suspicions between the ethnic groups, which made the process confidential and affected the participation of the community and the technical approval of the regional planning institute (KIIs, 2016).

### ***B. Determining the Urban Form during the Preparation of the L/NDP***

The urban forms of the L/NDPs badly followed the existing settlement organizations (i.e the plot and block organizations and the road network). Therefore, the urban form resembled organic forms and patterns. Most of the planned blocks were asymmetric and around 200-260 x 40-50 meters (KIIs, 2016 & 2017; [HCA, 2016](#)) (figure 8.1). This was different from Hawassa's planning standard that was 100-150 x 20 meter block size, and the symmetric organizations of plots.

Urban form details were determined by the plots' registration guidelines. These were established based upon the type of the landholding, the area of the plot, period of occupation and the identity of the owner summarized in table 8.2. The peri-urban landholds areas were classified in informal and illegal landholdings (defined in the literature review section). These were further qualified as sub-standard, to-the-standard and super-standard plots based upon the size and the nature of the landholder (farmers or squatters). These qualifications determined the size and forms of the plots and the block.

The plot sub-division guidelines determined the minimum possible functional size of the plots (150 M<sup>2</sup> for residential use at Hawassa city) and the maximum landholding size (500 M<sup>2</sup>). The guidelines also highlighted the need for maintaining regular shapes, the ways for taking back land for services and infrastructure and landownership system transitions. Land could be expropriated if replacement land was provided or if the plots were substandard. The super-standard plots could be regularized to maintain regular shapes. They were subject to reduction of land for services and infrastructure. The extra land beyond the 500M<sup>2</sup> was also subjected to taking back, if it was free from built structures (table 8.2). These were intended in order to maintain regular shapes, order, symmetric organizations and aesthetic urban design (KIIs, 2016).

Table 8. 2 Modes for determining plot size, form and conditions of regularization at peri-urban SNNPRS-Hawassa (2015-2017)

Plot standards	Land category	Conditions for registration
Sub-standard plots	Land less than 150M <sup>2</sup>	Replacement land 200M <sup>2</sup>
	Two adjacent plots each less than 150M <sup>2</sup>	Merge and common use
To-the-standard plots	Between 150-200M <sup>2</sup> , if irregular shape and the length of the sides is not less than 7m	Regularize with regular shape
	Between 150-200M <sup>2</sup> , if irregular in shape and the neighbours can negotiate to adjust	Merge and regularize
	If the land was between 201-500M <sup>2</sup>	Reduce for services and infrastructure and with minimum lease price
Super-standard plots	If the land exceeds 500M <sup>2</sup>	Demolish any structure in the exceeding area and expropriate this area without any compensation
	If the all 500M <sup>2</sup> was totally occupied with built structure	Regularize with maximum lease price

(Source: *SNNPRS 2015b*)

### 8.3.3 The Stage of Determining the State of Individual Plots

Consequent to the identification of 17916 plots and the preparation of the seven L/NDPs, the city's task force and the land development and management began to determine plot type based on the informality/illegality classification and the plot size. Even though these plots' elements would have been identified during the first stage of the regularization, the technical committee had failed to come up with these details as discussed above. Thus, the identified landholders were recalled for the field survey identification /on neighborhood based schedules/. Consequently 17916 land holders were availed themselves on the plots and field survey commenced to determine nature of the plots in the presence of the local delegates and the technical team in between of September 2015-January 2016 (KIIs, 2017).

#### 8.3.3.1 Determining the Illegal Landholdings

The illegal land holdings were further categorized based the location of the plots and the period of land occupation. Each categorization determined the modes of regularization. The first parameter was the location of the plots: within farmers' villages and within the farmlands intended for future urban development. The plots were further categorized by the identity of the occupants (farmers or squatters) and their level of income (low income or speculator) (*SNNPRS, 2015b*). These are summarized in table 8.3 below.

Table 8. 3 Modes of determining the plots for illegal landholdings at peri-urban Hawassa

S.N	Land category	Conditions for registration	Remark
1	Land occupied before July 08/2012	200 M <sup>2</sup> with lease base price and 25 ETB for each M <sup>2</sup> as a fine to the illegal act, otherwise demolish without compensation	Keep the shapes regular and follow the sizes based on the standards as mentioned in table 8.2
2	Illegal buildings between July 08/2012 – July 08/2015	Regularize 200 M <sup>2</sup> with the area's lease price and: a. if low income occupants' minimum lease price b. if speculator occupants' maximum lease price	

(Source: *SNNPRS 2015b*)

The locations of the plots served as a determinant, coupled with the identity of the occupant and the methods of land occupation, there were three qualifications to these ends. One, the illegal landholding found within farming villages that merged their legal possessions with the illegal landholdings. This category presumed that farmers were engaged in land speculations (KIIs, 2016) and the mode of regularization was designed to punish the occupants. As a result, determination of plots size and shape was dictated to follow various standards stated in table 8.2 above (*SNNPRS, 2015b*). Second, land holdings found in the farmers' villages but totally illegally occupied. In this case, plot size and registration modes were subjected to punishments because of the illegal acts of land occupations presumed. The extra landholding beyond the 500 M<sup>2</sup> would be expropriated for the city's development and the regularized land would be subjected to the market lease prices (*SNNPRS, 2015b*). Third, the illegal landholdings situated on a land required for public interests which were determined by the public bodies including urban development projects, were not allowed for registration and dictated to be expropriated without compensation and replacement land (*SNNPRS, 2015a&b*). There was an exception to this third qualification - illegal holders would be given 200 m<sup>2</sup> of replacement land only once with no compensation for their properties subject to the regional state's decisions (*SNNPRS, 2015a&b*). This was because the policy makers partially recognized that some of the illegal landholders were not speculators rather those unable to get land for housing in the cities (KIIs, 2016).

The second parameter was the period of occupation: those occupied before July 08/2012; those occupied between July 08/2012 - July 08/2015 and those occupied after July 08/2015 (*SNNPRS, 2015a & b*). The first two categories qualified for regularization and title deed acquisition while the third category subjected to demolishment. Demolishing and clearance was enacted to prohibit developments of illegal settlements and abolish the urban land-based rent-seeking tendencies. The illegal landholders that began with occupation before July 08/2012 were only allowed to register the 200 m<sup>2</sup> land and were to pay the lease base price and fines of 25 ETB per M<sup>2</sup> (*SNNPRS, 2015b*). Illegal landholders that occupied between July 08/2012 - July 08/15 qualified for registration and payed the market lease price (minimum for

the low income occupants and maximum lease market price for speculators) (*SNNPRS, 2015b*).

The third parameter was the plot size. The regularization guideline stated to keep the size remaining after a regular shape is maintained, with 200 M<sup>2</sup> as a minimum size (with lease base price) and 500 M<sup>2</sup> (with maximum lease market price). It also allowed for the expropriation of the remaining land if the plots were greater than 200 M<sup>2</sup> (hence the maximum size for residential plots allowed was 200 M<sup>2</sup>). Yet, the exception here was the prohibition of registering the illegal land if the owner had a land by his, spouses or minors' name in the city (*SNNPRS, 2015a & b*). The fourth parameter was the income level of the landholder. Low-income residents had rights to regularize only 200 M<sup>2</sup> of the land within the areas' lease market price. Conversely, squatters and speculators were subjected for regularizing according to the maximum lease market price (*SNNPRS, 2015b*).

There were two main rationales behind these sub-categorizations. First, period of occupation determined the regularization response enacted upon a plot based on the year of the lease law enactment. Those who first occupied plots after the lease law were punished through paying the lease market price. As a result, the pre-lease law occupants were tolerated because the policy makers admitted the failure of the city administration to supply land and let the landholders off with a smaller fine (KIIs, 2016). Second, the plots size for residential uses (major uses in the areas) was made to be 200 m<sup>2</sup> because of two reasons: (i) this was the minimum size of plots for residential use in the city and to keep equal distribution of land (KIIs, 2016) and (ii) to punish and discourage all the illegal occupants. However, planners and city officials criticized these qualifications because the periods of occupation and the identity of the occupant as well the phrase „land required for public interests“ were not objective, not easily identifiable and difficult to prove (KIIs, 2016 & 2017). No plots were registered on the basis of these guidelines (see the next stage for the details).

#### **8.3.3.2 Determining the Informal Landholdings**

In SNNPRS-Hawassa, the process of determining the size of plots and modes of regularizing informal landholdings found within the annexed areas of rural villages was dictated to follow the process and modes of illegal landholdings stated above and coupled with the following two important exceptions. Regional land development and urban development policy makers argued that the regularization of informal landholdings followed the modes of regularizing illegal land holdings because of three reasons. The first was that, according to them, the regularization policy maintains equity of resource distribution through equally re-subdividing the land that had a potential for urban expansion. The second was that the policy maintained urban planning standards by establishing similar and regular sub-divisions unto the rural villages that were irregularly occupied. The third was to establish sustainable development through making the rural youth an urban landholder /through sub-

divisions in to youth members of the family/ and to efficiently use the just potential land for city expansion (KIIs, 2016).

The first exception was if the landholder's plot was subdivided with his/her non-minor children. Here, the head of the household was provided with 500 M<sup>2</sup> and the children had the right to get 200 M<sup>2</sup> each, if the holder didn't have land within the city. This was done to prevent the speculators from occupying large tracts of land; hence, the policy presumed that the farmers had no opportunity to own a plot of land at the city. Thus, the intention of this exception was to punish the speculators and discourage the rent-seekers.

The second exception of regularizing informal landholdings was when farmers were willing to build or renovate their house. Landowners were required to get a permission from the municipality and the permission was only granted after considering services and infrastructure and is also in agreement with the plan, block survey and land size as stated in table 8.2 above. The need for the development permit was justified by two reasons: (i) to prevent the sale of land in the pretext of property transfer and thereby prevent the insurgence of speculators and rent seekers and (ii) to prevent the growth of unplanned development (KIIs, 2016 & 2017). If an incompatibility with the plan occurred when a landholder requested for development permit, the municipality was to provide land within the city and paid the necessary compensations (*SNNPRS, 2015b*). The provision of replacement land was justified by providing the landholder (presumed to be mainly farmers) an opportunity to get land in the city (KIIs, 2016).

In summary, categorizing the informal and illegal land holdings can be summarized in to the following five issues.

- i. determine the regular shapes and order of the plots based on the planning principles through the proposed area standards;
- ii. maintain equal distribution of land resources through the proposed plot area limits;
- iii. establish land values through the lease price associated with the landholding modes;
- iv. punish the illegal acts of landholding through fines;
- v. urbanize the peri-urban land through transitions into leasehold modes.

To this end, considering both land holding types in peri-urban Hawassa, 16266 out of the 17916 plots were found to be adequate for the registration and 1658 plots to be relocated because of the proposed land uses: greenery and the social services. Yet, the execution of the regularization and land registration was delayed because of the communities' resistances and the inability of the city administration to enforce the execution of the proposals. The determination of plots based on guidelines became impossible. Repetitive oppositions had occurred and the regional state officials held a consultative meeting. Various compromises to the standards were done and a

consensus was made to consider all the plots adequate for the registration as they were and register while considering the fines and lease prices. The issues of expropriating extra land of super-standard plots couldn't be possible. The city administration was unable to relocate the 1658 landholders because of the inability to prepare land for reallocation and pay the required compensations. There were also complaints on the where to be of the proposed plots as the plans were not transparent and changes in the locations of the relocated plots occurred (KIIs, 2016 & 2017).

#### 8.3.4 The Registration and Title Deed Delivery Stage

Peri-urban land registrations and the title deed provision followed the plots categorization. Since January 2016, the technical committee has reviewed the identification documents, the field surveys and the plot determination and has contacted the qualified 17916 plot owners to apply for registration.

The applicants were required to apply for land registrations and present landholding documentation. The application letters should have indicated the name of the landholder, the area of the land, the location of the land as given during the preceding stage, the date of land occupation and a request for registration. This was taken as a proof of consent for the terms and conditions of the program. The landholder documentation should have indicated the qualifying elements of the plots (i.e. date and mode of land occupation and identity of the occupant). The city administration/municipality also established two teams of surveyors, each containing 20 members, which cross checked the documents with the data from field surveys, determine the nature of the plot, prepared the titled deed and recorded payments (*HCA, 2016b*).

In response, 17916 landholders applied for the registration until February 2016 (*HCA, 2016b*). However, the applicants only requested for registration and hide all the details including land size, date of occupation etc and provided the documents of proof of landholding like property sell contract agreements. Nearly 85 percent of the applicants presented local contracts and half of the 85 percent had receipts for rural land use tax payments (KIIs, 2017). The municipality established personal files of the applicants and the team of surveyors started the field surveys based on the L/NDPs. They prepared the title deeds for 16266 (90.7 percent) of the plots and identified 1658 (9.3 percent) of the plots to be relocated because of the changes in land use as per the L/NDP proposals. However, only 5942 plots (36.5 percent) were registered until December 2016 (*HCA, 2016b*) and got the title deed while nearly 16,000 title deeds were prepared by the office (*HCA, 2016b*) (3216 plots (63.5 percent) were per leasehold, and 2726 plots (45.9 percent) were informal landholders resembling old possessions). The amount of new landholding documents implied the massive transfer of peri-urban land to the new landholders. The small number of (only 36.5 percent of the landholders) the registered landholders coupled with the afore-discussed repetitive resistances implied the failure in the assumptions of the regularization program that stated as „the landholders would massively register without resistance“ (KIIs 2016).



The landholders, mainly the farmers resisted the proposed modes of plot determinations and later declined to accept the modalities of the illegal landholding registration. The landholders argued that their plots were not illegal. Rather, they were legally occupied on the basis of the rural land administration regime and the law should be proactive not retroactive. As a result, the city administration's taskforce conducted three consultative meetings where they negotiated to adopt ways to overlook the plot qualifications that enabled to determine modes of land acquisition (KIIs, 2016). The technical committee also discussed different challenges and proved that not only the lack of details that determined the modes of the registration about the plots made the modalities difficult, but also the ways the landholders had built the physical structures created difficulties for determining the super-standard plots. The landholders constructed the structures mainly at the back of the plots (see section 4.1.6 of this report) to take advantages of the provisions that stated the extra land as the one free from built structures. They also left the front part of the plot open predicting that the new plans can easily reduce the land for roads (KIIs, 2016; Field observations, 2016 & 2017). These made the determinations of plot size and type difficult and challenge the execution of the regularization program difficult.

Thus, later, the city administration devised a 'context-based mode' on the basis of informal landholding registration that allowed plots registration without the aforementioned qualifications of size, date of occupation and area parameters (*HCA, 2016b*; KIIs, 2017). The city administration decided to register all the qualified plots in the peri-urban areas based on informal landholding registration modalities and avoided the expropriations of extra land and the persistence on the respective areas lease base price (*HCA, 2016b*). Yet, a small amount (< 2000) of the new settlers registered and paid the fines and lease fee (KIIs, 2017).

### **8.3.5 The Provision of Development Permit stage**

The final stage of the regularization process was the provision of the development permit upon the request of the registered landholder. The legal permit was made to strictly control new developments so that they followed the L/NDP and building standards. Therefore, permit would serve as an instrument to guide, modernize and urbanize the settlements. The registered landholder could apply for new development permission. The applicant was to present the blueprints of the proposed developments for residential use or, for commercial uses, blueprints and a project proposal. The applicants were expected to pay for the development permits and designs preparations and adhere to the „modern and urbanized“ construction standards (KIIs, 2017, *FDRE 2011*). If any extra land (as per the super standard plot size criteria of the guideline) was occupied, permits were only granted after the landholder cleared the occupied extra land on the basis of the L/NDP and the title deed. This was a mechanism which maintained to support plan implementation at no compensation cost (KIIs, 2016).





Figure 8. 2 One of the new constructions with development permit at Tullo-Argo peri-urban (2017)  
(Source: Researcher 2017)



Figure 8. 3 One of the new constructions without development permit at Datto-Odahe peri-urban (2017)  
(Source: Researcher 2017)

The number of development permit requests was insignificant. Only 221 landholders requested development permits up until January 2017 (*HCA, 2016b*). These requests of permits came from landholders that occupied plots alongside main arterial roads and wished to develop commercial projects like shops and small hotels. As a result, new multi-level structures emerged along the main roadsides in the regularized areas (figure 8.2) (KIIs, 2017; Field observations, 2017). Conversely, various new developments without development permits also were built within these neighbourhoods. Owners were redeveloping their structures and a lot of construction without a permit was seen in the regularized areas (figure 8.3) (KIIs, 2017; Field observations, 2017). Residents complained that the fees required for the permit process (such as the cost of blueprint design development) increased their investment cost (KIIs, 2017). This shows that the objectives of the development permit (to guide settlement urbanization and modernization by controlling developments) failed.

#### 8.4 The Theory of Change /ToC/ of the Regularization of Peri-urban Hawassa

The ToC was used to analyze the nature of the regularization policy and to evaluate its efficacy as a policy response. A basic ToC for a multifaceted intervention model developed by *Mayne (2015)* was selected. This model was selected for two reasons that stemmed from the nature of the regularization program. The first was the nature of the program activities. The core activities (planning and land registration) established a local system for urban land prevention and control. The program assumed these two activities would provide the aforementioned intended results. The two major programs also show the multifaceted nature of the regularization program. The second reason was the existence of various nested theories integrated along the casual links of the regularization process (discussed below). An ex-post analysis was conducted to check if the ToC yielded the intended outputs and what role the program played in bringing about the outputs.

#### **8.4.1 The Rationales and Presumptions of the ToC of the Regularization Policy**

The regularization program as a land development and management policy tool had different rationales that underlay the adoption of the model and its activities. As stated above, the major rationales were (i) efficient use of land resources and properties for current and future uses (formalization of informal land ownership and sustainable, optimal land use); (ii) the maintenance of responsive governance (good governance); (iii) the maintenance of equity in urban-land distribution (equity in resource use); (iv) the clearance of peri-urban areas from speculators (use of urban land as a tool for the establishment of the developmental state political economy); (v) the punishment of illegal acts (to discourage future unofficial land holding and unregistered developments- land administration and management), and (vi) the establishment of a local land governance regime at peri-urban areas of Hawassa (strengthened local governance). The rationales were mainly political, which reduced the effectiveness of the program. Consequently, the regularization program resulted in resistance and compromised modes of registration, and in turn yielded unintended results.

#### **8.4.2 The Fundamentals of the ToC of the Regularization**

The ToC of the regularization program and its constituents (figure 8.4) were discussed as follows. The regularization program targeted /beneficiaries/ to reach the holders of 17916 plots of peri-urban land and the landholders found within the administrative boundary of Hawassa city. It was intended to support the ULGs to administer urban land within the administrative boundary of the city and to use the peri-urban land for future optimal urban development. The targeted beneficiaries and the intended support to the ULGs guided the ToC of the regularization program and its fundamentals are stated below.

##### ***i. Core Activities, Impact Pathways and the Casual Link Assumptions***

###### ***A. Core Activities***

There were two core activities of the program. The first was the preparation of L/NDP, which was about determining the plot and blocks organization, land use and road network. The second was the registration of landholders, which consisted of plot ownership identification and title deed acquisition. These core activities were created to achieve the objectives of the program with emphasis on governance rationales. These governance decrees were mainly established to ensure tenure security and to yield plan-lead urban development.

###### ***B. Goods and Services***

The deliverable products included L/NDPs for the seven peri-urban neighborhoods and the delivery of title deeds for the 16262 qualified landholders. The plan assumed the landholders (both informal and illegal) would quickly and willingly participate in the regularization activities.

### ***C. Reach and Reaction***

The plan encapsulated the informal and illegal landholders at peri-urban Hawassa and the peri-urban land within the administrative boundary of Hawassa city. Landholders were expected to react to the intervention according to the responses predicted in the L/NDPs. The informal and illegal landholders in peri-urban Hawassa were all expected to accept the program and register their land, with the result that peri-urban land would be freed from speculators and rent-seekers thus made available for the city's future development. Communicating to the landholders that there are the long-standing benefits of the urban plans, city's development and title deed provisions were seen as a causal link assumption that would yield the intended changes in capacity stage. Thus, peri-urban farmers would develop trust on the public expropriation system.

### ***D. Capacity Changes***

The intended capacity changes of the beneficiaries and the reach of the regularization program could be the improved understanding and view of the farmers and informal landholders in the peri-urban areas about the city's development. Policymakers presumed that the landholders would understand the socio-economic effects of land transfer. Thus, farmers would wait for urban development to reach their area as their views would have changed. It was also assumed that land brokers and illegal developers would be abolished as the regularization process punished and discouraged rent-seekers and speculators. As a result, the casual link assumption to yield the behavioral changes would be the satisfied need of the landholders for tenure security and planned development which would have been ensured because of the urban plans and the land registration of the regularization process.

### ***E. Behavioral Changes***

An anticipated behavioral change was that illegal constructions would cease due to peri-urban landholders no longer transferring land through unofficial land sales. The casual link assumptions to yield the next step- direct benefits were the absence of illegal land transfer and evictions of the recent landholders. It was also presumed that the urban plans would guide the peri-urban development and there would be an established local urban land governance system.

### ***F. Direct Benefits***

Attaining the direct benefits of the change process was assumed to occur in the absence of illegal land transfers and recent landholder evictions. The urban plans would guide peri-urban development and there would be an established local urban land governance system. There were three intended direct benefits of the plan: (i) avoidance of eviction threats; (ii) peri-urban farmers remained farm landholders, and (iii) peri-urban landholders used the land for legally guided developments to avoid negative social-economic effects. Peri-urban land would be reserved for farming in the short run and for the optimal urban development in the long run. Concurrently, the casual link assumption for attaining the wellbeing outcomes were the ensured

supremacy of land laws, the functional land governance system, and the growing trust of benefited peri-urban landholders and their consequent cooperation.

### ***G. Well being***

The intended longer-term cumulative impact of the plan was to ensure public ownership of land; effective and efficient use of peri-urban land and ensuring planned urban land development.

#### ***ii. Supporting Activities***

Some supporting activities intended to establish local land governance. The supporting activities were presumed to make the core activities sufficient to yield the final output mentioned as a well being. They included the establishment of a city-district taskforce that demarked the boundary of the city and the district /presumably rural/ and held joint consultative meetings with the residents and the establishment of a sub-city-*kebele* taskforce. The task force controlled constructions after the regularization program was launched and has demolished 599 new structures at peri-urban Hawassa.

The intended capacity and behavioral changes of these administrative parties (the local administrators, district, city, sub-cities and *kebeles*) were the changes in attitude and collaborations for maintaining healthy urban development they acquired. Thus, they believed that the benefits of the peri-urban residents would be optimized by controlling the direction of land development at peri-urban areas.

#### ***iii. The Nested Theories within the Two Impact Pathways***

The model was based upon three theories that operated along the two impact pathways. The core activities' impact path way was surfaced by urban planning theories (urban design, standards, organizations of land uses and guided development) and the theories behind formalizing the informal settlements (citizens' rights, good governance, equity, and sustainability).

Parallel to this, the supportive activities' impact pathway was ruled by the theories of local governance (resource administrations, decentralized land governance, local control over the resources) and sustainable resource use (socio-economic benefits, future use and optimal development).

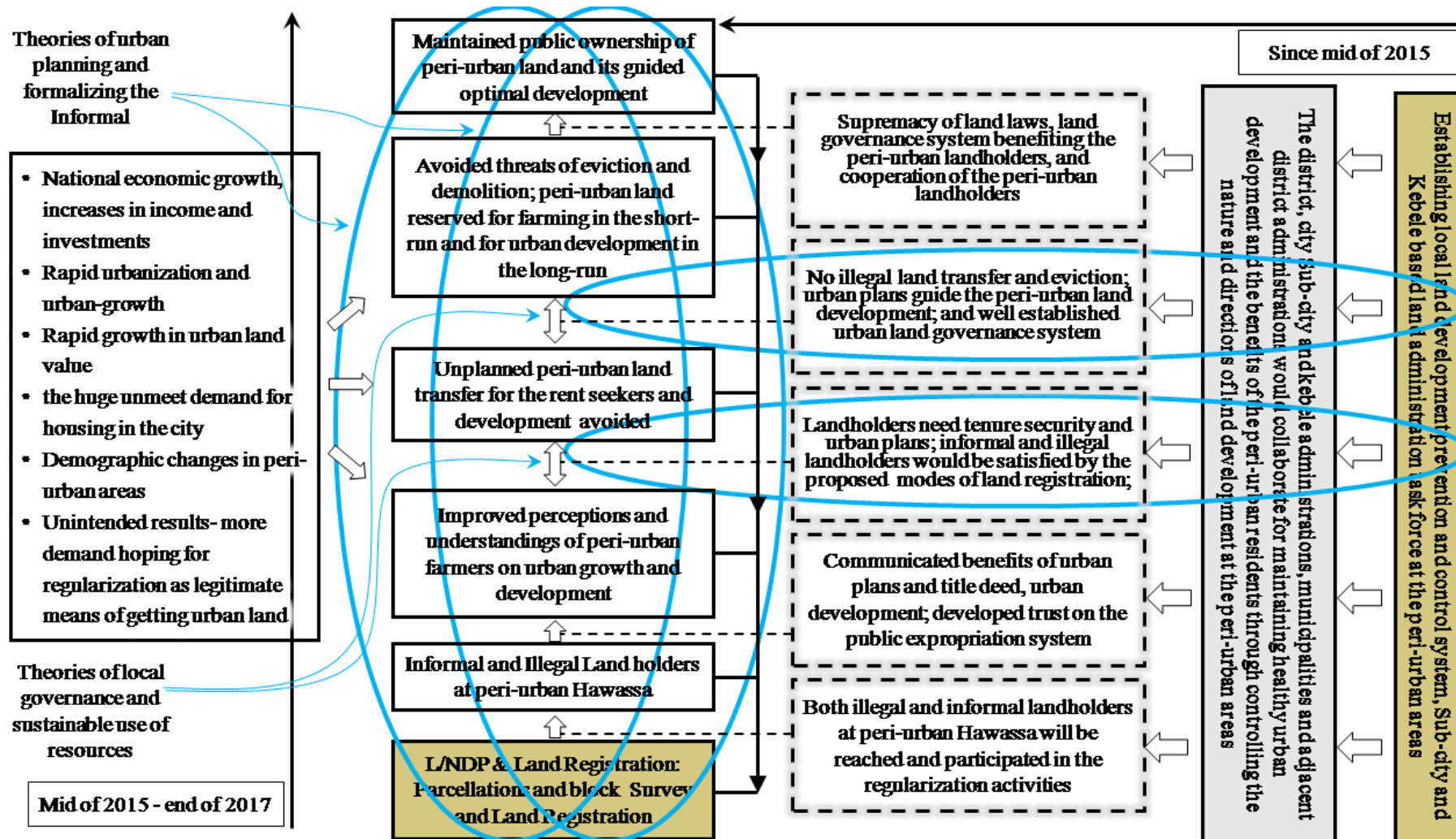


Figure 8. 4 The ToC of the regularization of peri-urban land in Hawassa, Ethiopia (2015-2017)

### *iii. The External Influences*

Land development in peri-urban Hawassa was subjected to various external influences. The nation's economic policy changes and the rapid economic growth significantly affected the development of the peri-urban Hawassa (i.e the adoption of free market economy and the consequent privatization yielded the reallocation of state farm land to the then farmers who later transferred their farmland to the third party ). National economic growth also yielded changes in household saving and investment in the area. A rapid appreciation in urban land value (as seen from the lease tenders) and the failures of the urban land lease system to accommodate the middle-class increased peri-urban land values with which the compensation money provided by the public body did not compete. This coupled with the huge unmet demand for housing, increasing number of residents and the changes in peri-urban household demographic structures affected peri-urban land values. These were fueled by the city's rapid urbanization and horizontal growth that made the expropriation of peri-urban land sudden and immediate; thus, peri-urban landholders could not rely upon the regularization program. The regularization response failed to consider the effects of these external influences and their dynamics yielded unintended results.

### *iv. Unintended Results*

The regularization policy, despite the 5942 (36.5 per cent) registered plots, largely failed both in regularizing the intended 17916 plots of land, executing the prepared seven different L/NDPs and in preventing and controlling the illegal constructions, as the number of new landholders grew after 2015 (chapter 8). None of the L/NDPs were implemented. The 1658 plots proposed to be relocated because of the proposals of the L/NDPs were not relocated. Only 221 plot owners requested for development permit and many still began construction without the permit. In conjunction, the number of new residents increased rapidly since 2015 and the construction of 2864 new houses was reported in between 2015-2016. More transfers were reported as more landowners trusted the transaction process and hoped to secure regularization approval as legitimate means of attaining urban land. Recently, resistances to the city's growth were undergoing and escalated up to the ban of the preparation of the new new urban plan.

## **8.5 Conclusions**

The regularization program that commenced at peri-urban Hawassa was a land development and management tool focused on the legalization of the informal and illegal land holdings. It was a policy instrument devised to legitimize and/or punish illegal occupants while urbanizing annexed rural land for city use. The program mainly presumed that the peri-urban land was illegally occupied by land-based rent seekers. It thus failed that its intentions and instead initiated underlying forces that later manifested as external factors and drivers of the peri-urbanization system (chapter 5). It was devised as a response to the negative socio-economic and spatial consequences that could threaten urban developments. It was a political response to ensure responsive governance and to the tenure residents insecurities while it served to abolish rent-seeking tendencies. The presumptions and rationales of the regularization plan failed to consider the areas as a transitional spatial structure within the urban-rural region.



Thus, the devised core plans (comprised of the L/NDPs and land registration) and supporting activities (control and governance) failed to yield the anticipated results.

The multistage land planning process was met with resistance and minimal community participation. Landholders failed to provide the requested landholder identity information in their registration documents, which implied their intentions to register all land and not follow the regularization plan. Later, the landholder majority resisted specific modalities specified by the guideline and anticipated to determine the details about the plot and negotiated to make the registration policy context-specific in order to register all the plots without expropriations, fines and the size qualifications.

Equally, the planning process was highly influenced by existing settlement patterns and land usage. Thus, the urban forms mostly followed patterns of organic growth. The planning process was office-based and lacked community participations, missed technical approvals by the respective regional parties, lacked transparency and was frequently changed in each proposal. Thus, it can be said that the planning proposals failed to attain the planning objectives that aimed at serving the interest of the community.

As many plots have not been registered, the ToC analysis of the regularization program disclosed that the intended objectives of the program failed. The supportive activity also did not prevent unauthorized constructions and a significant number of new constructions. This was mainly caused by the failure in the presumptions of the model. The model focused on illegal landholders and rent-seeking residents more than it considered the area as a transition occurred inherently because of the urban-rural region spatial organization (Chapter 6) (*Rauws & Roo, 2009 & 2011; Ravetz et al., 2013*). Various assumptions failed to consider external influences that drove unplanned landowner reactions (demand for urban land, etc) and the underlying theories of urban planning, resources/land use and local governance failed to look into the theories of urban-rural region and the peri-urban transition rather relied on the classical rural/urban dichotomy (chapter 6). Thus, the program failed to achieve the intended changes in capacity and behavior and yielded intended results –land owners unofficially transferred land to benefit from the appreciating land value and to minimize threat of eviction and poor plot compensation (chapter 6).



## 9. Conclusions and Recommendations

This chapter discusses the major findings of the research and the recommendations given. It elucidates the state, drivers, pressures, impacts and responses of peri-urban Hawassa. The findings and their implications were briefly summarized. The incompatibilities between the peri-urban system and the intended policy response were laid out. The researcher's recommendations and the areas of future work were briefly presented.

### 9.1 Conclusions

Hawassa was experiencing peri-urbanization in the past two decades. Peri-urban Hawassa, resemble as theoretically set, was situated within the Hawassa's city-rural region system. It was not just a matter of changes in the type of the land rather the emergence of a new socio-spatial phenomenon within the system. It was a transition zone in nature and hosted the emergence of new socio-ecological configurations. It displayed a complex state, which had its own peculiar drivers and pressures. These yielded transitions that resulted in effects/impacts, which affected the policy response.

#### *A. The State of Peri-urban Hawassa*

Peri-urban Hawassa was not just a change in rural land in to an urban phenomenon; rather it was a phenomenon that exhibited a unique spatio-temporal, socio-economic, physical, organizational, and morphological state. The settlements were situated within the city's functional area located between the municipal and administrative boundaries. This highlights that peri-urban Hawassa was a phenomenon that grew within the city-rural region system and became an outcome of various urban-rural factors yielding the SES called peri-urban Hawassa. It was an emerging phenomenon that began after 2003 and mushroomed after 2011, as 60 percent of the current residents settled in this area since 2011. These two years were associated with the introductions of new urban development (2003) and land management and administration (2011) policies. 62 of the new residents acquired land through former inhabitant transfers and 70 percent of the new settlers were attracted to the area because of land policy related factors. The years of settlement coupled with the modes of land acquisitions are two significant issues that highlight what drove the emergence of the settlements.

Peri-urban Hawassa acquired heterogeneity in its socio-economic structures. In addition to the changing demography (a dominance of youth within the former inhabitants) the settlements diversified their ethnic and religious compositions. 87 percent of the new residents had various ethnic and religious backgrounds. Household characteristics, such as household size, also reduced and approached the urban household size when compared to the rural. Unlike in rural areas of Ethiopia, spouses and children begin to engage in income generating activities and new, urban-type economic activities emerged in these areas. The number of middle-income residents became significant. Physical structures were changed. 99.5 percent of the houses were urban-type, both in design and materials, despite of the smaller size of the floor areas that usually imply lower densities of the built-area.

The settlements had improved access to socio-economic services (schools and health institutions, markets, places of religious practices and telecommunication) yet some of the services and amenities were inadequate (water and electricity) or inaccessible (waste management). Conversely, the introductions of small-scale technologies (three-wheeled motor bicycle taxis, solar PV and charging cells, etc.) were filling the gap caused by the limitations of services and amenities. All improved the connectivity and liveability of the settlements, which attracted many to the settlements and made the settlements well linked to the city. These improvements show that peri-urban Hawassa was not a growing slum, as later concluded by the policy makers; rather, the area formed an emerging transitional settlement typical to peri-urban areas. The settlers were benefiting from the decentralized local governance system. They relied on the *kebele* administration for administrative services. They rather suffered from lack of centralized services (like municipal services and rural development services) that they were denied because of the new urban administrative boundary. The inhabitants of peri-urban Hawassa participated more in elections, therefore growing their participation in local governance. The growing rights and negotiating capacities of the residents affected the policy response, partially because of the tendencies of clientelism. The morphological state of peri-urban Hawassa shows the dominance of organic forms of spatial organizations. The area comprised of residential neighbourhoods with some mixed and other land uses. Farm borders and the amount of land the former holders could retain due to the new urban land law influenced the land subdivisions. The plot and land uses were strategically set to avoid future threats of construction demolishing and land loss. These imply the possibilities for incremental development. The road networks were dominated by narrow footpaths that exhibited cul-de-sac patterns. Yet, some planning concepts were adopted in determining plot sizes and anticipating road directions by observing extensions from the city's plan. These highlight that the settlements had already acquired an interwoven state of being where various factors interacted to determine its form, nature and developments.

Peri-urban Hawassa was, thus, a complex state of transition where various factors had emanated from spatio-temporal, socio-economic, physical, organizational and morphological settlements and interacted in shaping each other and the peri-urban SES. It was also seen that the settlements became connected to the city in many ways, as these factors enhanced connectivity, liveability and growing rights. The settlements had the possibility to grow incrementally if the interventions adequately addressed the interacting factors beyond just focusing on land issues. These highlight that peri-urban Hawassa has a complex, transitional nature and it is a phenomenon that had multifaceted interacting factors that resulted in pressures to the urban-rural region system. This implies the need for developing a policy response that would address the interacting system and would consider its complex transition state.

### ***B. The Drivers of Peri-urban Hawassa***

Hawassa's peri-urbanization was an emerging phenomenon. Unlike the Asian EMR or the Latin America's favela, which emerged around a million plus cities, Hawassa's peri-urbanization occurred around a growing secondary city of a developing nation. It emerged as a

part of the city's urbanization process and was driven by two significant forces. The first driver was that the city's annexation led the urbanization process. The politically driven annexation of the *kebeles* (11 rural and one urban) brought 70 percent of the existing land in to the city's administrative boundary and contributed 30 percent of the city's population on average per annum. Political negotiation during the annexation caused the land to remain under rural classification and administered under the rural land management and administration regime. This resulted in the creation of rural land within urban jurisdiction and the existence of overlapping land governance regimes. The annexation was prospected to transform rural villages and threats of eviction were caused by the expropriations. These forced the rural landholders to develop an adaptive response by means of land transfers. This highlights the limitations of the annexation process that did not consider the peri-urban transition. The annexation system failed to establish peri-urban planning and management systems.

The second driver originated from the loopholes that existed within the land policies. The land policies were dichotomized in to urban/rural regimes and failed to consider the peculiar nature and dynamics of peri-urban land. The dichotomy radiated into all aspects of the land administration and management system. The peri-urban settlers benefited from this dichotomy. They, as rural landholders, were provided with legitimate rights to acquire, develop and transfer land. This provided opportunities to transfer and develop the peri-urban land despite the city administration's intentions to prohibit the growth. On the other hand, the residents also took advantage of the urban land administration and management system and requested registrations and title deeds, therefore plots were classified in to the urban administrative boundary. Equally, the urban land lease law resulted in escalated land value in a highly competitive system that created new demands to peri-urban land. These factors highlighted the dynamics of the dichotomized land policy and their consecutive effects in driving peri-urban transitions.

These occurrences show that rural Hawassa was annexed without proper administration and management systems, which resulted in peri-urbanization in a governance vacuum. The dichotomy also overlooked the peculiar peri-urban system and allowed its rapid transition to be haphazardly undertaken. The need is thus created for a proactive planning and management system that could back the annexations of rural areas and the establishment of a peri-urban governance system.

### ***C. The Pressures of Peri-urban Hawassa***

The aforementioned drivers created pressures on the peri-urban system that resulted in peri-urban transitions. These were partly observed from peri-urban land development. Peri-urban land development in Hawassa followed an informal land development path that mixed legal, quasi-legal and innovative activities. The land acquiring modes were legal as per the rural land regime that was negotiated during the annexation. An informal land market emerged as a quasi-legitimate institution that supported the land acquisition and development. There were strategic approaches (such as plot use and cooperation in securing the new constructions) developed by the landholders for managing land developments, securing land rights and

minimizing demolition and eviction risk. Land development was enhanced and took new forms which following public investments, such as the delivery of rural development services like roads. These dynamics all ushered in area transitions through either the pushing or pulling effects on the landholders. The push factors outweighed to trigger the transition to the next phase of the peri-urban development. These dynamics highlight the need to consider the extent, nature and dynamics of the transition while designing a policy response.

Peri-urban Hawassa was a developing phenomenon that has accelerated since 2011. The sharp increase of the number of new residents, housing constructions and the consequent developments in land policies (including regularization) enabled a new dynamic phase of transition with respective forms and development styles. It has not attained a maturity stage where the developments and transitions have reached relative stability. As a result, it was concluded that the settlements were in the process of transition. The settlements exhibited the three fundamental changes that were comprised from both rural and urban use and formations. Rural villages and farmlands were changed in to relatively dense and built areas. The number of rural structures significantly diminished and urban structures made from urban-type designs and materials altered the settlements. New technologies (such as transport and communication) supported the transitioning system. Organizational changes constituted the emergence and significant roles of social organizations like CBOs. They maintained the social cohesion and security of the residents. The CBOs collaborated with local elders in managing conflicts and in increasing the negotiating capacities of peri-urban residents that later influenced the response of the state. New socio-cultural values emerged from the institutional changes, which allowed the practice of land sales by the Sidama community. An informal land market was established, and, as it was partially legitimized, the land transfers and developments were enhanced. New economic activities and opportunities emerged so that the employment structure changed to accommodate spouses and children. This brought opportunities for all family members to engage in diverse urban-based economic activities like housing rental and motor bicycle taxi hire. The emerging sub-systems and their dynamics shaped the nature and transition of peri-urban Hawassa.

Hawassa's peri-urban transition exhibited three common and one unique attribute of dynamic transitions. First, it was a context-dependent phenomenon. The transition followed an adaptive response to the rapid urbanization and to the administration and management land loopholes. Expropriation and failures in the urban land supply hampered the residents, which later convened in a peri-urban arena. The local politics that underlay the annexation process created a favourable context to the occurring transitions. Second, the transition was a self-organized phenomenon. The settlements emerged spontaneously, structured and shaped by internal forces from the roles and strategic innovative responses of the internal stakeholders. They established strategic land subdivisions and uses in a quasi-legitimate land market. CBOs played significant roles in conflict management and land transferors cooperated for the erection of the new constructions. Local vendors developed innovative responses in delivering services and amenities like electricity and water. Third, Hawassa's peri-urbanization was path-dependent. Its developments relied on preceding developments like rural villages, farm borders, foot paths and the city's plan while also anticipating changes from the regularization

and escalating land prices. All highlight the unique nature of peri-urban Hawassa, which the policy response did not consider.

Fourth and uniquely, it exhibited market dynamism. Market forces, despite the prohibition of land sale and construction in the areas, underlie the formation and transformation of peri-urban Hawassa. Land value was determined by the growing demand and escalated land value in the city, the size of the plot and the location. These highlight the underpinning market principles that determined the value of the peri-urban land. The institutionalized land markets strengthened the confidence of the parties to engage in the transactions. Later, these transactions drove the negotiating capacity of the landholders and forced the public bodies to negotiate with the new landholders. The public bodies accepted the local contracts as legitimate documents that proved the holder had right to the land. The market dynamism overcame the administrative distributive principles and made the peri-urban land more economic. These highlighted the emerging shifts in land policy and the new consideration the response would have.

#### ***D. The Impacts of Peri-urban Hawassa***

Even though Hawassa's peri-urbanization was a recent phenomenon, which has not yet reached, maturity and impact assessments still demand a comprehensive self-standing assessment, some preliminary appraisals and analysis show that peri-urbanization has begun to yield both positive and negative effects and impacts. The diversification of economies and of urban-borne prospects was among the positive effects. However, policy makers presumed that the negative effects outweighed the positive, therefore their policy was devised to curb this growth. The socio-economic effects were associated with the evictions of former inhabitants and the loss of a just means of livelihood because they sold their land and mismanaged the money. The physical effects included the proliferations of spontaneous and sub-standard developments that would potentially create slum settlements. The political effects included the anti-urban development attitudes and the resistances to urban growth, which negatively affected the urban-rural linkages and the city's development.

The LULC shows that Hawassa's peri-urbanization resulted in a massive conversion of rural land, which comprised of farmland and environmental sensitive areas, like forests and wetlands. This was coupled with lack of infrastructure, services and the proliferation of haphazard developments. There were emerging environmental problems (such as inundation hazards and URTI diseases) associated with the state of the areas. These coupled with the absence of adequate planning and management and the continued growth and transformation of the settlements to imply the possibility of increasing effects and complexities that led to further impacts. These highlight that peri-urban Hawassa started to yield its own effects/impacts and to demand interventions that would mitigate the effects and manage the impacts.

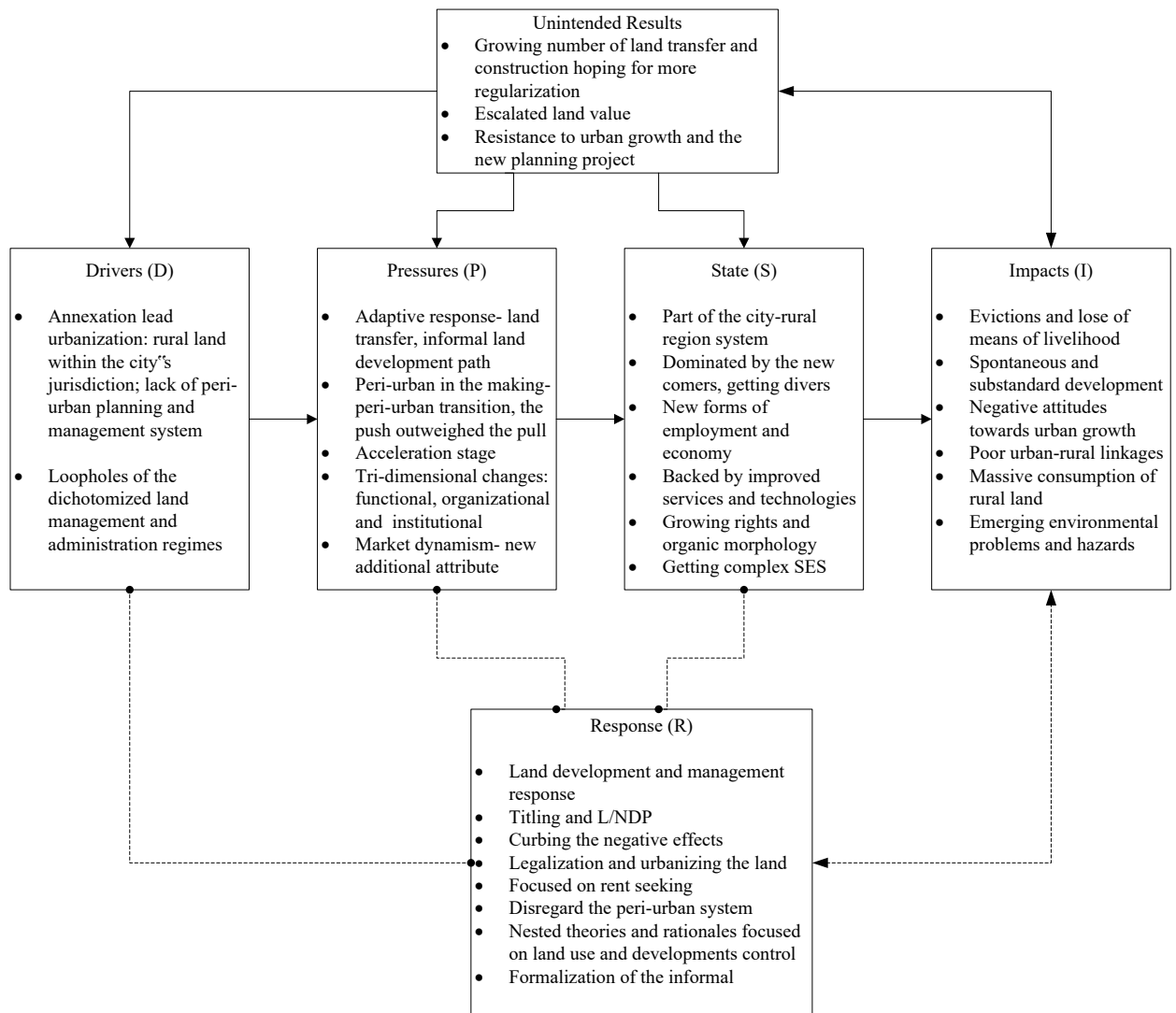


Figure 9.1 The DPSIR of peri-urban Hawassa

### ***E. The Response to the Peri-urban Growth***

Regularization was a land development and management policy designed as a response to the peri-urban areas and intended to establish responsive governance. It was aimed at curbing the negative effects of these peri-urban developments, with focus on the process of legalization and urbanization of peri-urban land. The evaluation of the response program revealed that it failed to resolve the problems, as only one third of the residents were engaged in the program. Rather, it yielded an unintended result that encouraged continued land transfers and new constructions.

These occurred because failures of the response- its rationales and presumptions as well as its components and the underlying theories. The policy response presumed that the (mainly new) peri-urban landholders were illegal and that the peri-urban lands were only developed to be used as a source of rent. It failed to consider the underlying drivers and their dynamics: many residents were affected by the land policy and searched for housing opportunities. The components also failed short of understanding the dynamics of the peri-urban system and

instead focused on land titling, land use plans and the prohibition of new developments. These were partially accepted because of the improved tenure security and many settlers at least delayed in engaging in the regularization process. However, the peri-urban system demanded more than titling and land use planning. The ill-fitting land policy highlighted the need to revise the rationale of the response and incorporate socio-economic, environmental and other forward-looking dimensions compatible with the multifaceted nature of the peri-urban Hawassa in to the policy.

The regularization components were retroactive responses that did not establish compatibly with the peri-urban system. The underlying theories focused on land use planning over holistic development, controlling local governance over participatory and inclusive governance, and formalization over enhancing capabilities. The land policy focused partly on managing what happened and overlooked the dynamic nature of the phenomenon and the future of the settlements. These factors highlight that the regularization policy failed to be compatible with the nature and dynamics of the peri-urban system. Rather, it only focused on the land governance and the benefits of urban development (figure 9.1). Consequently, they were affected by external forces and resulted in unintended outputs.

## 9.2 Recommendations

The following recommendations were given to address the limitations found due to the incompatibilities between the regularization program and the nature and dynamics of peri-urban Hawassa as stated in the DPSIR analysis. They were intended to address the underlying factors embedded within the sub-systems of the peri-urban system. They also are intended to consider the need to shift from retroactive, land-focused and preventive settlement policies to a proactive, holistic and system-based response. The recommendations remarked the need to shift to a rights-based inclusive and participatory approach which enables the enhancement of resident capabilities, as well as the maintenance of positive urban-rural linkages and inclusive urban growth. To these ends,

- I. The policy makers should recognize the peri-urban development as an inevitable SES that existed within the urban-rural region rather than considering as a just spatial and illegal phenomenon. It is an inevitable spatial configuration that has occurred elsewhere as far as urban-rural regions exist. It is not necessarily driven by illegal and rent seeking tendencies. Rather, systemic and dynamic processes drive it. Thus, the policy makers need to recognize it in order to develop a respective, systematic and holistic policy response. This demands the understanding the peri-urban spatial system, which is more than just a land-related issue.
- II. There is a need to shift to proactive, holistic and integrated planning and management policies. This requires the adoption of settlement/regional planning over the dichotomized and piecemeal urban/rural planning approach. The peri-urban settlements should have not waited for the urban planning to reach them. They can have proactive plans that include their influence in the region's system. This can be a



created through a settlement or regional plan. This plan can help guide and support their developments and transitions, as well as maintain their integration into the urban-rural region system and minimize their effects/impacts.

- III. There is a need to shift from formalization to capability based land development approaches. Formalization of the land rights through registration could not only ensure settlement transitions and integrations to the urban system, but capability approaches can, do that. These approaches include integrating upgrading of the settlements with land-adjustment programs. This supports the inhabitants' land retention to optimally and sustainably develop and minimize socio-economic, political and other effects. It also enables the positive enhancement of socio-economic transformations and urban-rural region integrations.
- IV. There is a need to adopt new models of urban and regional governance systems that focus on more than the maintenance of horizontal expansions of a given city. Regiopolis and metropolis models include this maintenance, which recognizes urbanizations and the emergence of satellite settlements. These enable the establishment of a decentralized governance structure which could systematically integrate the peri-urban system with the urban system, rather than enforcing the urban rules upon them and engulfing all under one centralized city system.

### **9.3 Future Areas of Research**

Given the findings and conclusions of this research, the following areas of future research about the Ethiopian peri-urban land were identified.

- i. What are the magnitudes and dynamics of the essentials of the sub-systems when defining peri-urban transitions?
- ii. What new trends would emerge, given the generated longitudinal data?
- iii. What new patterns, dynamics and development paths would the next stages of transitions follow?
- iv. What role would macro-policy forces (like the ethnic federalism, rapid economic growth, mega projects in the industrial parks and the expansion of highways) play in affecting peri-urban dynamics?
- v. What would be the result, had different case studies been taken and urban size considered, of the north-south dichotomy of Ethiopian urbanization and the agro-ecological zones?
- vi. What should the new policy tool look like? How can it integrate with the various presumptions and rationale aspects of the recommendations?

## Theses on the Dissertation

### Background and the problem

- We are living in the „urban age“ when more than half of the world’s population are living in urban areas and this is projected to increase. Africa will host the majority of the upcoming urban population and have been experiencing the emergence of new settlement forms including the peri-urban. Ethiopia, a rapidly urbanizing populous nation, will have same experience given the transforming socio-economic, political and physical state. The new settlement forms mainly the peri-urban development calls for adequate interventions hence the nation is by large rural and most of the urban transformations will undertake in these areas. Whether it is because of the inside-out transformation of the rural areas or the rapid proliferation of the peri-urban settlements, peri-urbanization is becoming the growing challenge to Ethiopian spatial development. There were a few research works that focused on the tenure, political economy and land rights of peri-urban Ethiopia. Yet studies focusing on the nature, transformation and policy responses were lacking.
- This thesis analysed the genesis /nature, dynamics/transformation/ and planning /response/ of peri-urban Ethiopia taking a case of Hawassa city; and concluded that peri-urban Ethiopia is a recently mounting phenomenon with peculiar formation and transformation calling for adequate policy response. It argues the existing policy-regularization, failed and rather resulted in unintended results because of the inability of the response to adequately address the peri-urban system.

### Urbanization and peri-urban settlements In Ethiopia

- Ethiopia has been rapidly urbanizing since 2000 and this will continue for the coming decades. The rapid urbanization was coupled with horizontal expansion of the urban centres, the transformations of rural villages, and the rapid proliferation of settlements in urban expansion areas.
- The policy responses to manage these developments failed and resulted in unintended results including protests that yield deadly violence.

### Aims and objectives

- The research aimed at analysing the nature of the peri-urban system that determined the efficacy of the planning endeavours of Hawassa city, Ethiopia. It explored the drivers of Ethiopia’s peri-urbanization; explained the nature of peri-urban transition; determined the existing state, and its effects, and evaluated the policy response-regularization in order to find-out the peri-urban system-policy mismatch. It came up with recommendation intended to support the peri-urban planning and management system.

### Peri-urban, Peri-urbanization and Peri-urban Transition

- The literature review shows that peri-urban is a socio-ecological system; inevitably existed within the city-rural region; comprised of the urban-rural spatial, social, physical, economic and psychological mixes that undertake transitions. Peri-urbanization was described as a multi-dimensional and multi-stage development of peri-urban areas through the peri-urban transition process. The process exhibited a transition with different characters and the pull-push

dynamics of various driving forces that in turn determined the nature, form and transform of the peri-urban system.

- Various forces including the nature of urbanization and other policy forces drove the transitions that created pressures and determined the peri-urban state. These in turn yield effects and impacts that initiated the policy responses. Thus the efficacy of the policy responses like regularization was determined by its adequacy to address the drivers, pressures, state and impacts of the peri-urban system.

### The Case Study

- Hawassa, a rapidly growing secondary city of Ethiopia, was taken as a case study and its two peri-urban villages (*Datto-Odahe* and *Tullo-Argo*) were taken as embedded cases.
- The study followed a pragmatic worldview epistemological and ontological positions and mixed method design was employed. It was an exploratory case study research. Primary data was collected through household surveys (400), key informant interviews (34) and field observations (2). Secondary data was collected from policy documents, performance reports and map analysis.

### The State of Peri-urban Hawassa

- ***Spatio-temporal state:*** peri-urban Hawassa was recently emerging socio-spatial phenomenon that rapidly growing since 2003 and accelerated after 2011 (62 percent of the residents). It covered a wide area that amounted 1,531.65 hectares of land subdivided in 792 blocks and 17,916 parcels. They constituted 10 percent of the city's total area and nearly 30 percent of the built area and situated on land annexed within the administrative boundary of the city and not planned.
- ***Socio-economic state:*** They were getting heterogeneous as the number of the new residents (86 percent) out-weighed the number of the former inhabitants. Ethnic and religion compositions were diversified and the number of non-sidama, non-protestant residents increased significantly. The household size decreased, 93 percent were married and men-headed. The demography was youth dominated. New employment structures (included the spouse and youth 74.7 percent of the household members) and urban economic activities (public service-29.8 percent, commercial activities-27.6 percent and daily labor-17.3 percent) emerged and number of middle-income residents increasing (33 percent).
- ***Physical state:*** The functional typology of houses started to change into urban type. Rural huts were diminished. It was composed of the service quarters (2/3), lesser floor area 20-60M<sup>2</sup> (7-20percent on average of the plot), lower construction cost (70 percent of the structures had an investment below 100,000ETB), the introduction of new (HCB, cement plaster and CIS) and the prevalence of local construction materials (Wood, mud, and CIS). All imply the on going physical transition and potentials for growth.
- ***The state of services and infrastructure:*** The improved state of services and infrastructures enhanced the liveability and connectivity of the areas so that many were attracted to reside in these settlements. They had better access to education (76.1 percent and 64.5 percent of the households had accessed kindergarten and primary schools in their villages) and health

services at their vicinities. The CBOs supported the socio-economic system and integrations- 94.4 and 65.5 percents were engaged in local and economic CBOs respectively). They also benefited from the local and the nearby economic and financial institutions- 64.2 percent relied on local markets in the vicinity and the near by commercial bank served 60.3 percent of the residents. The improved connectivity to the city helped them get taped to the city's services- 90.1 and 87.1 percent of the students attended secondary and tertiary schools in Hawassa city. The settlements were connected to the city by the expansion of trunk roads and mobile phones. Footpaths dominated Intra village road networks and community constructed earth pressed roads, yet the introduction of motor bicycle taxis enhanced the transport services. Electricity (47.4 percent of the households had private meter) were accessed through common meters and water services (20.9 percent of the households had private meters) were inadequate and private tenders supplied with expensive prices, emerging technologies like solar PV and charging cells were growing. The mobile phone network was reliable. Waste management services were not available and waste was poorly managed.

- ***State of local governance:*** decentralized local government services better ushered the peri-urban residents while they were deprived of centralized municipal services and the denied rural development services. 67.7 percent of the residents relied on *kebele* administrations. They were engaged in local governance as their participations in elections increased. Thus, legal rights were growing and influenced the policy responses.
- ***Morphological state:*** Peri-urban neighbourhoods started to take spatial forms in mixing some urban forms with the organic patterns. They became residential neighbourhoods (79.4 percent of the plots were used for residence). Land subdivisions were determined by the boundaries of the rural villages and the farmland. The plot areas were varied. The majority owned- average plot area 184-430M<sup>2</sup> and the mean average were 277.5M<sup>2</sup>. Yet the plots had more varied length (96.7 percent) and less varied width (20.3 percent). Former inhabitants occupied the plots with longer width. 73.5 percent of the plots had a built structure on their bottom back (67.6 percent) and made the front free. The road networks followed organic patterns, provided access to all the plots; dominated by narrow footpaths, and cul de sac patterns.
- ***Hawassa's peri-urbanization-*** followed the horizontal expansion of the city, 69 percent of the new residents were pushed/pulled by land policy related drivers and the nature of the city's urbanization. More of the Land was acquired through informal transfers - 62 percent of the landholders acquired it through property sale, or gift.
- ***Peri-urban Hawassa- the complex state:*** peri-urban Hawassa was the by-product of the interaction between the existing state-borne factors and other external forces. The complex state was the result of the interactions between the state factors, the external factors and their dynamics. These include rurbanization, urbanization, urban expansion, provision of infrastructure and services, undergoing socio-economic transformations, the operations of the ULGs /Urban local governments/, the land policy, city's structural plan, growing peri-urban land use, emerged informal land markets, the peri-urban morphology, the regularization, the CBOs and the introduction of technologies. These factors shaped the nature, form and transformation of peri-urban Hawassa. The factors interacted in either pushing or pulling the former inhabitants and the new residents in making decisions. They improved connectivity and liveability of the settlements and they shaped the form and magnitudes of the interactions,

which in turn shaped the formations and transformations, and the efficacy of the policy response.

### **The Drivers of Peri-urban Hawassa**

- The annexation driven urbanization of Hawassa and its consequential rapid expansion was one of the drivers of peri-urbanization. It has brought an addition of 137,712 peoples (an average of 35percent of the city's total population each year between 2010 and 2018) and 1,068.9 hectares of land. This resulted in the creation of rural administrative regimes within the urban jurisdiction and the overlapping land administration and management regimes. The annexation was underpinned by political interest, which later yield a conducive environment for the proliferation of peri-urban settlements.
- The second group of peri-urban drivers emanated from the loopholes of the co-existing land administration and management systems. One, they created conducive environments for transforming the rural land under the pretexts of legitimate acts and two the failures of the urban land systems created escalated land values and growing demands to peri-urban land. And thus they resulted in a new pressure /dynamics/ or transition to happen at peri-urban Hawassa

### **The Pressures /transition/ of Peri-urban Hawassa**

- The peri-urban land development followed an informal land development path. It was a step-by step process of acquiring and developing a peri-urban land. There were four modes of land acquisition in the areas and nearly 63 percent was acquired through transfer under the pretext of legitimate actions. Anticipated threats of expropriations (lose of huge amount of land except the remaining 500+ M<sup>2</sup>) coupled with other factors (economic opportunities house renting) drove the subdivisions and transfers. The subdivisions considered legal rights of the landholder, the possibly demanded size, and risk management and land value. The quasi-legitimate land market and the conducive loopholes of the land laws triggered the transfer stage. The private developments were where the new landholder built the physical structures strategically-securing ownership, minimizing risks and maintaining functionality and incremental development. Finally pubic servicing (like the rural road) enhanced the connectivity and liveability of the areas and shape the morphology.
- Peri-urban Hawassa was at the acceleration stage of transition since 2011. The number of the new residents and construction of housing structures were rapidly growing, consequent socio-economic and other transitions were occurring. As a result the push factors outweighed the pull forces and thus the acceleration stage of transition was acquired. This in turn brought the functional, institutional and organizational changes.
- The transition of peri-urban Hawassa portrayed the three common attributes of transitions: context dependency, self-organization and path dependency. And peculiarly, the transitions manifested market dynamisms. To this end, the prohibited land market forces surfaced all the stages of Hawassa's peri-urban land development and transition process. There were innovative and strategic approaches employed to establish the functionality of the informal land markets.

### **The Impacts/Effects of Peri-urbanization in Hawassa**

- Peri-urban Hawassa started to yield both positive and negative effects and the negative outweighed the positive effects. Socio-economic effects were seen in terms of the evicted number of the former inhabitants who lose their land, mismanaged the money from the land sale and destined on the city's streets. The political effects included the growing „illegality“ and the negative attitudes towards the city's growth and the urban development. The spatial effects include the proliferation of unruly and substandard developments that will result in slum.
- Peri-urban Hawassa grow horizontally /as the city's built area grew by 257 percents in the past 17years/ consuming the potential farmland and environmental sensitive areas that will in turn resulted in environmental problems which will get complicated. Thus, environmental problems and hazards started to emerge in the areas.

### **The Response to Manage the Peri-urbanization of Hawassa**

- The government of Ethiopia adopted regularization, the global best practice recommendation; to govern the peri-urban land development and establishing land management and administration system. It had more complex political objectives. It was just a retroactive response that intended to curb the negative effects of the peri-urbanization process and ensuring the effective development of the city by freeing the peri-urban area from land-based rent-seekers. The short-run objectives were establishing an urban plan system for the peri-urban settlements and secure the tenure of 17916 plot holders and in the long-run, it aimed establishing local land governance system and protecting the peri-urban land from illegal and inefficient developments through abolishing the urban-land based rent seeking practices. The regularization campaign was double faced: urban planning and titling. The campaign introduced multistage activities: identification and registration stage, the planning stage, plots determination stage, registration and titling stage, and development permit stages to legalize and urbanize the already occupied land and overlooked the other issues.
- The regularization policy failed to bring the intended changes (only 36.5percent of the plot holders were registered and got the title deed; only 221 requested for development permits and none of the L/NDPs were implemented) and yield unintended changes (2864 new houses were built in 2015-2016) that drove the growth of peri-urban settlements. The rationales failed to recognize the peri-urban system and focused on the illegal land occupation aspects. The core-activities and the underlying embedded focused on urbanizing and legalizing the rural land had no room to consider the inevitability, transition and dynamics of peri-urbanization. They focused on formalizing, prohibiting and controlling than capability, inclusiveness and system development. The external forces were not considered while they had significant effects in affecting the change process. Finally, the policy resulted in more land transfer and constructions.

### **Conclusions**

- The regularization program failed to recognize the peri-urban state as a SES and the inevitable subsystem of the city-rural region and focused on urbanizing the „illegally“ occupied rural land. It overlooked the underpinning drivers of the system and failed short of addressing the root causes. It inadequately considered the peri-urban transition and its dynamics that determined

the type and efficacy of the response. It focused just on the negative effects and highly politicized. These resulted in a incompatibilities between the peri-urban system and the policy response, which in turn brought unintended results that further enhanced the peri-urban growth.

### **Recommendations**

- Developing an integrated policy response that recognized the peri-urban system, proactively address the system holistically and in an integrated fashion on the basis of capability approaches and enhancing new forms of regional governance.



## **Selbstständigkeitserklärung**

Hiermit erkläre ich, Eshetayehu Kinfu, geboren am 15. 10.1974 in Yabello town-Ethiopia, dass ich die vorliegende Arbeit mit dem Titel: „Peri-urban Land in Ethiopia: Genesis, Dynamics and Planning.“ selbstständig und nur unter Verwendung der angegebenen Quellen und Hilfsmittel verfasst habe.

Rostock, 08/03/2019

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Eshetayehu Kinfu



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At Dire and Yabello Woreda different Schools

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Admas University Collage (Bishoftu campus), part timer instructor, , Central Oromia, Ethiopia

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(1992-1998) Oromia Education Bureau, Finifinne, Oromia, Ethiopia; (August, 2005 –May, 20) Admas University College Bushoftu, and (Since October 2011) Hawassa University, Hawassa, Ethiopia

Type of business or sector

Public Organizations

1999- 2002

**Woreda/ District Deputy Administrator (Oromia, Borena, Yabello)**

Coordinate the political, social, and economic development activities of the district, and act as the administrator on his/her absence

Borena Zone Administration, Yabello, South Ethiopia

Public Organization

June 2005- February 2006	<b><u>Town Manager</u></b> Dukem Municipality, Central Oromia,																																																		
October 2008-May 2010	<b><u>Core Process Owner</u></b> Land provision & construction Permit and execution Core process  Bushoftu Municipality, Central Oromia,																																																		
June 2010-September 2011	<b><u>Senior Expert</u></b> Senior expert at cadastre and land information preparation an administration at Sidama zor Urban development department.																																																		
<b>Education and training</b> Since October 2015	PhD Fellow, University of Rostock, Rostock Germany and Addis Ababa University- Institute of Architecture, Building and City Development Addis Ababa Ethiopia																																																		
November/2012- June-2013	Hawassa University: Higher diploma as a certified Professional Teacher																																																		
March 2007- August 2008	Ethiopian Civil Service Collage: Masters Degree in Urban-Management with specialization to Urban Land and Real Estate Planning Management																																																		
2003-2006	Ethiopian Civil Service Collage: Bachelor Degree Urban Management (with great distinction),																																																		
1994	Robe Teachers' Training Institute																																																		
Summer, 2002	Open University – Management: (certified manager)																																																		
January 2001- January 2002	TOT on Strategic Planning and Management from Oromia Public Service College																																																		
2011	Scientific Writing- Eecbp, Ministry of Education, Ethiopia																																																		
2014	Pedagogical Competencies Czech university of Life sciences and Czech Republic Development cooperation,																																																		
December, 2015	IRB - on Human research-CITI, University of Miami																																																		
<b>Personal skills and competences</b>	Computer (Ms Office, Ms VISIO, SPSS, STATA and NVIVO) Light vehicle driving (2 <sup>nd</sup> grade driving license)																																																		
Mother tongue(s)	<b>Amharic, Afan Oromo</b>																																																		
Other language(s)																																																			
Self-assessment	<table><tr><th colspan="4">Understanding</th><th colspan="4">Speaking</th><th colspan="2">Writing</th></tr><tr><th colspan="2">Listening</th><th colspan="2">Reading</th><th colspan="2">Spoken interaction</th><th colspan="2">Spoken production</th><th colspan="2"></th></tr><tr><td>E</td><td>Amharic</td><td>E</td><td>Amharic</td><td>E</td><td>Amharic</td><td>E</td><td>Amharic</td><td>E</td><td>Amharic</td></tr><tr><td>E</td><td>Afan Oromo</td><td>E</td><td>Afan Oromo</td><td>E</td><td>Afan Oromo</td><td>E</td><td>Afan Oromo</td><td>E</td><td>Afan Oromo</td></tr><tr><td>E</td><td>English</td><td>E</td><td>English</td><td>V G</td><td>English</td><td>V G</td><td>English</td><td>V G</td><td>English</td></tr></table> <p><i>E-Excellent and VG-Very Good</i></p>	Understanding				Speaking				Writing		Listening		Reading		Spoken interaction		Spoken production				E	Amharic	E	Amharic	E	Amharic	E	Amharic	E	Amharic	E	Afan Oromo	E	Afan Oromo	E	Afan Oromo	E	Afan Oromo	E	Afan Oromo	E	English	E	English	V G	English	V G	English	V G	English
Understanding				Speaking				Writing																																											
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E	Amharic	E	Amharic	E	Amharic	E	Amharic	E	Amharic																																										
E	Afan Oromo	E	Afan Oromo	E	Afan Oromo	E	Afan Oromo	E	Afan Oromo																																										
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<b>Language</b> <b>Language</b>																																																			

Conferences	<ol style="list-style-type: none"> <li>1. Presenter and Chair- the first international conference on Africa's urban studies 9hold on November 13-15/2017 at Hawassa Ethiopia  Paper presented and published as a book chapter- : <i>'Africa's Urbanization: Emerging Settlement Patterns and Implications to Urban Planning.</i></li> <li>2. Presenter and attendant- Ninth International Conference on Urban and Extra Urban studies held on 24-26 of October 2018 at Heidelberg Germany.  Paper presented –Peri-urban Dynamics in Ethiopia: Land use development (under review for publication).</li> </ol>
Publications	<ol style="list-style-type: none"> <li>1. Mains, D. &amp; Kinfu, E. (2014). <i>The Impacts of Asphalt Roads and Urban Development on Livelihoods in Hawassa</i>. Proceedings of the first National Conference held by Anthropology Program School of Behavioral Science and Humanities. Hawassa University.</li> <li>2. Mains, D., &amp; Kinfu, E. (2016). Making the city of nations and nationalities: the politics of ethnicity and roads in Hawassa, Ethiopia. <i>The Journal of Modern African Studies</i>, 54(4), 645-669.</li> <li>3. Mains, D., &amp; Kinfu, E. (2017). Governing three-wheeled motorcycle taxis in urban Ethiopia: States, markets, and moral discourses of infrastructure. <i>American Ethnologist</i>, 44(2), 263-274.</li> <li>4. Kinfu, E; Bombeck, H. &amp; Nigussie, A. (2018). <i>Africa's Urbanization: Emerging Settlement Patterns and Implications to Urban Planning. In</i> Urbanization, Governance and Social Transformation in Africa. IPDR, Hawassa University.</li> <li>5. Kinfu, E. (2017). Periurban Hawassa: Situation Analysis. Hawassa University, Institute of Technology. Proceeding of annual research review.</li> <li>6. Kinfu, E., Bombeck, H., Nigussie, A., &amp; Wegayehu, F. (2019). The Genesis of Peri-urban Ethiopia: The Case of Hawassa City. <i>Journal of Land and Rural Studies</i>, 7(1), 71-95.</li> </ol>
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## **Appendices**

Annex- i Household survey sheet and Interview questions

Annex-ii Household size in peri-urban Hawassa (2017)

Annex-iii The state of socio-economic services at peri-urban Hawassa (2017)

Annex-iv The state of infrastructure and services at peri-urban Hawassa (2017)

Annex-v The state of local governance at peri-urban Hawassa (2017)

Annex-vi The state of spatial forms at peri-urban Hawassa (2017)

Annex-vii Periods of settlement at peri-urban Hawassa (2017)

Annex- viii The state of public developments in Hawassa (2017)

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## Annex-i

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### a. Household Survey Sheet

Dear participant,

This research aims to understand the nature and dynamics of peri-urban areas of Hawassa, Ethiopia. It describes, explain and analyze the genesis and development of the peri-urban settlements in terms of the transition and planning endeavors of the settlements.

Your responses will be kept confidential and will just be used for the research purpose. They will not be used in any way other than for the purpose of this research.

I thank you in advance, for your willingness to respond to the questions.

#### QUESTIONER'S CODE

Questionnaire's number	
Name of the kebele	
Code of the household (as given on the guide map)	
Date and time of the enumeration local time)	
Name and signature of the enumerator	

#### Part-1: Household Demography

1	How many people are living in this home?										
2	Marital Status	S.N	Marital Status				S.N	Marital Status			
		1	Single			1	3	Divorced			3
		2	Married Year of Marriage E.C			2	4	Widow			4
3	Who is heading the family?	1. .Husband	2. Wife	3. * Relatives		4. Children		5. Others		*Grands, ante/uncle, brothers and sisters etc	
		1	2	3		4		5			
4	Details of the people living in this household?	S.N	Name of the member	Sex		Age	Relati onship *	Years in SchoolAcademic Status**		* 1- Husband 2-Wife 3-Children 4-Children's wife/husband 5Grand Children 6-Brothers/Sisters 7- Father/Mother 8- Other Family 9-Others **1-Uneducated	
				Male	Fem.				Year		
		1		1	0						
		2		1	0						
		3		1	0						
		4		1	0						
		5		1	0						

	6		1	0					2-Kindergarten
	7		1	0					3-Primary school 1-8
	8		1	0					4-secondary School9-12
	9		1	0					5-Tertiary TVET
	10		1	0					College/University)
									6-Others

5	Ethnicity	1	Sidama	1	If non-Sidama, specify _____
		2	Non Sidama	2	
6	Religion	S.N	Religion	Resp.	If other, specify
		1	Protestant Christian	1	
		2	Orthodox Christian	2	
		3	Catholic Christian	3	
		S.N	Religion	Resp.	
		4	Muslim	4	
		5	Traditional beliefs	5	
		6	other	6	

## Part II: Settlement Conditions

7	Where did you come from?	S.N	Location	Resp.		S.N	Location	Resp.	
		1	Born here	1		6	Oromia	6	
		2	Hawassa City	2		7	Amhara	7	
		3	Sidama zone/out of Hawassa City	3		8	Tigrai	8	
		4	SNNPRS/out of Sidama zone and Hawassa city	4		9	Others, If others, specify	9	
		5	Addis Ababa	5					
8	When did you settle here? E.C								
9	Why did you prefer to settle here?	S.N	Reasons for opting this location					Yes	No
		1	Availability of job opportunity in the locality					0	1
		2	Family transfer to this locality					0	1
		3	Better living standard /relative availability of basic services/					0	1
		4	Coming near to family					0	1
		5	Job transfer					0	1
		6	Insecurity in the former residential place					0	1
		7	Expensive living costs in the former residential place					0	1
		8	Expensive housing price /scarce housing supply/					0	1
	Other (Specify)					0	1		
10	How did you acquire this land?	S.N	Ways of land occupation	Yes	No				
		1	Informally	0	1				
		2	Squatting	0	1				
		3	Illegally	0	1				
		4	Others, specify	0	1				

## Part-III: Social, Economic and Basic Services

11	Which one of the following health services do you visited since you settled here?	S.N	Type of health institutions	Yes	No
		1	We visited none	0	1
		2	Health extension services	0	1
		3	Health post	0	1
		4	Health station	0	1
		5	District/town hospital	0	1
		6	Referral hospital	0	1
		7	Pharmacy services	0	1
		8	Others (specify)	0	1



12	Where do these health institutions found?	S. N	Type of health institutions	1- In your kebele		2- In Hawassa city out of your kebele		3- Out of Hawassa city	
				Yes	No	Yes	No	Yes	No
		1	We visited none	0	1	0	1	0	1
		2	Health extension Services	0	1	0	1	0	1
		3	Health post	0	1	0	1	0	1
		4	Health station	0	1	0	1	0	1
		5	District/town hospital	0	1	0	1	0	1
		6	Referral hospital	0	1	0	1	0	1
		7	Pharmacy services	0	1	0	1	0	1
		8	Others (specify)	0	1	0	1	0	1

13	What means of transport did you mainly use to travel to the health institutions?	S. N	Type of health institutions	1. walking		2. horse cart		3. BJJ		4. Minibus taxi		5. City bus		6. Private transport		7. others, (specify)	
				Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
		1	We visited none	0	1	0	1	0	1	0	1	0	1	0	1	0	1
		2	Health extension Services	0	1	0	1	0	1	0	1	0	1	0	1	0	1
		3	Health post	0	1	0	1	0	1	0	1	0	1	0	1	0	1
		4	Health station	0	1	0	1	0	1	0	1	0	1	0	1	0	1
		5	District/town hospital	0	1	0	1	0	1	0	1	0	1	0	1	0	1
		6	Referral hospital	0	1	0	1	0	1	0	1	0	1	0	1	0	1
		7	Pharmacy services	0	1	0	1	0	1	0	1	0	1	0	1	0	1

14	How many of the family members attend the following schools this year?	S. N	Sex	1. Kindergarten	2. Primary (1-8)	3. Secondary (9-12)	4. Tertiary (TVET, University, etc)	5. Others
		1	Male					
		2	Female					

15	Where do these academic institutions found?	S.N	Location	Kindergarten		Primary (1-8)		Secondary (9-12)		Tertiary (TVET, University, etc)		Others	
				Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
		1	In the kebele	0	1	0	1	0	1	0	1	0	1
		2	In Hawassa city out of your kebele	0	1	0	1	0	1	0	1	0	1
		3	Out of Hawassa City	0	1	0	1	0	1	0	1	0	1

16	Where did you regularly attend religious services?	1- In your Kebele		2- In Hawassa city out of your Kebele		3- Out of Hawassa City	
		1		2		3	

17	Why did you join the following CBOs?	S.N	CBOs	1. Political significance		2. economic significance		3. social significance		4. others	
				Yes	No	Yes	No	Yes	No	Yes	No
		1	I don't	0	1	0	1	0	1	0	1
		2	Edir	0	1	0	1	0	1	0	1
		3	Equb	0	1	0	1	0	1	0	1
		4	Ethnic community	0	1	0	1	0	1	0	1
		5	1:5 development army	0	1	0	1	0	1	0	1
		6	Others	0	1	0	1	0	1	0	1

18	If you were not engaged in the CBOs, What were your reasons?	S.N	Reasons	1. I don't need		2. It is not available		3. I believe that it is not useful		4. I don't trust its objectives		5. I can't afford		6. Others (specify)	
				Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
		1	I am engaged in all	0	1	0	1	0	1	0	1	0	1	0	1
18	If you were not engaged in the CBOs, What were your reasons?	2	Edir	0	1	0	1	0	1	0	1	0	1	0	1
		3	Equb	0	1	0	1	0	1	0	1	0	1	0	1
		4	Ethnic community	0	1	0	1	0	1	0	1	0	1	0	1
		5	1:5 development army	0	1	0	1	0	1	0	1	0	1	0	1
		6	Others	0	1	0	1	0	1	0	1	0	1	0	1

19	Where did you use these recreational and environmental services from?	S.N	Location	1. In your kebele		2. In Hawassa city out of your kebele		3. Out of Hawassa city	
				Yes	No	Yes	No	Yes	No
		1	I didn't use	0	1	0	1	0	1
19	Where did you use these recreational and environmental services from?	2	Public square	0	1	0	1	0	1
		3	Greenery	0	1	0	1	0	1
		4	Theater and film	0	1	0	1	0	1
		5	Sport field	0	1	0	1	0	1
		6	Youth center	0	1	0	1	0	1
		7	Library	0	1	0	1	0	1
		8	others	0	1	0	1	0	1

20	Where did you use these markets from?	S.N	Types of markets	1. In your kebele		2. In Hawassa city out of your kebele		3. Out of Hawassa city	
				Yes	No	Yes	No	Yes	No
		1	We use none	0	1	0	1	0	1
20	Where did you use these markets from?	2	Daily markets	0	1	0	1	0	1
		3	Weekly markets	0	1	0	1	0	1
		4	Monthly markets	0	1	0	1	0	1
		5	Occasional markets	0	1	0	1	0	1
		6	Other (specify)	0	1	0	1	0	1

21	Where did you use the following financial institutions from?	S.N	Types of financial institutions	1. In your kebele		2. In Hawassa city out of your kebele		3. Out of Hawassa city	
				Yes	No	Yes	No	Yes	No
		1	We use none	0	1	0	1	0	1
21	Where did you use the following financial institutions from?	2	Commercial banks	0	1	0	1	0	1
		3	Micro finance institutions	0	1	0	1	0	1
		4	Others	0	1	0	1	0	1

22	From which of the following water sources did you get water for these purposes?	S.N	Purpose	1. Private tap		2. Communal tap		3. Private vendor		4. Borehole		5. Fetching from lake/river	
				Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
		1	Drinking	0	1	0	1	0	1	0	1	0	1
22	From which of the following water sources did you get water for these purposes?	2	Cleaning	0	1	0	1	0	1	0	1	0	1
		3	Others	0	1	0	1	0	1	0	1	0	1

23	How much birr did you pay for 20 liters including transport cost?	----- Birr
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24	Which of the following sources of powers did you use for the listed uses?	S.N	Sources		1. Light		2. Cooking		3. Energy		4. Others		
				Yes	No	Yes	No	Yes	No	Yes	No		
		1	Candle	0	1	0	1	0	1	0	1		
		2	Gas/fuel filled	0	1	0	1	0	1	0	1		
		3	Wood fuel and charcoal	0	1	0	1	0	1	0	1		
		4	Solar PV powered cell	0	1	0	1	0	1	0	1		
		5	Electric charged light	0	1	0	1	0	1	0	1		
		6	Biogas electric power	0	1	0	1	0	1	0	1		
		7	Electric power	0	1	0	1	0	1	0	1		
8	Other	0	1	0	1	0	1	0	1				
25	How did you get electric power?	1. We don't use electric		2. Private meter		3. Common meter		4. Private vendor		5. Other (Specify)			
		1		2		3		4		5			
26	Which of the following telephone types did the members of your household use?	S.N	Member of the household	1. Don't have telephones		2. wired Fixed line		3. Wireless home cells		4. Cell phone		5. Private vendors	
				Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
		1	Husband	0	1	0	1	0	1	0	1	0	1
		2	Spouse	0	1	0	1	0	1	0	1	0	1
		3	Children	0	1	0	1	0	1	0	1	0	1
		4	Other family	0	1	0	1	0	1	0	1	0	1

#### Part IV: Conditions of Administrative and Municipal Services

		S.N	Types of services	1. in your kebele		2. In Hawassa city out of your kebele		3. Out of Hawassa city		4. Others	
				Yes	No	Yes	No	Yes	No	Yes	No
27	Where did you get these administrative services from?	1	We didn't get	0	1	0	1	0	1	0	1
		2	Local/kebele ID	0	1	0	1	0	1	0	1
		3	Security services	0	1	0	1	0	1	0	1
		4	Tax and economic services /urban safety net etc/	0	1	0	1	0	1	0	1
		5	Health and education/ Social services/	0	1	0	1	0	1	0	1
		6	Justice and court services	0	1	0	1	0	1	0	1
		7	Local development services /infrastructure	0	1	0	1	0	1	0	1
		8	Others (Specify)	0	1	0	1	0	1	0	1
28	Which of the following rural services do you get since you settled here?	S.N	Type of services	Yes		No					
		1	We had none	0		1					
		2	Rural land registration	0		1					
		3	Rural health extension	0		1					
		4	Agriculture development services	0		1					
		5	Rural safety net	0		1					
		6	Rural road	0		1					
		7	Rural water development	0		1					
		8	Rural administration services	0		1					
		9	Rural justice and court services	0		1					
		10	Rural security and public prosecutor	0		1					
		11	Other	0		1					

29	In which of the following elections did you participate as a resident of this settlement?	I didn't participate in all		1987 E.C		1988 E.C		1992 E.C		1993 E.C		1997 E.C		1998 E.C		2002 E.C		2003 E.C		2007 E.C	
		Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
		0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1

30	Which of the following municipal services did you get since you settled here?	S.N	Types services	Yes	No
		1	We had no services	0	1
		2	Land registration	0	1
		3	Construction design approval	0	1
		4	Construction permit	0	1
		5	Infrastructure and basic services	0	1
		6	Greenery and recreational services	0	1
		7	Social and Community interests/ worship, funeral places,...	0	1
		8	Waste disposal	0	1
		9	Other	0	1

31	To which municipality did you go for these municipal services since you settled here?	S.N	Types of services	1. Kebele		2. Sub-city		3. Hawassa City		4. Regional bureau	
				Yes	No	Yes	No	Yes	No	Yes	No
		1	We had no services	0	1	0	1	0	1	0	1
		2	Land registration	0	1	0	1	0	1	0	1
		3	Design approval	0	1	0	1	0	1	0	1
		4	Construction permit	0	1	0	1	0	1	0	1
		5	Infrastructure and basic services	0	1	0	1	0	1	0	1
		6	Greenery and recreational services	0	1	0	1	0	1	0	1
		7	Social and Community interests/ worship, funeral places, ...	0	1	0	1	0	1	0	1
		8	Waste disposal	0	1	0	1	0	1	0	1
		9	Other	0	1	0	1	0	1	0	1

## Part V: Household's Economy

32	Who are employed, among the household members, in income generating jobs?	S.N	Household member	Yes	No
		1	No one is employed	0	1
		2	Husband	0	1
		3	Spouse	0	1
		4	Children	0	1
		5	Others	0	1

33	In which of the following income generating jobs did they work?	S.N	Member	1. Farming		2. Animal husbandry		3. Commercial		4. Public servant		5. Daily laborer		6. Others (specify)	
				Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
		1	No one is employed	0	1	0	1	0	1	0	1	0	1	0	1
		2	Husband	0	1	0	1	0	1	0	1	0	1	0	1
		3	Spouse	0	1	0	1	0	1	0	1	0	1	0	1
		4	Children	0	1	0	1	0	1	0	1	0	1	0	1
		5	Others	0	1	0	1	0	1	0	1	0	1	0	1

		S.N	Employed members	1. Farming		2. Animal Husbandry		3. Commercial		4. Public servant		5. Daily laborer		6. Others		
				Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	
34	How many birr did those employed earning per month?	1	No one is employed	0	1	0	1	0	1	0	1	0	1	0	1	
		2	Husband	0	1	0	1	0	1	0	1	0	1	0	1	
		3	Spouse	0	1	0	1	0	1	0	1	0	1	0	1	
		4	Children	0	1	0	1	0	1	0	1	0	1	0	1	
		5	Others	0	1	0	1	0	1	0	1	0	1	0	1	
35	What were the reasons for unemployment of those who are unemployed?		S.N	Reasons for unemployment									Yes	No		
			1	No one is unemployed									0	1		
			2	aging (Minority or aged)									0	1		
			3	lack of agricultural land									0	1		
			4	Lack of required skills/training...									0	1		
			5	Lack of employment opportunities									0	1		
			6	Lack of capital/ land etc									0	1		
			7	Others									0	1		
36	In general, how do you rate the economic status of your household?		1. Very poor		2. Poor		3. low income		4. Middle Income		5. High income		6. Rich		7. Wealthy	
			1		2		3		4		5		6		7	

## Part VI: Land Ownership, Use and Registration

37	How many meter squares is the area of the land you hold?				M <sup>2</sup>				
38	How many meters is the length of the land?				M				
39	How many meters is the width of the land?				M				
40	What is your land title/right on this plot?		1. Owner	2. Tenant	3. Relative	4. Guard	5. Others (Specify _____)		
1			2	3	4	5			
41	When you or the owner did acquire the land?		1. I don't know			2. .... in E.C			
42	How did the landholder acquire the land?	S.N	Ways of acquiring				Yes	No	
		1	I have no information						
		2	Provided by government as agricultural land						
		3	The landholder is among the earliest inhabitants of the village						
		4	Bought/inherited/ got as a gift from the primary owner						
		5	Inherited from family						
		6	Bought from a person who had bought from others						
		7	Others( specify)						
43	When did the landholder buy the land?		1. I don't know		2. .... in E.C		3. The landholder didn't bought the land		
44	How did you maintain the legitimacy of the land transaction?	S.N	Ways of legitimization			Yes	No		
		1	We bought no land			0	1		
		2	We got rural land tax receipt			0	1		
		3	We have got rural land			0	1		
		4	Signed rural house sell contract agreement			0	1		
		5	Signed urban house sell contract agreement			0	1		
		6	Others(specify)			0	1		
45	If you bought the land, why did you trust the land transaction?	S.N	Reasons for trusting the transaction				Yes	No	
		1	We bought no land				0	1	
		2	Involvement of the elders				0	1	
		3	Seeing those who bought before				0	1	
		4	Availability of contractual agreements of property sell				0	1	
		5	Availability of rural land tax receipt				0	1	
		6	Provision of rural land certificate				0	1	
		7	We took risk/responsibility				0	1	
		8	Observing legalization /regularization/ of prior similar settlements				0	1	
		9	Others( specify)				0	1	

46	Which of the following uses are you using the structure on the land?	S.N	Uses	Responses			
		1	Residential only	1			
		2	Commercial only	2			
		3	Residential and Commercial mixed	3			
		4	Agriculture	4			
		5	Dairy	5			
		6	Agriculture and dairy farm	6			
		7	Others( specify)	7			
47	Is this land registered by any public body?			Yes	No		
				0	1		
48	If the land was registered, when?			1. Not registered		2. E.C	
49	If the land was registered, which of the following public entity did the registration?	S.N	Public body		Responses		
		1	It was not registered		1		
		2	City's municipality		2		
		3	Sub-city's municipality		3		
		4	Rural land administration office		4		
		5	Others ( specify)		5		
50	If the land was registered, did you get any document that confirms the registration?				Yes	No	
					0	1	
51	If you got document of registration, which one of the following documents was issued to you?	S.N	Registration document		Yes	No	
		1	No registration was conducted		0	1	
		2	Registration fee receipt		0	1	
		3	Urban land registration certificate		0	1	
		4	Rural land tax receipt		0	1	
		5	Rural land use right certificate		0	1	
		6	Others( specify)		0	1	
52	If the land was not registered, why?	S.N	Reason for not-registered		Yes	No	
		1	The land was registered		0	1	
		2	No registration is conducted yet		0	1	
		3	We are not willing for registration		0	1	
		4	We missed the registration dead line		0	1	
		5	The land was marked as illegal land hold		0	1	
		6	Others ( specify)		0	1	
53	If the land was not registered, what threats, did you think will happen?	S.N	Threats for not registered		Yes	No	
		1	The land was registered		0	1	
		2	We had no threat		0	1	
		3	Threat of eviction by government		0	1	
		4	Threat of eviction by primary inhabitants		0	1	
		5	Loss in optimum benefits of the land		0	1	
		6	The village will lose its livability		0	1	
		7	Others (specify)		0	1	

## Section VII: Conditions of Houses, Infrastructure and Services

54	When was this house built		----- E.C		
55	Which one of the following types of houses was built on this plot?	<b>S.N</b>	<b>House type</b>	<b>Yes</b>	<b>NO</b>
		1	Main house	0	1
		2	Service quarters	0	1
		3	Main house and the service quarters	0	1
		4	Rural hut	0	1
		5	Other (specify)	0	1
56	What was the floor area of the built structure?	<b>S.N</b>	<b>House type</b>	<b>M2</b>	
		1	Main House		
		2	Service quarters		
		3	Main house and the service quarters		
		4	Rural hut		
		5	Other (specify)		

57	Which of the following land use do the houses floor plan resembles?	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>	<b>Others</b>	
		1	2	3	4	5	6	7	
58	Which of the following construction materials were used to build the house?	<b>S.N</b>	<b>Construction materials</b>					<b>Response</b>	
		1	Wood, mud and grass hut					1	
		2	Wood mud and CIS					2	
		3	HCB, cement and CIS					3	
		4	Others (specify)					4	
59	How many birr do you estimate as the total construction cost of the house?	_____ <b>ETB</b>							
60	Does the house connected to a road?	<b>Yes</b> 0	<b>No</b> 1						
61	If the house was connected to a road, What type of road is it connected with?	<b>S.N</b>	<b>Response</b>					<b>Yes</b>	<b>No</b>
		1	It is not connected					0	1
		2	Asphalt					0	1
		3	Community built earth road					0	1
		4	URRAP road					0	1
		5	Foot paths					0	1
		6	Earth pressed road constructed by public bodies					0	1
		7	Cobble stone roads					0	1
		8	Others (specify)					0	1

## Part VII: Conditions of Waste Management and Environmental Services

62	Where did you collect the solid waste before disposal?	<b>S.N</b>	<b>Responses</b>	<b>Yes</b>	<b>No</b>
		1	We didn't collect	0	1
		2	Within our compound	0	1
		3	At the collection site within the village	0	1
		4	On the field	0	1
		5	Around the road sides	0	1
		6	Others (specify)	0	1
63	Where did you dispose the collected solid waste before disposal?	<b>S.N</b>	<b>Responses</b>	<b>Yes</b>	<b>No</b>
		1	Wedidn't dispose	0	1
		2	Incinerate in the compound	0	1
		3	On the field	0	1
		4	Around the road sides	0	1
		5	Handover to the collectors	0	1
		6	Others (specify)	0	1
64	Where did you collect the liquid waste before disposal?	<b>S.N</b>	<b>Responses</b>	<b>Yes</b>	<b>No</b>
		1	We didn't collect	0	1
		2	Within our compound	0	1
		3	At the collection site within the village	0	1
		4	On the field	0	1
		5	Around the road sides	0	1
		6	Others (specify)	0	1

65	Where did you dispose the collected liquid waste before disposal?	S.N	Responses	Yes	No			
		1	We didn't dispose	0	1			
		2	Incinerate in the compound	0	1			
		3	On the field	0	1			
		4	Around the road sides	0	1			
		5	Handover to the collectors	0	1			
		6	Others (specify)	0	1			
66	Does the house connected to drainage lines?	S.N	Responses			Response		
		1	Yes it is			1		
		2	No, it is not			2		
		3	There is no drainage line in the village			3		
68	Does your house connected to sewerage lines?	S.N	Responses			Response		
		1	Yes it is			1		
		2	No, it is not			2		
		3	There is no sewerage line in the village			3		
69	Which of the environmental problems did you or the residents of the villages encounter so far?	S.N	Responses			Yes	No	
		1	Inundation			0	1	
		2	Landslide			0	1	
		3	Environmental problems borne health problems: URTI, malaria, diarrhea...			0	1	
		4	Fire			0	1	
		5	Collapse of construction structures			0	1	
		6	Earth quake			0	1	
		7	Others (specify )			0	1	

**Thank you.**



## **b. Interview Questions**

### **I. For Government Officials, City Planners and Land Development Experts**

1. Backgrounds
  - 1.1 Academic status \_\_\_\_\_
  - 1.2 Profession \_\_\_\_\_
  - 1.3 Years of experience in the current position \_\_\_\_\_ years
  - 1.4 What were your roles in the regularization programs?
2. Defining the peri-urban
  - 2.1 What do you call, given your current position, these /settlements emerging at the expansion areas of urban centers/ settlements? Why?
3. Peri-urban land
  - 3.1 Is the land in these areas urban or rural? Why?
  - 3.2 Which land governance regime of the nation/region do you think govern the land in these areas? Why?
  - 3.3 Why the city engulfed the rural kebeles while the planning area was by large smaller than the engulfed area?
  - 3.4 Why the land in expansion areas of Hawassa remained rural while it was in the administrative boundary of the city?
  - 3.5 What were the major land-uses before the settlements started to develop?
  - 3.6 Who do you think are the existing landholders in these areas? Why?
  - 3.7 How do you think is the land in these areas transferred to the current landholders? Why?
  - 3.8 How do you evaluate the legitimacy of land transfers in the areas? Why?
  - 3.9 How do you evaluate the legitimacy of the new developments in these areas? Why? How?
  - 3.10 What were the rationales for the campaign launched to govern the land in these areas? Why?
  - 3.11 Who was responsible to administer the land in these areas? Why?
  - 3.12 How do you evaluate the efficacy of administering the land of these areas? Why?
  - 3.13 What were the major problems affecting the land administration in these areas? How? Why?
  - 3.14 What do you advise to ensure the effectiveness of land administration in these areas?
4. Peri-urban development
  - 4.1 How do you think that they emerged? Why?
  - 4.2 How do you evaluate their growth? Why?
  - 4.3 What do you think will happen to their growth in the future? Why?
  - 4.4 What policy options do you pursue to manage their growth? Why?
5. Drivers of peri-urban development
  - 5.1 What do you think were the drivers of the emergence and development of these settlements? How? Why?
  - 5.2 How do you see the contributions of the land policy for the development of these settlements? Why?
6. Pressures of peri-urban development
  - 6.1 What were the pressures created on the developments of these settlements ? How?Why?
  - 6.2 Did these pressures influence your policy options? How? Why?
7. Impacts of peri-urban developments
  - 7.1 What were the impacts of these developments?
  - 7.2 What policy options did you have to manage these impacts? How? Why?
8. Responses to manage the peri-urban developments
  - 8.1 What were the measures /policy options/ taken to manage their growth and development? How? Why?
  - 8.2 How do you evaluate the efficacy of the responses? Why?
  - 8.3 What do you think have affected the efficacy of the policy? How? Why?

- 8.4 What do you think that should have been taken? How? Why?
9. Regularization of peri-urban settlements?
  - 9.1 Why did you think is the regularization program relevant? How?
  - 9.2 What were the elements of the processes of regularizing these settlements? Why?
  - 9.3 Which category of the land type mentioned in the regularization process did the land at these areas belongs to? How? Why?
  - 9.4 How do you evaluate the efficacy of the regularization process? Why?
  - 9.5 What were the benefits of the regularization program? How? Why?
  - 9.6 What were the major problems you find during the regularization process? How? (at each stages of the process) why?
  - 9.7 What do you think that should have been taken to manage the developments of these settlements besides the regularization? How? Why?
  - 9.8 What do you think that should have been taken to manage the developments of these settlements besides the regularization? How? Why?
10. Others
  - 10.1 Are there anything you want to tell about the settlements, the land and the policy response?

## II. For Kebele Administrators

1. Background
  - 1.1 Age \_\_\_\_\_
  - 1.2 Sex \_\_\_\_\_
  - 1.3 Place of birth: Region \_\_\_\_\_ Zone \_\_\_\_\_ Woreda \_\_\_\_\_ Kebele \_\_\_\_\_
  - 1.4 Position in the kebele administration \_\_\_\_\_
  - 1.5 Number of years working as a member of kebele administration \_\_\_\_\_
2. Settlements development
  - 2.1 When did these settlements emerge? How? Why?
  - 2.2 Who were the primary settlers?
  - 2.3 Where did the earliest villages situate?
  - 2.4 When did new comers start to settle in this locality? How? Why?
  - 2.5 How were the settlements growing? Why?
  - 2.6 What were the major changes manifesting while the settlements were growing? How? Why?
  - 2.7 What are the benefits of the development of the settlement? Why?
  - 2.8 What are the effects of the developments of the settlements? Why?
  - 2.9 What should be done to manage the developments of the settlements? How? Why?
3. Land administration
  - 3.1 How did the earliest settlers acquire land? Why?
  - 3.2 How did the new settlers acquire land? Why?
  - 3.3 Is the land in the locality rural or urban? How? Why?
  - 3.4 What were the earliest major land uses in the area?
  - 3.5 What are the major land-uses now? Why?
  - 3.6 Why do you think that the land uses are changing? How?
  - 3.7 What are your roles in administering the land in the area? How? Why?
  - 3.8 What difficulties did you face while administering the land?
  - 3.9 How did you see the modes and benefits of land transfer from the earliest landholders to the new settlers? Why?
  - 3.10 What were your roles during the land transfers? How? Why?
  - 3.11 How did you manage the new land developments in the area? Why?
  - 3.12 How do you evaluate the land policies in relation to the practices in the area? Why?
  - 3.13 How do you evaluate the role of kebele administrations in the land administration activities? Why?
4. Regularization program

- 4.1 What were your roles in the regularization program? How? Why?
- 4.2 How did you evaluate the efficacy of the regularization program? Why?
- 4.3 What were the benefits of the regularization program?
- 4.4 What were the limitations of the regularization program?
- 4.5 What were the problems of the regularization program?
5. Are there any other issues do you want to talk about the settlements? The land? And regularization?

### III. For Elders Living in Peri-urban Settlements

#### 1. Backgrounds

- 1.1 Sex \_\_\_\_\_
- 1.2 Age \_\_\_\_\_ years
- 1.3 Place of Birth: Region \_\_\_\_\_ Zone \_\_\_\_\_ Woreda \_\_\_\_\_ Kebele \_\_\_\_\_
- 1.4 For how long have you lived in this area? \_\_\_\_\_ Years.

#### 2. Settlements' development

- 2.1 When did these settlements emerge? How? Why?
- 2.2 Who were the primary settlers?
- 2.3 Where did the earliest villages situate?
- 2.4 How many households were living back then?
- 2.5 When did new comers start to settle? How? Why?
- 2.6 How do you welcome the new comers? Why?
- 2.7 How were the settlements growing? Why?
- 2.8 How do you evaluate the ways of the growth of the village?
- 2.9 What were the major changes manifesting while the settlements were growing? How? Why?
- 2.10 What do you think will be the future of these settlements? How? Why?
- 2.11 What are the benefits of the development of the settlement? Why?
- 2.12 What are the effects of the developments of the settlements? Why?
- 2.13 What should be done to manage the developments of the settlements? How? Why?

#### 3. Land administration and development

- 3.1 Do you have land in this area? YES/NO
- 3.2 Have you sold any land yet? YES/NO. If Yes, How? Why? If No, Why?
- 3.3 How did land sell begin in the areas?
- 3.4 Why is land selling growing in the areas?
- 3.5 Have you been involved in land related conflicts? YES/NO. If yes, what were the issues? What were your roles?
- 3.6 How did you resolve land related conflicts?
- 3.7 What do you think are the benefits/opportunities of the settlement growth/land sale?
- 3.8 What do you think are the negative consequences of the settlement growth/land sale?

#### 4. Regularization

- 4.1 Did you involve in the regularization activities? If yes, what were your roles?
- 4.2 What were the benefits of the regularization program? Why?
- 4.3 What were the limitations of the regularization program? Why?
- 4.4 How do you evaluate the benefits of the regularization policy? Why?
- 4.5 What do you think should have the government did to manage the development in the areas? Why?

#### 5. Others

- 5.1 Do you have anything to tell about the settlements? The land markets? The regularization policy of the state?

#### IV. For Brokers

##### 1. Demography

- 1.1 Sex \_\_\_\_\_
- 1.2 Age \_\_\_\_\_ years
- 1.3 Place of Birth: Region \_\_\_\_\_ Zone \_\_\_\_\_ Woreda \_\_\_\_\_ Kebele \_\_\_\_\_
- 1.5 Academic status \_\_\_\_\_
- 1.6 For how long have you lived in this area? \_\_\_\_\_ Years.
- 1.7 For how long have you been engaged in land brokering business? \_\_\_\_\_ Years.

##### 2. Landholding and land markets

- 2.1 Do you have land in this area? YES/NO
- 2.2 Did you sell any land of your own? How? Why?
- 2.3 How did land sell begin in the areas?
- 2.4 Does land sell in the area growing? How? Why?
- 2.5 How did you begin land-brokering business?
- 2.6 Why did you prefer the land brokering business?
- 2.7 How many transactions of plots of land did you support?
- 2.8 What were your major roles in making the land transactions effective? How? Why?
- 2.9 How did you get those households interested in selling land?
- 2.10 How did you get clients interested to buy land?
- 2.11 How did the land price set? Why?
- 2.12 Is the land price in the area increasing or decreasing?
- 2.13 Could you tell me the prices of land in ETB on average each year since you were engaged in the business?
- 2.14 Is land selling legal practice? How? Why?
- 2.15 How did you support the legitimacy of land transactions? Why?
- 2.16 How did you support the land development in the area? Why?
- 2.17 Why do you think that people are selling land in the areas?
- 2.18 Why do you think that people are buying land in the areas?
- 2.19 Have you been involved in land related conflict? YES/NO; If yes, what were the issues?  
What were your roles?

##### 3. Settlement developments

- 3.1 How are these settlements growing? Why?
- 3.2 What major changes are you observing in the settlements? Since when? What do you think are the reasons?
- 3.3 What do you think will be the future of these settlements? How? Why?
- 3.4 What do you think are the benefits/opportunities of the settlement growth/land sale?
- 3.5 What do you think are the negative consequences of the settlement growth/land sale?

##### 4. Regularization

- 4.1 Have you been involved in regularization activities? How? Why?
- 4.2 What do you think are the benefits of the regularization program?
- 4.3 What were the problems of the regularization program?

##### 5. Do you have any other things to tell about the settlements, the land the regularization policy?

## Annex-ii

Household size in peri-urban Hawassa (2017)

Household size	Frequency	percent
1.00	9	2,3
2.00	25	6,3
3.00	71	17,8
4.00	81	20,3
5.00	80	20,0
6.00	59	14,8
7.00	28	7,0
8.00	26	6,5
9.00	10	2,5
10.00	10	2,5
11.00	1	,3
Total	400	100,0

### Annex –iii

#### The state of socio-economic services at peri-urban Hawassa (2017)

##### a. Access to education services

	N	In the Kebele		In Hawassa City		Other	
		freq.	percent	freq.	percent	freq.	percent
Kindergarten	117	89	76,1	27	23,3	1	0,6
Primary	219	136	64,5	78	37,1	5	2,4
Secondary	91	8	8,8	81	90,0	2	1,2
Territory	31	0	0,0	27	87,1	4	12,9

##### b. Access to health services

	N	None		Kebele		Hawassa		Out of Hawassa	
		Freq.	Percent	Freq.	Percent	Freq.	Percent	Freq.	Percent
Health extension	281	90	32	182	64,8	7	2,5	2	0,7
Health post	281	182	64,8	89	31,7	8	2,8	2	0,7
Health station	281	13	4,6	194	69,0	72	25,6	2	0,7
District Hospital Referral	281	141	50,2	0	0,0	137	48,8	3	1,1
Hospital	281	198	70,5	0	0,0	81	28,8	2	0,7
Pharmacy	281	192	68,3	0	0,0	88	31,3	1	0,4

##### c. Access to religious services

Location	Religious places		Funeral places	
	freq.	percent	freq.	percent
In your Kebele	341	85,5	39	9,8
In Hawassa city out of your Kebele	48	12	353	89,1
Out of Hawassa City	10	2,5	4	1,0

##### d. Access to markets

	N	Kebele		Hawassa		Other	
		Freq.	Percent	Freq.	Percent	Freq.	Percent
None	21,0	9,0	42,9	7	33,3	5	23,8
Daily	371,0	238,0	64,2	30	8,1	3	0,8
Weekly	371	67	18,1	303	81,7	1	0,3
Monthly	256	18	7,0	231	90,2	7	2,7
Occasional	256	7	2,7	230	89,8	19	7,4
Others	35	1	2,9	33	94,3	1	2,9

e. Access to financial institutions

Financial Institutions	N	Kebele		Hawassa		Other	
		Freq.	Percent	Freq.	Percent	Freq.	Percent
None	262	94	35,9	88	33,6	85	32,4
Commercial banks	262	158	60,3	119	45,4	2	0,8
Micro Finance	262	6	2,3	19	7,3	1	0,4
Others	263	11	4,2	9	3,4	7	2,7

# Annex-iv

## The state of infrastructure and services at peri-urban Hawassa (2017)

### a. Energy and power sources of peri-urban Hawassa (2017)

	Wood/																
	N	Candle		Gas/fuel		Charcoal		Solar PV		Charged cell		Biogas		Electric		Others	
Light	384	215	56,0	14	3,6	10	2,6	47	12,2	29	7,6	6	1,6	348	90,6	6	1,6
Cooking	309,0	0,0	0,0	7	2,3	278	90,0	2	0,6	0	0,0	6	1,9	78	25,2	1	0,3
Power	317	0	0,0	2	0,6	4	1,3	7	2,2	89	28,1	3	0,9	269	84,9	2	0,6
Other	6	1	16,7	1	16,7	1	16,7	1	16,7	3	50,0	1	16,7	1	16,7	1	16,7

### b. Telephone lines in peri-urban Hawassa (2017)

User	Don't have telephone		Fixed line		Wireless home cell		Cell phone		Private vendors		
		Percen		Percen		Percen		Percen		Percen	
	N	Freq.	t	Freq.	t	Freq.	t	Freq.	t	Freq.	t
Husband	355	3	0,8	2	0,6	5	1,4	343	96,6	2	0,6
Spouse	327	3	0,9	3	0,9	5	1,5	314	96,0	2	0,6
Child	121	3	2,5	1	0,8	3	2,5	113	93,4	1	0,8
Other	41	5	12,2	1	2,4	2	4,9	32	78,0	1	2,4

### c. Access to different water sources and functions at peri-urban Hawassa (2017)

	N	Private Tap Freq.	Percent	Communal tap Freq.	Percent	Private Vendor Freq.	Percent	Borehole Freq.	Percent	Lake/river Freq.	Percent
Drinking	387	118	30,5	8	2,1	254	65,6	4	1,0	3	0,8
Cleaning	387	113	29,2	10	2,6	158	40,8	87	22,5	19	4,9
Others	387	12	3,1	3	0,8	17	4,4	221	57,1	134	34,6
	116										
	1	243	20,9	21	1,8	429	36,9	312	26,9	156	13,4



d. Waste collection and disposal in peri-urban Hawassa (2016)

Solid waste Collection			Solid waste Disposal		
	Freq.	Percent		Freq.	Percent
I don't collect	0	0	I don't dispose	0	0
In the compound	306	76,5	In the compound	219	54,75
Neighborhood collection	19	4,75	At the field	41	10,25
In the field	25	6,25	By road side	35	8,75
Road side	42	10,5	To collectors	93	23,25
Others	8	2	Others	12	3
	400	100		400	100

Liquid waste Collection			Liquid waste Disposal		
	Freq.	Percent		Freq.	Percent
I don't collect	143	35,75	I don't dispose	0	0
In compound collection	159	39,75	Burry in compound septic,	152	38
In the neighborhood	21	5,25	At the field	146	36,5
In the field	33	8,25	Outskirt	70	17,5
Roadside	29	7,25	Sewerage/drainage line	18	4,5
Others	15	3,75	Other	14	3,5
	400	100		400	100

e. Three wheel taxis (BJJ) and mobile network subscribers in Hawassa

Year	Number of BJJ Taxis registered per year	No of mobile subscribers in the given year
2004/05	0	1214
2005/06	0	1284
2006/07	107	2134
2007/08	251	12008
2008/09	115	21387
2009/10	243	39561
2010/11	323	54012
2011/12	240	796567
2012/13	351	557328
2013/14	157	825104
2014/15	13	237300
2015/16	105	635516
2016/17	15	859709

(Source: Hawassa City transport office 2017, Ethio-telecom Hawassa district 2017)

# Annex-v

## The state of local governance at peri-urban Hawassa (2017)

### a. Administrative services accessed by the residents of peri-urban Hawassa (2017)

		kebele		sub-city		city admin.		others	
	N	Freq.	Percent	Freq.	Percent	Freq.	Percent	Freq.	Percent
no service	129	49	38,0	30	23,3	28	21,7	22	17,1
ID	296	275	92,9	12	4,1	8	2,7	1	0,3
Security services	122	105	86,1	13	10,7	3	2,5	1	0,8
Economic services	91	45	49,5	14	15,4	31	34,1	1	1,1
Social services	244	128	52,5	50	20,5	65	26,6	1	0,4
Justice and court	28	17	60,7	6	21,4	3	10,7	1	3,6
Local development	25	18	72,0	4	16,0	2	8,0	1	4,0
Others	12	4	33,3	6	50,0	1	8,3	1	8,3
Total/Average	947	641	67,7	135	14,3	141	14,9	29	3,1

### b. Municipal services accessed by the residents of peri-urban Hawassa (2017)

		kebele		Sub-city		Municipality		Other	
	N	freq.	percent	freq.	percent	freq.	percent	freq.	percent
No service	337	121	59,6	79	36,1	74	14,9	63	87,5
Land registration	234	18	8,9	53	24,2	162	32,5	1	1,4
Design Approval	55	7	3,4	17	7,8	30	6,0	1	1,4
Construction permit	77	18	8,9	12	5,5	46	9,2	1	1,4
Infra. and basic services	129	5	2,5	23	10,5	100	20,1	1	1,4
Greenery and beautification	15	5	2,5	4	1,8	5	1,0	1	1,4
Worship/ funeral places	115	21	10,3	22	10,0	71	14,3	1	1,4
Waste disposal	14	4	2,0	3	1,4	6	1,2	1	1,4
Others	16	4	2,0	6	2,7	4	0,8	2	2,8
Total/Average	992	203	20,5	219	22,1	498	50,2	72	7,3

c. Participations of peri-urban residents in local and national elections (1995-2017)

Year of Elections	Participants		
	N	Freq.	Percent
None	204	111	54,4
1995	119,0	35,0	29,4
1997	120	34	28,3
2000	125	41	32,8
2002	128	52	40,6
2005	147	84	57,1
2007	138	87	63,0
2010	189	147	77,8
2012	184,0	154,0	83,7
2015	306,0	285,0	93,1

d. Reasons for not participating in Elections of peri-urban residents (2017)

	N	Freq.	Percent
Not in the locality	399	249	62,4
Legally Minor	399	76	19,0
Not allowed	399	18	4,5
Not interested	399	28	7,0
Others	399	7	1,8

# Annex-vi

The state of spatial forms at peri-urban Hawassa (2017)

## a. Plot area in peri-urban Hawassa (2017)

Area range in M <sup>2</sup>	Mid- value	Frequency	Percentage
14-123	75,5	8	2,1
125-163	144	19	5,0
168-200	184	112	29,6
201-250	225,5	64	16,9
255-300	277,5	97	25,6
308-350	483	18	4,7
360-500	430	50	13,2
600-800	700	8	2,1
1600-2500	2050	2	0,5
3000	3000	1	0,3
Total		379	100,0

## b. Plot structure in peri-urban Hawassa (2017)

Plot dimension (w*l) in meters		Range			
		Freq.	Percent	Width	Length
2*40	2	0,6	2	40	0
6*20	3	0,8	6-6,50	10,00-30,00	0
7*27	8	2,2	7,0-7,5	10,00-30,00	7*15,7*28
8*21	12	3,3	8,13-8,5	13,00-22,00	&7*30
9*20	12	3,3	9,00-9,30	10,0-22,30	8*18
	23				9*22
10*16	5	64,7	10	2,00-50,00	10*20
10*31	6	1,7	11	25,00-35,00	11*35
12*24	35	9,6	12,00-12,80	15,00-80,18	12,3
13*21	4	1,1	13,00-13,40	16,00-25,00	0
14*29	5	1,4	14	19,00-40,00	0
15*24	9	2,5	15	15,00-35,00	15,2
16*23	5	1,4	16	19,00-25,00	16*25
17*25	4	1,1	17	20,00-30,00	17*20
18*36	2	0,6	18	30,00-42,00	0
19*30	1	0,3	19	30	19*30
20*23	8	2,2	20	14,00-35,00	20*20 & 20*30
23*25	1	0,3	20	35	23*25
24*29	1	0,3	24	29	24*29
25*30	1	0,3	25	30	25*30
30*28	3	0,8	30	13,00-50,00	0
35*40	1	0,3	35	40	35*40
36*45	1	0,3	36	45	36*45
37*48	1	0,3	37	48	37*48
40*40	2	0,6	40	40	40*40
336*24	1	0,3	336	24	336*24
	36	100,0			

**Annex-vii**

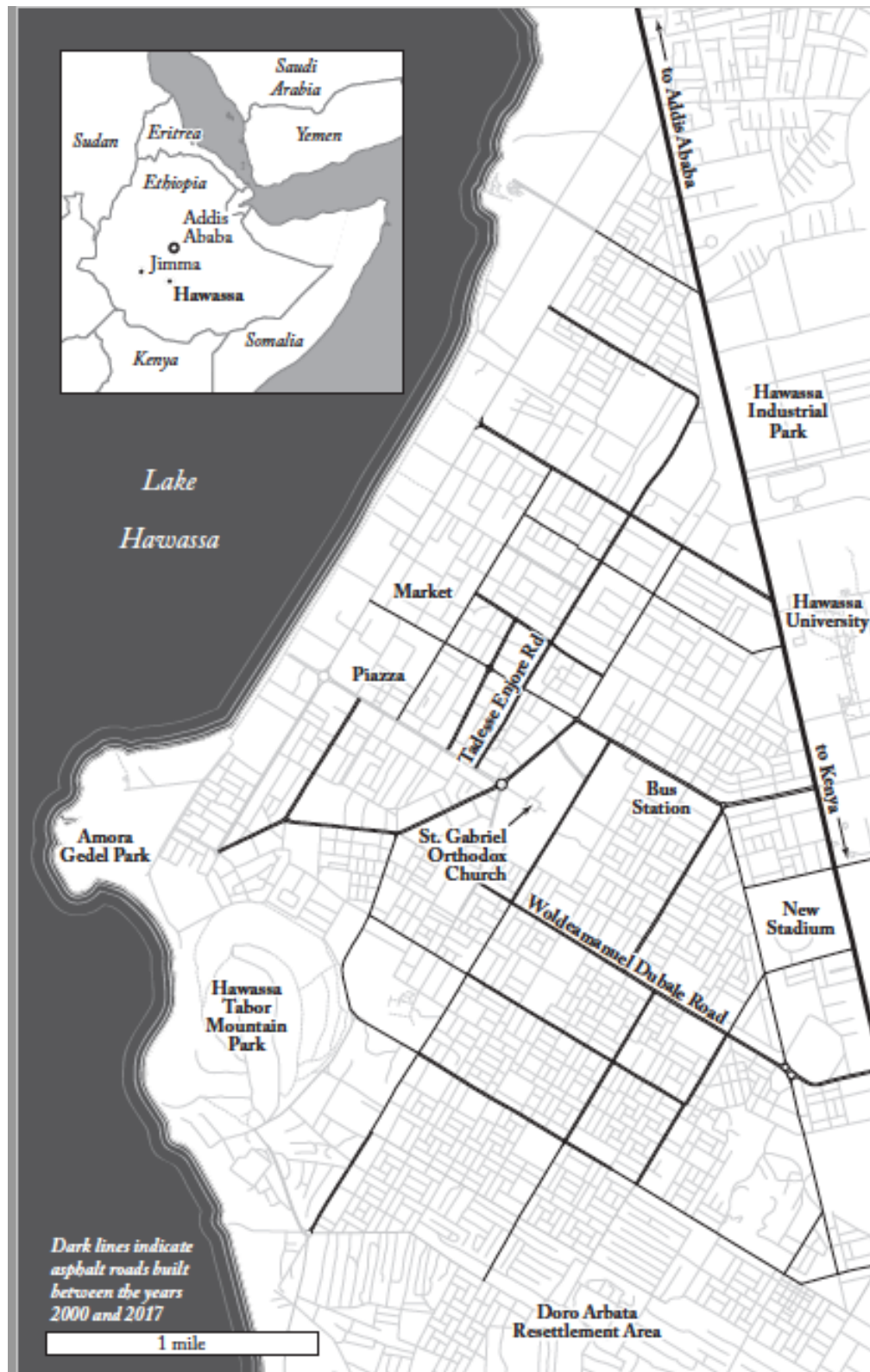
Periods of settlement at peri-urban Hawassa (2017)

Periods of settlement	Frequency	Percent
Before 2004	26	8.0
2004-2010	105	32.3
2011-2017	194	59.7
Total	325	100.0

#### Annex- viii

#### The state of public developments in Hawassa (2017)

a. Hawassa city road network (2017)



(Source: Mains, D. forthcoming)

b. Energy and power sources for peri-urban residents of Hawassa (2017)

	Wood/																
	N		Candle	Gas/fuel		Charcoal		Solar PV		Charged cell		Biogas		Electric		Others	
Light	384	215	56,0	14	3,6	10	2,6	47	12,2	29	7,6	6	1,6	348	90,6	6	1,6
Cooking	309,0	0,0	0,0	7	2,3	278	90,0	2	0,6	0	0,0	6	1,9	78	25,2	1	0,3
Power	317	0	0,0	2	0,6	4	1,3	7	2,2	89	28,1	3	0,9	269	84,9	2	0,6
Other	6	1	16,7	1	16,7	1	16,7	1	16,7	3	50,0	1	16,7	1	16,7	1	16,7

c. Users of telephone lines in peri-urban Hawassa (2017)

User	N	Don't have telephone		Fixed line		Wireless home cell		Cell phone		Private vendors	
		Freq.	Percent	Freq.	Percent	Freq.	Percent	Freq.	Percent	Freq.	Percent
Husband	355	3	0,8	2	0,6	5	1,4	343	96,6	2	0,6
Spouse	327	3	0,9	3	0,9	5	1,5	314	96,0	2	0,6
Child	121	3	2,5	1	0,8	3	2,5	113	93,4	1	0,8
Other	41	5	12,2	1	2,4	2	4,9	32	78,0	1	2,4

d. Access to different water sources and functions at peri-urban Hawassa (2017)

a. Access to different water sources and functions at peri-urban Harare (2017)											
	N	Private Tap		Communal tap		Private Vendor		Borehole		Lake/river	
		Freq.	Percent	Freq.	Percent	Freq.	Percent	Freq.	Percent	Freq.	Percent
Drinking	387	118	30,5	8	2,1	254	65,6	4	1,0	3	0,8
Cleaning	387	113	29,2	10	2,6	158	40,8	87	22,5	19	4,9
Others	387	12	3,1	3	0,8	17	4,4	221	57,1	134	34,6
	1161	243	20,9	21	1,8	429	36,9	312	26,9	156	13,4