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ADDIS ABABA UNIVERSITY

**ETHIOPIAN INSTITUTE OF ARCHITECTURE, BUILDING
CONSTRUCTION AND CITY DEVELOPMENT
(EIABC)**

**THE CHALLENGES OF LAND USE PLAN
IMPLEMENTATION IN MAJOR TOWNS SURROUNDING
ADDIS ABABA CITY:**

THE CASE OF LAGA TAFO LAGA DADI TOWN

BY:

AHMEDTOFIK MOHAMMED TAHIR

FEBRUARY, 2024

ADDIS ABABA, ETHIOPIA



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Ethiopian Institute of Architecture, Building Construction and City
Development
(EiABC)

The Challenges of Land Use Plan Implementation in Major Towns
Surrounding Addis Ababa City:
The Case of Laga Tafo Laga Dadi Town

By:
Ahmedtofik Mohammed Tahir

A Thesis Submitted to the School of Graduate Studies of Addis Ababa University,
Ethiopian Institute of Architecture, Building Construction and City Development
(EiABC), In Partial Fulfillment of the Requirements of the Award of Master's of
Science Degree in Urban Planning.

Advisor:
Birhanu Girma (PhD)

February, 2024
Addis Ababa, Ethiopia

Declaration

I, Ahmedtofik Mohammed, declare that this thesis prepared for the partial fulfillment of the requirements for the degree of Masters of Science in Urban Planning entitled “**The Challenges of Land Use Plan Implementation in Major Towns Surrounding Addis Ababa City: The Case of Laga Tafo Laga Dadi Town**” is my original work, and it has not been submitted by any other person for the award of degree in any other universities or institutions and that all sources of material used for this thesis have been dully acknowledged.

Addis Ababa
February, 2024

Name: Ahmedtofik Mohammed Tahir

Signature

Confirmation

I stated that Ahmedtofik Mohammed has carried out this research work on the topic entitled “**The Challenges of Land Use Plan Implementation in Major Towns Surrounding Addis Ababa City: The Case of Laga Tafo Laga Dadi Town**” under my supervision and it is sufficient for submission of the partial fulfillment of the award of Master’s Degree in Urban Planning.

Addis Ababa
February, 2024

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Approval

As a member of the Examiners board of the final Master's thesis open defense of **Ahmedtofik Mohammed**, we have read and evaluated the thesis prepared by **Ahmedtofik Mohammed** entitled “**The Challenges of Land Use Plan Implementation in Major Towns Surrounding Addis Ababa City: The Case of Laga Tafo Laga Dadi Town**” and recommended to Ethiopian Institute of Architecture, Building Construction and City Development, Addis Ababa University to accept the Thesis for the Fulfillment of Requirements for the award of Degree of Masters’ of Science in Urban Planning.

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Acknowledgment

Above all, I thank the Almighty Allah for always being with me in all my endeavors and giving me the endurance to complete my studies. It is very difficult to thank everyone who assisted me in writing this research work. However, I would like to express my gratitude to the following people among many and the rest not mentioned here is sealed in my heart forever in my future.

I express my deepest appreciation to my advisor Birhanu Girma (Associate Professor) for his invaluable comments, criticism and professional advice from the inception to the completion of the thesis. Special thanks forever to my wife Mrs. Sehuna Junaid for she sacrificed a lot of her time, and energy and contributed very much to the success of this study with her continuous encouragement, moral and material support.

I also owe my warmest gratitude to my friend Mr. Yonas Asafa and Mr. Shelema Ababe for their continuous encouragement from the very beginning of the study and technical support on methodology and data analysis.

I would also thank Laga Tafo Laga Dadi Town sectoral office professionals and all OUPI staffs, especially Mr Birhanu Mermeja, I also thank to residents and farmers in the study area for their valuable information.

Finally, my heartfelt thanks go to my all family for their support and encouragement and to all others who directly or indirectly contributed to the success of the study.

Abstract

In order to deal with such 21st-century urban challenges, one of the major areas of intervention to ensure healthy development in urban centers is efficient and effective land use planning and implementation. However, the implementation of an urban land use plan is hindered by different factors. Thus, this paper examines the major challenges of land use plan implementation in major towns surrounding Addis Ababa. Laga Tafo Laga Dadi Town, which has exhibited increasing urban growth and land use plan implementation challenges, is used as a case study. The paper employs a qualitative research method in order to identify major challenges of land use plan implementation and their effects on urban development in Laga Tafo Laga Dadi Town. Questionnaires, interviews, observation, and existing land use surveys were employed to collect data. A judgmental and random sampling technique was used. While descriptive analysis and RII were deployed for data analysis. The findings of the study indicated that the absence of stakeholders' participation in the land use plan preparation and implementation, the expansion of illegal settlements, corruption, a lack of integration and coordination among sectoral offices, poor data management, and a lack of monitoring and evaluation were the major challenges that hindered the implementation of a land use plan in the town. Consequently, this lack of well-implemented land use plans negatively affected the overall development, which increased the expansion of urban sprawl, inefficient use of resources, environmental degradation, and social and economic inequalities. Thus, the study recommends strengthening stakeholders' participation in plan preparation and implementation, establishing a monitoring and evaluation scheme, and organizing a data management center for the successful implementation of the land use plan in Laga Tafo Laga Dadi Town.

Keywords: Land Use Plan, Plan Implementation, Challenges, Effects, Urban Development.

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Abbreviations and Acronyms

AACPPO – Addis Ababa City Planning Project office

AAU - Addis Ababa University

CBD - Central Business District

CSA - Central Statistics Agency

CCD - Country Club Developers

E.C. - Ethiopian Calendar

EiABC - Ethiopian Institute of Architecture, Building Construction and City Development

FHA - Federal Housing Agency

G.C. - Gregorian Calendar

GIS - Geographic Information System

Ha – Hectare

KII – Key Informants Interview

Km - Kilometer

m²- Meter Square

OUPI - Oromia Urban Planning Institute

RII - Relative Importance Index

SPSS - Statistical Package for the Social Sciences

WWII - World War Two

UN – United Nation

USA - United States of America

% - Percentage

CHAPTER ONE: INTRODUCTION

1.1. General Background

Ethiopia is among the least urbanized countries in the world and Africa. According to the United Nation (2020), report on the level of world urbanization, the world average was 56%, while in Africa it was 43%. The report indicated that, Ethiopia's' extent of urbanization is much lower than that of Africa. This situation, however, is not likely to last long, especially given the level of economic growth observed in the past few years.

Cities and towns, especially in emerging nations, are expanding rapidly and at an unprecedented pace, which presents significant difficulties. They must be carefully planned and efficiently guided by these plans in order to enable their extension, purposeful specialization, cultural expression, and most importantly sustainability, as they are locations where development possibilities and obstacles collide (Devas & Rakodi, 1993). Urban planning is therefore a key instrument for directing the development of metropolitan areas elsewhere. The difficulties and objectives of planning exercises vary, nevertheless (UN-Habitat, 2009).

Future spatial planning must be done within the context of an understanding of the contemporary factors influencing urban areas, such as the environmental challenges of climate change and cities' excessive reliance on fossil fuel-powered cars; the demographic challenges of rapid urbanization, the rapid growth of small- and medium-sized towns, and an expanding youth population in developing nations; and, in developed nations, the challenges of urbanization and urbanization-related issues. Increasing socio-spatial issues, particularly social and spatial inequalities; urban sprawl, and unplanned per-urbanization; and the challenges and opportunities of increasing democratization of decision-making as well as increasing awareness of social and economic rights among regular people (UN Habitat, 2009).

Many land use changes occur without any land use planning, which can have negative effects on the environment and human well-being. Based on environmental, social, and economic considerations, land use planning can assist in determining the optimum way to distribute terrestrial resources (FAO, 1993). Planning for land use takes into account all these factors (economic, social, and environmental) and has the potential to improve decision-making, lessen land use conflicts, foster stakeholder dialogues, and pinpoint areas where land use changes have the least negative effects on the environment and human well-being.

Even though land use planning is thought to be important, it is difficult to fully design and implement these plans. The system for planning and implementing land use confronts difficulties in promoting land use patterns that produce the most net value for the community and meet efficiency goals. These difficulties include taking into consideration externalities, overcoming information asymmetry, minimizing transaction costs, interacting with potential rent-seekers, and predicting the strategic actions of those who stand to benefit or lose from the outcome of the planning (Francis and Ismo, 2011).

The adoption of urban land use planning as strategic tool to direct urban dynamics is particularly difficult in the global south, especially in the Sub-Saharan Africa. Spatial conflicts between urban and regional plans, conflicts in administrative boundaries, lack of interdepartmental coordination, insufficient funding, and lack of political will, political interference, and corruption are major challenges facing land use plan implementation in Nigeria as depicted by (Enonguanbhor et al., 2021). In line with these, insufficient financial and human resources, lack of stakeholder engagement, and lack of political will are the major challenges implementation of land use plans in Paraguay according to (Delphin et al., 2022).

In order to deal with such 21st century urban challenges, one of the major areas of intervention to ensure healthy development in the urban centres is efficient and effective land use planning and implementation. In 2014, Ministry of Urban Development, Housing and Construction formulated a new Urban Plan Preparation and Implementation Strategy to facilitate effective urban planning and implementation in urban areas of Ethiopia. Nevertheless, many readings indicated that land use planning and its implementation practices in Ethiopia are challenging and facing difficulties in implementing the plan documents. One of the most important issues that a lot of urban centres have different types of spatial plan from time to time but implementation is always the major problems. The preparation of the urban Structure plan should integrate the essential thematic areas such as, residential, physical and social infrastructure, road and transport, zoning, regional, urban region finance and good governance, and urban economy to identify the core urban problems and to propose rational solutions (Fainsten, 2006). Adequate implementation of urban plans in all their dimensions requires political leadership, appropriate legal and institutional frameworks, efficient urban management, improved coordination, consensus-building approaches and eliminated effort duplication in order to respond clearly and successfully to issues both now and in the future. Effective implementation and evaluation of urban planning require, in particular, continuous monitoring, periodic adjustments and sufficient capacities at all levels, as well as sustainable

financial mechanisms and technologies. Furthermore, Admasu and Jenberu (2020) stated that lack of clear policy, weak institutional capacity, low financial ability as a major challenges of plan implementation in Ethiopian context. (Admasu and Jenberu, 2020)

Due to the fact that, incompatible and contending benefits over possession and use of urban land and properties, planning and administration activities faces their most difficult challenge (Gulyani et al., 2001). Among other things, participatory planning and harmonization of implementation strategies and activities are key to the urban settlement's quality. Cities in Ethiopia have recently experienced acceleration in urbanization. A clear situation can be seen in Addis Ababa, the country's capital, and the nearby large towns that have been going through a process of urbanization and urban expansion. Main communities surrounding Addis Ababa, including Laga Tafo Laga Dadi, have seen a change in land use as a result of a significant portion of the population commuting out to these major towns from the city core of Addis Ababa. Different urban plans have been prepared and are now being implemented in order to guide the growth of urban areas and manage the extremely precious resource of land. Thus, the town of Laga Tafo Laga Dadi has a structure plan at urban level as well as several local and neighbourhood development plans. The preparation process and implementation of this plan have been challenged by different issues. Having the above-mentioned background this study attempts to understand the major challenges of land use plan implementation and their effects in major towns surrounding Addis Ababa by taking the case of Laga Tafo Laga Dadi town.

1.2. Statement of the problem

Urban lands in most parts of the world face unprecedented stress: the on-going urbanization along with the increasing population create huge demands of urban land (UN-Habitat 2012) for different uses including residential, greenery, business, infrastructure, and social services. The main tool for development and a necessity for better urban living is the urban plan. It encourages planned development by allotting plots for different land uses in a systematic and logical way. This helps to ensure efficient utilization of scarce land resources because the allocation of plots for various land use functions is one of the ultimate goals of urban plan preparation and implementation. The need for transparent and accountable implementation of urban plans according to their planning period with effective, efficient and equitable utilization of scarce urban resources particularly urban land use.

The fact that Eastern Africa has a reasonably lengthy legacy of planning practice suggests that there is knowledge of physical land use planning, which primarily consists of structure

planning, master planning and construction standard and regulations, and a system of development control (FAO, 2020). A land use plan at a large scale is a comprehensive framework for the development of an area that illustrates the intended usage of its many components and translates national and regional planning principles and guidelines into land use proposals (Hirasskar, 2007).

Ethiopia is one of the least urbanized countries in Africa, yet it is rapidly becoming more urbanized. Ethiopia's urban areas are planned by the National and Regional Urban Planning Institutes. Nonetheless, the country's urban areas are intended to be governed by their separate town administrations and municipalities. In various-sized metropolitan centers, the administration and governing authorities' main focus is the implementation and management of urban plans, which is a municipal responsibility. Due to competing and conflicting interests over the ownership and use of urban land, this is the most difficult component of planning and managing urban centres (Gulyani et al., 2001). Addis Ababa, as the primate city in the country, experiencing a high rate of urbanization and urban spatial growth. Major towns surrounding the capital city like Laga Tafo Laga Dadi, Burayu, Sululta, Sebeta and Dukem have been urbanizing at different rates and to guide this urbanization urban land use planning has been practicing and facing huge challenges to implement it, thus Laga Lafo Laga Dadi town the most prominent one. The growth of urbanization, spreading out of the city and suburb over agricultural land, conveys both negative and positive effects on land use plan implementation. The remarkable suburbanization of Addis Ababa city and major towns surrounding the capital both in terms of physical growth and population is a result of economic, political, social, environmental and legal factors. Successful implementation of land use plan in the towns surrounding Addis Ababa City including Laga Tafo Laga Dadi town have been facing several challenges, which affects over development of the towns, as reported by (OUPI, 2009).

Regarding efforts to implement urban plans in Oromia, the majority of urban centres have encountered challenges when attempting to adopt the proposed land use plan. Thus, they have failed to translate graphics into the ground, according to the OUPI's implementation report. As a result, most urban plans are out dated before their implementation. The municipality intends to address problems related to good governance in relation to urban land use management and ensure equitable socio-economic development in the fast urbanization scenarios of the country. However, the current real urban land use management challenges are implementing the proposed land use plan in Laga Tafo Laga Dadi town seems not going as to meet this target to the community's satisfaction. Therefore, the consolidated problem statement of this study is

assessing the causes and effects of implementing urban land use plan challenges in Laga Tafo Laga Dadi town.

Several studies have been undertaken on the implementation of land use plans and yet there are no studies carried out on the challenges of land use plan implementation in towns surrounding Addis Ababa City. However, very closely, the challenges of urban plan implementation in the small town of Oromia are examined by Kassahun and Gobena (2022). Furthermore, Admasu and Jenberu (2020) and Taddese et' al. (2016) also studied Urban Planning Implementation Challenges in Arbaminch Town and land use plan implementation and its effects on Ecosystem in Addis Ababa respectively. This study, therefore, attempts to identify the major challenges of land use plan implementation and their effects in Laga Tafo Laga Dadi Town in order to help in decision-making related to land use plan preparation and implementation. It also helps, to forward commendable recommendations for the policy gaps observed and is important for land use plan implementation stakeholders to have a clearer perspective.

1.3. Research objectives

1.3.1. General Objective of the Study

The overall objective of this study is to assess the major challenges of implementation of urban land use plan and their effects in Laga Tafo Laga Dadi Town and to forward valuable recommendations.

1.3.2. Specific Objectives of the Study

1. To assess current extent of land use plan implementation of the town of Laga Tafo Laga Dadi.
2. To assess the major challenges of urban land use implementation in Laga Tafo Laga Dadi Town.
3. To determine the effects of failure of land use plan implementation on urban growth and development in the study area.
4. To propose a strategy that mitigates the challenges of implementation of land use plan of the town.

1.4. Research Questions

The challenges of urban land use plan implementation in Ethiopia in the period of fast urbanization and urban expansion looks complicated which needs further studies. With knowledge of major challenges of urban land use plan implementation, the obvious question is what are these challenges and how in adequate plan implementation impacts urban development and growth. Therefore, it is a timely comeback to undertake the study that can lead to an appropriate urban land use plan implementation which to alter urban growth setting. Thus, the specific research questions from the perspective of this study are the following:

1. What is the existing status of land use plan implementation of the study area?
2. What are the major challenges of land use plan implementation in the context of Laga Tafo Laga Dadi?
3. How the failure of land use plan implementation affects urban growth and development in the study area?
4. How can we ensure effective and efficient implementation of urban land use plan?

1.5. Significance of the Study

The research on the challenges of implementing urban land use plans will contribute to the knowledge available in the study area regarding the economic, social and environmental benefits of urban land use plans. The study also investigated the status and trends of implementing the proposed urban land use plan in rapidly urbanizing Laga Tafo Laga Dadi town and shows some policy direction for the urban development in the Oromia regional state. The finding of this study will fill the gap between plan preparation and implementation, and it will help to indicate clearly the challenges and constraints of land use plan implementation in the town. Moreover, it can generate information as it is used to revise manuals; for policymakers and urban plan professionals. The findings of the study will help the town to improve the implementation of the land use plan by identifying the weakness and areas of inefficiencies. It is also a partial fulfilment required for an MSc in Urban Planning for the researcher that will have academic significance to be used as a reference for those interested in studying on implementation challenges of urban land use planning in urban settings.

1.6. Scope of the Study

In order to provide a comprehensive image of the towns around Addis Ababa City as a whole, the main purpose of this study is to describe the significant challenges to the implementation of an urban land use plan in Laga Tafo Laga Dadi town, one of the towns found in the surrounding territories of Addis Abeba City. Thus, the thematic scope of the study focuses on extent and challenges of implementation of urban land use plan of structure plan of Laga Tafo Laga Dadi Town and their overall effects on urban developments of the town. This study geographically covers administrative boundary of Laga Tafo Laga Dadi town 10,056.45 hectares (OUPI, 2009). Structure plan of Laga Tafo Laga Dadi town was prepared in 2009 by integration between town administration and OUPI and after approval of the plan the implementation process started immediately. Thus, temporal scope of the study is starting from the year of land use plan preparation which 2009.

1.7. Limitations of the Study

The availability of relevant literature and documents for the study was a critical problem. Local and developing countries literature or studies in areas of urban land use plan implementation is second to none. Consequently, finding some empirical pieces of evidence about the major challenges of urban land use plan implementation and their effects on urban development was very problematic. Furthermore, the limitation of this study is that the town administration official was hesitant to give an appropriate and reliable data. Unfortunately, people may not be willing and/or open to respond to the questionnaires and usually push the interview to the lower-level employees. Time constraint may also face with the research characteristic which need site observation, data collection as well as the reluctance of some respondents to share their time due to time pressure with their own businesses.

1.8. Organization of the thesis

This research project is organized into four chapters and six major parts as follows;

The research study is conducted and presented in the methodical way of chapters, it starts with part one introduction to the land use plan implementation challenges with contents of background, statement of the problem, research objectives and questions, significance and delimitation of the study. Following that, part two of the paper undertakes literature reviews on the major challenges of land use plan implementation challenges and its effects. Under chapter three, the study's methodology contains research approach, data sources, collection

methods and sampling and analysis methods as covered. Whereas, the result and discussions are presented in detailed analysis of the variables of the study. The research is completed under chapter five by providing conclusion and by forwarding important recommendations

CHAPTER TWO: LITERATURE REVIEW

2.1. Introduction

This chapter tries to give an insight review about the theoretical frameworks on those issues related to urban planning and implementation processes. To a large extent the chapter gives attention to the evolution and approaches followed in the past and the situation in the contemporary world and relate this to Ethiopia in that regard. The sub-sections of the chapter, the need for urban planning, defining urban planning and plan implementation, the evolutions as well as approaches followed in the urban planning concepts of urban plan and plan implementations Ethiopia's local practices, Laga Tafo Laga Dadi town as a case study, are reviewed and conclusion drawn.

2.2. Definition and Conceptual Framework

Land is a basic and the most fundamental resource to be properly administered and guided by a development plan. Land use planning and management tools have, over the years, played a crucial role in avoiding and mitigating the adverse impact of rapid, unplanned urbanization (Masakazu, 2003). Urban planning is a framework that helps decision-makers turn a vision into practice by urban space a vital resource for built-up development and involving stakeholders along the way; it is not about vision but strategies to make a difference (UN-Habitat, 2013). Furthermore, they stated urban planning primarily aims to realize adequate standards of living and working conditions for all segments of current and future societies ensure equitable distribution of the costs, opportunities and benefits of urban development and particularly promote social inclusion and cohesion. Urban planning is a catalyst for sustained and inclusive economic growth, which provides an enabling framework for new economic opportunities, regulation of land and housing markets and the timely provision of adequate infrastructure and basic services. Urban planning contributes to increased human security by strengthening environmental and socioeconomic resilience, enhancing mitigation and adaptation to climate change and improving the management of natural and environmental hazards and risks. Planning makes the most of municipal budgets by informing infrastructure and services investments, distributing economic development, balancing demands for growth with the need to protect the environment, as well as providing a framework for private participation (UN-Habitat, 2013).

Urban planning: Refer to planning with a spatial or geographical component, in which the general objective is to provide for the spatial structure of activities (of land uses) which in some far better place than the pattern developed naturally without planning and design (Petter Hall, 1974).

Urban Planning is also known as town planning and city planning is the development rearrangement of land use activities and built environment, including transportation, commerce, residence, infrastructure, natural environment and others to make urban areas functional. Furthermore, know a day it is a technical and political process concerned with the well-being of people the management of land and the design of built environment (McGil University, 2022).

Land use planning; type of urban planning sometimes used interchangeable with urban planning is the process of controlling how land is used by town and cities. Mostly, it is carried out to encourage more desired social, economic and environmental result for the use of resources effectively. Moreover, the objective of the land use planning frequently includes protection of natural environment, controlling informal developments, reduce transportation mess, avoid land use disputes and reduce pollution. In order to achieve these goals land use planners, believe managing land use will alter human behavior pattern for the better (Wikipedia, 2022).

Urban planning should ensure the principle of 30, 30 and 40 proportion of land use category during plan preparation process in which 30% of the land is proposed for Environmental and recreation purpose and another 30% for road network including transport facilities the rest 40% is used for other land use types such as residence, commercial, mixed use and others as stated by structure Plan manual (FUPI, 2006). Plan implementation is the systematic method of transforming Structure plans into practical actions. It is the most difficult part of the planning process in both developed and developing countries. According to FUPI, (2006), implementation of structure plan is undertaken through detail plans for areas under intensive pressure.

2.3. Theoretical Framework.

Practically, modern urban planning theories have embraced the claim that the political factors must be considered in all planning areas. Nevertheless, analyses of planning have largely ignored the classic literature of political theory. An examination of the political thought that underlines different approaches to planning can reveal the political value and interests

embedded in planning procedure and allow planning process to be related to political culture. People prefer to live in the suburbs than in the inner cities due to different factors, thus a city should be constructed with the central area reserved for business and the surrounding area covered with greenery. All of the high building should be in core area and the remaining residential belt should be created zigzag fashion while maintaining the necessary set back (Ankita, 2022).

2.4. The Historical Context of Land Use Planning

Making decisions about settlement development is referred to as land-use planning. Planning for a territory (region, district) involves research, projects, and management tasks intended to assure the logical placement and blending of people, production facilities, and natural objects. The strategy of territorial, social, economic, and environmental development of major territorial units is determined by land-use planning (countries and their regions). Territorial entities, including nations, regions, and their constituent portions, make up land-use planning objects. Land-use planning has been a difficult cooperative endeavour of government authorities and specialists for about a century. Land use planning for both military and civilian buildings was used in Ancient Rome. These facilities' placement was established by laws. Plans took topographic features into consideration. Towns featured two-story buildings that were walled in. There was an acropolis (an upper town) in the middle. It was bordered by housing complexes (Matveeva et.al, 2018).

Legends and its representation of Figure 2.1

- 1- Boundary of land of high significance
- 2- Housing area
- 3- Cultural site
- 4- Regional social facilities
- 5- Agriculture site
- 6- Use-restricted areas

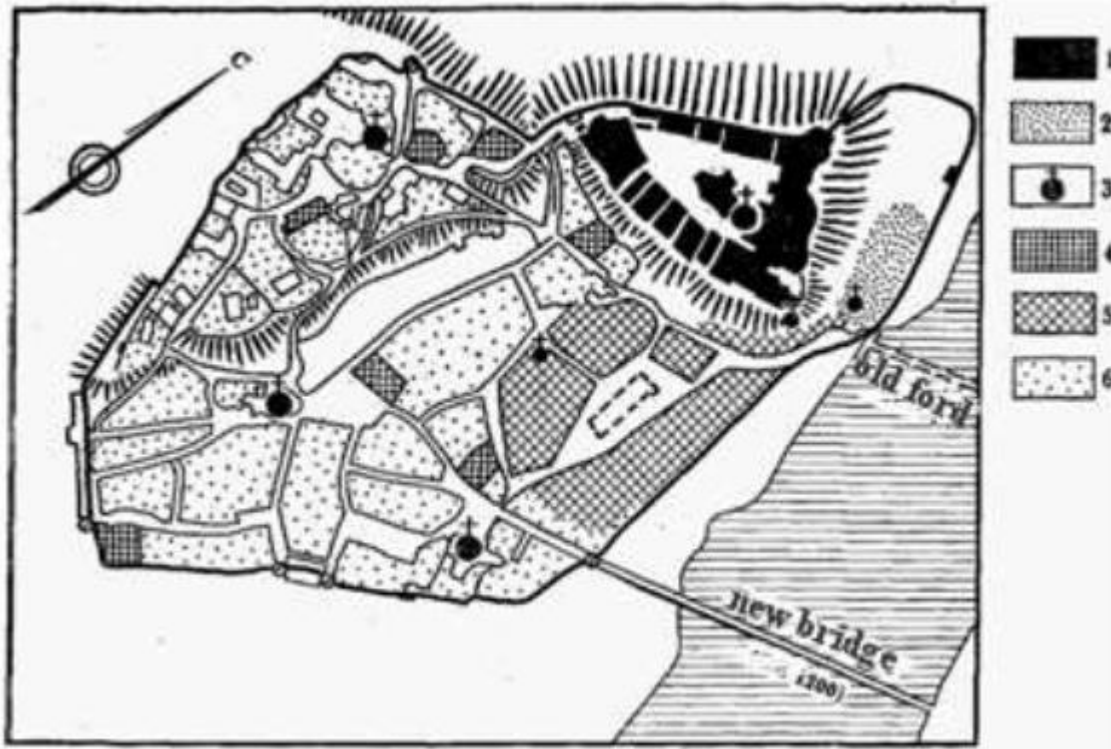


Figure 2.1: Medieval Magdeburg (1250)

Source: (Matveeva et al., 2018)

After the late 18th century industrial revolution, cities saw rapid urbanization as well as a wide range of social and environmental problems which leads to the evolution of land use planning. In response, land use planning was promoted with the emergence of Ebenezer Howard's Garden City Movement in the late 1800s, especially in Europe. Howard's Garden City movement worked to establish sustainable communities, preserve open areas, and enhance living circumstances for city people as basic principles of land use planning. An additional momentous land use planning undertaking that aimed to improve the urban image and its aesthetics within cities was the City Beautiful movement in the United States, which was led by Daniel Burnham (Talen, 2012).

Land use planning in the modern era advanced further throughout the 20th century and was a vital approach and strategy for sustainable development, environmental management, and urban planning. Land use planning experienced a remarkable transformation in the 1960s and 1970s with the introduction of comprehensive land use plans that combined spatial, environmental, social, and economic considerations. Planning instruments like zoning, parcellation rules, and development control has become more crucial in regulating urban

growth (Pastey and Jean, 2000). Planning for land use today takes into account a number of issues, such as urban development, climate change, the loss of agricultural lands, and social inequality. To make sure that land is used effectively, efficiently and sustainably, land use planners put into practice techniques like urban redevelopment, expansion of existing city planning, compact development and mixed-use zoning, and conservation planning. To sum up, land use planning has greatly changed over time in response to the shifting spatial, social, environmental, and economic requirements of communities and land use planning will continue to be a critical piece of sustainable development and urban management as urbanization and other issues become more of a problem of contemporary urban settlements.

2.5. Theories or /and Models Urban Land Use Planning.

2.5.1. Concentric Zone Model

One of the earliest theoretical models to explain the spatial configuration and expansion of urban settlement was the Concentric Zone Model, created by Ernest Burgess in 1925. According to Burgess's model, urban land use is divided into a number of concentric rings that branch out from the city centre. A zone of manufacturing and residential land use surrounds the central business district (CBD). These areas gradually widen as the city develops (Ernest W. Burgess, 1925).

The central business district was expected to be used by a variety of business activities such as high-rent uses, including office buildings, department stores and other merchants, financial institutions, hotels, theatres, etc. In the immediate neighbourhood of the central district, there would be a variety of uses, such as low-cost worker housing for those low-class communities, as well as manufacturing, wholesale trade, storage, and other similar pursuits that are either directly or indirectly associated with the central zone's activities. Housing for low-wage earners, people in the middle class, and expensive upper-class dwellings in rural and metropolitan areas would be allocated to suburbs further out in the hierarchy (John, 1995).

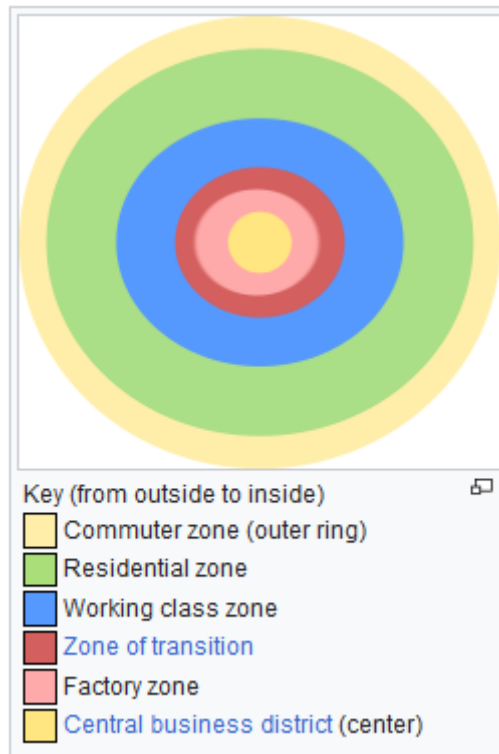


Figure 2.2: Concentric Model of Land Use Planning

Source: Wikipedia, (2022)

2.5.2. Sector Model

According to Homer Hoyt's Sector Model, which he developed in 1939, urban land use expands outward from the city core along major transportation routes. Different economic activities and social rearrangement define these sectors, with high-income groups frequently residing in protruding sites or other highly desirable regions of a city. The Sector Model was developed in reaction to the Concentric Zone Model's shortcomings, precisely the finding that urban land use might not always evolve in perfect concentric circles.

Hoyt indicated that urban areas are characteristically built out in pie or wedge-shaped zones and corridors developed from the center of the city to the edge, as divergent to concentric circle theory. The CBD is still at the core of the Hoyt Sector Model, but zones used for industrial and residential development are moving outward away from it along the transportation way. For illustration, private cars made it possible for high-income districts to spread out from the city center to the city's outskirts. Because like attracts like, the land use within each sector would stay the same. The rich sector would continue to be rich since it would be the most desirable place to live and only the rich could afford to do so (Hoyt H., 1939).

Hoyt's theory also takes into account the idea of a synergistic link between land uses, which makes it advantageous for similar land uses to be situated close together. For instance, residential properties typically sit next to the most compatible type of land use which is other residential properties and industrial properties next to other industrial properties. As a result, the advantageous interchange benefits of being close to other similar land uses are strengthened and the detrimental effects of having incompatibility are reduced. Hoyt also discussed that when a city develops and evolves, a significant number of the housing units occupied by middle- and upper-class families will likely be newly constructed on previously rural land in the suburban areas. The reason for this suburbanization is those areas of medium- and high-income residential dwellings are currently bounded on each side by areas of intermediate value, but those with higher incomes are best able to afford to build new homes on undeveloped land (John, 1995).

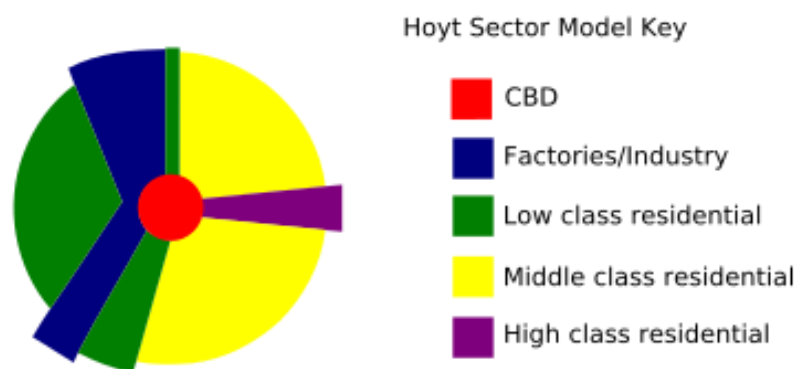


Figure 2.3: Sector Model

Source: Wikipedia commons

2.5.3. Multiple Nuclei Model

Chauncey Harris and Edward Ullman comprehended in 1945 that many cities did not follow to the conventional concentric zone or sector model. Metropolitan areas were expanding to their suburbs significantly, and some of these suburbs, having developed significantly, were now operating like smaller business districts. These smaller commercial areas served as the centers, or satellite nodes, of activity around which land use patterns developed. In spite of the fact that Harris and Ullman continually view the CBD as the primary hub of commerce, they

proposed that a specialized center of activity would emerge in accordance with the unique needs of other activities. Their approach places the city at its core, with light manufacturing and wholesale situated along transportation corridors. It was believed that heavy industry would be situated close to the perimeter of the city, possibly surrounded by lower-income homes, and commuter suburbs and smaller service hubs would fill the urban periphery (Harris and Ullman, 1945)

Harris and Ullman's Multiple Nuclei Model



Figure 2.4: Multi Nuclei Model

Source: Wikipedia, (2022)

The Multi Nuclei model depicts a city's plan by taking Chicago city as case. Even while a city may have started with a central business district, other smaller Central business districts emerge on the city's transitional and peripheral area close to the more affluent housing regions to allow shorter distance to the centres from suburb area of the city, according to the study. Thus, many centers emerge outside main centre which form multi-nuclei urban form. Their goal was to create a more intricate but realistic model with the objective of leave the concentric zone model alone and better capture the complexity of urban environments, especially those that are larger by presupposing all of the land is not level and even the distribution of resources exists and in residential areas, the population is distributed fairly and transportation costs exist (Kelly, 2009).

2.5.4. Land Rent Theory

I. The Von Thunen Model and Land Value Behavior

Land value is essential in all sorts of decision relating to real estate buying, selling, financing, managing and leasing. The land value analysis of land use goes back to the pioneering work of von Thünen. Early in the 19th century von Thünen developed a model of land use that showed how market processes could determine land uses and how they were spatially distributed over a theoretical geographic area. Similarly, low valued products will be grown farther from the city. Land prices decline as distance from the market center (town) increase. Products that are high-value, or require quick market access, or are costly to transport are produced adjacent to town. Von Thunen said that the land-use around a city is determined by the value of products grown on the land. If the value of product is high, it will be grown near the city (Jager J., 2020).

$$R = Y(p - c) - Y * F * m$$

R= Land rent

Y= Yield per unit of land

c= Production expenses per unit of commodity

p= Market price per unit of commodity

F= Freight rate

m= Distance to market.

Traditionally the urban structure approach of land price dominated the main philosophy of land value behavior. The early and well-known theories of Von Thünen have laid the foundation of land price and land use theories. The Von Thünen model is an excellent illustration of the balance between land cost and transportation costs (Park, 2013).

II. Bid-Rent Theory

The central market town in the Von Thünen model is interpreted by Alonso as a city with a central business district (CBD) in the city centre. Bid rent theory is a geographical theory that refers to how the price and demand on land changes as the distance towards the CBD (central business district) increases. This is based upon the idea that retail establishments wish to maximize their profitability, so they are much more willing to pay more for land close to the CBD and less for land further away from this area. This feature of urban land use theory causes land values to decline with distance from the center city. To this day, most major cities have a

traditional core that is identifiable by its concentration or agglomeration economies. The most valuable land is situated in the old section of the city where comprehensive infrastructure has been developed during the long history of growth (Alonso, 1964). As it is indicated in figure, as distance from CBD increases the value of land decreases. However, in contemporary approach the real world is not mono centric and other factors also determine the land value.

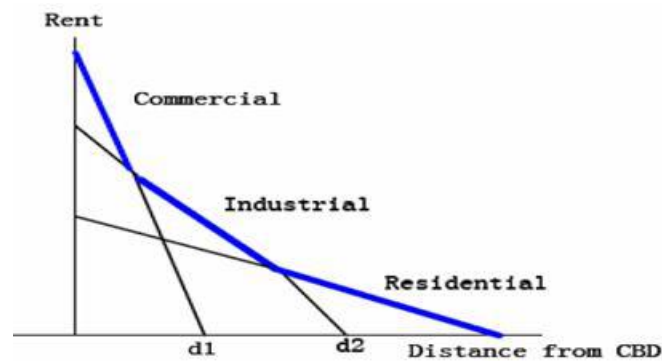


Figure 2.5: Relationship Between Rent and Distance Between CBD

Source: Alonso (1964)

2.6. Types Urban Plan.

2.6.1. Structure Plan

Structure Plan (SP) is defined as a legally binding urban plan that consists of graphic documents along with explanatory texts formulated and drawn at a level of an entire urban boundary of a given urban center. The plan sets out the basic minimum requirements regarding physical development the fulfillment of which could produce a coherent urban development in social, economic and spatial spheres. It is a framework plan that guides the development or redevelopment process of an urban center in an integrated and holistic manner.

Structure plan is relevant in that it is a technical, institutional and policy framework, in which with the active participation of relevant urban actors, systematically identifies, prioritizes and addresses socio-economic, environmental and spatial urban development issues. It outlines intervention approaches and implementation programs to be undertaken to achieve city-wide and at influence area including the surrounding towns. It is one of the basic urban management tools, which professionals of urban development planning and implementation should use in their day-to-day activities (Abrham, 2003).

As stated by Ministry of Environment of New Zealand, (2017) an area's future development and land use patterns, open space areas, the layout and type of infrastructure (including transportation links), and other significant features and constraints that affect how the effects of development are to be managed are all defined by a structure plan, which serves as a framework for guiding new development or redevelopment of an area. Structural plans are made up of one or more maps, plans, or diagrams that show the proposed character, characteristics, and connections for regions that are being developed or redeveloped. The following planning issues and problems are handled by a structure plan:

- i.** Greenfield development and urban consolidation
- ii.** The types and locations of land uses that will be allowed, with regulations.
- iii.** Multi-modal transportation links
- iv.** Urban region's infrastructure needs
- v.** Integrating infrastructure and existing urban development with new and growing development
- vi.** Open space networks, landscape characteristics, and amenity reserves
- vii.** Natural threat area protection
- viii.** The supply of natural amenities for the community
- ix.** The preservation of areas, features, or values
- x.** placement of network utilities.

2.6.2. Local Development Plan

A local development plan is a legally binding plan depicting medium term, phased and integrated renewal and upgrading development activities of an urban area with the view to facilitating the implementation of the structure plan by focusing on strategic areas. A local development plan prescribes the functions such as urban design principles, concrete standards, development criteria, spatial framework and organization of a given area for the provision of technical and social infrastructures. A local development plan is a plan of a locality that is part of a city and bases itself on the capacity and current situations with regard to the implementation of the current structural and strategic plans. One structure or strategic plan may have many LDPs. A local development plan displays methods of land management type and building height, roads, main infrastructures and transport system, housing development, green areas, city renovation and reallocation of space, and other environmental issues. It should be

prepared and executed through the active participation of the local population (Ministry of Urban Development and Housing, 2005).

2.6.3. Integrated Development Plan

Local governments employ integrated development planning (IDP), a strategic planning method, to direct and inform decision-making procedures pertaining to social, economic, and environmental development. Integrated development planning encourages sustainable development, effective resource management, and inclusive community engagement with the goal of enhancing inhabitants' quality of life. These plans often serve as the basis for choices about budget allocation, infrastructure planning, and policy within a comprehensive framework that ensures coordination and synergies across many sectors and stakeholders. Getting communities and community organizations more involved in local government issues is the goal of integrated development planning. The whole economic and social growth of the region should be considered in the strategy. It must establish guidelines on how land should be utilized, what services and infrastructure are required, and how the environment should be safeguarded. Municipal planning and projects should follow the integrated development planning once it has been created, and the annual council budget should be based on the integrated development. People in the area should take the integrated development plan into consideration when they are working on local projects (Department of Regional and Local Infrastructure Development, Republic of South Africa, 2015).

2.7. Land Use Planning

One of the many terms (such as structure planning, town planning, town and country planning, urban planning, city planning, and environmental planning) that are frequently used to describe public policy intervention related to the ordering and regulation of land use in a productive, ethical, and sustainable manner is "land-use planning." There are many academic and professional definitions of spatial planning, and they vary between nations and jurisdictions and, to some extent, depend on context. Conventional definitions frequently place an emphasis on planning as a methodical process intended to control future land use and growth (Akimoto, 2009).

The process of identifying the best ways to utilize and manage land while taking into account its economical, topographical, environmental, social, economic, and political circumstances is known as land use planning. The goal of land use planning is to guide, control, or manage

changes in land use to ensure that it is put to the highest and best use, preserve the environment's quality, and encourage the protection of the land's natural resources. The territorial diagnosis and the generation of another course of action of management and environmental protection for the planning of the use of the land produce the essential knowledge necessary for the formulation of the policies of use, contributing to the search for competitive and sustainable productive and extractive activities and systems. The systematic process of land use planning helps by directing the location of socio-economic activities based on the suitability, and compatibility of the land and resolving land use conflicts; the areas susceptible to environmental dangers and their management; the base of natural resources that should remain and be safeguarded; Identify sustainable systems for production and extraction; assist in land use planning and identify places in need of land adaptation or recovery projects (Savini and Aalbers, 2016).

2.8. Approaches of Urban Land Use Planning

2.8.1. Comprehensive Urban Land Use Planning

Comprehensive urban land use planning is a methodical process that evaluates numerous land use factors, identifies possibilities and problems, and presents a long-term vision and development strategy. This strategy incorporates objectives, targets, and policies to direct development decisions and allocate the resources required to produce desired results (Melville, 1985). A comprehensive urban plan refers to the most fundamental strategy created to lead community growth. Physical coverage of the entire neighbourhood is one feature of the comprehensive plan. The fact that it is long-term is another essential feature. Time horizons for comprehensive plans are typically in the range of 15 -20 years (John, 2012).

The idea of comprehensive urban land use planning is closely tied to a community's ability to develop economically and spatially. A detailed urban land use plan can be used to forecast a community's future growth or decline. Most importantly, a comprehensive plan can be used to address a community's on-going evolution and change. Land use plans are another name for comprehensive plans, which are frequently concerned with matters pertaining to the proper uses of land. Comprehensive plans are frequently created to address concerns with compatibility between different urban land uses, management and protection of natural resources, identification and preservation of historically significant lands and structures, and

proper planning for infrastructure needs. Other times, comprehensive plans are used to solve problems with housing, recreation, and schools (John, 2023)

2.8.2. Sustainable Urban Land Use Planning

Sustainability and planning have a sequential component. While planning is the act of actually making plans for the future, sustainability refers to what we do today and how it affects the future. We may conclude that planning can undoubtedly affect an urban area's sustainability because urban land use planning is a function that occurs within every urban area (Fourie, 2014). Planning for urban land-use optimization is crucial to achieving long-term urban sustainability. Yet, in light of rising urbanization, migration, and climate change, it becomes a worldwide challenge, particularly in emerging nations. The optimization and allocation of sustainable urban land use are seen as powerful techniques for achieving urban sustainability. Sustainable urban land use planning integrates social, economic, and environmental considerations of people in order to achieve one of its key objectives: sustainability and promote long-term sustainability and liveability. This approach includes urban planning strategies such as green infrastructure planning, which focuses on the conservation and protection of natural resources and environmental amenities (Mostafizur R. and Gyorgy S., 2022).

2.8.3. Participatory Urban Land Use Planning

Local land users are given a significant voice in the planning, use, and management of the urban land and other resources they rely on which is the goal of participatory land use planning. It brings together the many stakeholder's aids in the creation of a shared vision and helps to settle disputes about the use of land and land resources. Particularly, it gives underrepresented groups like women and young people a chance to participate according to (Negash, 2012)

Table 2.1: Features of Participatory Urban Land Use Planning

Features	Participatory Urban Land Use Planning Approach
Level	Local (LDP or NDP, and action plan at local levels)
Key stakeholders	Local community and officials
Main focus	Planning of sustainable urban land use based on the significance and interest of the local community, participatory implementation and optimal utilization and equitable land use.
Major Criteria	Local community's desires and priorities, relevant urban policies and standards
Implementation	Depending on the communities the resource, time and priorities
Objective	strengthening the local community and other local stakeholders' abilities to sustainably manage their resources

(Source: Negash, 2012)

2.9. Basic Land Use Planning Principles and Objectives

2.9.1. Sustainability

Development that is sustainable is one which satisfies existing demands without jeopardizing the capacity of future generations to satisfy their own needs. Two fundamental ideas are contained in it: the idea of needs, especially the basic needs of the developing countries, to whom top priority should be given; and the notion that the environment's capacity to supply present and future needs is constrained by the state of technology and social structure. As a result, in all nations, developed or developing, well-planned land use, the objectives of economic, spatial and social growth must be stated in terms of sustainability. Thus, the primary objective and principle of land use planning are to promote and attain sustainable development. Moreover, development entails the gradual alteration of society and the economy. But unless land use planning and development strategies take into account factors like shifting access to

resources and the distribution of costs and benefits, physical sustainability cannot be ensured (Brundtland Commission, 1987).

2.9.2. Efficient use of resources

Any development project must have a land use plan in place to prevent resource waste and inefficient use of the land. When land use planning is proposed well, it is able to assist land use plan implementers in maintaining the local social, physical, and economic circumstances. The location and extent of land required carrying out a wide range of various economic, spatial and social policies, plans, projects, and programs can also be determined using this technique. Thus, land use planning will examine the physical characteristics of the activity on land while taking the development aims and objectives into consideration to ensure that the use of land can be sustained appropriately both now and in the future without waste. Planning for land use ensures that it can be utilized for future generations even after development has taken place efficiently (Jason, 2020).

2.9.3. Public Participatory

There are numerous justifications for involving the general public in planning and land use decisions. The increase in the community is participation's most significant advantage. When people are active in the process of proposing solutions via land use planning to societal, economic, and spatial problems, they feel more connected. Correspondingly, those who are not participating in the land use planning and development of solutions are more inclined to oppose them once they have been created. Individuals who participate in the decision-making process frequently say they leave with a sense of pride and a deeper sense of community (League of California Cities, 2019). Planning for land use has numerous facets, and it frequently serves as the setting for local conflicts that are fuelled by tensions between private and public interests. Local communities' involvement in land use and development offers a chance to come up with socially acceptable, economically viable and spatially sustainable solutions, points out potential conflict causes, and keeps the local government from becoming isolated according to (Zaleczna, 2018).

Furthermore, according to (GIZ, 2011), the following are the basic principles and objectives of land use planning:

- a. Balance the social, economic and environmental needs of the community

- b. Must be legally binding land use plans and/or rules.
- c. Integrated into state institutions having the official mandate for inter-sector planning
- d. All-inclusive process and must be based on stakeholder differentiation and gender sensitivity
- e. Promotes civic engagement, realistic and oriented to local conditions
- f. Takes into account local knowledge, traditional strategies for solving problems and conflicts
- g. Subsidiarity
- h. Vertical integration and inter-disciplinary cooperation, capacity improvement, transparency
- i. Future-oriented, and iterative process
- j. Implementation-oriented
- k. Influence the composition and intended purposes of budgets and funds

2.10. Challenges of Urban Land Use Plan Implementations

According to Antje Hannemann (2008), especially in developing countries, the implementation of an urban plan is the toughest and more problematic stage of the land use planning process. At this stage, many challenges and resistances from the community and institutions are likely to emerge which greatly affect the outcome of the plan and eventually the living condition of the urban inhabitants. Rizwan and Obaidullah (2006) indicate the challenges of poor urban plan implementation resulted in a waste of money, time and human resources on the plan-making bodies hence, really poses a challenge to the government. Therefore, a plan is a tool to guide and manage the growth of an urban center, a plan preparation by itself is nothing for urban development if there is improper implementation. Effective and full implementation of the plan would bring and support developmental activities and it would create sustainable urban development, which is safe for its residents. Abdal-Majid I (1993) in his part elaborated that, there are two important difficulties in implementing urban plan proposals. The first one is the plan has not been used as a positive planning tool to try to influence private sector activity. The second one is that the municipality has limited power to carry out development or acquire land to facilitate. According to many researches and studies, in many developing countries, the implementation of urban plans faces serious difficulties fluctuating from political to economic; from financial to institutional; and from physical to socio-cultural factors.

It takes expertise and knowledge of what to do, how to do it, and when to implement land use strategy effectively. It entails assembling, planning, and controlling the resources required to carry out the plan's recommended course of action. There are several challenges that hindered effective land use plan implementation and execution of proposed plans and strategies. Barrett and Fugde (1981), stated that the following factors are the major challenges of land use plan implementation of a plan:

1. Lack of Participation

Lack of proper consultation, decisions about any urban planning including land use planning frequently fail to provide the expected outcomes and have a detrimental influence on society, which encourages unrest. Making sure a wide range of viewpoints are taken into account aids decision-makers in better understanding the connections between and nature of the issues facing the city. Furthermore, Public participation in plan preparation fosters respect for participants' opinions, increases participants' interest in planning and increases their impact on land use planning and public life. When competing arguments and points of view are taken into account, there is a considerably higher likelihood that support from the general public will improve the result. This has wider repercussions for creating a vibrant civil society (UN-Habitat, 2018). Additionally, Dalton (1989), stated the absence of community and stakeholder participation in plan preparation and implementation hurts the execution of the plan. The proposed plan always affects the community and different sectors in one or another way, thus, their absence from preparation and implementation highly reduces the outcome of the plan. This result suggests that any misalignment between the ambitions of the community and the fundamental objectives of a plan can sabotage the entire implementation procedure. Building awareness is essential for the plan's successful execution, according to Burby (2003), the majority of public policy concerns pertaining to land use can be addressed with the support of target group knowledge and awareness. The public can be informed about the likely responsibilities they can play in ensuring that initiatives in their communities are implemented by increasing local awareness through educational programs.

2. Expansion of Urban sprawl

Expansion of uncontrolled urban settlement toward natural areas especially, in peripherals areas of cities and towns. This leads to a horizontal extension of urban centers and depicts characteristics such as scattered and fragmented neighborhoods

without plan regulation according to Dadi et al (2016). Zina and Sana Sati (2014) illustrated how illegal land subdivision in urban environments begins with an unexpected invasion of land that is reserved for other uses without legal authority, for a particular group of people, where they reside their homes, without official permission from land use plan implementers, which turns into a major challenge when land use plan is implemented in accordance with the proposed plan.

3. Corruption and lack of taking corrective measures

Ineffective land use system and conflicts are major effects of corruption in urban land administration worldwide. The allotment of identical land parcels by the land registration office as a result of the acceptance of phony titles is one sort of conflict made possible by corruption. Conflicts in social and political arenas are also brought on by the grabbing of land without proper land plan implementation. Land corruption occurs in urban areas where there is fast urbanization, a rise in the demand for and price of land resources, negligent enforcement of the law, and weak urban plan implementation. Competition for a limited resource and the ensuing price increase present excellent chances for both public income and individual wealth. Urban land has turned into a source of financial speculation in many countries in the world during this period of economic opportunity (Nieves Z., 2018). Corrupt practices are primarily connected to the phase of planning regulation's introduction (or revision). In order to ensure that a proposed land-use plan or regulatory scheme complies with the contractor's requirements. This form of corruption can occur throughout various stages of the planning process including, the drafting phase, or when applications for variants are submitted, and it can also affect various planning tools, depending on the system of planning in use in a particular location (comprehensive plans or implementation plans). (Francesco C. and Stefano M., 2015)

4. Lack of Monitoring and Evaluation:

Lack of monitoring and evaluation in urban plan implementation has negative consequences on urban development. The proposed urban plan is not implemented on the given time framework, there is no accountability and the plan is also violated if not monitored and evaluated regularly. Thus, lack of monitoring and evaluation highly affect tracking the progress of urban plan implementation, it is almost impossible to regulate the proper implementation of the plan if not monitored and evaluated. This results in a failure to assess the outcome of the plan implementation whether it is a success or failure and take corrective measures accordingly, which diminishes land use

plan implementation status and progress (Ochieng et al., 2018). Muthiga (2019), also stated monitoring and evaluation are essential elements in making sure that there is responsibility and accountability in the execution of land use plans. Furthermore, a lack of monitoring and evaluation occurred in the fragile administrative structure that brings opportunities for corruption and purposeful plan violation by implementer bodies.

5. Inadequate budget and manpower

Urban areas are advantages, answers, and forces behind societal and economic advancement. Cities and towns have enormous economic potential that is currently untapped but that can and ought to be used to generate wealth and economic opportunity for all. This necessitates effective urban planning that promotes connectedness, integration, and urban compactness. Yet, if they are not backed by financial, well-equipped human resources and regulatory measures for implementation, even the best urban plans run the risk of going underutilized. Strategic finance mechanisms and enabling governance frameworks must accompany strategic public investments. Land use plan implementation requires finance to build physical infrastructure, social services, and recreation areas. Additionally, well-equipped and competent human resources are essential. The growing disparity between the financial resources that are available and the municipal expenditure requirements is the primary issue that most cities and towns, particularly those in charge of cities in developing nations, must deal with. Rapid urban population expansion, which generates an ever-increasing demand for public services, new public infrastructure, and its maintenance, is one of the key causes of this widening fiscal disparity (UN-Habitat, 2015).

6. Plan Violation and Poor Data Management

An urban plan violation is at different localities without any legal background. The violations were made based on the needs of individuals or collective decisions. In this case, the residential site has been changed into commerce and commercial site is changed into industrial and industrial sites to the residence. In fact, the problem seems to be the refusal to implement the provisions found on proclamation No. 574/2008 of the federal government. The major land use category is repeatedly exposed to plan to violation include: roads, green areas, commerce and another environmentally sensitive part of the town. The poor land management system in the town includes; lack of a cadastre map and land banking system, the poor coding system to identify one plot from the other and a lack of check and balance on the land provision system for the beneficiaries and more. Cadastre has a significant contribution to the municipality of

the town. It gives more efficiency in the distribution of information, and for a better decision-making with a large information base, without cadastre it is impossible to plan and implement development projects, and control squatter settlement or illegal construction (Fura, 2012).

7. Lack of Coordination and Implementation strategies:

The urban plan implementation strategies are a document that is extremely helpful in assisting the cities and towns in formulating programs, establishing priorities, allocating resources, and evaluating success. Plan implementation strategies, techniques, and tools can determine the success or failure of the execution. Furthermore, the implementation of an urban plan is carried out either by the municipality by involving different sectors. Thus, cooperation and coordination between those sectors are essential for the execution of the plan (Burby, 2003).

8. Lack of Detail Plans:

Lack of small-scale precise blueprints may cause issues with urban plan implementation. Clearly demonstrated that the creation of a thorough plan is necessary for every type of implementation activity. Any work of plan implementation has to be supported with detailed plans otherwise it will be problematic to implement plans. The structure plan is guided by the Local Development Plan (LDP) since the structure plan shows only the major land uses. The major land use should be interpreted by the LDP and LDP by the parcellation plan. In this case, LDP was not executed in the structure plan implementation of the town in general (Belachew, 2010). In fact, the prepared LDP by itself had the problem of coordinating data which later resulted in the shift of contour lines. Therefore, since the coordinate data is the basic tool for the implementation of urban plans, data attached to the structure plan lacks accuracy and this later leads to produce a shift in the implementation effort (Fura, 2012).

Generally, land use plan implementation is challenged by different factors as stated above. If the attributed causes are not addressed, the inadequate implementation of land use plans, which is attributed to inadequate funding, a lack of political will and coordination, a lack of manpower, interference, lack of detailed plans, corruption, lack of participation and implementation strategies, implies that the land use planning process alone cannot address the problems and bring the expected urban development of cities and towns (Enoguanbhor et.al., 2021).

2.11. Effects of Failure of land use plan implementation

All modern urban communities share the issue of unbalanced and unreliable urban development as a result of a lack of proper urban plan implementation at different stages. Given that the economy-ecology balance is ignored and economic interests always take precedence, this problem will inevitably continue to worsen. Thus, improper land use plan implementation resulted in a variety of negative effects on overall urban development. These include environmental resource degradation, social and economic inequalities, economic inefficiencies, uncontrolled urban growth, and lack of basic services and physical infrastructures (Esra C., 2013).

According to Foley et al. (2015), a lack of well-implemented urban land use plan led to environmental degradation, through loss of habitat, fragmentation and loss of biodiversity. Furthermore, it results in urban sprawl, deforestation and pollution from land use changes which further contributes to climate change, water scarcity and air pollution. Improper land use plan implementation results in uncontrolled urban growth which bring soil degradation, erosion, salinization and nutrient depletion. In line with this, water pollution and natural resource depletion are also other major consequences of lack of a proper land use plan. Inadequate land use plan implementation and management lead to increased water pollution from agricultural runoff, industrial waste and urban development. Moreover, improper execution of urban plan implementation causes over-extraction of waste resources, leading to ground water depletion and reduce water availability as stated by Vorosmarty et. al. (2010).

In many areas place different values on the environment and provide different considerations to land use planning. Correspondingly, different perceptions on the surroundings might be seen at different times. The definition of urban growth includes the rise in production and consumption that originated throughout the industrial revolution, together with extensive construction action and the deduction that natural resources would never run out. The amount of energy and land used at this stage is extravagant. Growth and expansion of larger urban areas next to and toward agricultural land and natural environment area are considered a key sign of development and needs proper land use planning and implementation (Esra, 2013).

From a different angle, it is believed that urbanization and urban growth as a result of the industrial revolution was the catalyst and the main reason. When urbanization, urban growth, and industrialization are inspected together in this background, it follows that the segment of mechanization in the concentration of the people in cities and town and in the environmental

stress it creates is a fact that cannot be omitted. In the late 19th century, the industrial revolution and subsequent technical progression, population growth, and fast urbanization, urban growth without proper land use planning and implementation broke the environmental balance, which led to the start of the rapid depletion of the natural environment and resources. This process of environmental degradation, which has been going on as the need for extended living spaces and areas of use has gradually grown, has meaningfully changed how the ecology functions, deliberately or accidentally (Esra, 2013).

Failure of land use planning and plan implementation impacted the expansion of urban areas toward the natural environment. Uncontrolled growth of urban areas; urban sprawl is a major consequence of such growth. Urban sprawl consumes valuable agricultural land, forest and wetlands without the consent of urban areas' administrative bodies. In American cities, the urban highly affected mode of transport as a result of urban sprawl occurred because of a lack of improper plan implementations, vehicle miles driven have increased more than twice as quickly as roadway capacity. A lot of urbanized regions for which statistics are available all experienced increased roadway congestion starting from the 1980s. This is true even in areas that battled congestion and temporarily seemed to be succeeding in doing so. In a never-ending cycle, the construction of new highways only increases traffic and urban sprawl (Ewing et.al., 2008).

The appropriate implementation of urban plans has a number of effects that deteriorate social equality and reduce economic progress in urban areas. It may result in the delirium of properties and affluence in some places, job losses and unemployment, a rise in poverty, and environmental harm (Pacione, 2009). Currently, more people live in urban areas than in rural areas, all population increase is expected to take place in cities and towns during the next decades, where it will also pull rural populations through migration. Every aspect of sustainable development, including social and economic inequality, is highly affected by this phenomenon. Urban areas act as facilitators for employment, modernization, and economic progress. Urban areas, however, are less equal than rural ones. In most urban areas, there are receptacles of extreme impoverishment alongside places with high levels of income and contemporary infrastructure. The urban gap encompasses aspects that are economic, social, and spatial. Rapid urban growth and urbanization have raised social anxiety about the state of people's health. Even while maternal and child health is generally better in cities than in rural regions, it can occasionally be worse in urban slums and other impoverished sections of cities. Unregulated housing, land use, and bad land use planning and urban planning can concentrate disadvantages

in particular areas, creating a cycle of marginalization and exclusion (United Nations, Department of Economic and Social Affairs, 2020). Generally, the lack of proper implementation of land use plans has a number of negative effects, such as social inequity, environmental deterioration, urban sprawl, strained public infrastructure, and economic inefficiencies.

2.12. Urban Land Use Planning in Ethiopia

2.12.1. Urban Land Use Planning and Its implementation in Ethiopia

Planning of urban settlements is an effort to regulate and categorize the conflicting urban land uses of urban space for different activities. Thus, the main responsibility of planning is therefore developing urban-related policies, legal frameworks, standards and manuals that address urban environmental, economic, and social challenges and to make different urban plans for better decisions based on those policies and legal frameworks (Wilson et.al., 2019).

Rapid urbanization and development in Ethiopia present both significant prospects and complications for a nation's long-term sustainable advancement. For illustration, major cities need more resilient urban physical infrastructure and basic service resources than smaller cities because they are expected to be hubs of innovation and fortune creation (Zhang et.al., 2016). Without vigilant planning and synchronization among the various economic sectors, including urban economic activities, agriculture, forestry, water resources, energy and mining, as well as wildlife and tourism, the land is being used in Ethiopia without consideration for its spatial, social and economic suitability and protection of the natural environment, leading to severe natural resource degradation and escalating food insecurity. Thus, if uncontrolled and unregulated land use without planning continues, the nation's natural environment will be irreparably damaged, with extensive social and economic consequences. For the past half-century, several efforts have been undertaken to propose land use plans at different levels including regional and urban levels (Zemen et al., 2017).

According to Zemen et al. (2017), regardless of the efforts to propose land use planning and natural resource management initiatives, lack of enforcement and regulatory procedures hindered its implementation. The major obstacles identified are a lack of coordination between several government sectors, a lack of a legal background and policy, a lack of implementation

capacity, and a lack of sufficient finance as major challenges that hindered the implementation and success of previous land use planning activities both at an urban and regional level. The main dimness seems to have been the lack of a strong central government to coordinate, lead, monitor, and evaluate the implementation of the land use plans.

Ethiopia's population is increasing quickly, the country is still reliant on the agriculture sector, and there has been a growth in urbanization and industrialization, which has resulted in improper land use and the deterioration of the natural environment. Urban and rural land use is regulated by existing institutions and legislation, but sectoral incorporation, skill, and capacity have hindered the preparation and implementation of participatory integrated land use planning.

For this reason, the Ethiopian government assigned and recognized the National Integrated Land Use Planning and Policy Office, which is responsible for sectoral coordination of land use planning processes at all administrative levels (GIZ-PLUP, 2021).

2.12.2. Relevant Policies and Legal Frameworks on Urban land use planning in Ethiopian

Planning for urban land use is a vital constituent of sustainable urban growth in Ethiopia. The government is aware of the necessity for efficient and integrated land use planning to control urban development and raise the standard of living for urban dwellers at cities and towns across the country. Ethiopia's urban land use planning has changed significantly after regime change in 1991. To address the issues caused by rapid urbanization and urban developments the government has put up a number of policies, strategies and regulations, including the National Urban Development Policy. The government's objectives and framework for urbanization and urban growth, including urban land use planning, are outlined in this policy (Tefaye et.al., 2019).

By announcing a national land use strategy and creating a national integrated land use policy, the Ethiopian government made a significant move. Despite the lack of a national land use strategy and a national integrated land use plan that has already resulted in significant uncontrolled urban growth, and degradation of natural resources, the decision to acknowledge the issue and the need to address it is highly positive. Ethiopia's division of rural and urban areas for land administration and land use regulation continues to make it difficult to develop integrated land use planning and execution. Conflicting activities are likely to arise if the two

areas continue to have different land use development plans or mismatch between the different hierarchies of land use plans. With the suggested land use policy, such contradictory plans and mismatches between them are resolved and an integrated land use plan could be created that would benefit both urban and rural areas. Additionally, the land use policy offers a thorough framework for taking into account and coordinating different actors' interests at all levels (Zemen et.al., 2017). Furthermore, they stated, recently a comprehensive urban development policy has been introduced as one of the pillars of ADLI, which assists urban centers and surrounding hinterlands in following an urban plan and accelerates the development of urban areas while also improving connections with rural areas. Additionally, the all-encompassing strategy supports the realization of the notion that cities and towns are engines of economic progress and provide socio-economic opportunities. Generally, the preparation and execution processes for urban land use planning have been impacted by the change in government, notwithstanding the several proclamations that have been made.

In Ethiopia, there are various legislative frameworks pertaining to urban land use planning. Some of the significant ones are highlighted below (Ministry of Urban Development and Construction, 2006):

1. Urban Planning and Development Regulation No. 121/2006
2. Urban Development Policy
3. Proclamation No. 721/2011- Urban Land Leasehold:
4. Regulation No. 412/2017 for Urban Development and Construction
5. No. 456/2005 Land Administration and Usage Proclamation
6. Housing Proclamation No. 114/1998
7. Ethiopian Building Code Standards (EBCS)
8. Addis Ababa City Government Urban Development Plan and Plan Implementation Directive

2.13. Conceptual framework: the relationship between variables

The implementation of land use is the dependent variable of this study, it is affected by various independent variables. Independent variables apart from the one noted in the objective the other major extraneous variables are held constant by the researcher for the study to be possible. Major obstacles to land use plan implementation are selected as independent variables to describe their impacts on overall urban development, in which these independent variables affect the dependent variable in various ways. The absence of stakeholder participation in plan preparation and plan implementation, expansion of illegal settlements and lack of integration across sectoral offices are challenges of plan implementation as main independent variables selected, in addition, to understand the major effects of improper land use plan implementation in the study area, lack of well-implementation of land use plan is taken as an independent variable which is affected by different independent variables in a various way, so challenges of land use plan implementation are considered as both dependent and independent variables in this study.

There are a lot of factors that hinder land use plan implementation as reviewed from different theoretical and empirical pieces of evidence. These challenges start from the plan preparation stages which extend to the last stage of the planning process, the monitoring and evaluation stage. Thus, corruption, lack of detailed plans, insufficient budget and manpower, poor data management, deliberate plan violation, lack of taking corrective measures and lack of strategies, and guiding principles are major challenges identified and tested in the study area.

The challenges of urban land use plan implementation have a significant effect on the urban development of cities and towns as stated in literature works. Urban land use plans to control and regulates urban growth and development of urban areas. But its implementation is hindered highly by a different factor which results in negative effects on the social, economic, environmental and spatial development of urban settlements. Social and economic inequalities, urban sprawl, inefficient land uses and environmental degradation are the major one according to different literature work.

The following diagram in (Figure 5), designates the detailed conceptual framework of the relationship between explanatory variables (major challenges of urban land use plan implementation) and explained variables (land use plan implementation and consequences on urban development).

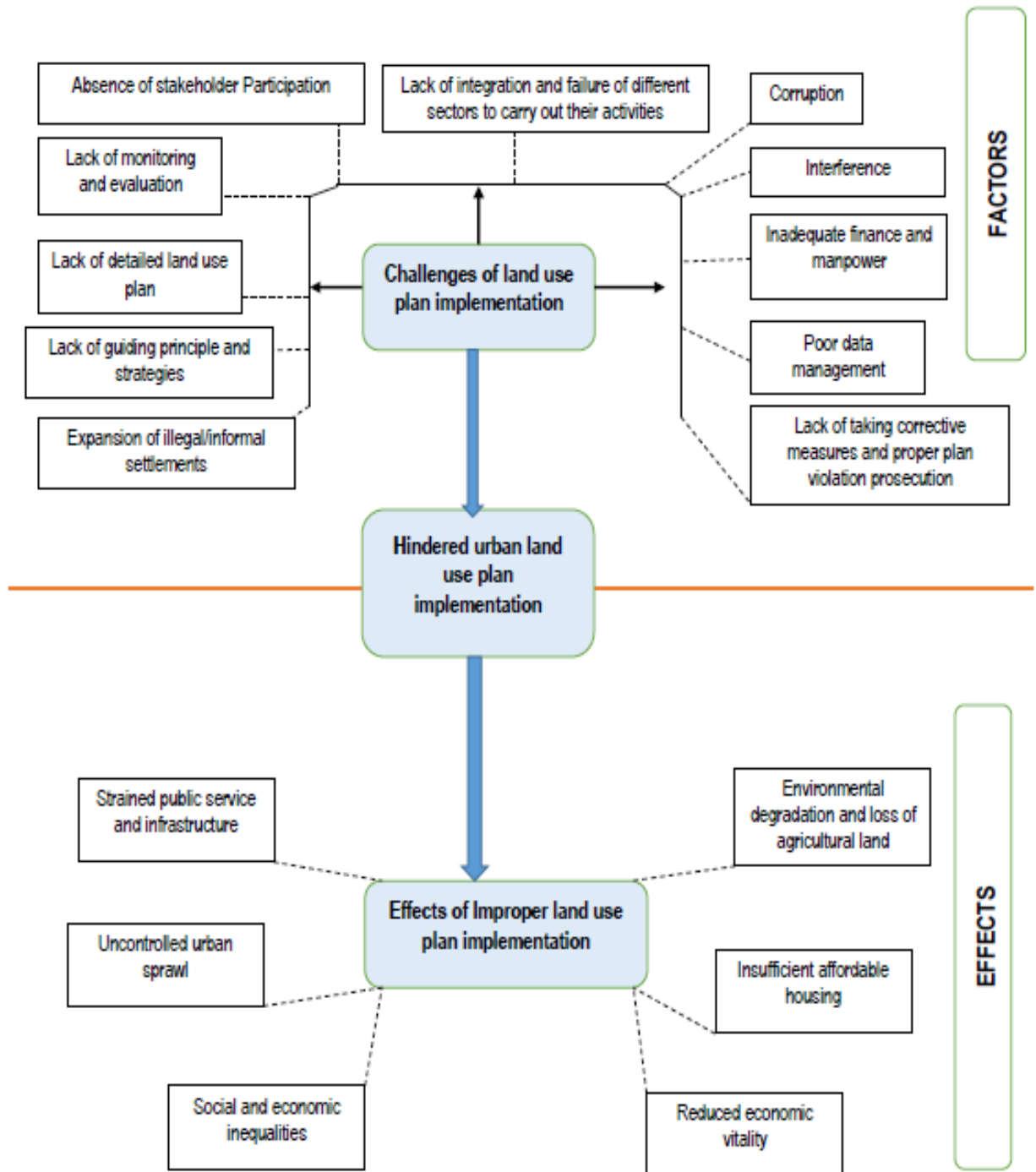


Figure 2.6: Conceptual Framework: Relationship Between Explanatory and Explained Variables

Source: (Organized by Author, 2022)

2.14. Lesson learned from Literature/summery of literature

The practice of creating, maintaining, and controlling how land is used in urban contexts to meet the needs of citizens is known as urban land use planning. In order to direct the use of land for a range of reasons, including residential and commercial activities, transportation infrastructure, and public amenities, among others, it entails drafting plans, designs, and rules. Planning for urban land use attempts to create liveable, sustainable communities that provide their residents with a higher level of living. Population growth, traffic patterns, environmental effects, and economic factors are all taken into account during this process.

Urban land-use plans are often implemented through zoning laws, building codes, and other land-use policies that limit how a certain metropolitan area's land can be used and developed. Implementing urban land use plans necessitates a number of procedures, such as site evaluations, construction permit reviews, and zoning amendment approval. To reflect shifting social, economic, and environmental developments in the area, urban land use plans must be regularly reviewed, revised, and monitored. It typically involves cooperation between numerous governmental and non-governmental organizations, entrepreneurs, and community stakeholders. The execution of urban land use plans is hampered by several variables, especially in developing nations. It is the most difficult and difficult stage of the land use planning process.

Several obstacles and institutional and community resistances are anticipated to surface at this point, which will have a significant impact on the plan's result and ultimately the living conditions of city dwellers. The land use plan would bring about and promote development activities and would result in sustainable urban development that is secure for its inhabitants.

In many developing countries, the implementation of urban plans faces serious difficulties changing from political to economic; from financial to institutional; and from physical to socio-cultural factors. Thus, the following factors are the major challenges of urban land use plan implementation that affect over all urban development in various ways.

- a) Lack of participation
- b) Expansion of informal urban settlements
- c) Corruption and lack of taking corrective measures
- d) Lack of monitoring and evaluation
- e) In adequate finance and manpower
- f) Poor data management

- g) Lack of coordination and implementation strategies and
- h) Lack of detailed plans

The issues with the implementation of urban land use plans that are mentioned above have a detrimental impact on urban development. As a result, poor urban planning causes unrestrained urban growth, social and economic inequality, the destruction of the environment and natural resources, inefficient land use, decreased economic vibrancy, and a lack of urban services and physical infrastructure are among major one.

2.15. Conceptual definition of some significant terminologies used in the study

As per this study, the following word and terminologies have the attached conceptual meanings:

Urban land: is a land that is located in an officially recognized township boundaries

Urban land use: is an urban land that is used for different types of activities such, residential, commercial, manufacturing and others.

Urban Land use planning: process of designing and regulating the use of land within a city or urban area.

Urban Land use plan: is a formal document which contains the wide-ranging plan, also known as an all-purpose plan, structure plan, master plan or land-use plan, is a document designed to guide the future actions of urban areas.

Challenges of land use plan implementation: is a major obstacle faced during urban land use plan execution based on proposed implementation strategies and phases.

Land use change: is a change of activities of the land from one type of land use to another such as the transformation of farm land to urban activities; residential, commercial land use etc.

Urbanization: the process of population shifts from rural to urban areas and change of agricultural and natural environment into urban settlements

Urban Sprawl: the quick horizontal expansion of a city or town's towards nearby natural or rural areas, frequently typified by single-use zoning, low-density residential housing, and a greater reliance on private automobiles.

Surrounding town: is towns or small urban centers established in the surrounding areas of a major city to help devolve industrial development, residential development and offer typical services to its residents.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1. Introduction

This study used a variety of alternative strategies that included several methodologies and procedures for data sampling, collection, and analysis. As a result, this chapter includes descriptions of the study area, research design and methodologies, data gathering techniques, sampling techniques, and data analysis methods.

3.2. Location and Description of the Study Area

Laga Tafo Laga Dadhi town is part of Oromia National Regional State, Special zone surrounding Finfinnee, 20 km North East of the National and Regional capital Addis Ababa along highway asphalt road to Shano town. Astronomical Location, Laga Tafo Laga Dadhi town extend from 9° 00' 32" to 9° 08' 47"N latitudes and 38° 48' 48" to 38° 56' 4" E Longitudes. In projected or local coordinates, the town is located 479493 to 492791 meters Easting (X) Longitude and 995827 to 1011042 meters Northing (Y) Latitude.

The town is located at the foot hill of Entonto ridge which imposes flood challenge in one hand and contributes for micro-climate improvement due to high elevation and few vegetation covers. Laga Tafo Laga Dadhi town is one of the fastest growing towns in the region and the country and its current population is approximately about 54,788. Its closeness to Addis Ababa makes the city as an option for investment, dwelling, and development of hotel, recreation and industry. The structure plan of Laga Tafo Laga Dadi Town was prepared in 2000 E.C and the planning boundary covers land area of 2,417.49 hectares. The current proposed structure plan has increased the area of the town to 10,056.45 hectares.

The Town has been expanding horizontally in order to accommodate the increase in population as a result of natural population growth and in-migration. This partly contributed to the increase of informal settlements in different areas of the Town especially at the peripheries. This trend demonstrates the significant impacts on sustainable development and become threat to compromise the quality of life within the town. Therefore, the study explores the current situation of urban land development practices and helps to identify the opportunities and constraints in the utilization of effective and efficient land use in the Town. The study also helps to consider the interest and preference of communities on the implementation of land use planning and development. Generally, the community of urban and its periphery benefited

economically, aesthetically from effective and efficient implementation of urban land use planning.

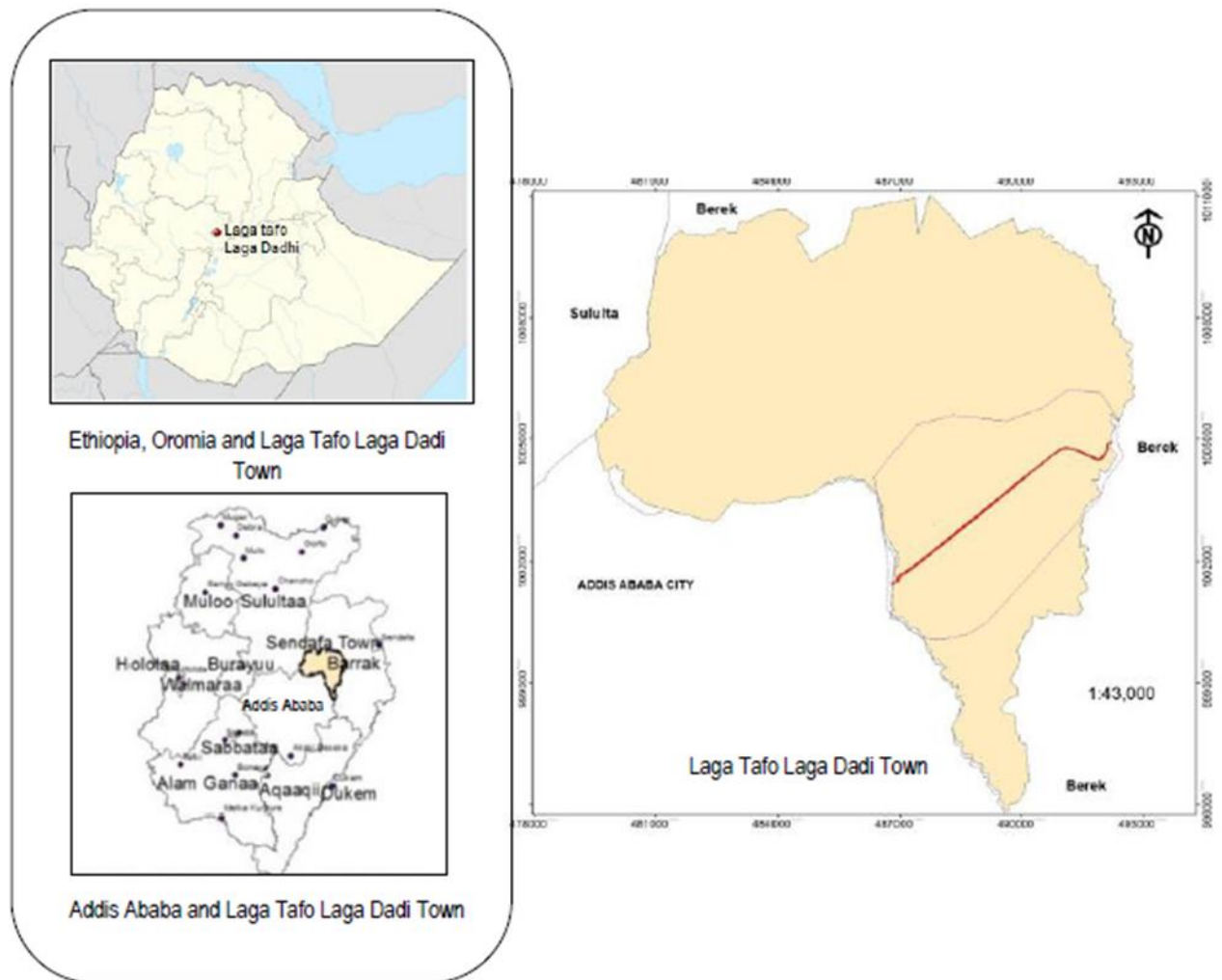


Figure 3.1: Location Map of the Study Area

Source: (Organized by Author, 2022)

3.3. Research Approach.

Qualitative approach was used to collect the required and reliable information of implementation status, and it was used to explore the challenges of plan preparation and implementation process. The qualitative data was analysed through detailed contextual reviews. The independent variables of the research include; the main actor's level of influence, social characteristics, economic and legal status, plan preparation policies, plan implementation guidelines, and institutional working procedures. The second variable of the research is the poor plan implementation as constant variable, which has apparently shown by

different literatures. Since qualitative approach use, multiple sources of data such as, structured questionnaire, interview, observation and documents were used to analyse the poor implementation status. To explain the variables of effects of plan implementation failure on the overall development of the town and its environment detailed and frequent site visits and observations were widely used. Land satellite maps/images have studied analysed using GIS to measure the magnitude of the effect. To study the effects qualitative description also was used. Finally, contextual reviews on the currently working legal documents were undertaken.

3.4. Research Design

This study adopted qualitative approach. The main way of thinking about performing qualitative research is to explore phenomena' nature, including its quality, various manifestations, context in which they emerge, or perspective from which they can be observed. It outlines the goal of the qualitative study, the role of the researchers, the stage of the research, and the data processing method either directly or implicitly (Loriane et al., 2020). This study includes both theoretical and contextual parts which endeavor to present land use plan and challenges of its implementation. Archival documents from the secondary source are used to analyze theoretical parts whereas, contextual parts cover the issue of land use and its implementation challenge in the context of Laga Tafo Laga Dadi town; the study area.

Descriptive survey method of inquiry encompasses all kinds of comparative and correlational methods which involves selection of sample of respondents and administering questions or conducting interviews to gather data on the variable of study (Kothari, 2004). Moreover, Kothari (2004) stated that descriptive research attempts to describe and interpret the question of 'what is' whereas explanatory research aims to establish cause and effect association between variables. Furthermore, Kothari (2004) stated; explanatory research is a prolongation of descriptive research type, in where the researcher goes further than simply describing the characteristics, to further analysis and explanation of 'why' and 'how' something is happening. This study employed both descriptive and explanatory types of research that describe the situation of association between variables challenges of land use implementation and also explain the challenges overall effect on urban development.

Depending on the nature of research questions in this study which encompasses both descriptive and explanatory types of inquiries, the case study method is selected to analyze and interpret what are the challenges of land use plan implementation and how the challenges affect overall development of land in the study area.

This study sought to obtain descriptive and self-reported data from Laga Tafo Laga Dadi sectoral offices, OUPI and residents of the town for which, a descriptive survey design is the most appropriate. Descriptive survey helps researchers to expose the respondents to a set of questions that enable comparative analysis. The assumption is that all the patron or respondents had information that windbag on the problem that was being examined which is the challenges of land use plan implementation.

This research study depending on the purpose of study and types of research questions; describing cause and effect of land use plan implementation in the study area and in order to deal with the 'how' and 'what' questions types, dedicated on survey type of strategic inquiry. For the qualitative data, semi-structured interviews, questionnaires, observation/site survey/ and document review methods were used. For the statistical description of trends and opinions of the population, both interview and questionnaires are deployed for data collection with determined to describing population characteristic from the samples.

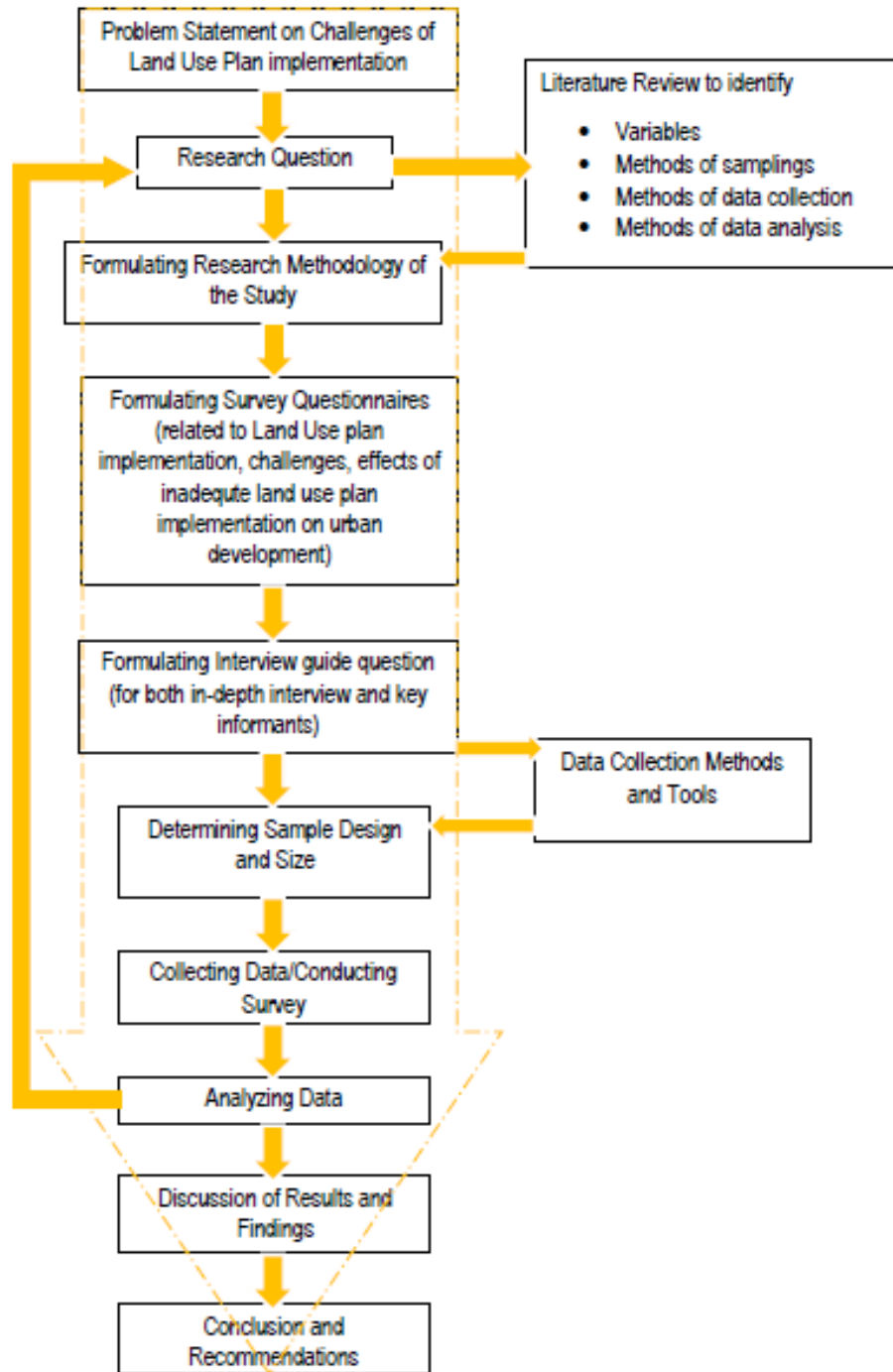


Figure 3.2: Research Design Diagram
Source: Organized by author, (2022)

3.5. Research Method

The survey method was implemented for this study in order to understand the major challenges of land use plan implementation and its effects on urban development. In addition, contextual review methods have also been used to study the challenges and effects of the situation understudy. The survey method is best for this kind of study which helps to major factors that

hindered land use plan implementation in the study area and how these challenges affected the overall towns' growth and development. In line with this Groves et al. (2011) stated that the survey is a systematic method for gathering information from a large population sample and describing the basic characteristics or experiences of the larger populations. Thus, this study is also based on the perception of the large population; households which make the survey research design applicable.

Consequently, this research has been conducted through major survey tools such as; questionnaires, key informant interviews, in-depth interviews and existing land use surveys to study the variables, including the current land use situation, major land use plan implementation challenges, and corresponding effects of these challenges. The questionnaires were self-administered and include both close-ended and open-ended questions. In this case, open-ended questionnaires aid to compare the answer to close-ended questions. To identify major challenges of land use plan implementation in study area four scale Likert scale measurements from disagree to strongly agree were deployed. To explain the variables of effects of inadequate land use plan implementation and existing land use situation, frequent site visits and observation were deployed.

3.6. Justification for the Method

The survey method was adopted for this study in order to understand the challenges of land use plan implementation which collect information from householders, different professionals, key informants, direct site observation and existing land use surveys. In this case, when the population is larger households, surveying was the appropriate method to grasp the thinking of these larger populations through different sampling techniques (Groves, et.al., 2011).

Furthermore, different literature justified that, explanatory and descriptive research focuses on “what and how” aspects of the relationship between dependent and independent variables and answers by facts gathered by different tools (Kothari 2004). For the mixed types of research survey methods helps to collect strong data from the case study areas with the site visit and observation. Thus, the survey and contextual review method is the best way to investigate the land use plan implementation status, major challenges and effects in the study area.

3.7. Sources and types of Data

This study employed data generated from both primary and secondary sources, which are collected using interviews, semi-structured questionnaires, personal observations and an assessment of various relevant secondary documents respectively. The main body of information for this study was obtained from primary data which is collected using interviews, questionnaires and observation with appropriate technical staff of the Laga Tafo Laga Dadi town sectoral offices, Oromia Land Bureau and Oromia urban planning institute. The secondary data were obtained from documents of the municipality, Oromia urban planning institute, internet and other published and unpublished materials.

The tool that was used to collect under the qualitative method includes; checklist, interview, observation, and digital camera, from primary sources and relevant published and unpublished documents such as an official report, journals, policy documents, proceedings and books from secondary data sources were used.

3.8. Methods of Data Collection.

3.8.1. Primary Sources (Data Collection Method).

i. In-depth interview

Semi-structured interview type is used for this study because it is more appropriate in descriptive and explanatory types of research as it is more economical, provides a safe basis for generalization and required relatively lesser skill on the part of the interviewer according to Kothari (2004). Semis-structured interview instrument is used for officers from Laga Tafo Laga land management, OUPI, Oromia Land Bureau, mayor and municipality offices and farmers.

ii. Field survey

To get reliable information related to the level of land use plan implementation, field survey was given conducted on selected site at Laga Tafo Laga Dadi town. This helps to identify the current status of the land use plan implementation, the challenges of land use implementation and the effects of improper land use implementation against the proposed land use category.

iii. Key informant Interview

It was used to collect information about the preparation and implementation of the structure plan of the town. Three groups of three key informants were used in this study. Individuals with better knowledge and experience in urban plan implementation and preparation process were selected and contacted to obtain the relevant data. The information gathered through KII was used to triangulate and supplement the data collected from Laga Tafo Laga Dadi town administration. An open-ended discussion was undertaken to gather the required information from the informants.

iv. Questionnaires

The researcher used semi-structured questionnaires and by using this type of questionnaire, respondents will be comfortable providing their perceptions, feeling, attitude, etc. Questionnaires were also administered in local languages, for the sake of clarity and to be easily understandable by the respondents and were used to collect in-depth information from the residents of the town.

v. Direct Observation

In order to obtain first-hand information which is relevant to the study; direct observation of the study area was conducted. It was carried out through systematic observation of the spatial growth of the town, and major land use categories to evaluate and compare the proposed and the implemented proposed land use plan.

3.8.2. Secondary Source (Data Collection Method)

i. Desk Review

A Desk review is the second source of secondary data for this study. It includes published documents such as annual plans, proposals, minutes and official annual reports and unpublished documents such as policy documents, scholarly works, manuals, proceedings and so forth. Spatial plan and design Documents like land use plans, road network plan, local development plans and urban designs. Examinations of these documents in relation to facts on the ground enable to identify actual performance and challenges that exist during plan preparation and implementation. Text documents related to land use plan preparation and implementation such as policies, laws, standards, regulations, codes, as well as official performance reports related with land use plan implementation challenges etc. to be assessed in similar manner.

Table 3.1: Summary of Sources and Method of Data Collection

Method of collection		Source/Participants
Primary sources	Key informant interview	Urban Planners, Land management officers, environmentalist, Socio-economist, Urban managers and infrastructure engineers
	In depth interview	Farmers, and Kebele administrators
	Questionnaire	Residents
	Observation	Physical inspection of the study area.
	Field Survey	Proposed and implemented land use types
Secondary sources	Desk review	Published and unpublished documents
	Literature and spatial data	Reports, satellite images from google earth and base map.

Source: (Organized by Author, 2022)

3.9. Types of Variables and Measuring Techniques

The independent variables of the research are the causes for the plan implementation failure that includes; the main actors, level of influence, socio-economic characteristics, land use challenge, plan preparation policies, plan implementation guidelines, and institutional working procedures. The second variable of the research is inadequate and poorly maintained services and utilities, severe housing shortage and problems, deforestation, land degradation, and environmental impoverishment as a dependent variable. The third variable of the research is also, poor plan implementation as a constant variable, which has apparently been shown by different works of literature.

Table 3.2: Variables and Measuring Techniques

Types of Variables	Categories of Variables	Analysis and Measuring Techniques
Survey background (Gender, age, family size, marital status, occupation, family size, levels of educations and income)	Independent	Descriptive statistics, table and graphs
Existing land use situation	Independent	Descriptive statistics, GIS and comparative land use map, table and graph
Challenges of land use plan implementation Lack of participation (Expansion of informal urban settlements, corruption and lack of taking corrective measures, lack of monitoring and evaluation, in adequate finance and manpower, poor data management, lack of coordination and implementation strategies and lack of detailed plans	Independent	Descriptive statistics and analysed and ranked by RII method
Status of land use plan implementation	Dependent	Descriptive statistics, GIS and comparative land use map, table and graph
Effects (urban sprawl, inefficient land use, strained public service and infrastructure, socio-economic inequalities, degradation of environment, reduced economic vitality and insufficient affordable housing.	Dependent	Descriptive statistics

Source: (Organized by the author, 2022)

3.10. Sampling Technique and Sample Size Determination.

The sampling techniques were carefully chosen based on the objectives and research questions of the study. The sampling technique of this study employed random and non-random (purposive) taken from different sections of the society such as; elders, government employees, traders, youths, residents and retired individuals, municipality, town council,

Oromia land bureau, and Oromia urban planning institute. currently, the town population is estimated to be close to 54,788, the report of CSA 2007 put the population size of Laga Tafo_Laga Dadhi town at 18,117. This census was misleading and cannot represent the present condition (only focused on Laga Tafo and Laga Dadhi) as one Ganda/kebele. Ten years out of the 54,788 people estimated during the 2017 census, the male and female population was 24,961(46%) and 29,827(54%), respectively. The sampling frame of the study is the list of those residents living in areas that are expected to bring adverse effects on the structural plan implementation. In this case, it's about 10,536 households residing in Laga Tafo_Laga Dadi town. According to Miller (2011), the sample size was calculated by using a sampling formula since the targeted population was N=10,536 households and researchers used Yamane (1967) formula; therefore, the sample size of household respondents would be;

$$n = \frac{N}{1 + N(e)^2} \dots\dots\dots \textit{Equation 1: Sampling Formula}$$

were

n- sample size

N- is Number of population size

e- is the level of precision (Margin of error 5% with confidence level of 95%)

thus, the sample size was computed as follows;

$$n = 10,536 / (1 + 10,536(0.05)^2)$$

$$\mathbf{n=385}$$

Four administrative kebeles, designated 01, 02, 03, and 04 or Laga Tafo, Laga Dadi, Dambal, and Eka Dale, respectively, make up the town of Laga Tafo Laga Dadi. 385 survey questionnaires were given out to local residents and this number was then proportionally allocated to the kebeles depending on their share of the overall population. As a result, the accompanying table provides an illustration of each sample size as calculated using a straightforward random sampling technique.

Table 3.3: Sample Size of Households Selected for Questionnaire

No.	Name of Kebeles in Laga Tafo Laga Dadi town	Total number of Households	Formulas to Assign Kebele level Sample	Sample Size from each kebele	Sampling Technique
1	Laga Tafo (01)	3428	$3428 \times 385 / 10536$	125	Simple Random Sampling
2	Laga Dadi (02)	2646	$2646 \times 385 / 10536$	97	
3	Dambal (03)	3050	$3050 \times 385 / 10536$	111	
4	Eka Dalle (04)	1412	$1412 \times 385 / 10536$	52	
Total		10,536		385	

Source: Organized by the author, (2022)

The study used probability (random) sampling and non-probability (purposive /judgmental) sampling type to increase the validity of the research and to interpret the result of the study. Based on these 385 respondents were randomly selected from four kebeles as stated above to conduct the thesis. Among 10,536 households, the sampling unit is about 385 households. Furthermore, variability and limitedness in number among the population is another reason that drives the researcher to opt for a purposive technique. With this understanding, the researcher selected **15** key informants from Laga Tafo Laga Dadi sectoral offices, Oromia Land Management bureau and OUPI, and 10 farmers for the depth interview, which becomes 410 units within the town. Therefore, the sample sizes for this study were for a questionnaire and interview accounts for 385 (randomly) and 25 (purposively) respectively, with a total of 410 respondents from the total population of 54,788 in Laga Tafo_Laga Dadi town.

Furthermore, the researcher purposefully chose four sites, each of which contains 20 to 36 blocks, to investigate the state of land use plan implementation in the study area. In order to choose the blocks for field surveys to gather existing land use data and further analyse the level of implementation of proposed land uses, the availability of major land use types and variations in location are taken into consideration. Thus, four sites contained total of 109 blocks with total areas of 135.83hectares are selected and existing land use surveys are conducted for seven days.

Table 3.4: Sample Size of Existing Land use Survey

No.	Selected Sites	Block Numbers in a site	Total areas of the selected blocks in hectares
1	Site One	31	39.04
2	Site Two	20	23.91
3	Site Three	36	44.47
4	Site Four	22	28.41
Total Area		109	135.85

Source: Organized by author (2022)

Table 3.5: Research Participants and Sample Size

No	Sampling Frame	No of interviewee	Sampling Technique	The reason behind sampling (criteria of sampling)
1	Residents/sections of society	385	Random sampling	
2	Farmers of the town and the surrounding kebeles	10	Purposive sampling	Farmers who were impacted by urbanization and lost their farming land after long-term residence in the town and surrounding kebeles.
3	Land office of the town	3		Their experiences and level of expertise are the reason behind the selection.
4	Oromia land bureau	2		Their position and experiences are the reason behind the selection.
5	Municipality office of the town	2		
6	Town council	3		
7	Oromia urban planning institute	5		Professionals who participated on structure plan preparation and/or implementation.
	Total	410		

Source: (Organized by Author, 2022)

For this study the researcher will employ a questionnaire-based survey, interview guiding questions in-depth interviews and key informants' interviews (KII), and document own observations during site visits. The personal observation was made by the researchers in order to see the current status of the urban land use plan and to cross-check the proposal in the structural plan and the implementation on the ground. Interviews with government officials and experts responsible for urban land use management are also conducted.

The interview type to be conducted was open ended and conducted on a face-to-face base and through phone calls. These interviews are conducted to gain in-depth information from the experts who have knowledge about urban land use plan implementation practices in the town. Multiple data collection techniques will be used in order to get reliable information on the urban land use implementation challenges as well as the community perception of urban land use planning and implementation. The main instrument used to interview the official's semi-structured interviews, which contained open-ended questions whereby the respondents give the chance to discuss all principles of green Infrastructure will be incorporated.

As Hattori A and Lance M, (2016), stated that given clusters are typically small geographic clusters would undercut one of the main advantages of the cluster design, the opportunity for the overflow effects from participants to non-participants within the same cluster is natural and plausible. Therefore, the selection of clustered Kebele with the smallest subs geographically location Ganda provides sufficient data. However, the informants have the same behaviour in relation and position with the objectives of the study, finally, random sampling was held on identified sample size.

3.11. Method of Data Analysis

Data analysis is the process of systematically reaching and arranging the responses of questionnaire, interviews, observation, focus group discussion and other materials that the researcher collected to enrich the study. Qualitative approach of data analysis was used and used to describe the results qualitatively while the quantitative data were analysed by using the Microsoft word and Microsoft Excel. Tables, charts, graphs, percentages, ratios, figures, and photos were used to interpret and summarize the findings where necessary. The qualitative data were analysed by using grid overlays of spatial maps to quantify accordance and deviations between land use plans and actual land use, in order to assess the status of implementing land use plan. In addition to field survey researcher uses the satellite images and the proposed land

use plan of Laga Tafo Laga Dadi town for quantifying different categories of land use plan in AUTOCAD Arc GIS tool.

Data from an existing land use survey of three selected sites was analysed using the cluster land use analysis technique. In order to find groups of locations or clusters with similar land use patterns or kinds, statistical techniques known as cluster analysis are applied to land use data in planning. Based on their activity and percentage share of total areas, this aids in classifying different land use categories (Forman, 1995). As a result, GIS and AutoCAD software are used to encode, analyse, and categorize the existing land use data from three sites, which further compared and contrasted to proposed land use types of the same blocks.

Table 3.6: Summary of Data Analysis Method

Methods of analysis	Description	Instruments
Descriptive analysis	The researcher systematically organized and coded the data in order to analyze in terms of descriptive statics; including percentage and frequencies and presented the findings through; qualitative description of information, such as tabular, charts and direct illustration from respondents.	SPSS and Microsoft excel
Relative importance index analysis	The data received through the questionnaire was analyzed by RII method to determine the relative importance of major challenges of land use plan implementation and its relative impact on study area urban development; identified from the literature survey. $RII = \frac{\text{sum of weights (W1+W2+W3+W4)}}{AN}$ Where W= weights given to each factor by respondents and will range from 1 to 4. A = is the highest weight (4 in this case), and N= total number of respondents. For this study, the scales are as follows: 1- Disagree, 2- Neutral, 3- Agree and 4 - Strongly agree.	Microsoft excel
Spatial analysis	Satellite images from google earth database are organized and interpreted to determine land use implementation. grid overlays of spatial maps to quantify accordance and deviations between land use plans and actual land use, in order to assess the status of implementing land use plan	GIS

Source: (Organized by Author, 2022)

CHAPTER FOUR: RESULTS AND DISCUSSION

4.1. Introduction

In this chapter, the result of the data collected are presented using basic descriptive statistical tools and analysis are drawn out of the presentation of data. The research sought to answer the research questions accordingly, thorough discussions, interpretations and findings are made to drive sound inferences and conclusions. Secondary data from OUPI and different offices of municipalities were evaluated to support arguments derived using primary data in this study.

This chapter begins with the analysis of general information of sample respondents and rate of return, detailed analysis of questionnaires and interview guide questions, presentation and discussion of the findings to come up with a set of results that achieve the stated objective of the study.

4.2. Survey Background

4.2.1. Questionnaires return rate

The study targeted 410 respondents in total. Thus, 385 residents and 10 professionals and officers from different sectorial offices and 10 farmers are compromised. The response rates were shown in Table 4.1.

Table 4.1: Questionnaire Return Rate

No.	Section/research participants	Sample size	Returned questionnaire and (interview conducted)	Response rate (%)
1	Farmers	10	10	100
2	Officers from land management office	3	3	100
3	Oromia Land Bureau	2	2	100
4	Residents	385	317	82.3
5	Municipality office of the town	2	2	100
6	Town council	3	2	66.7

7	OUPI	5	4	83.3
	Total	410	340	82.9

(Source: Organized by author, 2023)

Some of the professionals and officers from the different sectorial offices in the town were not interested to participate in the study. Furthermore, they didn't have well-organized data, the researcher tried to convince them to participate in the study. Generally, the response rate was sufficient and representative. 82.9% (Figure 4.1) is an adequate amount for analysis and reporting. This praiseworthy response rate was due to the extra effort that was made via personal call and visit to remind the respondents to fill in and return the questionnaires.

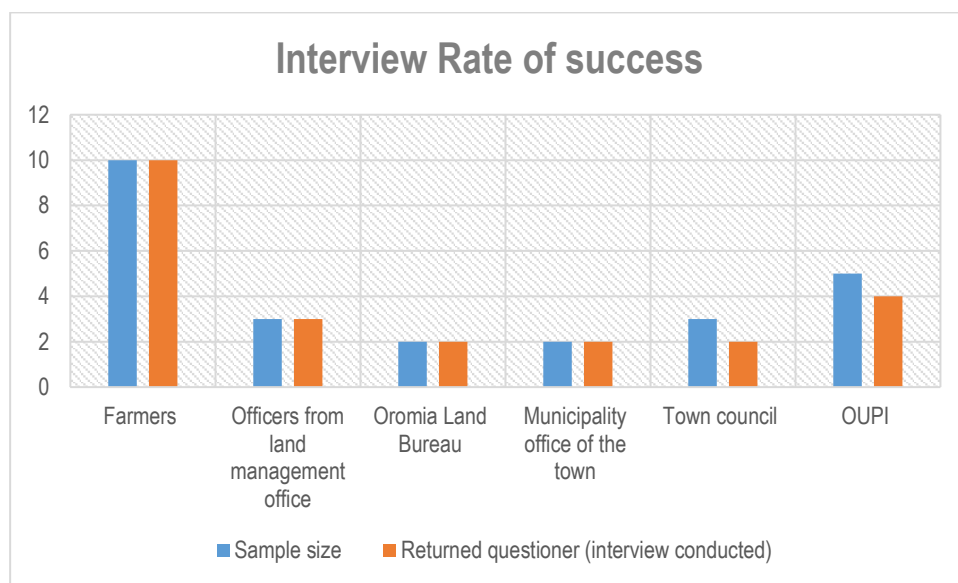


Figure 4.1: Interview Rate of Success

(Source: Organized by author, 2023)

4.2.2. Demographic characteristics of respondents

The following table (Table 4.2) summarizes the demographic features of the 340 fully filled, interviewed and returned study questionnaires.

Table 4.2: Demographic Characteristics of Respondent's

No		Frequency	%	Cumulative %
1	Educational Background			
	University/college	153	45	45
	High school	113	33.2	78.2
	Primary	74	21.8	100
	Total	340	100	
2	Experience in years (professional)			
	More than 10	5	38.5	38.5
	5 to 10	6	46.2	84.6
	Below 5	2	15.4	100
	Total	13	100	
3	Age by years			
	22-35	76	22.4	22.4
	35-45	170	50.0	72.4
	Above 45	94	27.6	100.0
	Total	340	100.0	
4	Experience /period lived Laga Tafo in years			
	Below 5	37	11.1	11.1
	5 to 10	119	35.6	46.7
	11 to 15	132	39.5	86.2
	Above15	46	13.8	100.0

	Total	334	100.0	
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(Source: Organized by author, 2023)

Table 4.2 and Figure 4.6 indicated that the majority of the respondents 45% (153) who participated in the survey attended education in university or college, and similarly, the majority of respondents 46.2 % involved in the survey have 5-10 years of experience in planning, land management, environmental planning or urban development which shows that the respondents were competent enough and capable to participate in the survey. The overall professional experience was analysed with professionals in land use planning and did not apply to residents. This means that their experience in the planning and land management industry the respondents had particularly in the study area and qualification of their age, the respondents had reliable information which this study was seeking.

4.2.3. Professional Experience and Year of Residence of Respondents

According to Table 4.2 and Figure 4.2 out of Planned 15 professionals to be a participant of this study, 13 of them was attained. Thus, 38.5% of them have vast experience in the sector where as 46.2% have experience of five to ten years in the industry. Only 15.4% of them have below five years of experience in the sector. Majority of the respondents have good expertise in the field so they provided valuable answers to each questions asked.

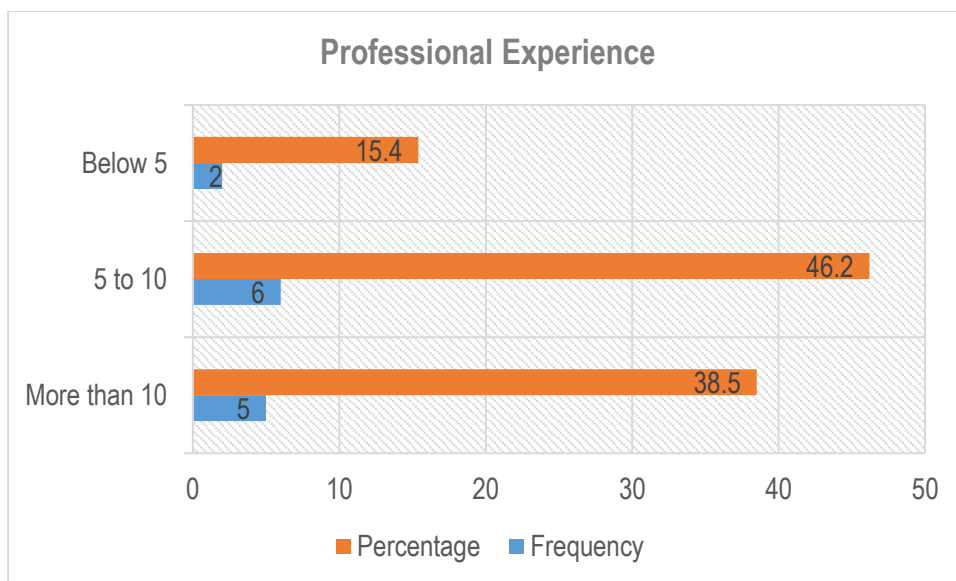


Figure 4.2: Graph of Professional's Experience Ratio

(Source: Organized by author, 2023)

Only 11.1% (37) of the study participants' households have been in the study area for less than five years, and 35.5% (119) have lived there for five to ten years as indicated on Figure 4.3. 13.8% (46) of the respondents lived in the town of Laga Tafo Laga Dadi for more than 15 years at the time of data collection, compared to 39.5% (132) of the respondents, who mostly resided there for between 11 and 15 years according to Figure 4.3.

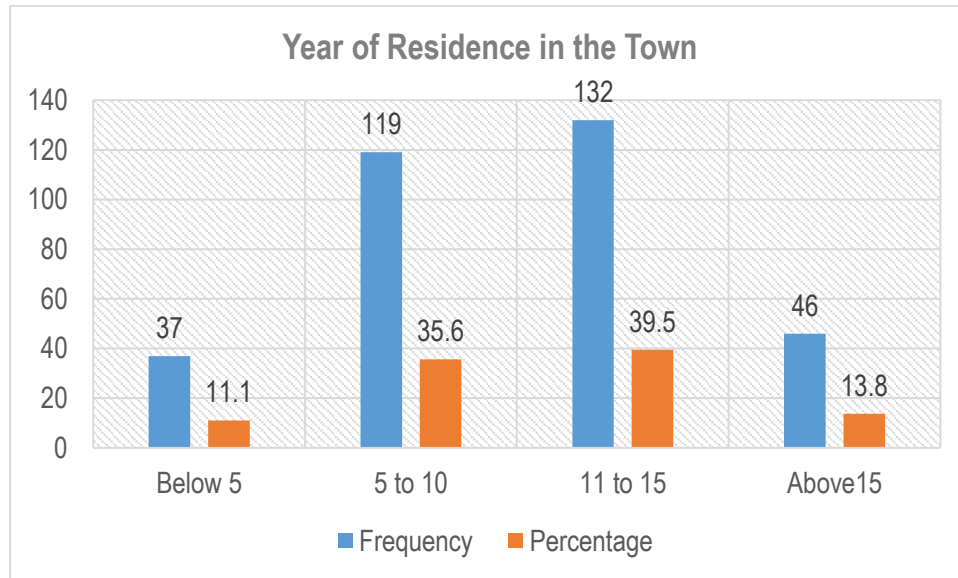


Figure 4.3: Year of Residence of Respondents in the Study Area

(Source: Organized by author, 2023)

4.2.4. Sex and Age Categories of the Respondents

As shown in the Figure 4.4 below, 62% or 210 of the respondents were male while the other 38% or 62 of them were females. Thus, most of the respondents were males.

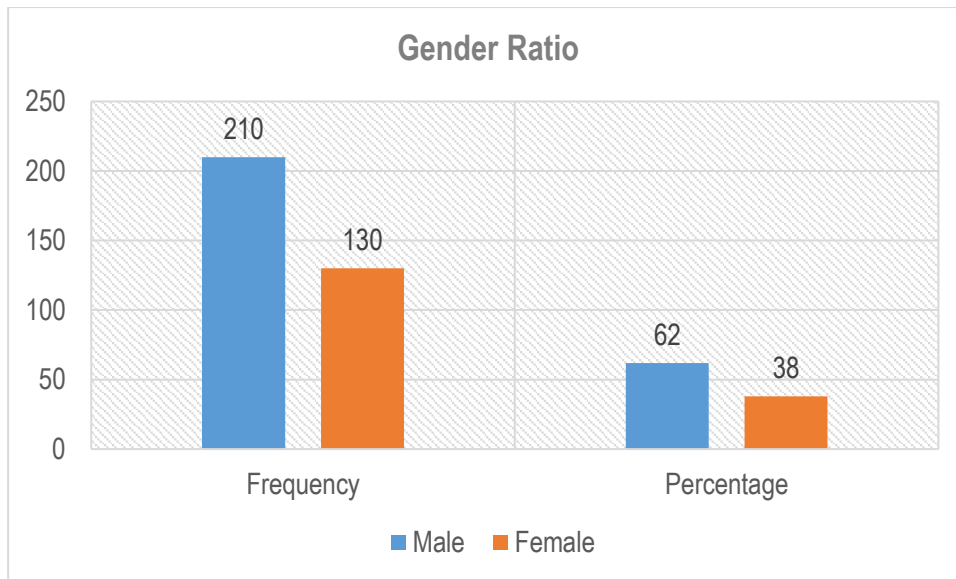


Figure 4.4: Graph of Gender Ratio of Respondents

(Source: Organized by author, 2023)

Respondents were classified under different age categories. Thus, as shown in Table 4.2 above and Figure 4.5 below, half of the respondents (170) or, 50% are between 35-45 years of age while 27.6 % (94) are above 45 years of age, thirdly, 22.4% or 76 respondent age are categorized between 22-34 years of age. Thus, the largest age groups were between 22-45 years which indicated the most respondents in the study area were found at productive age.

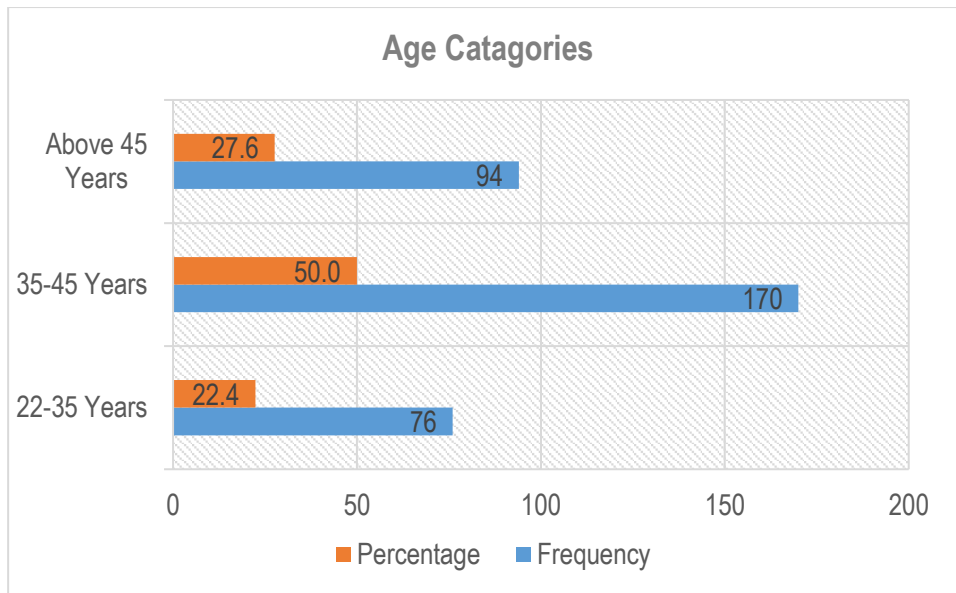


Figure 4.5: Graph of Age Group of Research Participants

(Source: Organized by author, 2023)

4.2.5. Education Status of Respondents

Regarding their educational history, 21.8% of the research participants had only completed primary school. While 33.2% of the population has completed secondary education. The majority of respondents, about 45% of all respondents, had a university or college degree as indicate on Figure 4.6. As a result, the majority of respondents had either completed secondary education or received a college or university degree, which enhances the study's findings by allowing for a deeper comprehension of the issue raised.

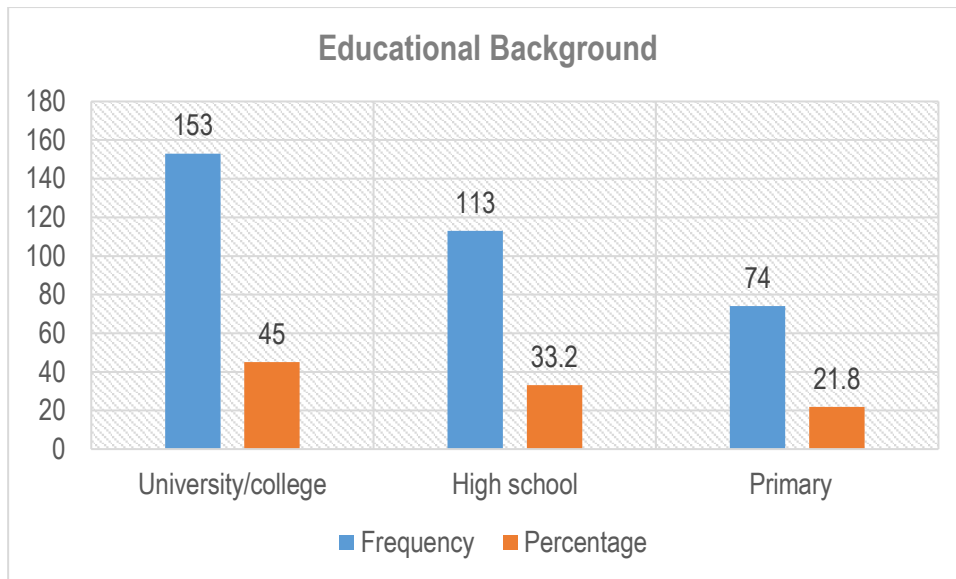


Figure 4.6: Graph of the Level of Education of Respondents

(Source: Organized by author, 2023)

4.3. Land Use Plan Implementation in the Laga Tafo Laga Dadi

It has been mentioned earlier that a land use plan is implemented at site-specific levels using detailed plans such as NDPs and Urban Designs. A neighbourhood development plan is prepared for a specific area that has already been identified in the land use plan and includes detailed plans that regulate neighbourhood redevelopment, urban upgrading, urban design and Urban Block Design. Many NDPs or LDPs are prepared by consultancy firms and Oromia Urban Planning Institute. Therefore, the preparation of NDP or LDP is recognized as one of the important detailed plans that facilitate the implementation of land use plans in the study area.

The first land use plan of LagaTafoo Laga Dadi town are prepared in 1998 by Oromia Urban Planning Institute. Between 1998-2008 implementation of the plan was very slow and it didn't produce the intended result. There are a lot of factors that may be listed for lack of well-implementation of the land use plan. For instance, only two local development plans are prepared during this period to implement the land use plan of the town which is very limited considering the size of the town. According to interviewees plan implementation in the town during this period was challenged by different factors, such as lack of capacity and budget, lack of experience in plan implementation and absence of detailed plan are the major factors that hindered the successfulness of land use plan implementation in the study area.

According to respondents the urban land use plan implementation in Laga Tafo Laga Dadi town is well short of what are proposed in 2009. Urban planners of the town stated that the implementation extent is slow mostly, urban development is not guided by the plan, especially in expansion area. Similarly, inner city, where the proposal of commercial land use with regular block (street network) are not implemented at all which is same for Dire area in the town, the researcher also affirmed Dire area extent and Tafo River area via land use survey and presented below in Table 4.3 and Figure 4.7. Furthermore, at inner city commercial activities are seen spatially along main road unfortunately street network and block arrangement inner city are not implement according to the proposed land use plan of the town. As indicated in Table 4.3 the respondents were asked to rate their opinion on whether land use plan implementation effectively guides and manage urban development in the town.

Table 4. 3: Efficiency of Land Use Plan Implementation in Laga Tafo Laga Dadi Town

S. No.	Urban land use plan effectively guides and manage urban development in Laga Tafo Laga Dadi town	Respondents	Percent
1	Strongly agree	6	1.76
2	Agree	23	6.76
3	Neutral	11	3.24
4	Disagree	133	39.12
5	Strongly disagree	167	49.12
Total		340	100

Source: (Own survey, 2023)

As indicated in Table 4.3 and Figure 4.7, 49.12% (167) and 39.12% (133) respondents replied strongly disagree and disagree respectively, while 3.24% (11) and 6.76% (23) responded by neutral and agree respectively were only 1.76% (6) responded strongly agree. Therefore, the majority of respondents concurred that the study area's urban land use plan does not direct and manage urban development. This explains why the proposed land use and the existing land use in the town are incompatible. Interviewed Urban Planners of the town are also stressed the town is not growing and developing in accordance with proposed ten-year land use plan. In

view of that, Fraol et. al. (2021) also claimed that the urban land use plans for the municipalities of Gelan and Laga Tafo Laga Dadi were unable to direct and control urban growth and spatial development.

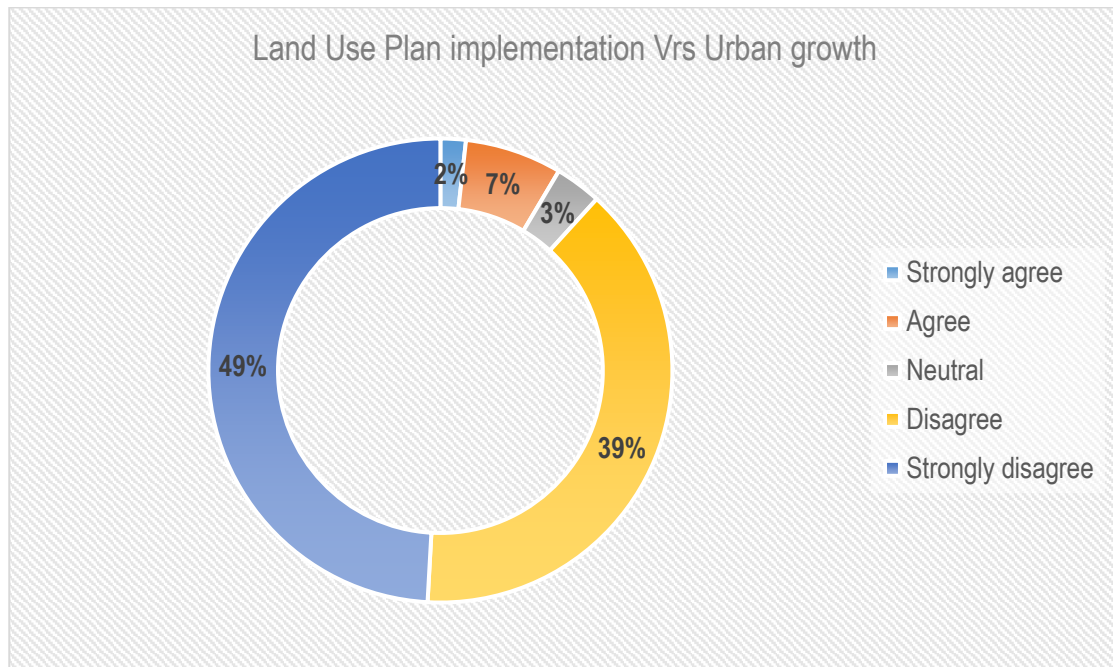


Figure 4.7: Response Rate of Land use Plan Implementation in Relation to Urban Growth

Source: (Own Survey, 2023)

Generally, land use plan implementation in the study area is not going according to prepared plan, land management officers and urban planners of the town stated that both urban expansion and development are not going according to requirements of the plan documents. They raised different factors for this; easy land grabbing and changing from agricultural to residential at expansion area, affordable value that attracts informal development are the major one according to the experts. Thus, residential development along peripheral areas of the town, commercial development in inner parts of the town, major road infrastructure in the town, open spaces and recreational facilities area not developed according to the proposed plan of urban land use in the town. This phenomenon hindered economic and overall growth of the town as stated by expertise of the town.

4.4. Status of Urban Land use plan implementation in Laga Tafo Laga Dadi town

For the purpose of this study, a land use survey was used to gather crucial information from sample sites and blocks under the control of three kebele administrations. Understanding the

existing land use types and characteristics of the urban land use implementation status in Laga Tafo Laga Dadi town required observation and a land use survey. Sites one, two, and three were chosen as independent locations for field observation and a land use survey in the study area. Thus, all blocks found in the selected sites were surveyed and existing land use data was collected. The author used the 2009 structure plan as the base map before the visit, creating and assigning numbers to each block of the sample sites. Data were then collected over the sequence of five days from 12 November 2022 to 16 November 2022.

4.4.1. Sample Site One: Tafo River area

The Tafo River bounds this location, which consists of thirty-one blocks. The river's state was impacted by the expansion of informal residential development. A 30-meter river buffer is supposedly proposed along the river in the structural plan, but in reality, only less than half implemented. Additionally, the town's proposed land use plan indicated commercial development along the main road in this area, which is currently occupied by residential development and mixed use with only three blocks are implemented. According to the existing land use, block 6, 18 and 23 (B3 and B5) in Figure 4.8 are commercial while those on the proposal about nine blocks are commercial uses as seen in Figure 4.9. According to survey data, Block nine (B9) is entirely occupied by a social service organization (church) and residential while it is proposed for Manufacturing and storage activities. Block 11, 19 and 26 are proposed for environment and recreation which all are violated and used for residential use in contrast to proposed structure plan of the town. Also, the town's proposed land use plan does take into account the size of the roads or the pavement materials, which does it execute the street networks as specified. Block size and configurations that are created haphazardly are therefore impacted by the lack of street network implementation in accordance with the plan (Figure 4.8 and Table 4.4).

Table 4.4: Land Use Plan Implementation Extent (Site One)

Block Code	Existing land Use		Proposed Land Use	Status of Proposed Land Use Plan Implementation
	Land Use Type	Area in ha		
B1	Recreation and Environment	0.89	Recreation and Environment	Partially Implemented
B2	Residential	0.64	Commercial	Violated

B3	Residential	0.25	Residential	Implemented
B4	Residential	0.18	Residential	Implemented
B5	Residential	0.23	Residential	Implemented
B6	Commercial	0.22	Commercial	Implemented
B7	Mixed Use	0.64	Commercial	Violated
B8	Residential	0.26	Commercial	Commercial
B9	Residential/Service	0.37	Manufacturing	Violated
B10	Residential/Service	0.29	Service	Partially Implemented
B11	Residential	1.10	Residential and Buffer	Partially Implemented
B12	Residential/Service	0.75	Residential	Partially Implemented
B13	Residential	0.95	Residential	Implemented
B14	Service/Residential	7.53	Service	Partially Implemented
B15	Mixed Use	1.17	Commercial	Violated
B16	Mixed Use	0.53	Commercial	Violated
B17	Mixed Use	2.17	Commercial	Violated
B18	Commercial	1.13	Commercial	Implemented
B19	Residential	0.72	Environment and Recreation	Violated
B20	Residential	0.43	Residential	Implemented
B21	Residential	1.50	Residential	Implemented
B22	Residential	0.41	Residential	Implemented
B23	Commercial	1.51	Commercial	Implemented
B24	Residential	0.69	Residential	Implemented
B25	Residential	0.51	Residential	Implemented
B26	Residential	0.60	Environment and Recreation	Violated
B27	Residential	0.31	Service	Violated
B28	Mixed use	1.49	Commercial	Violated
B29	Residential	0.28	Residential	Implemented
B30	Residential	2.41	Residential/Commercial	Partially Implemented
B31	Residential	0.30	Commercial	Violated
Total		39.04		

Source: (Own Survey, 2022)

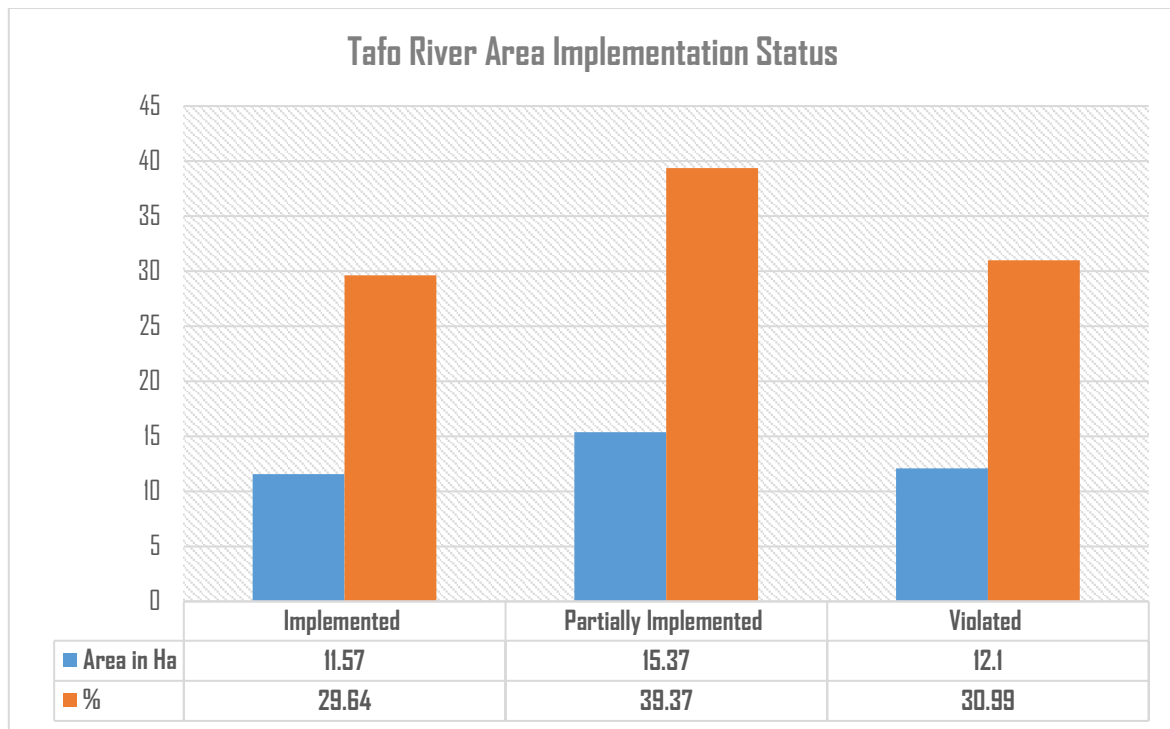


Figure 4. 8: Implementation Status of Land Use Plan of Tafo River Area (Site One)

Source: (Field Survey, 2022)

Generally, out of 39.04 hectares evaluated only 11.57 hectares (29.64%) are implemented according to proposed land use plan of the town. Whereas, 12.1 hectares (30.99%) and 15.37 hectares (39.37%) are violated and partially implemented respectively (Figure 4.8). In line with this, interviewees also confirm that, implementation of proposed land use plan in the study area is quite low around commercial corridors in the town which is happens because of the proposed block and street network are highly dissimilar to existing one which make the implementation harder.

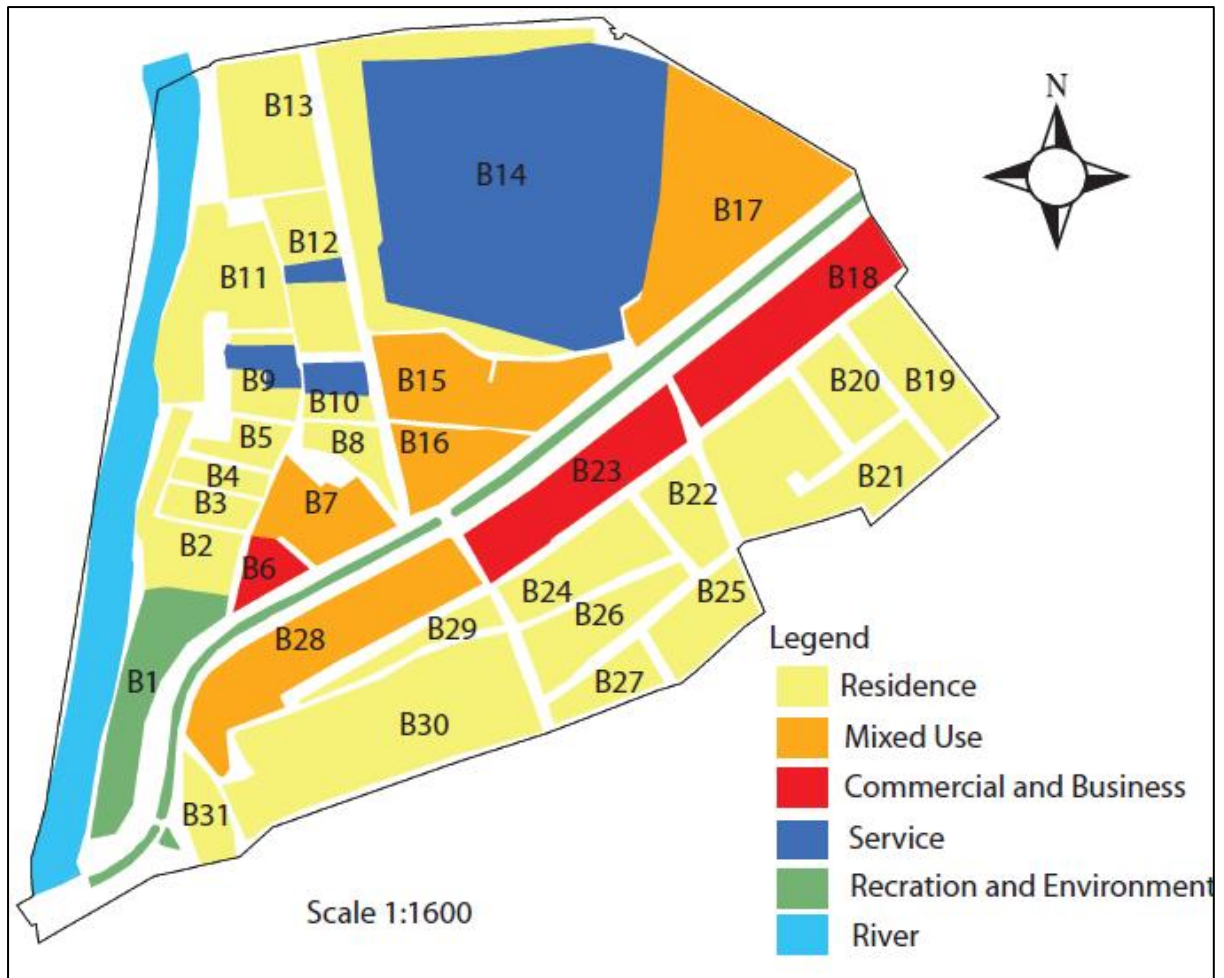


Figure 4.9: Existing Land Use Map of Site One

Source: (Own Survey, 2023)



Figure 4.10: Proposed Land Use Plan of Site One
 Source: (Structure Plan of the Town, 2009)

4.4.2. Sample Site Two: Dirre Area

This site, out of the ones chosen, has the most unimplemented land use plans. The urban form of the proposed site is entirely distinct from that of the current one. On the town's proposed land use plan of structure plan, a regular street network with a regular width is clearly suggested; however, it is not actually implemented. Irregular blocks that go against the plan are the result of the lack of a street network proposal. Furthermore, there are proposed green spaces and buffers that are partially present on the existing land use. Only four of the site's twenty blocks is implemented in accordance with the town's proposed land use plan as indicated in Table 4.5 and Figure 4.12, 4.13. In agreement with this, the interview source also mentioned that somehow this area has been offered for commercial use to act as a business centre for the nearby neighbourhoods, but there has been little progress on its implementation.

Although the presence of transportation stations and street intersections encourages business activity, it is not implemented properly. Additionally, according to the town's urban planner, Dirre is one of the secondary centers of the town with a commercially active area; however, block layout and commercial development in the area were hampered by the lack of a street network implementation. In summary, the data showed that the Dirre area's land use plan implementation was among the lowest, which had a significant impact on people's quality of life and urban growth as a whole.

Table 4.5: Land Use Plan Implementation Status of Site Two

Block Code	Existing Land Use		Proposed Land Use	Status of Land Use Plan Implementation
	Land Use Type	Area (in ha)		
B1	Mixed Use	1.79	Commercial	Violated
B2	Residential	0.24	Residential	implemented
B3	Recreation and Environment	0.26	Buffer	Implemented
B4	Recreation and Environment	2.41	Commercial and Residential	Violated
B5	Residential	0.15	Commercial	Violated
B6	Residential	2.05	Commercial	Violated
B7	Residential	0.94	Commercial	Violated
B8	Mixed Use	0.18	Commercial	Partially Implemented
B9	Mixed Use	0.93	Commercial	Partially Implemented
B10	Residential	1.13	Commercial	Violated
B11	Residential	0.95	Residence	Implemented
B12	Social Service	0.08	Commercial	Violated
B13	Administration	0.72	Commercial	Violated
B14	Residential	2.7	Commercial/Residence	Partially Implemented
B15	Residential	3.18	Commercial/Residence	Partially Implemented
B16	Residential	1.84	Commercial/Residence	Partially Implemented
B17	Residential	0.74	Commercial	Violated
B18	Residential	2.4	Commercial	Violated
B19	Residential	0.63	Commercial	Violated
B20	Residential	0.59	Residence	Implemented
	Total Area	23.91		

Source: (Field survey, 2022)

Only 15% of Dirre area (site two) of proposed land use plan is implemented (Figure 4.11). In addition, about 36.9% is partially implemented whereas; majority (48.06%) of this site, Dirre area is not implemented as per proposed land use plan of the study area.

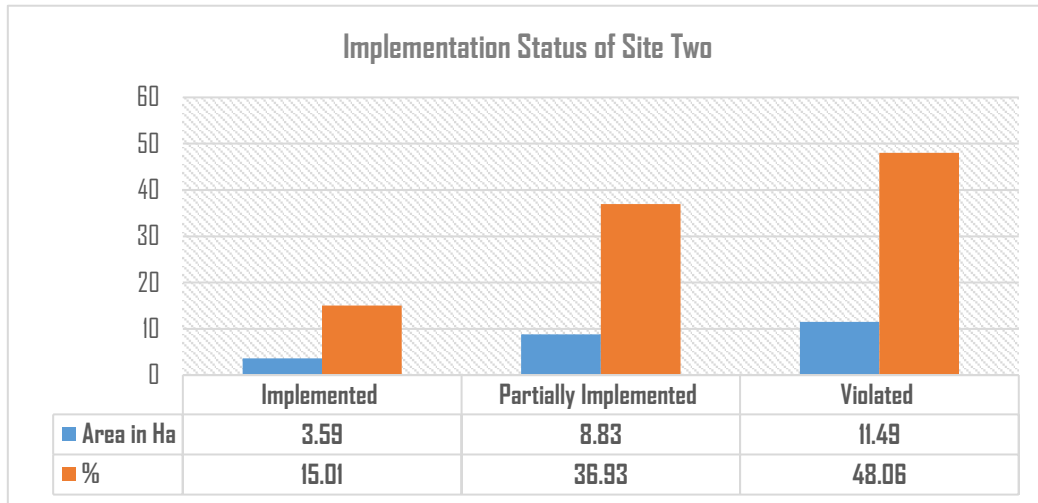


Figure 4. 11: Implementation Status of Land Use Plan of Dirre Area (Site Two)
Source: Field Survey (2022)

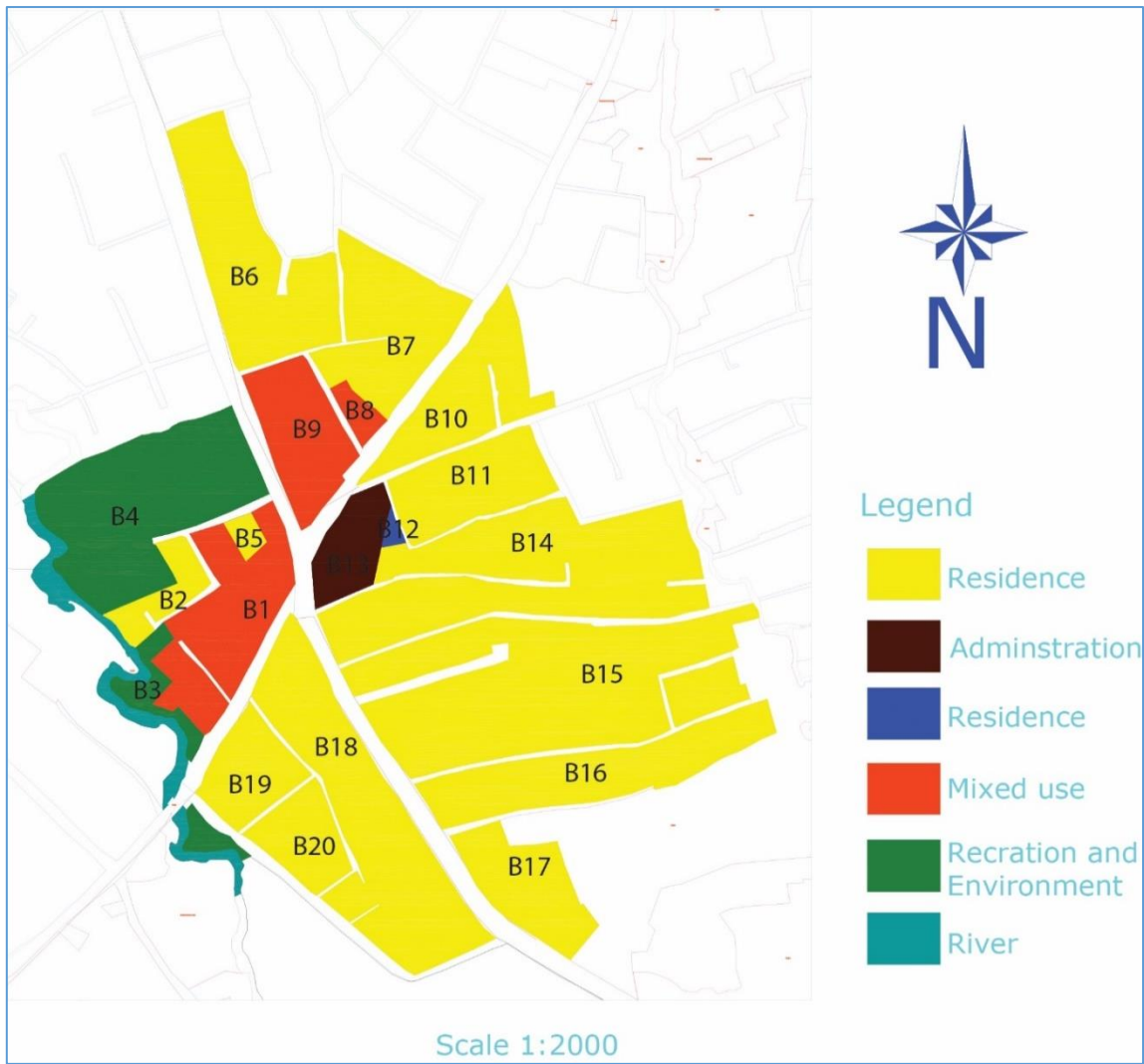


Figure 4.12: Existing Land Use Map of Site Two
 Source: (Field survey, 2023)



Figure 4.13: Proposed Land Use Plan of the Site Two

Source: (Structure Plan of the Town, 2009)

4.4.3. Sample Site Three: Laga Dadhi Area

The third sample site for the land use survey is the Laga Dadhi cattle market area, which is situated next to a main road that runs through the town. The researcher noticed that the site has the potential for linear commercial development along the road. The site is attractive for such development due to its location, accessibility, and some already-existing land use activities on the along main street. Correspondingly, this area is designated for commercial and some manufacturing activity in the town's proposed land use plan. A cattle market and a slaughterhouse are also shown on the proposed land use map in this area. As can be observed from Table 4.6, Figure 4.14 and 4.15, the only activities that are actually carried out on the ground are cattle markets and slaughterhouses. Also, the buffer zone that is meant to separate abattoirs from other activity is not in use. As indicated in the proposed land use plan, more commercial activities along major roads and collector streets are also not implemented. In addition to the survey results, urban planners of the town mentioned improperly implemented road networks and commercial activities along a main road in the neighbourhood. Other

activities that do not follow the proposed land use plan area are also taking place in the green space and buffer area. In general, the land use plan's proposed activities on this site are not carried out correctly according to the proposed land use plan document.

Table 4.6: Implementation Status of Land Plan of Site Three

Block Code	Existing land Use		Proposed Land Use	Status of Proposed Land Use Plan Implementation
	Land Use Type	Area in ha		
B1	Mixed Use	3.4	Commercial	Violated
B2	Residential	0.2	Residential	Implemented
B3	Residential	0.47	Residential	Implemented
B4	Residential	0.71	Residential	Implemented
B5	Residential	0.17	Residential	Implemented
B6	Mixed Use	0.77	Commercial	Violated
B7	Service	0.83	Commercial	Violated
B8	Residential	4.12	Residential	Implemented
B9	Recreation and Environment	2.07	Recreation	Implemented
B10	Residential	0.44	Residence	Implemented
B11	Residential	0.78	Commercial/Residence	Partially Implemented
B12	Residential	0.43	Commercial/Residence	Partially Implemented
B13	Residential	1.56	Commercial/Residence	Partially Implemented
B14	Residential	1.05	Residence	Implemented
B15	Residential	0.56	Commercial/Residence	Partially Implemented
B16	Residential/Service	1.30	Residence	Partially Implemented
B17	Residential	1.31	Commercial/Residence	Partially Implemented
B18	Residential	0.60	Commercial/Residence	Partially Implemented
B19	Residential	2.53	Commercial/Residence	Partially Implemented
B20	Residential	0.40	Commercial/Residence	Partially Implemented
B21	Residential	0.88	Commercial/Residence	Partially Implemented
B22	Residential	2.08	Commercial	Violated
B23	Residential	1.45	Residential	Implemented
B24	Residential	0.60	Residential	Implemented
B25	Residential	3.21	Commercial	Violated
B26	Residential	0.23	Commercial	Violated

B27	Commercial and Business	0.25	Commercial	Implemented
B28	Residential	0.49	Commercial	Violated
B29	Residential	2.64	Commercial	Violated
B30	Residential	1.63	Residential	Implemented
B31	Service	0.93	Residential	Residential
B32	Commercial and Business	2.16	Commercial	Implemented
B33	Residential	1.00	Manufacturing	Violated
B34	Residential	1.01	Residential	Implemented
B35	Mixed/Administration	1.23	Commercial/Administration	Violated
B36	Residential	0.98	Residential	Implemented
Total		44.47		

Source: (Field Survey, 2022)

This site locally known as Laga dadhi Cattle Market area contain 36 blocks and 44.47 hectares of land. The proposed street network implementation in this area is quite low and the urban form is completely different between what is proposed and implemented especially along major road. On the town's proposed land use plan of structure plan, this area is designated for commercial uses along the road and residential, of course with other land use types also proposed. However, it is not fully implemented. According to Figure .40.2% of the blocks (17.88hectares of land) are violated in this site where as 20.9% (9.28 hectares) are partially implemented. In contrast to other sites about 38.9% (17.31 hectares) of proposed land use types in the site are fully implemented in the site. In line with this, the interviewees also mentioned that somehow this area has been offered for cattle market (which is implemented) to act as a business centre for the nearby neighbourhoods and the whole city, but there has been little progress on its implementation apart from market, residential areas and its surrounding few blocks. In agreement with this, the town's urban planner, among implemented or partially implemented in status. In summary, the data showed that the Laga Dadhi area's land use plan implementation was among the best one (Figure 4.14 and Table 4.6), which had a significant impact on people's quality of life and urban growth as a whole.

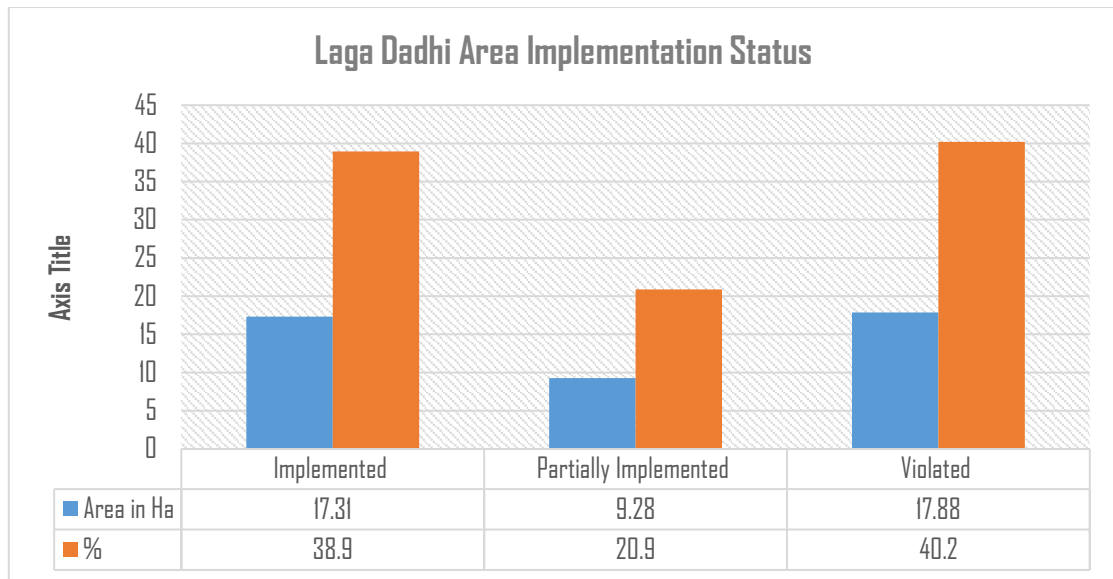


Figure 4. 14: Implementation Status of Land Use Plan of Laga Dadhi Area (Site Three)

Source: (Field Survey, 2022)

As presented in the Figure 4.14, 4.15 and Table 4.6 majority of the proposed land use plan in the area are violated and not fully implemented. Furthermore, most of the area is occupied by residential type of land use whereas; the proposal part is designed for commercial according to Figure 4.16.

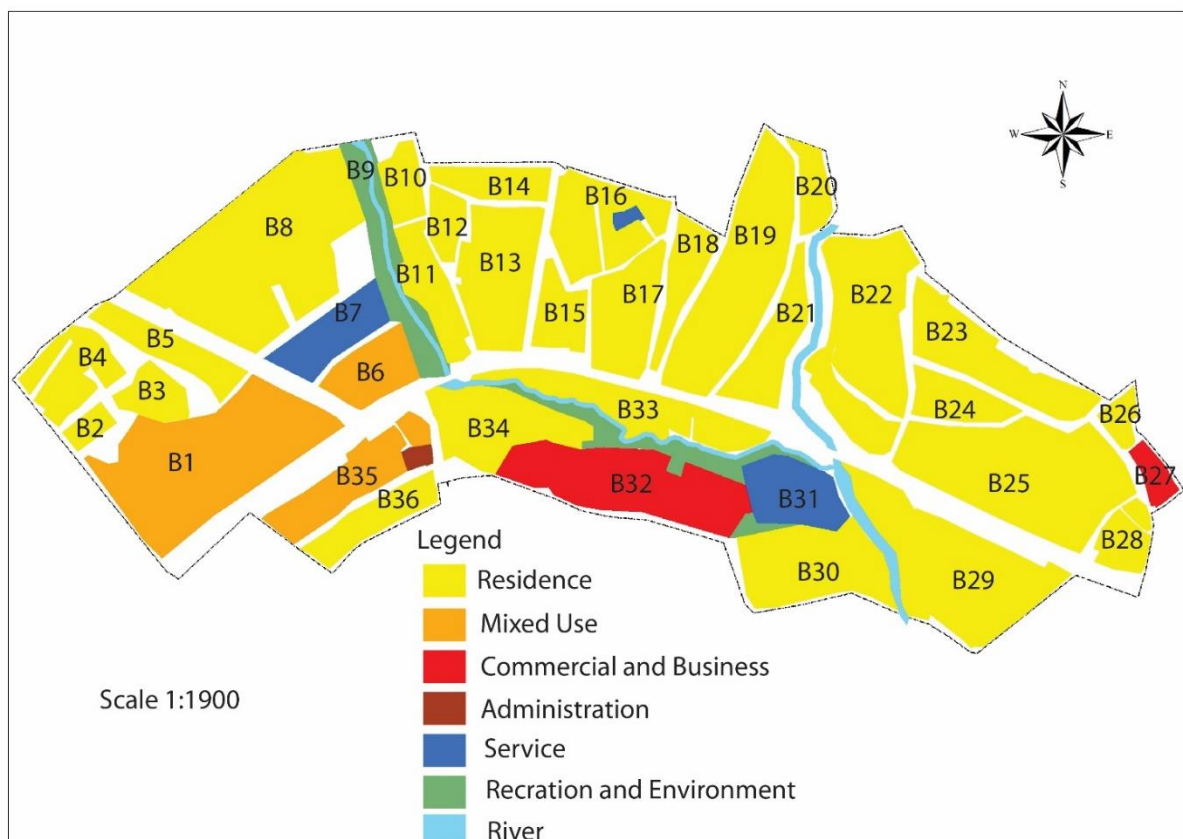


Figure 4.15: Existing Land Use Map of Site Three

Source: (Field Survey, 2023)



Figure 4.16: Proposed Land Use Plan of Site Three

Source: (Structure Plan of the Town, 2009)

4.4.4. Sample Site Four: Zoble Area

This site locally known as Zoble Market area contain 22 blocks and 22.41 hectares of land. Street network implementation is better than the other three selected sites, block formation are similar to proposed block apart from market areas. On the town's proposed land use plan of structure plan, this corridor is designated for commercial uses, however, it is not fully implemented. Out of 22 blocks only four blocks are implemented whereas, four blocks are partially implemented and majority of blocks (13 in numbers) are not implemented according to the Table 4.7. In agreement with this, the interview source also mentioned that somehow this area has been offered for commercial use to act as a business centre for the nearby neighbourhoods, but there has been little progress on its implementation apart from market and its surrounding few blocks. Additionally, according to the town's urban planner, this area is the second commercial corridor in the town, its implementation is very low. furthermore, he suggested its implementation will be accelerated in coming years because of the under-construction asphalt concrete street in the area which have main role in attracting business activities. In summary, the data showed that the Zoble area's land use plan implementation was

among the lowest (Figure 4.18 and Table 4.7), which had a significant impact on people's quality of life and urban growth as a whole.

Table 4. 7: Implementation Status of Land Use Plan of Zoble Area (Site Four)

Block Code	Existing Land Use		Proposed Land Use	Status of Land Use Plan Implementation
	Land Use Type	Area (in ha)		
B1	Commercial	5.5	Commercial	Implemented
B2	Commercial	2.97	Commercial	Implemented
B3	Residential	1.4	Commercial	Implemented
B4	Residential	2.35	Commercial	Violated
B5	Residential	0.53	Commercial	Violated
B6	Residential	0.41	Commercial	Violated
B7	Residential	0.35	Commercial	Violated
B8	Residential	0.95	Commercial	Partially Implemented
B9	Residential	0.72	Commercial	Partially Implemented
B10	Residential	1.34	Commercial	Violated
B11	Under Construction	0.85	Commercial	Partially Implemented
B12	Residential	0.96	Commercial	Violated
B13	Residential	0.73	Commercial	Violated
B14	Manufacturing and Storage	1.05	Manufacturing and Storage	Implemented
B15	Residential	2.58	Commercial	Violated
B16	Recreation and Environment	0.47	Commercial	Violated
B17	Under Construction	0.68	Commercial	Partially Implemented
B18	Residential	1.53	Commercial	Violated
B19	Recreation and Environment	0.32	Recreation and Environment	Implemented
B20	Residential	1.52	Commercial	Violated
B21	Residential	0.51	Commercial	Violated
B22	Recreation and Environment	0.69	Commercial	Violated
Total Area		28.41		

Source: (Field Survey, 2022)

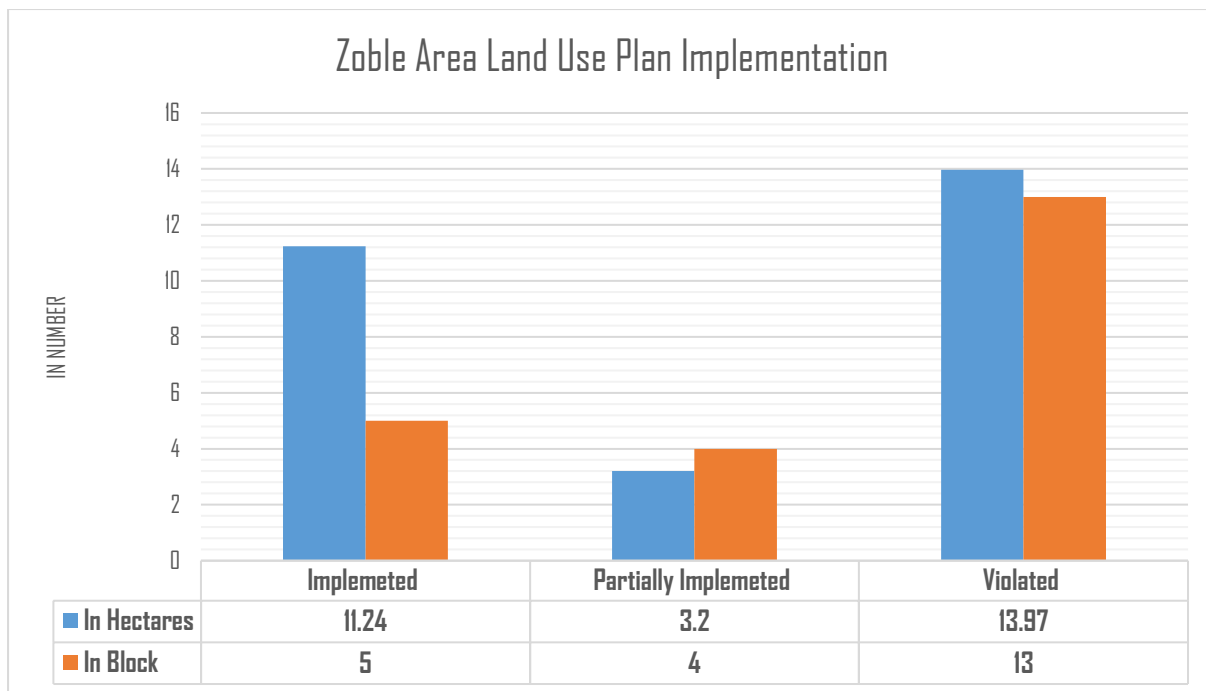


Figure 4. 17: Implementation Status of Land Use Plan of Zoble Area (Site Four)

Source: (Field Survey, 2022)

As presented in the Figure 4.17, 4.18 and Table 4.7 majority of the proposed land use plan in the area are violated and not fully implemented. Furthermore, most of the area is occupied by residential type of land use whereas, the proposal part is designed for commercial according to Figure 4.19.

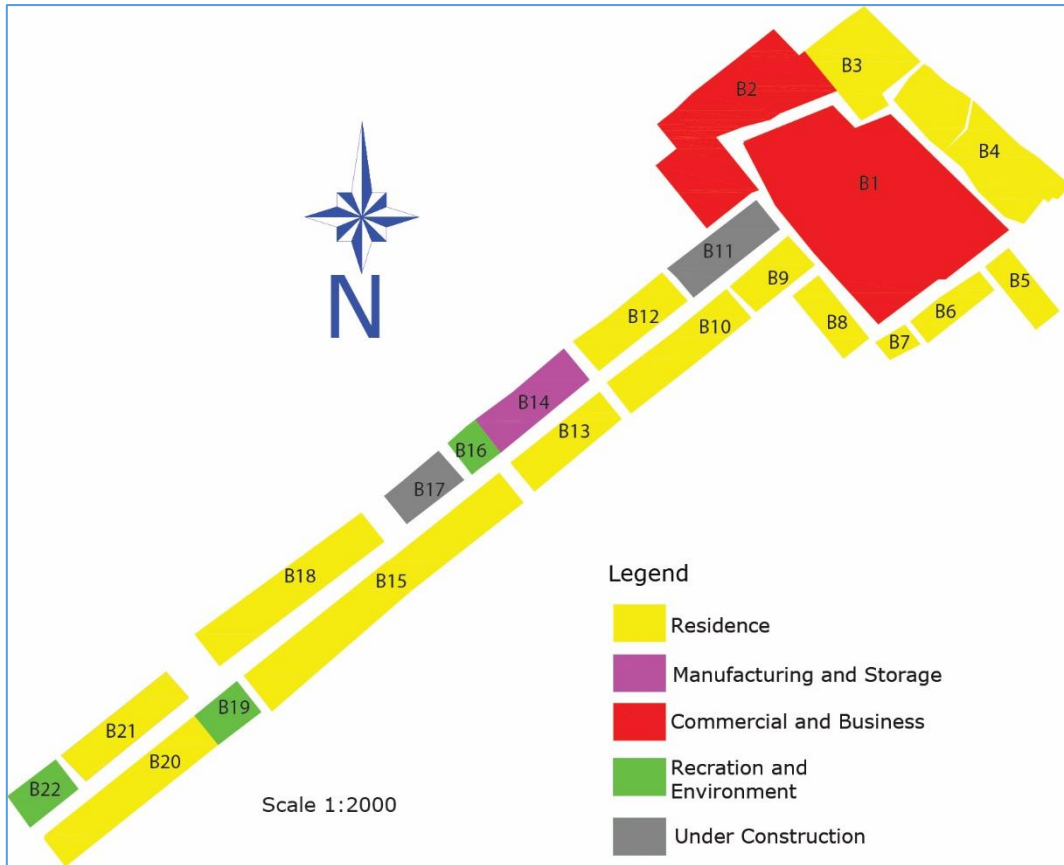


Figure 4. 18: Existing Land Use of Site Four
Source: Field Survey (2022)

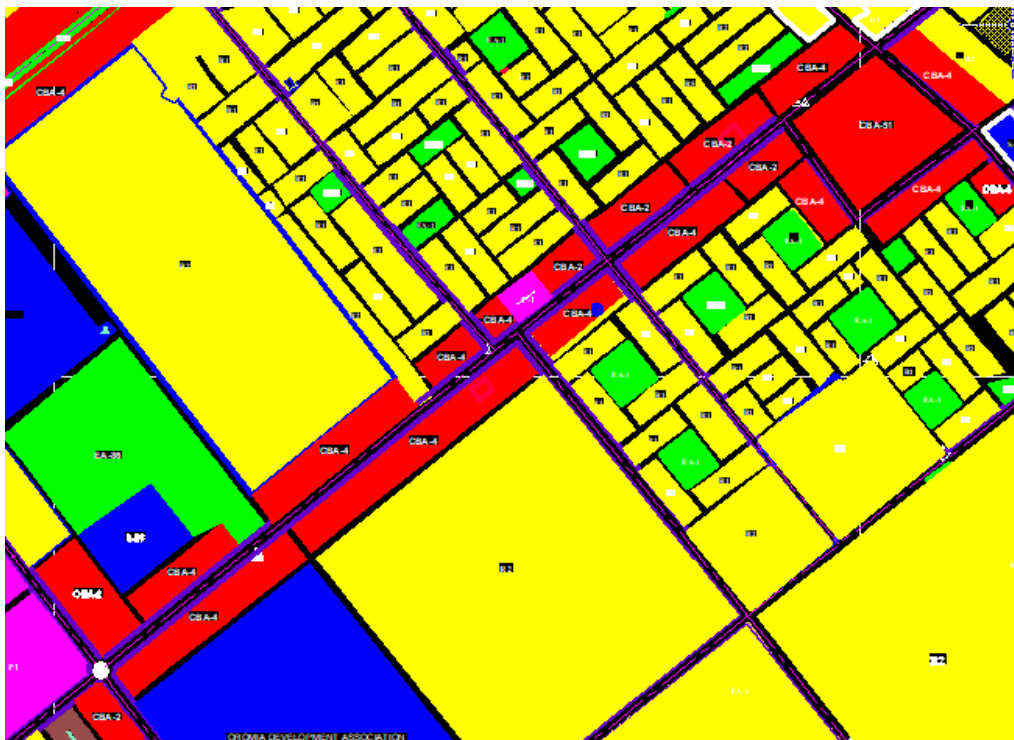


Figure 4. 19: Proposed Land use of Site Four
Source: Laga Tafo Laga Dadi Structure Plan (2009)

4.4.5. Summary of Implementation Status of Land Use Plan in the Study Area

Implementation status of proposed land use plan of Laga Tafo Laga Dadhi town is quite low with only **32.18%** plan is implemented which is below one third as indicated in Table 4.8. Totally, land use plan implementation status of 109 blocks in four different sites on 135.83 hectares of land are evaluated. Thus, only 43.71 hectares (32.18%) are implemented as per propose land use plan of the town. Whereas 36.68 hectares (27%) of proposed plan is partially implemented as depicted in Table 4.8, and Figure 4.20 and 4.21. Furthermore, plan on 55.44 hectares (40.82%) of land is violated and not implemented according to proposed land use plan which shows that the town's level of implementation is quite poor. Interviewee result also indicated that, land use plan implementation the study area is very low. This has also been confirmed by key informant interviewees, who emphasized that the town's expansion and development are not guided and managed effectively by the town's proposed land use plan, which has seriously hampered the town's overall urban growth and development.

Table 4.8: Summary of Existing Land Use Survey

Sample Sites	Numbers of Block	Total Area in Hectares	Implementation Status in hectare			Percentage of Implementation
			Implemented	Partially Implemented	Violated	
One	31	39.04	11.57	15.37	12.1	29.64
Two	20	23.91	3.59	8.83	11.49	15.01
Three	36	44.47	17.31	9.28	17.88	38.9
Four	22	28.41	11.24	3.2	13.97	39.56
Total	109	135.83	43.71	36.68	55.44	32.18%

Source: (Field survey, 2023)

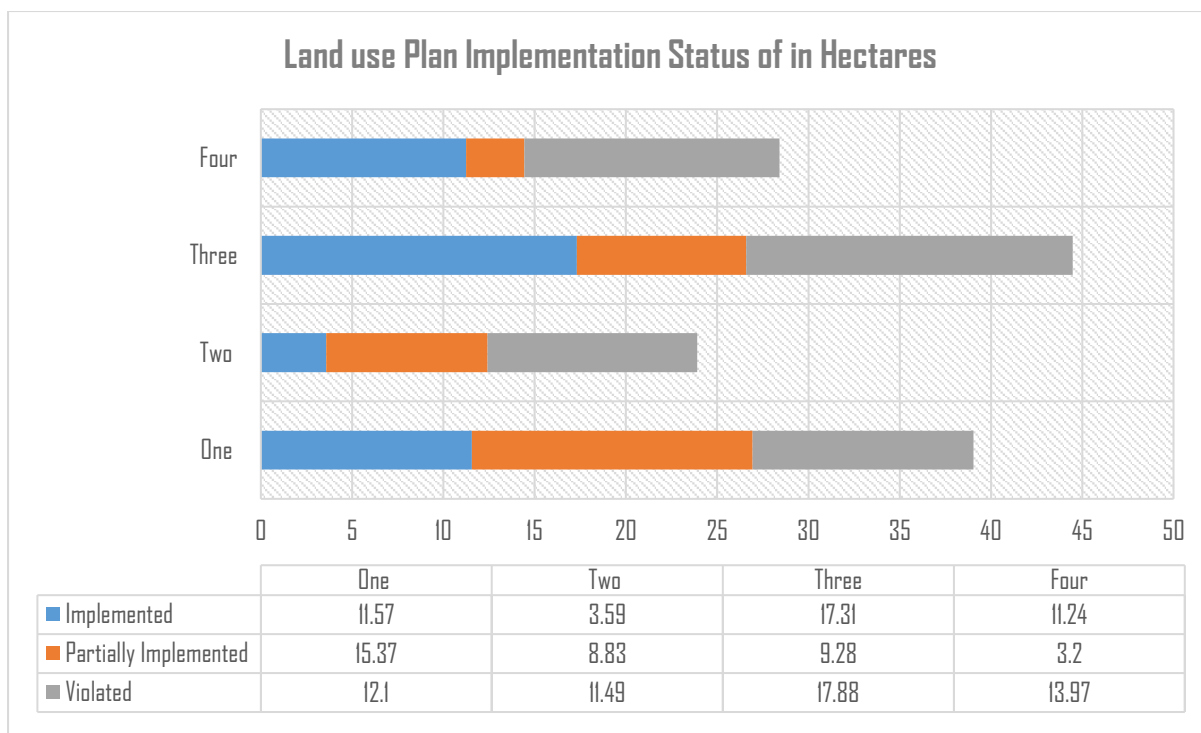


Figure 4. 20: Land Use Plan Implementation Status of Land use Plan in the Study Area

Source: (Field Survey, 2022)

4.5. Challenges of Land Use Plan Implementation in Laga Tafo Laga Dadi Town

Major challenges of land use plan implementation in Laga Tafo Laga Dadi town indicated that they are not too different from other areas' challenges which are identified from the works of literature. Based on the findings, the major challenges of land use plan implementation in the study area are presented and discussed as follows;

- a) Absence of stakeholders' involvement in plan preparation and implementation.
- b) Lack of integration and failure of different sectors to carry out their activities:
- c) Lack of monitoring and evaluation
- d) Expansion of illegal settlements
- e) Inadequate budget and manpower
- f) lack of guiding principles, strategies, standards, norms
- g) Lack of taking corrective measures and absence of proper prosecution of plan violation
- h) Interference (e.g., local governments, local people, developers)
- i) Lack of detailed land use plans in the region
- j) Corruption and
- k) Poor data management

Relative Importance Index (RII) is used to analyse the correlation between the predictors or major challenges listed above and their significance level to impact on the dependent variable as stated in chapter three under the methodology part. Thus four-point scale was given to show their significance (1- disagree, 2- neutral, 3- agree and 4 for strongly agree). As stated in the methodology part of the thesis, calculation of RII the following formula is used.

$$RII = \text{Sum of weights } (W1 + W2 + W3 + W4) / AN, \dots\dots\dots \text{Equation 2: RII}$$

Where W= weights given to each factor by respondents and will range from 1 to 4. A = is the highest weight (4 in this case), and N= total number of respondents.

Based on the above formula the calculation of RII for this study was computed using Microsoft Excel. The highest response in this case A is 4.

Eleven major challenges of land use plan implementation were identified from the literature and preliminary field survey and tested by Relative Importance Index (RII) technique. The RII was computed for each challenge to identify the most significant challenges and rank them accordingly. The changes were ranked based on the RII values. From ranking the assigned to each challenge of plan implementation, it was possible to identify major important challenges of land use plan implementation in Laga Tafo Laga Dadi town.

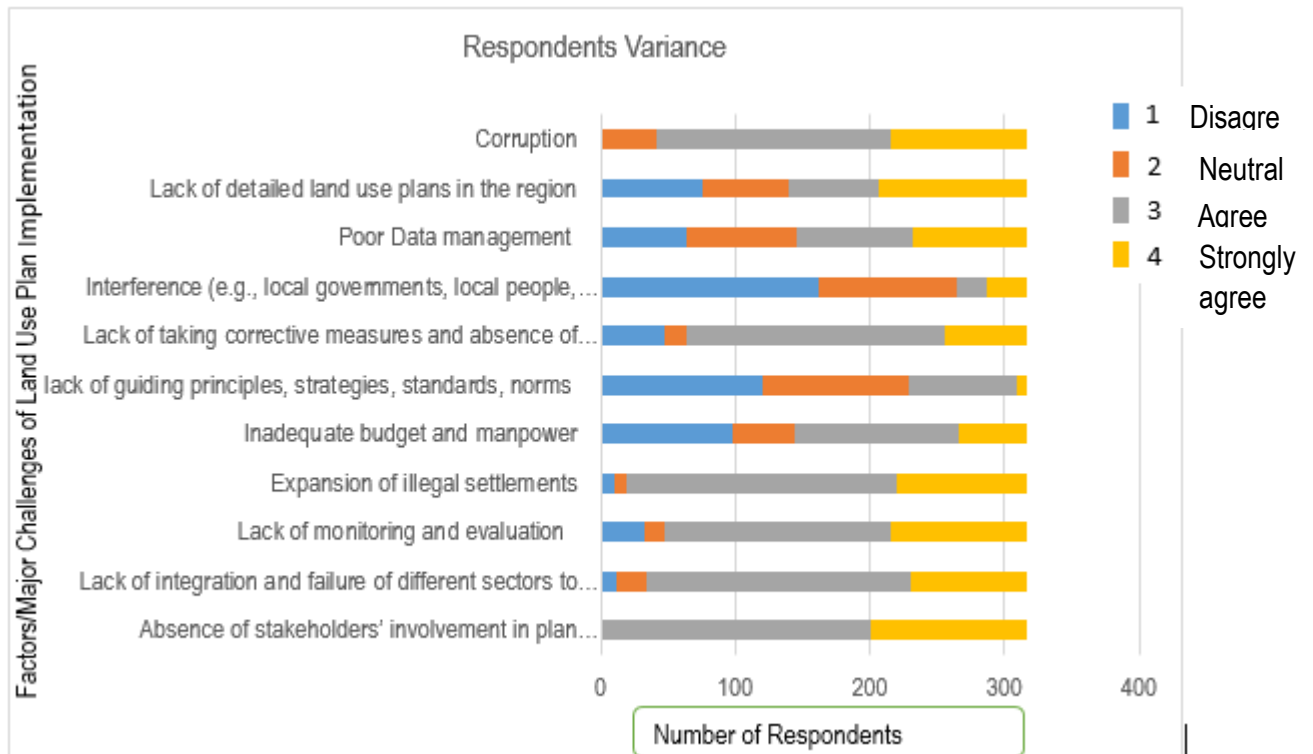


Figure 4.21: Challenges of Land Use Plan Implementation Respondent's Variance

Source: (Field survey, 2023)

Table 4.9: Critical Challenges of Land Use Plan Implementation by RII Method

No.	Variables (Major Challenges of Land Use Plan Implementation)	RII	Rank
1	Absence of stakeholders' involvement in plan preparation and implementation	0.842	1
2	Lack of integration and failure of different sectors to carry out their activities	0.782	4
3	Lack of monitoring and evaluation	0.767	5
4	Expansion of illegal settlements	0.803	2
5	Inadequate budget and manpower	0.599	9
6	lack of guiding principles, strategies, standards, norms	0.48	10
7	Lack of taking corrective measures and absence of proper prosecution of plan violation	0.71	6
8	Interference (e.g., local governments, local people, developers)	0.438	11
9	Poor Data management	0.617	8
10	Lack of detailed land use plans in the region	0.667	7
11	Corruption	0.797	3

Source: (Field survey, 2022)

Based on Table 4.9, Figure, 4.23, the absence of stakeholders' involvement in plan preparation and implementation in the study area has the highest score with an RII value of 0.842 and is closely followed by the expansion of illegal and informal settlements with a 0.803 RII score. Thus, this implies most of the respondents agreed that these two challenges are the most significant obstacle to land use plan implementation in the study area. Corruption and lack of integration and failure of different sectors to carry out their activities are third and fourth with RII values of 0.797 and 0.782 respectively. Lack of guiding principles, strategies, standards, norms and Interference (e.g., local governments, local people, developers) are the least challenges tested with a score of RII of 0.480 and 0.438 respectively, thus, according to the result these two challenges are not significant problems of land use plan implementation in the

study area since the score found to be less than average (0.500). Generally, all contributing factors identified from the literature are significant except lack of guiding principles, strategies, standards, norms and Interference (e.g., local governments, local people, developers)

4.5.1. Absence of stakeholders' involvement in plan preparation and implementation.

By efficiently interacting with the public and resolving disagreements in a cooperative way, stakeholder involvement promotes a beneficial relationship between a government and the resident. Without proper consultation, decisions about any urban planning including land use planning frequently fail to provide the expected outcomes and have a detrimental influence on society, which encourages unrest. Making sure a wide range of viewpoints are taken into account aids decision-makers in better understanding the connections between and nature of the issues facing the city. Moreover, stakeholders' engagement fosters respect for participants' opinions, increases participants' interest in planning and increases their impact on land use planning and public life. When competing arguments and points of view are taken into account, there is a considerably higher likelihood that support from the general public will improve the result. This has wider repercussions for creating a vibrant civil society (UN-Habitat, 2018). According to key informants, stakeholder involvement in the town's structure plan preparation, which is handled by OUPI, was almost non-existent at various stages. In particular, professionals from various sectors of the town feel that they were ignored throughout the process and only invited for the final presentation of the plan before approval. In a similar vein, farmers who are significantly impacted by urbanization claimed in an in-depth interview that they were never invited nor represented during the drafting of the structure plan. Furthermore, they claimed that because there was little stakeholder input, the plan overlooked them and paid little attention to the integration of farmers with urban settlement and urban farming. The absence of stakeholders' involvement in plan preparation and implementation in the study area has the highest score with an RII value of 0.842 which makes this challenge the most critical of all. Furthermore, the survey's findings also showed that just roughly 8%, or 26 out of 317 participants, participated in and consulted about the plan's creation as shown in Figure 4.25. Therefore, one of the main challenges to implementing the land use plan in the study area is the absence of stakeholder participation at various stages.

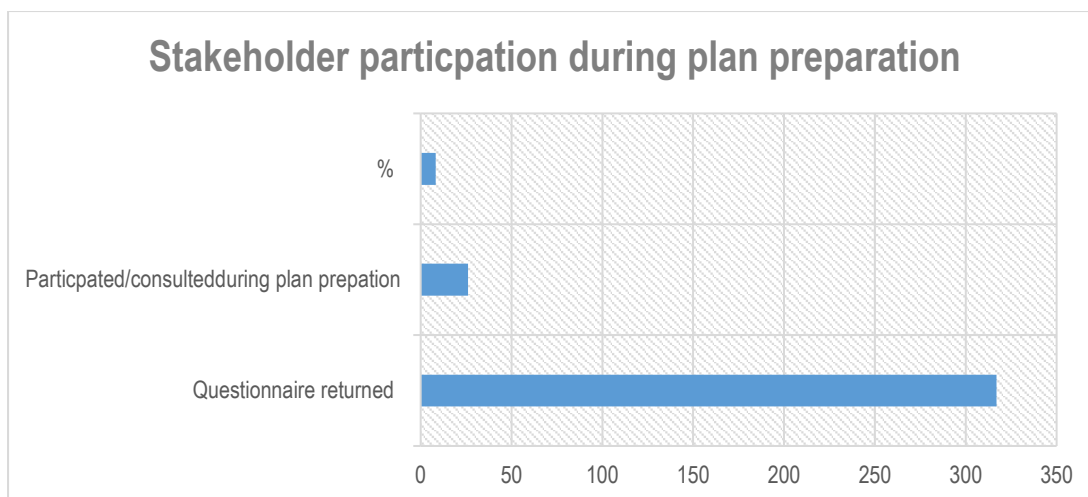


Figure 4.22: Stakeholder Participation During Plan Preparation of the Study Area

Source: (Own Survey, 2022)

4.5.2. Expansion of informal and/or illegal settlements

The expansion of illegal and informal settlements in Laga Tafo Laga Dadi town is also another significant challenge to land use plan implementations. According to the RII result, almost all respondents agreed upon this fact and ranked second with a value of 0.803 Figure 4.23. In line with this, Zina and Sana Sati (2014) illustrated how unauthorized land subdivision in urban environments begins with an unexpected invasion of land that is reserved for other uses without legal authority, for a particular group of people, where they reside their homes, without official permission from land use plan implementers, which turns into a major challenge when land use plan is implemented in accordance with the structure plan.

In the study area context these types of settlements are known as ‘Mena Adesa’. Mena Adesa literally translates as "home of the moon," suggesting that illicit house building takes place at night. These settlements are constructed without the administration of the town's approval and without a permit issued by the town. So, building such housing is not regarded as part of the town's structure plan or of the activities designated to specific locations. Urban planners from the land management offices of the towns also emphasized how well organized and rapidly expanding informal communities are becoming, with people from the capital city and even from abroad funding the construction. Without any legal standing, they purchased the land from farmers and began to settle it in groups, In-depth interviews with the farmers, revealed that they also took part in informal land transfers to individuals due to the town government's expropriation of their land and the extreme low compensation amount. They also settled in

environmentally sensitive and buffer zones. The researcher observed the construction of such settlements on river banks and outskirts of the town. As a result, being occupied by such settlements is becoming a barrier to performing land use implementation in accordance with the town's structure plan.



Figure 4. 23: Sample Photos of Informal Settlements in the Study Area

Source: Taken by Author (2023)

4.5.3. Corruption

Unfortunately, corruption is pervasive in the realm of land use planning. According to research by Francesco and Stefano (2015), the government authority and professionals that regulate the land industry are one of the public entities most affected by corruption. Corruptions can occur at various stages of the planning process; during the initiation of planning, drafting phase, and implementation phase, including monitoring and evaluation. Similarly, RII computation indicated that corruptions are the third major challenge of land use plan implementation with

the result of 0.797 table 4.9 and figure 4.23. Additionally, the results of the interviews indicate that many issues involving corruption were brought up during land use plan implementation in the study area, including the duplication of deeds on the same plot, violations of the land use plan, improper building permits, land use changes, the illegal formalization and regularization of squats, during property transfers, and others.

4.5.4. Lack of integration and failure of different sectors to carry out their activities

The involvement of many sectoral offices at various stages is necessary for an effective land use plan implementation. The Land Management Office, Cadastral Office, Construction Bureau, Investment and Urban Development Section, and Municipal Administration Sectors are the major offices involved in the plan implementation of the study region. According to key informant's saying, these sectors have been integrated under the mayor's office's leadership, but this integration only exists in theory because there are no practical integration strategies for plan implementation. The lack of regulations and a defined role for local government departments slow down the implementation of the strategy. Furthermore, these sectoral offices are not properly carrying out the necessary plan implementation operations. Moreover, RII showed that produced a result of 0.782 (Figure 4.27). Furthermore, respondents were asked to rate their opinion on whether the lack of integration and failure of different sectors to carry out their activities are among the major challenges of land use plan implementation in the study area. Thus, 27% and 62% of them responded strongly agree and agree, while 7% of the respondents remain neutral with only 4% of the respondents believed lack of integration and failure of sectors to carry out their activities are not the challenges to land use plan implementation in Laga Tafo Laga Dadi town. So, the majority of the respondents believed lack of integration and failure of the sectors are major challenges of land use plan implementation in the study area, which is also affirmed by interviewees, there is a lack of coordination and cooperation among major stakeholders of offices at municipality level.

In agreement with these, Dragana et al. (2021) claimed that one of the biggest obstacles to the implementation of urban plans is the lack of integration in various local government sectors, which has led to Serbia's low rate of plan implementation.

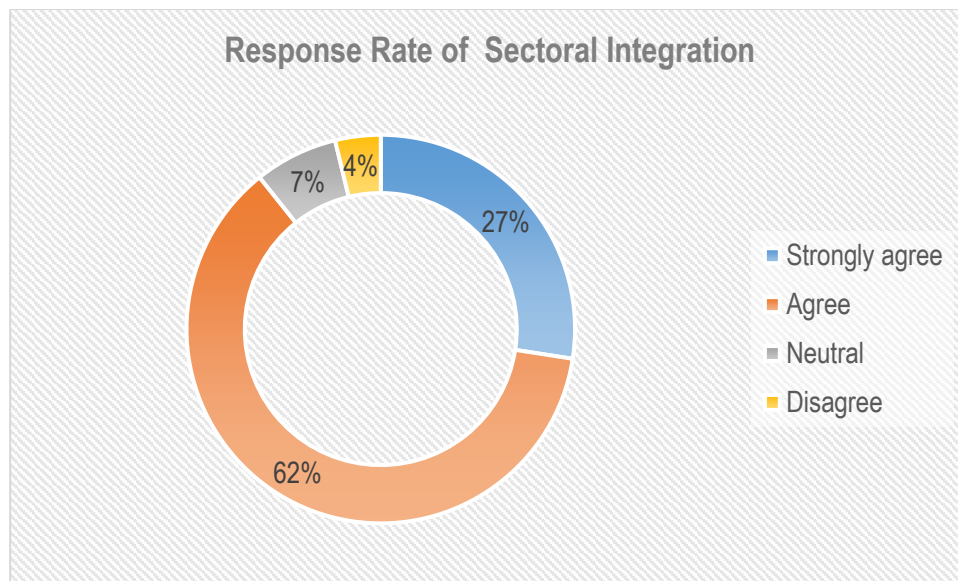


Figure 4.24: Response Rate of Indicator of Lack of Integration in the Study Area

Source: (Own Survey, 2022)

4.5.5. Lack of monitoring and evaluation

Monitoring and evaluation of urban plans are not a recent development and have long been regarded as a potent public management instrument in urban planning practice for accomplishing associated goals and objectives, promoting sustainability, and influencing decision-making. Many developing nations are still working on building and implementing these systems, although many wealthy nations have frequently employed monitoring and evaluation to manage successfully in their performing urban growth (QUYEN et al., 2018). Laga Tafo Laga Dadi town doesn't have a defined monitoring and evaluation system, like other towns in developing nations. One of the key informants from the mayor's office claimed that there is currently no mechanism in place to assess and track the implementation of land use plans. In addition, there is no accountable entity at the municipal level to create and put this system into place.

Every year, the municipality develops priority areas and phases of plan implementation and attempts to put those into practice as a monitoring system for plan execution. According to the plan, so far they gave priority to formal residential development in the town's outskirts and commercial development in urban centers (along the main road that runs from the Tafo River to the Mission area). In the initial period, they also incorporated the protection of natural areas including riverbanks, buffer zones, and hilly terrain. The researcher observed regularization of commercial development along major roads and protection of the natural environment

(riverside and sensitive area around Dale and Gora area), but other than that, there are no reports of monitoring and evaluation of the implementation of the land use plan in the study area. In accordance with this, the results of RII identified a lack of monitoring and evaluation as a fifth major barrier to plan implementation in the study area with a value of 0.767 (Table 4.9 and Figure 4.23).

4.5.6. Lack of taking corrective measures and absence of proper prosecution of plan violation

As previously mentioned, there are numerous plan violations and corruption of various kinds throughout the study area. Adopting administrative corrective actions and carrying out appropriate prosecutions of the violations are essential for reducing and alleviating these issues. Apart from the fact that there have been no legal actions taken against any of these offenses, little administrative corrective measures have been taken against employees who engaged in duplication of deeds according to the interviewees. With a score of 0.710, RII also indicated that the sixth barrier to land use plan implementation is the lack of remedial actions and proper prosecution of plan violations.

4.5.7. Lack of detailed land use plans in the town

Detailed land use plans, such as local development plans, neighbourhood plans and designs, urban designs, action plans, and others, are used to implement the structure plans of the towns. Only local development plans are prepared and used to carry out the study area's structure plan. In an effort to implement a bigger land use plan at the municipal level, OUIP and the town itself prepared eight local development plans between 2011 and 2015 E.C. About 34 detailed plans are recommended by OUIP, (2009) to implement the land use plan of the town at the time of data collection only 8 of them are prepared. According to KII Interviewees, however, the preparation of local development plans also has issues like a lack of conformity with the structure plan, a violation of the structure plan, and a lack of engagement. Thus, according to RII results, (0.667) the problem related to the detailed plan is the challenging implementation of the land use plan in the study area.

As indicated in Figure 4.28 OUIP (2009), recommended about 34 detailed urban plan to implement land use plan of the town which includes, LDP or NDP, Urban design, Action Plans and Development Plans. Thus, only 23.5% (8 LDPs) of them is prepared so far with one NDP Dire area is an ongoing which will be expected to be finalized in August, 2023 according to

professionals who are participating on the project. Thus, low accomplishments rate of detail urban plan in the town is considered among major obstacles of land use plan implementation in the study area.

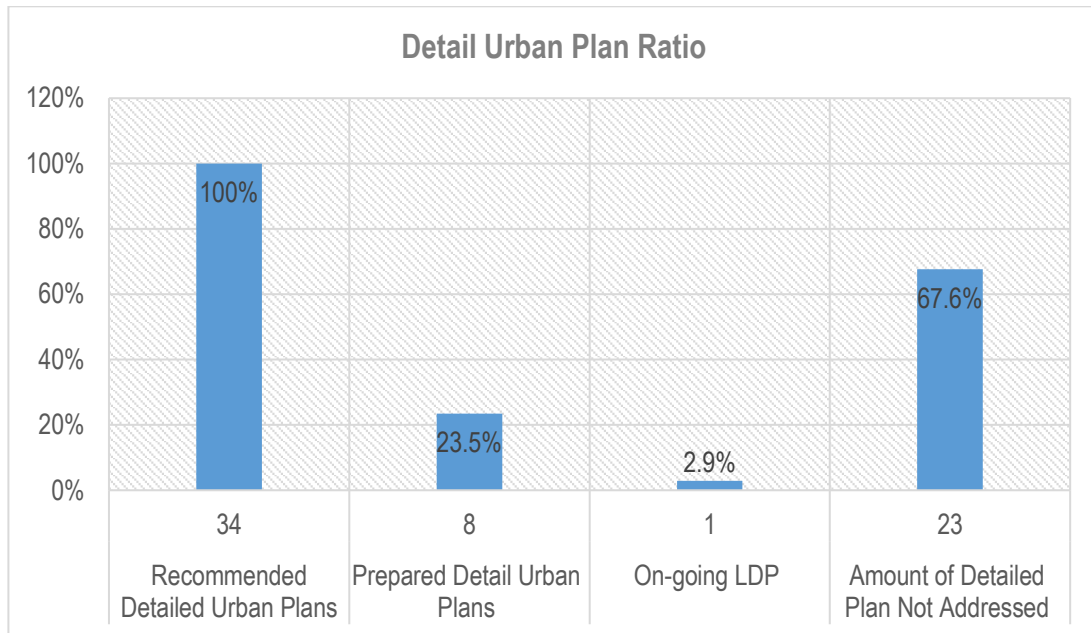


Figure 4.25: Ratio of Detailed Urban Plan in Laga Tafo Laga Dadi Town

Source: (Organized by Author, 2023)

4.5.8. Poor Data Management

There is no land management data center in Laga Tafo Laga Dadi town. RII results also affirm this with a score of 0.667. Following the preparation and acceptance of the structural plan, OUPI simply gave physical copies and electronic copies to the town administration without implementing an effective data management system in the form of GIS, AutoCAD, and report in Microsoft Word format. Hence, without a formal central data management system, all sectors and experts who took part in the implementation simply saved and managed data on their desks and laptops. Additionally, there are issues with the cadastral and land banking systems, the coding method used to distinguish one plot from another, the lack of a check and balance mechanism for the beneficiaries' access to land, and other. The researcher asked experts in the town administration if the town has a well-organized data management system and all of them responded negatively to this question (Figure 4.29) According to the experts, there are a

lot of recurrences of title deeds on a single plot, because of the absence of organized data system.

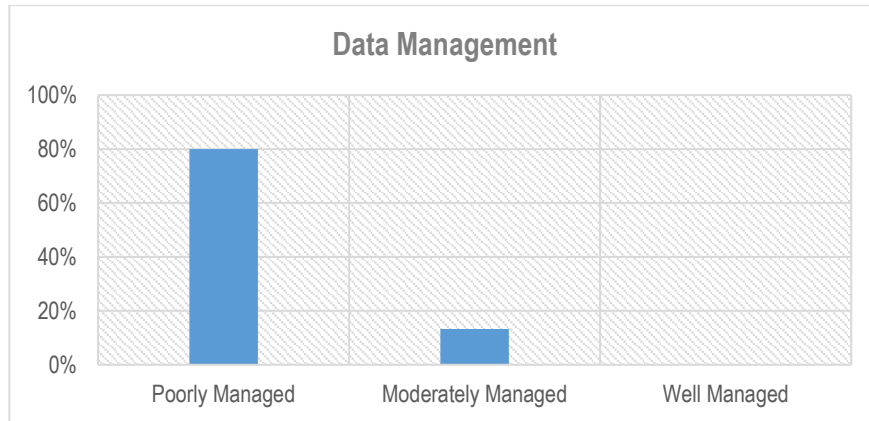


Figure 4.26: Data Management in Laga Tafo Laga Dadi Town from Experts' Perspective

Source: (Organized by Author, 2023)

4.5.9. Inadequate budget and manpower

According to a report by OUPI (2008), one of the major obstacles to the implementation of urban plans is financial and skilled manpower issues. The funding allotted to Laga Tafo Laga Dadi town is insufficient, thus, providing physical infrastructure (such as a road), basic services, waste disposal, urban parks, and others are highly challenging. The result of RII also depicted this with a figure of 0.599. The KII results also demonstrate that lack of funding is a significant barrier to implementing road construction in accordance with the structure plan. For example, only 9 km of the 28 km asphalt concert level road proposed in the structure plan was contracted out and implemented from 2011-2015 E.C., but then again its construction stage was only at 35% at the time of this interview.

4.6. The Effects of Urban Land Use Implementation Challenges in The Study Area

Lack of well implementation of urban land use plan in Laga Tafo Laga Dadi town as a result of the above stated challenges and obstacle brought numerous effects on overall urban development of the town. According to the opinions of the interview respondents, growth and development of town in all sectors are hindered by poor implementation of the plan, road and other physical infrastructure construction, housing, economic activities, degradation of

environmental amenities, lack of open space and recreational facilities are mainly the result of lack of proper land use plan implementation in the study area. Thus, the finding of this study allied with other empirical evidences such as Foley et.al (2015), Esra (2013), Vorosmarty et.al (2010) and Erwin et.al. (2008). For instance, Erwin et.al (2008) stated improper land use plan implementation impacted the expansion of urban areas toward natural environment, which result uncontrolled urban growth which further resulted urban sprawl, natural environment degradation and economic disparities among communities. Similarly, Pacione (2009) affirmed that deteriorated social equality, reduced economic progress and uncontrolled urban spatial growth are major effects of inappropriate land use plan implementation. Thus, the effects of improper urban land use plan implementation in Laga Tafo Laga Dadi town are presented and discussed as follows;

4.6.1. Uncontrolled Urban Sprawl

Lack of proper land use plan implementation in Laga Tafo Laga Dadi town because of the above listed and described problems, the urban area in Laga Tafo Laga Dadi town is expanding uncontrollably and eating precious agricultural land as well as natural resources according to experts. It results in dispersed and wasteful land use patterns, making the provision of infrastructure, public services, and transportation more challenging and expensive. Furthermore, key informants from OUPI claimed that the location of the town contributed to suburbanization from the capital Addis Ababa. The town is located about 21km from the Addis Ababa city center immediately outside the limit of the city, bordering a residentially dominant part of the city (Figure 4.26) this proximity makes the town preferable for such urban growth. In line with this, Masresha (2013), stated that Laga Tafo Laga Dadi town is located toward a residentially overriding part of Addis Ababa city than the other towns found surrounding the city in the Oromia region. Thus, land use plan implementation limitation facilitates the uncontrolled urban sprawl toward the outer parts of the town. The literature has also established that restrictions on the implementation of land use plans encourage unregulated urban sprawl outward expansion area of the cities and towns. This problem; Inadequate land use plan implementation leads to unplanned and unregulated urban growth, which is characterized by weak connectedness and disruption of natural and agricultural environments, (Gillham, 2002).

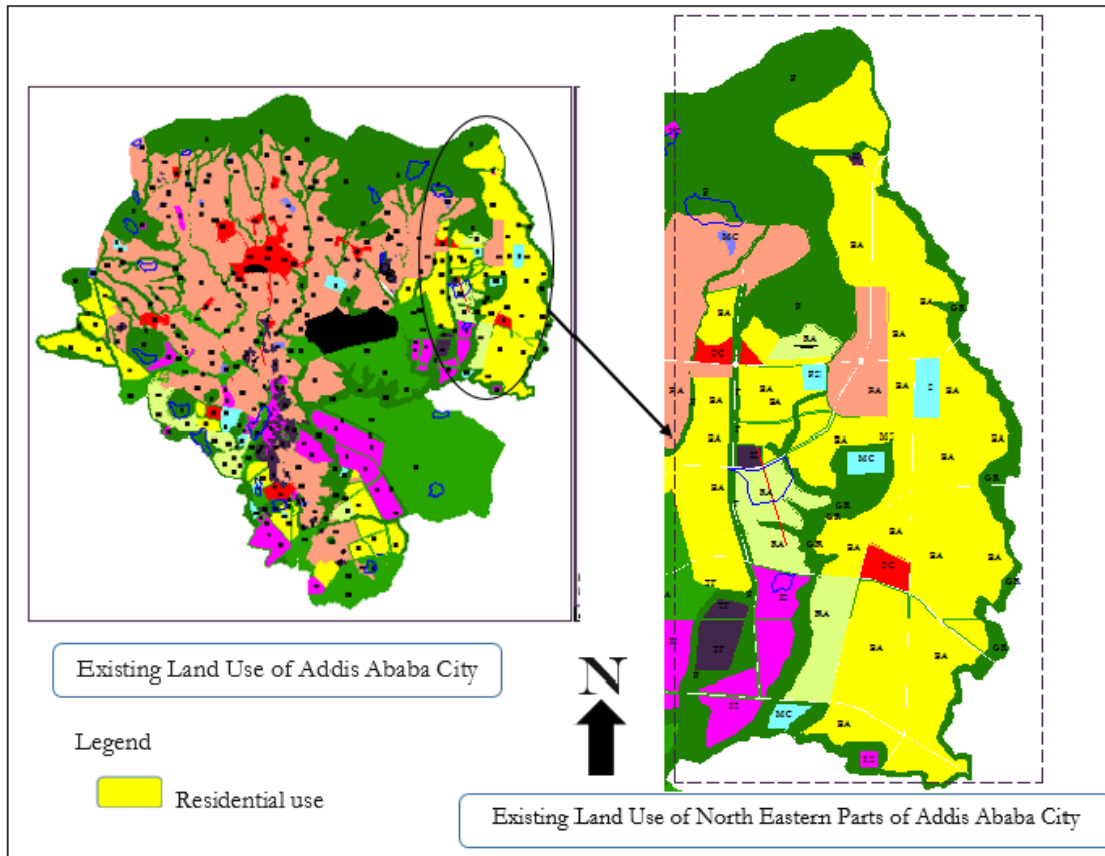


Figure 4.27: Residentially Dominated Part of Addis Ababa Bordering the Study Area

Source: (AACPPO, 2016)

Furthermore, the respondents were asked to rate their stance on whether uncontrolled urban sprawl are among the result of lack of well implementation of land use plan in the study area. Thus, as indicated on Figure 4.31, 57.6% (196) and 35.3% (120) are responded with strongly agree and agree respectively, while 1.2% (4) remain neutral and 2.4% (8) and 3.5% (12) are replied disagree and strongly disagreed. This implies, around 93% of respondents are positively responded that improper land use plan implementation in Laga Tafo Laga dadi town drastically increased uncontrolled urban sprawl in the town. Key informants also affirmed this, that urban expansion in the town especially in Dire, Laga Dadi and Gawasa area are mostly urban sprawl without guidance from the structure plan of the town and they alleged that the lack of land use plan implementations contributed for such growth. In agreement with this, Pacione (2009), also stated that such improper land use plan implementation highly increase urban sprawl in peripheral parts of the cities and town.

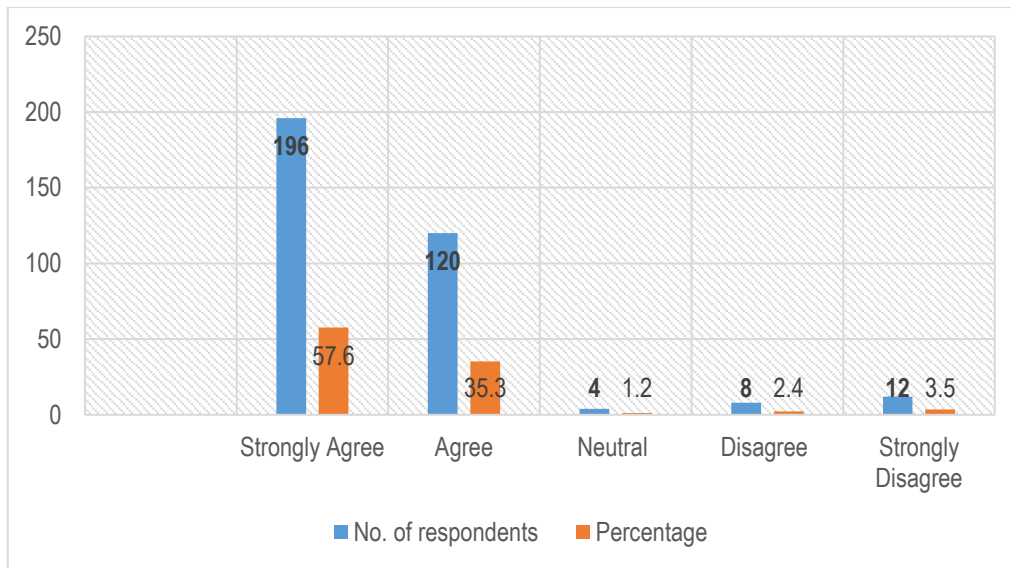


Figure 4.28: Response Rate of Effects of Lack of Proper Land use Plan Implementation

Source: (Own Survey, 2023)

4.6.2. Inefficient Land Use

The absence of a well-implemented land use plan in the study area results in minimal use for the purpose that is not optimal which leads to less efficient and less sustainable urban environments according to key informants. Lack of land use implementation in the study area causes inefficiency in urban land use as a result of incompatible land uses, land degradation, misallocation of resources, and reduced economic growth of the town according to the senior urban planners of the town. Insufficient enforcement of land use regulations in Laga Tafo Laga Dadi town led to incompatible land uses close to each other, which resulted in negative impacts on the environment, public health and quality of life. For instance, industries near residential areas in Kebele 01 of Laga Tafo Laga Dadi town as a result of land use plan implementation, where the area is proposed for residential purposes (Structure plan of town, 2009) Additionally, there is residential development along the Jala Washa area where propose forest, which causes environmental land degradation reduces its efficiency. Jianhua and Junwei (2022) also affirm that land uses economic efficiency of the urban area is highly affected by the location compatibility of land use types proposed and implemented along each other.



Kebele 01 manufacturing and storage site, surrounded by residential areas. According to proposed land use plan of the town this area is reserved for residential land use. lack of land use plan implementation resulted incompatibility of land use and reduce the efficiency as according to expert's opinion.

Figure 4.29: Kebele 01 Manufacturing and Storage area

Source: (Google Earth, 2023)

4.6.3. Environmental degradation and loss of agricultural land

As stated by a senior environmentalist of the town, poor enforcement of the land use plans caused the degradation of forests, soils, and other natural resources from hilly and environmentally sensitive areas in the town. Additionally, lands reserved for green areas, parks and open spaces in town are highly violated and used for built-up spaces, particularly for residential purposes. According to the experts and existing land use plan of the town open space and green areas constitutes 8.4% in 2015 whereas it is about 25% proposed structure plan of the town (Structure plan of the town, 2009). According to the interviewed urban planners of Laga Tafo Laga Dadi town, land cover change from agriculture to urban settlement has been increasing at a higher rate in the town in the last few years. Outer parts of the town are dominated by agricultural use, only the western and northwest parts of the town (bordering Addis Ababa city) are developed for residential types of uses. Structure plan sufficiently reserved the land for residential uses which is about 60% of built-up spaces. Unfortunately, residential type of land use only constitutes 42% of the total land reserved for built-up space in the town in 2015 (Existing Land Use Map of the town, 2009), this is caused by poor implementation of structure plan of the town and resulted informal land use change from agricultural to a residence which further caused huge loss of agricultural land in the town.



Figure 4. 30: Sample Photos of Loss of Agricultural land and Protected areas

Source: Taken by Author (2023)

The researcher asked survey questionnaire respondents whether in appropriate land use plan implementation resulted environmental degradation and loss of agricultural land in the study area. Accordingly, 62.1% and 30.3% of respondents replied with strongly agree and agree while, 0.9% remain neutral, with only 4.1% and 2.6% of them answered disagree and strongly

disagree respectively. Thus, lack of proper land use plan implementation in Laga Tafo Laga Dadi town resulted huge agricultural loss and environmental degradation.

Table 4.10: Response rate of on Environmental Degradation

Environmental Degradation and Loss of Agricultural Land	No. of Respondents	Percentage
Strongly Agree	211	62.1
Agree	103	30.3
Neutral	3	0.9
Disagree	14	4.1
Strongly Disagree	9	2.6
Total	340	100.0

Source: (own Survey, 2022)

Furthermore, due to low compensation rate at the town farmers are highly participated on informal agricultural land transfer according to interviewed farmers. Almost all of them confirm they participated on such market due to high difference in direct sell to individuals than compensation they received by government. For instance, one interviewee stressed that, they received only 36 birrs per m² of land where as they sell to 350-600 birr to individual. Thus, all land that transferred from farmers to individual are used for residential purpose whatever the proposed land use of the town is, which resulted loss of agricultural land. In line with finding, theory and empirical evidence by Ramprasad (2013) also portrayed this declaration.

4.6.4. Insufficient affordable housing

According to key informants, urban planners, and officials from the town government, the implementation of effective land use in the study area had a significant impact on the availability of a sufficient supply of affordable housing in the town. Unfortunately, the land planned for housing development purposes is absorbed by other activities, which decreases the amount of housing available. The town's structure plan allocated around 60% of land use to dwelling purposes. Also, a well-thought-out land use plan ensures that residential areas have the requisite physical and social infrastructure, including roads, power, water, and other facilities. The cost of home development is also impacted by the lack of suitable infrastructure, which discourages residential real estate investments. Selamwit et' al. (2019) also stated that

informal settlement along the town's periphery or rapid land use change from agricultural to residential types without the municipality's authorization have a significant impact on the availability of homes in Laga Tafo Laga Dadi town. According to the town's urban planners, there has been a recent increase in residential housing development due to a number of factors. For example, real estate developers like CCD, Rosetta, and Ropak are heavily involved in this type of investment, even though nearly all of these developer firms target the housing demand in Addis Ababa city. These occurrences also contributed to the town's people' lack of access to affordable homes. Survey results also affirm this (Figure 4.34) with the result of 53.5% (182) and 41.8% (142) of the respondents strongly agree and agree to the phenomena of insufficient affordable housing in the study are boosted by the lack of proper implementation of land use plan, with less five percent think otherwise.

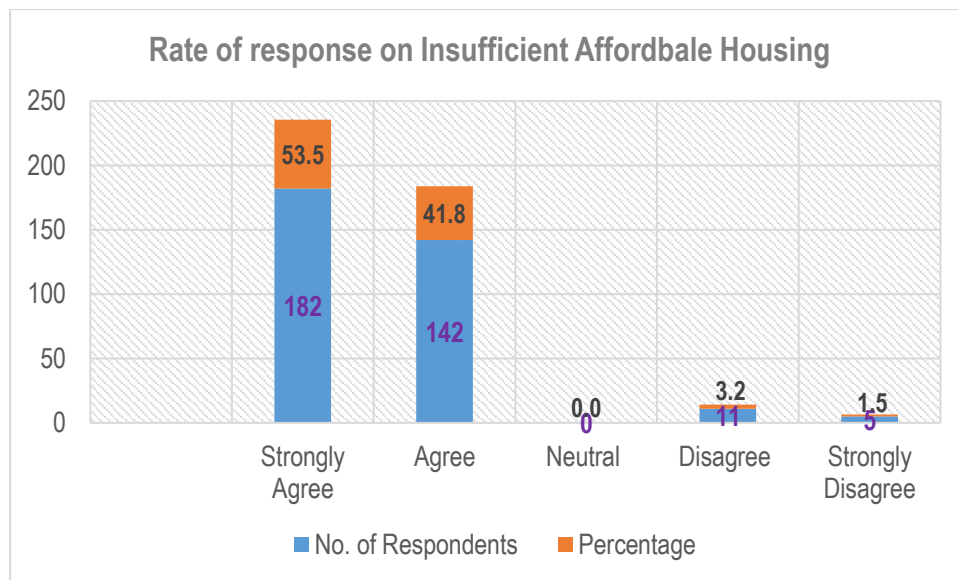


Figure 4.31: Survey Result of Poor Land Use Plan Implementation on Housing

Source: (own Survey, 2022)

In conclusion, maintaining an adequate supply of affordable housing requires a carefully implemented land use plan in the town. Such plans can encourage effective land use, access to necessary resources, and appropriate coordination among stakeholders, ultimately resulting in a decrease in housing costs and a rise in the number of options for individuals in need of cheap housing.

4.6.5. Social and economic inequalities

Due to the lack of a well-implemented land use plan, there are significant social and economic disproportions in the study area. Researcher has found that places with fully executed land use plans have stronger physical and social infrastructure, as well as natural advantages like open spaces and green areas. The government finds it difficult to provide social and physical infrastructure in regions where development has deviated from the town's structure plan, which results in significant social and economic imbalances in the community according to the interviewees. Nonetheless, the municipality attempted to address the supply of infrastructure and economic activity chances toward such settlements by implementing a regularization program, which did not produce the desired results in closing such gaps.



Figure 4.32: CCD and Tafo River Area

Source: (Satellite image, 2023)

CCD Area is the area that was well-planned and implemented in accordance with the town's structure plan. In contrast, the Tafo River Area has informal settlements along the river that contravene the town's structure plan because the region is classified as a buffer zone. Due to the lack of a well-executed land use plan for the town, this area has an uneven urban form with minimal infrastructure and environmental amenities. Similarly, Jan and Yehua (2020) affirmed

that residential segregation is related to several aspects of inequality in American cities, as well as more and more in Europe and developing nations. Lack of execution of land use plans is one of the main causes of this segregation, notably in developing countries.

4.6.6. Reduced economic vitality

Planning for urban land use is essential to an urban area’s economic stability. In order to warrant a better standard of living for urban inhabitants, it encompasses the process of regulating the use of land and consolidating urban infrastructure, facilities, and services. The economic strengths of urban areas and regions may be impacted in both positive and negative ways depending on how urban plan implementation is drives. By proposing land for a variety of uses and encouraging sustainable practices, an effective urban land use plan guarantees the economic vitality of the urban area. Well implemented land use plans attract investment, improve quality of life, and create jobs, all of which contribute to an area's overall economic well-being (Li et' al., 2015). In contrast, this study's findings show that poorly implemented land use plans in the study area significantly reduce the town's economic vibrancy.

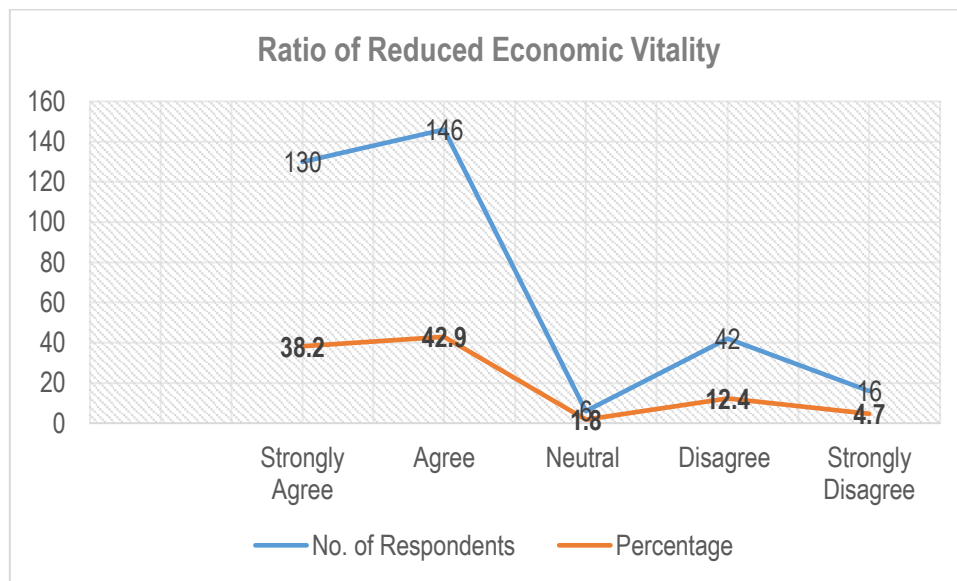


Figure 4.33: Effects of Poor Land Use Plan Implementation on Economic Vibrancy

Source: (Own Survey, 2022)

As indicated in Figure 4.36, 38.2% (130) and 42.9% (146) of the respondents respond with strongly agree and agree while 1.8% (6) of them remain neutral whereas, 12.4% (42) and 4.7% (16) of them responds with agree and disagree to the question of whether poor implementation of urban land use plan reduced economic vitality in Laga Tafo Laga Dadi town. Moreover,

interviewees also stressed, the town's investment and business activities are reduced since land that is set aside for these purposes is primarily used for other purposes along the major highway that runs through the town. According to socio-economists who participated in the plan's preparation and execution in the town, poor plan implementation lowers the town's ability to generate income and create jobs. Economic growth and corporate competitiveness in the town are troubled by a lack of infrastructure development, public utilities, and inefficient resource use as outlined in the town's land use plan. Furthermore, local environmentalists emphasized that poor execution of the town's structure plan increased urban sprawl and hindered the protection of vital environmental assets, which further slowed the town's long-term economic growth.

4.6.7. Strained public service and infrastructure

In order to best serve the community's social, economic, and environmental demands, land, resources, services, and infrastructure must be logically and sustainably organized and implemented (Jianhua and Junwei, 2022). According to respondents, poor implementation of urban land use plan in the town of Laga Tafo Laga Dadi has a major negative impact on infrastructure and public services in a number of ways.

- **Transportation:** The lack of transportation infrastructure in the town causes traffic reduces connectivity between different areas of the town, access to motorized transport, high transport cost and long duration of waiting for the transport.
- **Social services:** in accordance with the Laga Tafo Laga dadi town's structure plan, the land use plan allows all inhabitants to have convenient access to important social services, such as education, health facility, and municipal services. Unfortunately, the lack of well-implementation of land use plan in the study area negatively impacted overall urban development and quality of life. Similarly, the majority of the sites proposed as green and recreational areas on the town's land use plan are used for other purposes, which affected residents with lack of such critical urban facilities.
- **Water, drainage and sanitation:** According to the town's infrastructure specialist, the distribution of the town's water, drainage and sanitation infrastructures are far from what is proposed on the land use plan of the town. Lack of these physical infrastructures highly affected the resident's way of life.

- **Waste management:** The town's projected site for garbage management is not at all built. It results in impromptu garbage collection and disposal systems that are unable to effectively handle the waste produced in various parts of the town.

In accordance with these, inadequate execution of urban land use plans has a significant impact on infrastructure and public services. By putting an emphasis on topics like transportation, service accessibility, green space creation, water and sanitation, trash disposal, and energy efficiency, urban land use can be used to develop thriving cities that can meet the many demands of its inhabitants (Jianhua and Junwei, 2022).

CHAPTER FIVE: CONCLUSION AND RECOMMENDATIONS

5.1. Conclusion

Laga Tafo Laga Dadhi town is one of the fastest growing towns in the region and the country, with a current population of 54,788. Its proximity to Addis Ababa makes it an attractive option for investment, especially residential real estate investments sector. The first structure plan of the town was prepared in 2000 and covers land area of 2,417.49 hectares. The current proposed structure plan which proposed in 2009 has increased the area of the town to 10,056.45 hectares, which has contributed to the increase of urban settlements in different areas of the town. This study examined major challenges of land use plan implementation and their corresponding effects on urban development of the town.

The result of this study reveals that land use plan implementation process has faced considerable challenges that hinder the growth of the town according to the plan. Laga Tafo town is a traditionally agricultural area, in the last decades the new urbanization has led to massive cover change from agricultural to urban settlement for the purpose of developing a built environment though, this massive horizontal growth of the town is not managed by prepared structure plan. The status of land use plan implementation in the town is not effective with around 80% of the sample sites chosen (82.56 hectares of land) completely not implemented in accordance with the proposed land use plan. only 16% of the chosen samples are carried out in accordance with the proposed land use plan, which shows that the town's level of implementation is quite poor. Thus, the towns urban land development and growth is not effectively and efficiently guided and managed by proposed land use plan.

The implementation process of land use plan in the town faced huge challenges due to different factors. In view of that, the major challenges of land use plan implementation in the study area are most of the factors that identified from the literature. Subsequently, the identified major challenges of land use plan implementation by this study in their decreasing orders of importance includes; absence of stakeholders' participation in plan preparation and implementation, expansion of illegal settlements, corruption, lack of integration and failure of different sector to carry out their activities, lack of monitoring and evaluation, lack of taking corrective measures and absence of proper prosecution of plan violation, lack of detail land use plans in the region, poor data management and inadequate budget and man power. In contrast

to literatures, lack of guiding principles, strategies, standards, norms and interference from different level of government, local people and developers have no significance in hindering land use plan implementation in the study area as determined by RII result.

The researcher found that, the above listed major challenges of land use plan implementation in the study area resulted the failure of proper implementation of the plan which further result in significant negative effects on urban development and growth of the town. According to the finding of this study, effects of absence of well-implementation of land use plan on urban development of the town are;

Uncontrolled growth of urban sprawl and inefficient land use; rapid growth of informal settlements without municipality approval on agricultural land and environmentally sensitive areas and fragmented land use with poor connectivity between different parts of the town.

Lack of a well-executed land use plan in the town, **environmental degradation, and the loss of agricultural** land present prospects for uncontrolled horizontal development toward the natural environment and agricultural land.

Insufficient affordable housing; once more, a lack of effective supervision by a plan contributed to a shortage of affordable housing, further isolating residents of lower income from basic services and employment prospects.

Disorganized land use in the study region worsens **social and economic inequality;** disadvantaged communities are disproportionately affected by the problem of access to high-quality social services. such as education, healthcare and employment activities in addition to business opportunities.

Insufficient land use plan implementation and **decreased economic vigor** in the study region made it more difficult to find acceptable locations for commercial (along major roads/centers), industrial, and mixed-use development in Laga Tafo Laga Dadi town.

The lack of a well-executed land use plan in the study region led to an unexpected and unequal population increase, which put a strain on essential **social services and physical infrastructure** like green spaces, open spaces, and the transportation system.

Generally speaking, a number of obstacles impede Laga Tafo Laga Dadi town's ability to implement its land use plan. These issues have a significant negative impact on the town's growth and sustainability; as a result, a proper and effective land use plan implementation is

crucial for fostering overall sustainability, enhancing quality of life, and guiding town growth in accordance with the plan. Consequently, concentrating on resolving the aforementioned implementation-related issues will directly mitigate these adverse consequences.

The finding of this study allied with other studies conducted in the same thematic area, for instance, the study conducted by Zina and Sana (2014), concluded that the expansion of informal settlements and uncontrolled growth lower are the major challenges of land use plan implementation. According to his finding, this challenge of plan implementation negatively affected the sustainable development off urban areas. Additionally, Mulatu et' al. (2022) established lack of active participation, lack of sufficient budget and lack of commitment are among major challenge that hinder Nekemte town structure plan implementation.

5.2. Recommendations

The following recommendations are forwarded for OUPI and Laga Tafo Laga Dadi town municipality as well as other for practices and police purposes based on the aforementioned conclusions and findings of the study.

1. Strengthen Stakeholders participation in plan preparation and implementation: There was almost no participation from the community, experts from the local government sectoral agencies, and others in the planning process during the preparation of the land use plan for Laga Tafo Laga Dadi town. Invite local communities to participate in the plan's formulation, execution, and monitoring. The effectiveness of the plan's implementation will be considerably enhanced by holding regular consultations and meetings to maintain consistent communication and cooperation among various stakeholders and to allow them to express their concerns, suggestions, and ideas.
2. Establish monitoring and evaluation scheme: There is no monitoring and evaluation system in place in the study area. A thorough monitoring and evaluation scheme should be developed and implemented to track the implementation of the land use plan, identify difficulties and opportunities, and adjust plans as needed. They will undoubtedly aid in the implementation of the land use plan successfully in the study area.
3. Ensure financial sustainability and capacity building: Set aside a sufficient amount of money for the land use plan's implementation. Hence, investigating creative funding mechanisms, such as private investment and public cooperation, will be very helpful in

resolving the budget shortage. Also, regular training and workshops at the local and OUPI levels will greatly add to the technical and management ability of workers working on land use planning preparation and execution.

4. Controlling illegal/informal settlements: Implementing a land use plan in the study regions is significantly hampered by the rapid proliferation of informal settlements in the area. So, one option to aid in regulating such development is to tighten land use planning and zoning restrictions. Furthermore, establishing a clear system for land registration, strengthening enforcement of and penalties for unauthorized settlements, encouraging community involvement and public awareness, and developing cooperation with Addis Ababa city all contribute to the control of such developments.
5. Propose integrated land use plan implementation system: as there is a lack of coordination amongst sectoral offices in the study area. For the town's land use plan to be implemented correctly, a coordinated implementation strategy and a taskforce with defined roles and responsibilities must be proposed and established at the municipal level.
6. Establish data management center: Laga Tafo Laga Dadi town has no data center. The implementation of the urban land use plan will be greatly aided by the establishment of an efficient data management center. It encourages the use of well-informed, open, and evidence-based implementation strategies. Additionally, it assists urban planners and decision-makers in creating and overseeing land-use regulations that support sustainable growth and accommodate evolving conditions.
7. Preparation of small-scale detail plans: Local development plans, action plans, strategic plans, urban designs, block designs and parcellation plan are a few examples of the small-scale planning types that are needed to implement land use plans at the town level. There aren't many such detailed plans produced at the study area to implement the long-term land use plan in this regard. Therefore, proposing such plans is crucial to implementing the town's land use plan.

5.3. Suggestion for further studies

Planners, politicians, and other stakeholders can learn more about how to effectively execute land use plans, address current issues, and promote sustainable development by undertaking additional research on the areas listed below.

1. The researcher identified around 11 variables from the literature in order to determine the key obstacles to implementing land use plans in relation to their relative effects on urban growth. It is also advised that any researchers who are interested in this topic conduct additional research to look at the effects of the various variables separately. Also, methodologically assessing these factors in regression analysis enables quantitative comprehension of their effects.
2. Assessing specifically the above-identified challenges of land use plan implementation separately in relation to land use plan implementation is suggested to come up with detailed obstacles of land use plan implementation. Thus, the following areas are forwarded for further studies.
 - ✓ Expansion of illegal settlements and land use plan implementation
 - ✓ Monitoring and evaluation of land use plan implementation
 - ✓ Participation, integration and land use plan implementation
 - ✓ Evaluation of economic implication of land use plan implementation
 - ✓ Developing capacity building program for land use plan implementation

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Appendixes

Annex I: Publishable Manuscript

The Challenges of Land Use Plan Implementation in Major Towns Surrounding Addis Ababa City: The Case of Laga Tafo Laga Dadi Town

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Abstract

This study is an assessment of major challenges of urban land use plan implementation in towns surrounding Addis Ababa City; the case of Laga Tafo Laga Dadi town. To achieve these objective qualitative research was employed to identify the major challenges of urban land use plan implementation, effects and extent of land use plan implementation were used and data were analysed descriptively using simple descriptive analysis and RII method. Questionnaire, interview, observation and secondary data was used for collection. The findings of the study indicated that the absence of stakeholders' participation in the land use plan preparation and implementation, the expansion of illegal settlements, corruption, a lack of integration and coordination among sectoral offices, poor data management, and a lack of monitoring and evaluation were the major challenges that hindered the implementation of a land use plan in the town. Thus, the study recommends strengthening stakeholders' participation in plan preparation and implementation, establishing a monitoring and evaluation scheme, and organizing a data management centre for the successful implementation of the land use plan in Laga Tafo Laga Dadi town.

Keywords: Land Use Plan, Plan Implementation, Challenges, Urban Development.

Introduction

Cities and towns, especially in developing nations, are expanding rapidly and at an unprecedented pace, which presents significant difficulties. They must be carefully planned and efficiently guided by plans in order to enable their extension, purposeful specialization, cultural expression, and most importantly sustainability, as they are locations where development possibilities and obstacles collide (Devas & Rakodi, 1993). Urban planning is therefore a key instrument for directing the development of metropolitan areas elsewhere. The difficulties and objectives of planning exercises vary, nevertheless (UN-Habitat, 2009). Future spatial planning must be done within the context of an understanding of the contemporary factors influencing urban areas, such as the environmental challenges of climate change and

cities' excessive reliance on fossil fuel-powered cars; the demographic challenges of rapid urbanization, the rapid growth of small- and medium-sized towns, and an expanding youth population in developing nations; and, in developed nations, the challenges of urbanization and urbanization-related issues. Increasing socio-spatial issues, particularly social and spatial inequalities, urban sprawl, and unplanned per-urbanization; and the challenges and opportunities of increasing democratization of decision-making as well as increasing awareness of social and economic rights among regular people (UN HABITAT, 2009).

Many land use changes occur without any land use planning, which can have negative effects on the environment and human well-being. Based on environmental, social, and economic considerations, land use planning can assist in determining the optimum way to distribute terrestrial resources (FAO, 1993). Land Use planning and implementation in African, particularly sub-Saharan Africa has faced difficult to fully design and implement these plans. The system for planning and implementing land use confronts difficulties in promoting land use patterns that produce the most net value for the community and meet efficiency goals. These difficulties include taking into consideration externalities, overcoming information asymmetry, minimizing transaction costs, interacting with potential rent-seekers, and predicting the strategic actions of those who stand to benefit or lose from the outcome of the planning (Francis and Ismo, 2011). Like other Sub-Saharan Africa countries, land use plan implementation in Ethiopian urban centres are facing serious major obstacles. Laga Tafo Laga Dadi town are no exemption.

The Ministry of Urban Development, Housing and Construction formulated a new Urban Plan Preparation and Implementation Strategy in 2014 to facilitate effective urban planning and implementation in urban areas of Ethiopia. However, many readings indicated that land use planning and its implementation practices in Ethiopia are challenging and facing difficulties in implementing the plan documents. The preparation of the urban Structure plan should integrate the essential thematic areas such as residential, physical and social infrastructure, road and transport, zoning, regional, urban region finance and good governance, and urban economy to identify the core urban problems and propose rational solutions (Scott and Fainste, 1996). Due to the fact that, incompatible and contending benefits over possession and use of urban land and properties, planning and administration activities faces their most difficult challenge (Gulyani et al., 2001). Laga Tafo Laga Dadi has seen a change in land use due to urban growth and expansion and commuting out of Addis Ababa. Different land use plans have been prepared to guide the growth of the town and manage the precious resource of land. The town has a land use at urban level and several local and neighbourhood development plans, but the preparation and implementation of these plans have been challenged by different issues.

Several studies have been undertaken on the implementation of land use plans in other developing countries by Enonguanbhor et al. (2021), Delphin et al. (2022) and Kassahun and Gobena (2022) underlined the major challenges of land use plan implementation are lack of participation, in adequate finance and manpower, corruption, informal settlements and plan violation. However, there are no studies carried out on the challenges of land use plan implementation in Laga tafo Laga Dadi town. Therefore, the objective of this study is to assess

the major challenges of urban land use plan implementation and their effects in Laga Tafo Laga Dadi town.

Related Literature Review

Land Use Planning and its Approaches

Land use planning is defined as is a methodological process of ordering and regulating future land uses and growth in a productive, sustainable and ethical manner ((Akimoto, 2009). Savini and Aalbers (2016) stated that the systematic process of land use helps by directing the spatial location of socio-economic, environmental, housing and infrastructural activities based on suitability, highest and best use and compatibility of activities to avoid conflicts and increase its efficiency and effectiveness. Thus, land use planning can be approached by different ways, the common ones are presented below;

Comprehensive land use planning: is a methodical process that evaluates numerous land use factors, identifies possibilities and problems, and presents a long-term vision and development strategy. This strategy incorporates objectives, targets, and policies to direct development decisions and allocate the resources required to produce desired results (Melville, 1985). Physical coverage of the entire neighbourhood is one feature of the comprehensive plan. The fact that it is long-term is another essential feature. Time horizons for comprehensive plans are typically in the range of 15 -20 years (John, 2012).

Participatory Urban Land Use Planning: Local land users are given a significant voice in the planning, use, and management of the urban land and other resources they rely on which is the goal of participatory land use planning. It brings together the many stakeholder's aids in the creation of a shared vision and helps to settle disputes about the use of land and land resources. Particularly, it gives underrepresented groups like women and young people a chance to participate according to (Negash, 2012)

Sustainable Urban Land Use Planning: Sustainability and planning have a sequential component. While planning is the act of actually making plans for the future, sustainability refers to what we do today and how it affects the future. We may conclude that planning can undoubtedly affect an urban area's sustainability because urban land use planning is a function that occurs within every urban area (Fourie, 2014). The optimization and allocation of sustainable urban land use are seen as powerful techniques for achieving urban sustainability. Sustainable urban land use planning integrates social, economic, and environmental considerations of people in order to achieve one of its key objectives: sustainability and promote long-term sustainability and liveability. This approach includes urban planning strategies such as green infrastructure planning, which focuses on the conservation and protection of natural resources and environmental amenities (Mostafizur R. and Gyorgy S., 2022).

Basic Land Use Planning Principles and Objectives

Sustainability: development that is sustainable is one which satisfies existing demands without jeopardizing the capacity of future generations to satisfy their own needs. Two fundamental ideas are contained in it: the idea of needs, especially the basic needs of the developing

countries, and the notion that the environment's capacity to supply present and future needs is constrained by the state of technology and social structure. The primary objective and principle of land use planning is to promote and attain sustainable development, and development entails the gradual alteration of society and the economy. Unless land use planning and development strategies take into account factors like shifting access to resources and the distribution of costs and benefits, physical sustainability cannot be ensured (Brundtland Commission, 1987).

Efficient use of resources: land use planning is essential for any development project to prevent resource waste and inefficient use of the land. It will examine the physical characteristics of the activity on land while taking the development aims and objectives into consideration to ensure that the use of land can be sustained appropriately both now and in the future without waste. Planning for land use ensures that it can be utilized for future generations even after development has taken place efficiently (Jason, 2020).

Public Participatory: The most important details in this context are the benefits of involving the general public in planning and land use decisions. Participating in the process of proposing solutions to societal, economic, and spatial problems can increase the community's connection, and those who are not participating are more likely to oppose them. Additionally, those who participate in the decision-making process often leave with a sense of pride and a deeper sense of community (League of California Cities, 2019). Local communities' involvement in land use and development offers a chance to come up with socially acceptable, economically viable and spatially sustainable solutions, points out potential conflict causes, and keeps the local government from becoming isolated according to (Zaleczna, 2018).

Challenges of Urban Land Use Plan Implementation

In developing countries, the implementation of an urban land use plan is the toughest and more problematic stage of the land use planning process. At this stage, many challenges and resistances from the community and institutions are likely to emerge which greatly affect the outcome of the plan and eventually the living condition of the urban inhabitants (Hannemann, 2008). Rizwan and Obaidullah (2006) stated that the challenges of poor urban plan implementation resulted in a waste of money, time and human resources on the plan-making bodies hence, really poses a challenge to the government. Therefore, a plan is a tool to guide and manage the growth of an urban center, a plan preparation by itself is nothing for urban development if there is improper implementation. Effective and full implementation of the plan would bring and support developmental activities and it would create sustainable urban development, which is safe for its residents. Abdal-Majid I (1993) in his part elaborated that, there are two most important difficulties in implementing urban land use plan proposals. The first one is the plan has not been used as a positive planning tool to try to influence private sector activity. The second one is that the municipality has limited power to carry out development or acquire land to facilitate implementation.

Lack of proper consultation, decisions about any urban planning including land use planning frequently fail to provide the expected outcomes and have a detrimental influence on society, which encourages unrest (Barret and Fugde, 1981). Dalton (1989) also stated that, the proposed plan always affects the community and different sectors in one or another way, thus, their

absence from preparation and implementation highly reduces the outcome of the plan. Furthermore, Dadi et. Al (2016) illustrated how expansion of uncontrolled urban settlement in peripheral areas of cities and towns leads to a horizontal extension of urban centers and scattered and fragmented neighborhoods without plan regulation challenged land use plan implementation. Zina and Sana Sati (2014) demonstrated how illegal land subdivision in urban environments begins with an unexpected invasion of land reserved for other uses without legal authority, for a particular group of people, where they reside their homes, without official permission from land use plan implementers. This leads to a major challenge when land use plan is implemented in accordance with the proposed plan.

Lack of monitoring and evaluation in urban plan implementation has negative consequences on urban development. Thus, lack of monitoring and evaluation highly affect tracking the progress of urban plan implementation, it is almost impossible to regulate the proper implementation of the plan if not monitored and evaluated. This results in a failure to assess the outcome of the plan implementation whether it is a success or failure and take corrective measures accordingly, which diminishes land use plan implementation status and progress (Ochieng et al., 2018). Furthermore, a lack of monitoring and evaluation occurred in the fragile administrative structure that brings opportunities for corruption and purposeful plan violation by implementer bodies (Muthiga, 2019). Land use plan implementation is hindered by different factors, plan implementation strategies, techniques, and tools can determine the success or failure of the execution. Furthermore, the implementation of an urban plan is carried out either by the municipality by involving different sectors using well demonstrated implementation strategies. Thus, cooperation and coordination between those sectors are essential for the execution of the plan (Burby, 2003).

Generally, land use plan implementation is challenged by different factors as stated above. If the attributed causes are not addressed, the inadequate implementation of land use plans, which is attributed to inadequate funding, a lack of political will and coordination, a lack of manpower, interference, lack of detailed plans, corruption, lack of participation and implementation strategies, implies that the land use planning process alone cannot address the problems and bring the expected urban development of cities and towns (Enoguanbhor et.al., 2021).

Research Materials and Methods

Overview of Study Area

The study area, Laga Tafo Laga Dadi, a rapidly growing town is located in Oromia National Regional State, Oromia Special Zone Surrounding Finfinnee. Relative to the other urban centers in the zone, Laga Tafo Laga Dadi town is very proximate to Addis Ababa next to Burayu town. It is located about 21kms from Addis Ababa Municipality towards the North East on the way to Shano town immediately outside the limit of Addis Ababa city, (Figure 1). Astronomical Location, Laga Tafo Laga Dadhi town extend from 9° 00' 32" to 9° 08' 47"N latitudes and 38° 48' 48" to 38° 56' 4" E Longitudes. In projected or local coordinates, the town is located 479493 to 492791 meters Easting (X) Longitude and 995827 to 1011042 meters Northing (Y) Latitude.

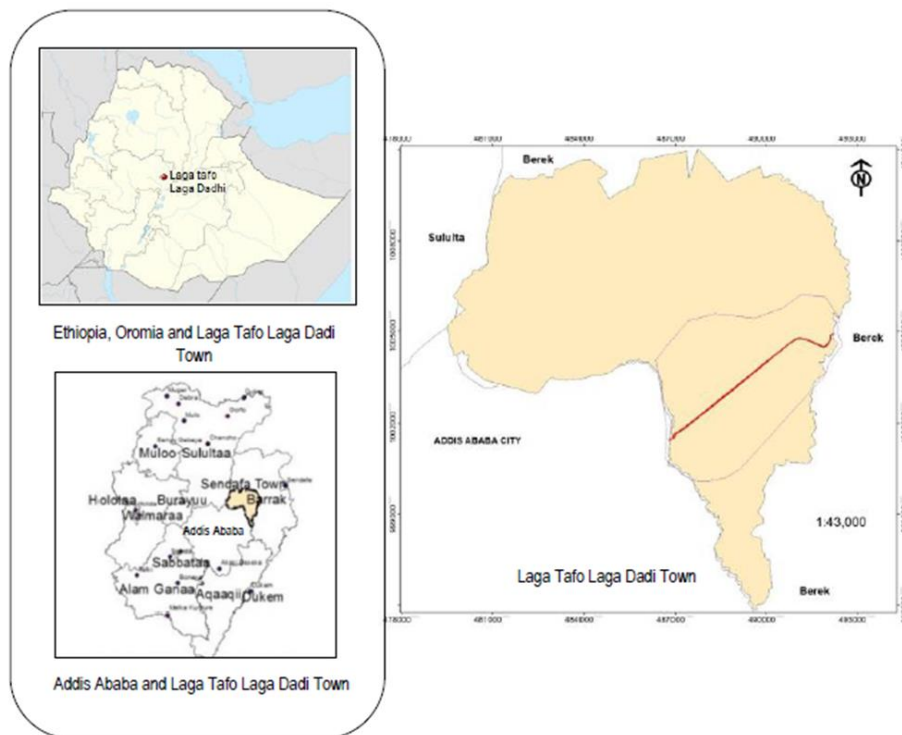


Figure 3. 3: Location Map of Study Area

Source: (Organized by Author, 2023)

Research Design

This study adopted a qualitative and quantitative research approach to assess the challenges of urban land use plan implementation. This research employed quantitative data produced by survey questionnaire measured by using a Likert scale and existing land use survey while key informant and depth interview (semi structured interview) and observation are used for qualitative data collection. The survey method was implemented for this study in order to understand the major challenges of land use plan implementation and its effects on urban development. In addition, contextual review methods have also been used to study the challenges and effects of the situation understudy. Depending on the nature of research questions in this study which encompasses both descriptive and explanatory types of inquiries, the case study method is selected to analyze and interpret what are the challenges of land use plan implementation and how the challenges affect overall development of land in the study area.

Methods of Data Collection.

Semi-structured interview type is used for this study because it is more appropriate in descriptive and explanatory types of research as it is more economical, provides a safe basis for generalization and required relatively lesser skill on the part of the interviewer according to Kothari (2004). Thus, In-depth interview with farmers, professionals and experts from sectoral office of Laga Tafo Laga Dadi town and OUPI are conducted. Questionnaires, field survey and observation were also used to collect primary data from residents, sectoral offices and site. Desk review and literature review are deployed to collect data from secondary sources.

Sampling Technique and Sample Size

Probability and non-probability sampling technique were used to select sample from the population. Simple rand sampling of probability sampling were deployed to select residents' (household) from four kebeles understudy, while purposive sampling were used to select key informants from Laga Tafo Laga Dadi sectoral office (Land management office (3), Municipality office (2), town council (3)), OUPI (5), Oromia Land Bureau (2) and ten farmers from the town. Expertise level and experience in their respective position are considered to select professionals and expertise. While farmers who were impacted by urbanization are also selected purposively.

Or local households, 385 survey questionnaires were administered using simple random sampling techniques. The questionnaires were distributed over the four kebeles of Laga Tafo Laga Dadi town which administered among 10,536 households. Thus, Yamane's (1967) formula was used to calculate sample size from the target population.

$$n = \frac{N}{1 + N(e)^2} \dots \dots \dots \text{Equation 3: Sampling Formula}$$

where

n- sample size

N- is Number of population size

e- is the level of precision (Margin of error 5% with confidence level of 95%)

thus, the sample size was computed as follows;

$$n = 10,536 / (1 + 10,536(0.05)^2)$$

$$\mathbf{n=385}$$

Hence, as indicated in Table 1.1. the sample size of respondents from each kebele administration in Laga Tafo Laga Dadi town were taken.

Table 3.7: Sample Size of Households Selected for Questionnaire

No.	Name of Kebeles in Laga Tafo Laga Dadi town	Total number of Households	Formulas to Assign Kebele level Sample	Sample Size from each kebele	Sampling Technique
1	Laga Tafo (01)	3428	$3428 * 385 / 10536$	125	Simple Random Sampling
2	Laga Dadi (02)	2646	$2646 * 385 / 10536$	97	
3	Dambal (03)	3050	$3050 * 385 / 10536$	111	
4	Eka Dalle (04)	1412	$1412 * 385 / 10536$	52	
Total		10,536		385	

Source: (Organized by Author, 2023)

Data Analysis Method

The Quantitative and qualitative data gathered from research participants were analysed descriptively. In the process mixed data analysis, qualitative data analysis was employed. Thus, quantitative data were analysed by using the SPSS and Microsoft Excel to generate quantitative information extent of land use plan implementation and its effects. RII result, tables, charts, graphs, percentages, ratios, figures, and photos were used to interpret and summarize the findings where necessary and triangulated. Furthermore, the qualitative data were analysed by using grid overlays of spatial maps to quantify accordance and deviations between land use plans and actual land use, in order to assess the status of implementing land use plan. Descriptive statistics was employed to determine the relationship between independent variables and dependent variable.

Results and Discussion

Survey Background

The result in Table 4.1 indicated that the majority of the respondents 45% (153) and 33.2% who participated in the survey attended education in university or college, and high school respectively and similarly, the majority of respondents 46.2% and 38.5% involved in the survey have 5-10 and more than ten years of experience in planning, land management, OUPI or urban development which shows that the respondents were competent enough and capable to participate in the survey. 50% and 22.4% of respondents are confined between 22-35 years and 35-45 years of age categories. Furthermore, 35.6% and 39.5% of respondents are reside in the study area for 5-10 and 11-15 years respectively. The overall professional experience was analysed with professionals in land use planning and did not apply to residents. This means that their experience in the planning and land management industry the respondents had particularly in the study area and qualification of their age, the respondents had reliable information which this study was seeking.

Table 4.11: Survey Background

No		Frequency	%	Cumulative %
1	Educational Background			
	University/college	153	45	45
	High school	113	33.2	78.2
	Primary	74	21.8	100
	Total	340	100	
2	Experience in Years (Professional)			
	More than 10	5	38.5	38.5
	5 to 10	6	46.2	84.6
	Below 5	2	15.4	100
	Total	13	100	
	Age Categories by Years			
	22-35	76	22.4	22.4

3	35-45	170	50.0	72.4
	Above 45	94	27.6	100.0
	Total	340	100.0	
4	Experience /Period lived Laga Tafo Laga Dadi in years			
	Below 5	37	11.1	11.1
	5 to 10	119	35.6	46.7
	11 to 15	132	39.5	86.2
	Above15	46	13.8	100.0
	Total	334	100.0	

Source: (Field Survey, 2023)

Challenges of Urban Land Use Plan Implementation in Laga Tafo Laga Dadi Town

Relative Importance Index (RII) is used to analyse the correlation between the predictors or major challenges listed above and their significance level to impact on the dependent variable as stated in under the methodology part. Thus four-point scale was given to show their significance (1- disagree, 2- neutral, 3- agree and 4 for strongly agree). Thus, calculation of RII the following formula is used.

$$RII = \frac{\text{sum of weights } (W1+W2+W3+W4)}{AN}, \dots\dots\dots \text{Equation 4: RII}$$

Where W= weights given to each factor by respondents and will range from 1 to 4. A = is the highest weight (4 in this case), and N= total number of respondents.

Based on the above formula the calculation of RII for this study was computed using Microsoft Excel. The highest response in this case A is 4.

Eleven major challenges of land use plan implementation were identified from the literature and preliminary field survey and tested by Relative Importance Index (RII) technique. The RII was computed for each challenge to identify the most significant challenges and rank them accordingly. The changes were ranked based on the RII values. From ranking the assigned to each challenge of plan implementation, it was possible to identify major important challenges of land use plan implementation in Laga Tafo Laga Dadi town.

As indicate in Figure 4.1 the selected respondents were asked to rate their view on the selected variables (major challenges of urban land use plan implementation) in the study area using Likert scale. The variance of a result is presented as follows in the Figure. Consequently, the major challenges of land use plan implementation in Laga Tafo Laga Dadi town indicated that they are not too different from other areas' challenges which are identified from the works of literature works.

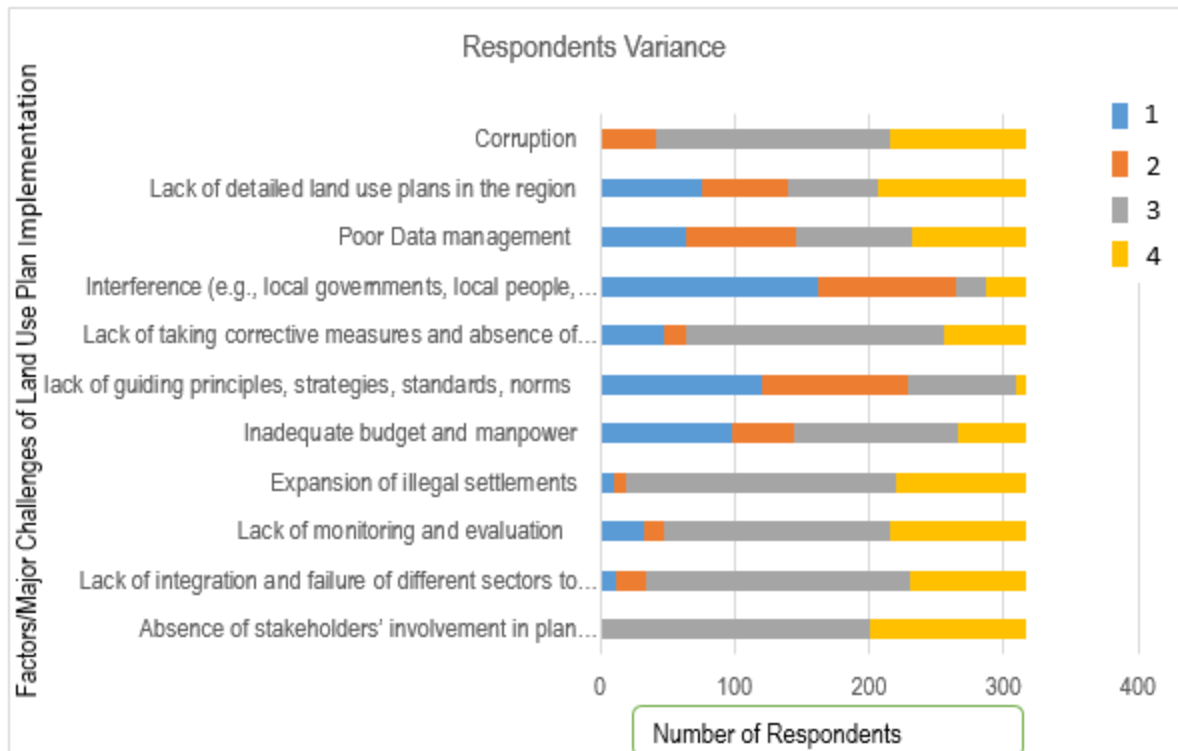


Figure 4.34: Challenges of Land Use Plan Implementation Respondent's Variance

Source: (Field Survey, 2023)

As indicated in Table 4.2, the absence of stakeholders' involvement in plan preparation and implementation in the study area has the highest score with an RII value of 0.842 and is closely followed by the expansion of illegal and informal settlements with a 0.803 RII score. Thus, this implies most of the respondents agreed that these two challenges are the most significant obstacle to land use plan implementation in the study area. Corruption and lack of integration and failure of different sectors to carry out their activities are third and fourth with RII values of 0.797 and 0.782 respectively. Lack of guiding principles, strategies, standards, norms and Interference (e.g., local governments, local people, developers) are the least challenges tested with a score of RII of 0.480 and 0.438 respectively, thus, according to the result these two challenges are not significant problems of land use plan implementation in the study area since the score found to be less than average (0.500). Generally, all contributing factors identified from the literature are significant except lack of guiding principles, strategies, standards, norms and Interference (e.g., local governments, local people, developers).

Table 4.12: RII Results of Critical Challenges of Land Use Plan Implementation in the Study Area

No.	Variables (Major Challenges of Land Use Plan Implementation)	RII	Rank
1	Absence of stakeholders' involvement in plan preparation and implementation	0.842	1
2	Lack of integration and failure of different sectors to carry out their activities	0.782	4
3	Lack of monitoring and evaluation	0.767	5
4	Expansion of illegal settlements	0.803	2
5	Inadequate budget and manpower	0.599	9
6	lack of guiding principles, strategies, standards, norms	0.48	10
7	Lack of taking corrective measures and absence of proper prosecution of plan violation	0.71	6
8	Interference (e.g., local governments, local people, developers)	0.438	11
9	Poor Data management	0.617	8
10	Lack of detailed land use plans in the region	0.667	7
11	Corruption	0.797	3

Source: (Own Computations, 2023)

The analysis result of the data from open ended questionnaire and interview indicated that, stakeholder involvement in the town's structure plan preparation, which is handled by OUPI, was almost non-existent at various stages. In particular, professionals from various sectors of the town feel that they were ignored throughout the process and only invited for the final presentation of the plan before approval. In a similar vein, residents and farmers who are significantly impacted by urbanization claimed in an in-depth interview that they were never invited nor represented during the drafting of the land use proposal of structure plan. Moreover, they claimed that because there was little stakeholder input, the plan overlooked them and paid little attention to the integration of farmers with urban settlement and urban farming. With the highest score of RII value of 0.842 lack of participation is the most critical of all. In similar manner, United Nation (2018) stated that, lack of proper consultation, decisions about any urban planning including land use planning frequently fail to provide the expected outcomes and have a detrimental influence on society, which encourages unrest. Making sure a wide

range of viewpoints are taken into account aids decision-makers in better understanding the connections between and nature of the issues facing the city.

The expansion of illegal/informal settlements and corruption in Laga Tafo Laga Dadi town is also another significant challenge to land use plan implementations. According to the RII result, almost all respondents agreed upon this fact and ranked second and third respectively with a value of 0.803 and 0.797 in Table 4.2. In line with this, Zina and Sana Sati (2014) illustrated how unauthorized land subdivision in urban environments begins with an unexpected invasion of land that is reserved for other uses without legal authority, for a particular group of people, where they reside their homes, without official permission from land use plan implementers, which turns into a major challenge when land use plan is implemented in accordance with the structure plan. Francesco and Stefano (2015) also found out the government authority and professionals that regulate the land industry are one of the public entities most affected by corruption. Corruptions can occur at various stages of the planning process; during the initiation of planning, drafting phase, and implementation phase, including monitoring and evaluation which highly affected plan implementation.

Laga Tafo Laga Dadi town doesn't have a defined monitoring and evaluation system, like other towns in developing nations. One of the key informants from the mayor's office claimed that there is currently no mechanism in place to assess and track the implementation of land use plans. In addition, there is no accountable entity at the municipal level to create and put this system into place. RII result also affirmed this with the result of 0.767. In line with this, Quyen et.al. (2018) indicated that monitoring and evaluation system is major obstacle in many developing nations which most of them are starting working on building and implementing these systems, although many wealthy nations have frequently employed monitoring and evaluation to manage successfully in their performing urban growth.

Dragana et al. (2021) claimed that one of the biggest obstacles to the implementation of urban plans is the lack of integration in various local government sectors, which has led to Serbia's low rate of plan implementation. This is not an exemption in Laga Tafo Laga Dadi town, lack of integration and failures of different sector to carry out the expected activities are among critical challenges that hindered plan implementation in the town which is affirmed by RII result of 0.782 and interview. RII result indicated poor data management and lack of detail plan are found to be among major problems in the study area with the score of 0.666 and 0.667 respectively. The findings by Fura (2012) and Belachew (2010) are also confirmed that, inadequate detail plan such as LDP and urban design and poor data management system are major obstacles of land use plan implementation in Ethiopia's urban centres.

Generally, as indicated in Table 4.2 and Figure 4.1 land use plan implementation challenges are mostly similar to others findings. For instance, Enoguanbhor et.al. (2021) stated that, land use plan implementation in developing nations is challenged by different issues; inadequate funding, a lack of political will and coordination, a lack of manpower, interference, lack of detailed plans, corruption, lack of participation and implementation strategies, which implies that the land use planning process alone cannot address the problems and bring the expected urban development of cities and towns.

Conclusion and Recommendations

The first structure plan of the Laga Tafo Laga Dadi town was prepared in 2000 and covers land area of 2,417.49 hectares. The current proposed structure plan which proposed in 2009 has increased the area of the town to 10,056.45 hectares, which has contributed to the increase of urban settlements in different areas of the town. This study used questionnaire, interview, and field observation to assess major challenges of land use plan implementation in Laga Tafo Laga Dadi town. The following conclusions and recommendation are drawn based on the analysis of data and generated results of descriptive, RII and qualitative data. Land use plan implementation in Laga Tafo Laga Dadi town is challenged by enormous number of factors.

The result of this study reveals that land use plan implementation process has faced considerable challenges that hinder the growth of the town according to the plan. Laga Tafo Laga Dadi town is a traditionally agricultural area, in the last decades the new urbanization has led to massive cover change from agricultural to urban settlement for the purpose of developing a built environment though, this massive horizontal growth of the town is not managed by prepared proposed by land use plan. In view of that, the major challenges of land use plan implementation in the study area are most of the factors that identified from the literature. Subsequently, the identified major challenges of land use plan implementation by this study in their decreasing orders of importance includes; absence of stakeholders' participation in plan preparation and implementation, expansion of illegal settlements, corruption, lack of integration and failure of different sector to carry out their activities, lack of monitoring and evaluation, lack of taking corrective measures and absence of proper prosecution of plan violation, lack of detail land use plans in the region, poor data management and inadequate budget and man power. In contrast to literatures, lack of guiding principles, strategies, standards, norms and interference from different level of government, local people and developers have no significance in hindering land use plan implementation in the study area as determined by RII result.

Finally, based on results and discussion on the data in this study, the following recommendations are forwarded for the future improvement of the implementation land use plan in Laga Tafo Laga Dadi town and issues that challenged. The effectiveness of plan implementation will be considerable enhanced by strengthen stakeholders' participation in plan preparation and implementation. Coordination among stakeholders with well proposed plan implementation monitoring and evaluation system undoubtedly aid the successfulness of the implementation. The town should prepare necessary details such as LDP/NDP and organize modern data management centre to boost implementation of the plan. Moreover, the town is recommended to ensure financial sustainability, capacity building and illegal expansion controlling mechanism which will highly aid proper implementation of land use plan in the study are.

Thematically, the scope of this study is limited to assessing major challenges of land use plan implementation in the study are, thus, intensive studies of these factors by regression analysis method should be takes place in the study area to come up with quantified level of challenges and helps to develop strategies to tackle these challenges.

Annex II: Questionnaires

Introduction

The purpose of this questionnaire is to obtain data for a research project conducted by Ato Ahmedtofik Mohammed, on the topic “**The Challenges of Land Use Plan Implementation in Major Towns Surrounding Addis Ababa City: The Case of Laga Tafo Laga Dadi Town**”, in partial fulfillment of the requirements for the award of a Master’s degree.

The aim of this study is knowledge seeking in the sense that, pursues to describe the major challenges of land use plan implementation in major towns surrounding Addis Ababa city. In order to attain the goal, your cooperation in filling out the questionnaire genuinely is essential. In addition, output of this study will significantly contribute land use plan implementation problems in towns surrounding Addis Ababa city.

The researcher, in this regard, assures you that all information you provide will be confidential and is to be used only for research purpose.

Thank you!

Ahmedtofik Mohammed

1. sex: - male female
2. Marital status: - married single
3. Age: - 18-35 36-45 46-65 above 65
4. Educational backgrounds: - Incomplete of Grade 10 Grade 10-12 complete grade12 complete Vocational and Technical Bachelor Degree MA, M.Sc. and above.
5. Occupational status A) Government employee B) self-employee C) Private firm employee D) retired F) Unemployed
6. What is the main source of your income and support for your family?
a) Private b) Public employed c) Retired d) Other
- 7 What is your monthly income? a) Below 1000 Birr b) Between 1000 to 1500 Birr
c) Between 1500 and 2000 birr d) Above 2000 Birr e) Unwilling to disclose

8. What is your saving mechanisms? A. Equib B. Edir C. Bank D. Other

9. The ways of your land holding system. A. Illegal/squatter B. legal / lease- hold

C. inheritance /free-hold D). Buying E). Other

9.1. House ownership: - A. Government B. Private C. Kebele D. Other

10. Do you think the way of land holding system is challenged properly implementation of land use plan?

Yes No

If your answer is yes which one of land holding system is challenged?

11. Did the community actively participate in the plan preparation? Yes No

If your answer is yes, what is your role of participation.

A. Decision making B. providing valuable comments C. providing information/data.

D. Other _____

If your answer for Q.11 is “no”, what are the reasons? _____

12. Do you participate during the land use plan implementation? Yes No

If your answer is yes, what is your role of participation A) Money contribution B) Labor

C) Equipment D) Technical support E) Decision Making

13. Do you think the proposed land use plan is made on the basis of appropriate planning concept?

A) Conflict free B) Fair distribution of services C) Bring Balanced development

D) Balanced allocation of land for all uses E) Fair distribution of green infrastructure.

14. Do think the town is growing according to the proposed land use planning? Yes No

If your answer no, why _____

15. Do you have any comment considering the land use planning of the town? Yes No

If yes, what is your comment _____

If your answer is No what is your comment. _____

16. What are the major problems of the town that hinder to implement proposed land use plan properly? _____

_____.

Could you Rank (prioritize the problems in order) _____

_____.

17. Do you have any comment on the overall development of the town?

.....

Annex II: Questionnaire for Laga Tafo Laga Dadi sectoral offices and OUPI

1. What was your offices' participation in the structure plan preparation?

If limited or none, what do you think were the reasons?

2. What is the available technical capacity of the municipality?

- Man power
- Finance
- Authority

3.1. Area of participation in plan preparation process: A) Decision making B) Providing information C) Providing valuable comments D) Financing

3.2. Level of participation in land use plan implementation: - A) Budget allocation B) Equipment C) Technical support D) Other, specify

3.3. Which stages of the planning process did you have participated? A) Data collection B) Analysis C) Proposal D) Approval E), Implementation F. in all planning stage

4. Do you think the land use planning document properly managed? Yes No

If your answer is yes explaining your town experience.

If your answer is no explain your shortcoming. _____

5. Do you think the land use plan of the town can be implemented by the capacity of the municipality in terms of resource and authority for successful implementation? Yes No

If your answer is yes, what measures can you suggest? _____

6. Has the town municipality any strategy for effective implementation process of the structure plan in line with the planning period? Yes No

7. How do you evaluate your horizontal and vertical coordination in plan preparation and implementation? Explain your own comments _____

8. Do think there are any problems related to political in urban plan implementation _____

9. Do you think that the population growth and their land demand will match at the end of the planning period? Yes No

I. If "Yes" How? _____

II. If "No" Why? And to what extent _____



Annex III: Questionnaires to be filled by residents and professionals

These parts of questionnaire designed to know major challenges of urban land use plan implementation in the study area and filled by all research participants

No.	Variables	It is a challenge to implementation of land use plan in the study area
		1. Disagree 2. Neutral 3. Agree 4. strongly agree
1	Absence of stakeholders' involvement in plan preparation and implementation.	
2	Lack of integration and failure of different sectors to carry out their activities:	
3	Lack of monitoring and evaluation	

4	Expansion of illegal settlements	
5	Interference (e.g., local governments, local people, developers)	
6	Inadequate budget and manpower	
7	Lack of taking corrective measures and absence of proper prosecution of plan violations	
8	lack of guiding principles, strategies, standards, norms	
9	Lack of detailed land use plans in the study area	
10	Corruption	
11	Poor data management	

Questions designed to know effect of land use implementation challenges in Laga Tafo Laga Dadi town.

No.	Variables	It is an effect of implementation of land use plan in the study area	Remark
		1. Strongly Agree 2. Agree 3. Neutral 4. Disagree 5. Strongly Disagree	
1	Uncontrolled urban sprawl		
2	In efficient urban land use		
3	Environmental degradation		
4	Loss of agricultural land		
5	Insufficient affordable housing		
6	Social and economic in equalities		
7	Reduced economic vibrancy		
8	Strained public service and infrastructure		

Any recommendation for successful implementation of land use plan _____

Annex IV: Interview questions for Monitoring and Evaluation Department (at Municipality and OUPI)

1. Have you been performing the monitoring and evaluation of the Laga Tafo Laga Dadi town plan?

A. Yes B. No

If no, why? -----

2. At what time interval do you undertake the monitoring and evaluation for Laga Tafo Laga Dadi town?

3. What was the status of land use plan implementation the town?

4. What were the major problems observed in plan implementation during monitoring and evaluation Laga Tafo Laga Dadi town?

5. What corrective measures were recommended for the concerned body on plan implementation?

6. What are the effects of lack of well-implementation of the plan on urban development of the town?

7. What lessons learnt from Laga Tafo Laga Dadi town plan implementation?

8. Do you think that the prepared plan can guide the fast development of the town?

Comment on that.

Annex V Interview guide questions with farmers

1. What do you think for your being included in the town? Is it an opportunity or threat for you?

If it is threat for you, explain

2. Had the municipality of the town made discussion on your inclusion to the town

3. Have you satisfied on the amount of compensation paid for you? A) Yes B) No

If no, why? What Kinds of Compensation are you Paid? A. Money B. Plots of land C. Housing

4. Have you participated in illegal land selling of your own?

5. Are you living in fear of evictions? Why?

6. What are the effects of evictions in terms of social, economic and environmental?

7. What benefits did inclusion of the township gives you and how land use plan implementation affects you?

8. what do you think are the major problem that hindered land use plan implementation in the town and your locality?

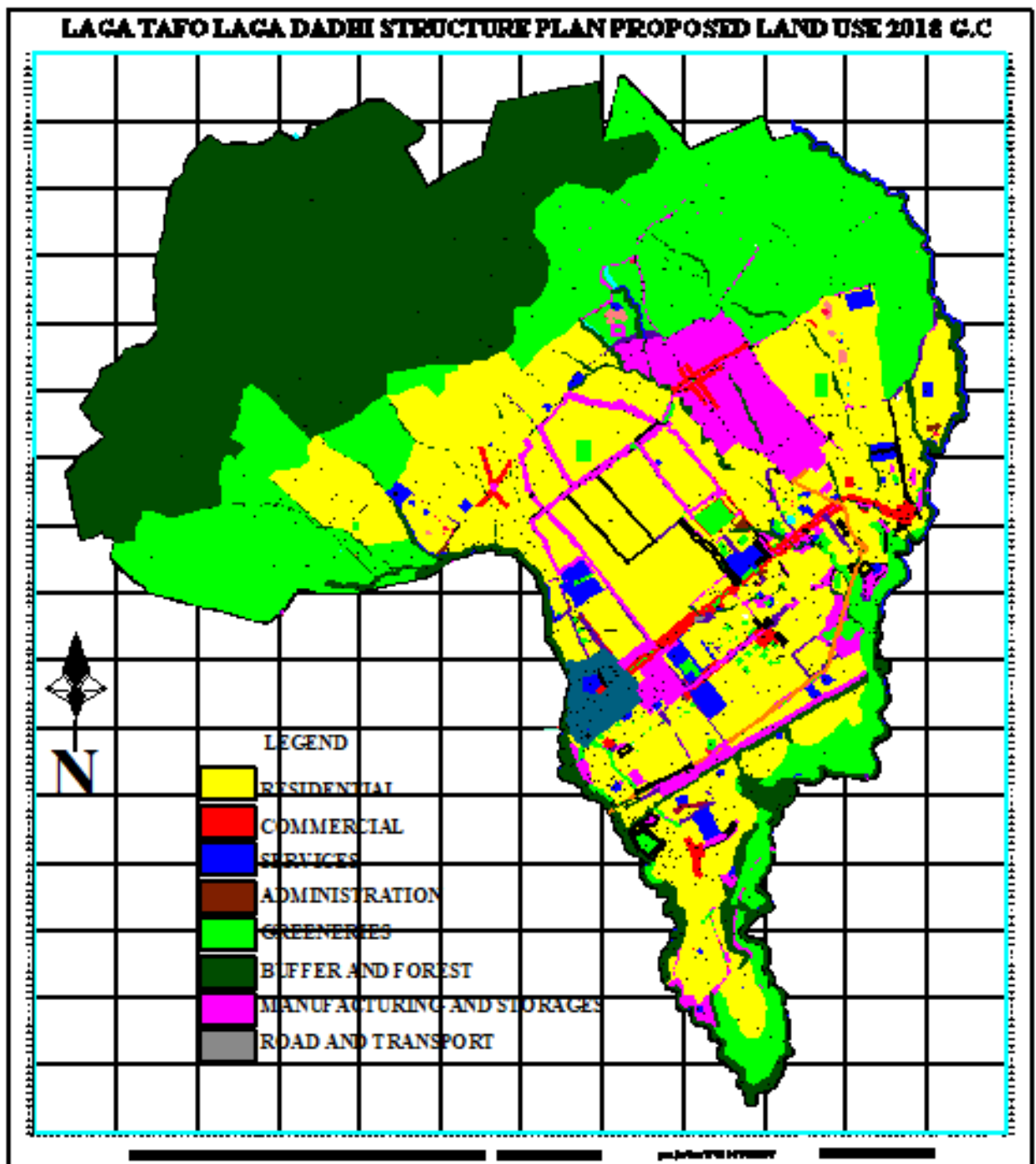
9. what are the effects because of lack of land use plan implementation in the town?

Annex VI: Existing Land use data collection format (field survey by author)

Site	Block		Remark
	Number	Land use type	
ONE	B1		
	B2		
	B3		
	B4		
	B5		
	B6		
TWO	B1		
	B2		
	B3		
	B4		
	B5		
	B6		
	B7		
THREE	B1		
	B2		
	B3		
	B4		
	B5		
	B6		
	B7		
	B8		

Annex VIII: Proposed Land Use Map of Laga Tafo Laga Dadi Town

(Structure Plan of the Town, 2009)



Annex IX: Sample pictures of study area taken by researcher



