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An Assessment of Urban Land Use Plan Implementation Challenges in
Oromia Region: The Case of Dukem Town

By:

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A Thesis Submitted to the School of Graduate Studies of Addis Ababa University,
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Declaration

I, the undersigned, declare that this thesis is my own and original work in fulfillment of the requirements for the degree of Master of Science in Urban Planning entitled “An Assessment of Urban Land Use Plan Implementation Challenges in Oromia Region: The Case of Dukem Town. It has not been previously submitted to this or any other institution and is the original work of the author unless otherwise stated. All sources of material used for the thesis have been properly acknowledged, following the scientific guidelines of the Institute.

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Approval

As a member of the Examiners board of the final Master's thesis open defense of Gezahegn Birku, we have read and evaluated the thesis prepared by Gezahegn Birku entitled “**An Assessment of Urban Land Use Plan Implementation Challenges in Oromia Region: The Case of Dukem 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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Abstract

Land use planning is a critical tool for managing and regulating the use of land in towns and cities. However, implementing land use plans in Dukem town can be challenging, due to a variety of factors, including plan violation, informal settlement, and land use incompatibly and lack of community participation. By observing the problem, this study focuses on major causes and the consequences of urban land use plan implementation challenges Dukem town. It identify the most common challenges that the sub city face, and discuss the factors that contribute to these challenges. Research approach of explanatory with survey methods were used in the research. Descriptive statics and analysis with detailed contextual reviews were widely undertaken throughout the research. The result of the study shows that, the major challenges of land use plan implementation includes: corruption, increase illegal expansion, and environmental pollution, lack of land use plan management system. Accordingly, the result of the explanation of the consequences of the failed urban land use plan implementation: expansion of in formal settlement; decrease of land value and produces an irregular and aesthetically poor town are the major effects that are challenging the sub city. Generally the study shows that, Dukem town faces many challenges in land use plan implementation which hinder the development of the town. Finally the research recommends: preventing unlawful settlement before any building begins; increasing community participation in land plan preparation and implementation; and regularly monitoring and evaluation of the plan's implementation.

Keywords: Planning, Urbanization, Urban Land, Peri-urban, Plan Implementation

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Acronyms and Abbreviations

BWUDO	Bureau of Works and Urban Development of Oromia
EIZ	Eastern Industrial Zone
FAR	Floor Area Ratio
FGDs	Focus Group Discussion
FUPCO	Federal Urban Planning Coordinating Office
FUPI	Federal Urban Planning Institute
GIS	Geographic Information System
IDP	Integrated Development Plan
KOSPI	Kombolcha Steel Products Industry
LDP	Local Development Plan
MP	Master Plan
MWUD	Ministry of Works and Urban Development
NUPI	National Urban Planning Institute
ORAAMP	Office of the Revision of Addis Ababa Master Plan
OUPI	Oromia Urban Planning In Statute
SPSS	Statistical Package for Social Sciences

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

The growth of towns and cities as a result of the industrial revolution was a significant period in the history of city planning, which was previously known by the name of city planning. Cities and towns were severely constrained by the growth, which led to a wide variety of negative outcomes, including overcrowding, traffic congestion, environmental pollution, and so on (Hall, 1998). In the modern world, it is also an essential instrument for achieving sustainable urbanization (NUPI, 2006). Urban planning is practiced differently in different nations of the world. Urban areas, especially in developing nations, are expanding rapidly and at an unprecedented pace, which presents significant difficulties. They must be properly planned and effectively guided by these plans because they are locations where development opportunities and challenges collide (Devas and Rakodi, 1993). This will allow for their expansion, functional specialization, cultural expression, and, most importantly, sustainability.

The existence of an urban plan and its successful execution are crucial for the efficient use and management of resources in urban areas. Urban land use planning is a critical tool for managing and regulating the growth and development of cities. It can help to ensure that cities are livable, sustainable, and prosperous. However, implementing land use plans can be challenging, especially in developing countries (Boudreau, 2018). Most African nations have historically used the master planning (MP) strategy to direct the physical development of their cities and towns (Nijhuis, 2019). Another study by (Afolabi and Aboyeji, 2021) in Nigeria found that the most common challenges to land use plan implementation were lack of enforcement, corruption, and rapid urbanization. The study recommended that the government strengthen land use enforcement, address corruption, and develop strategies to manage rapid urbanization.

According to studies, fewer than 25% of Ethiopia's formally recognized urban areas have no plans to direct their spatial development and even those that do struggle to put the plans into practice. It is believed that the first conventional urban planning method was developed in Entoto, Ethiopia, under Menelik II's rule (Girma, 2004). Urban planning, which focuses on the physical form, economic functions, and social impacts of the urban environment as well as the placement of various activities within it, is a design to order the use of land and other physical resources for the public interest to improve the quality of life and well-being of people who live in cities (Gashu, and Feyisa, 2022).

The main problems affecting the creation and execution of urban plans, in addition to economic constraints, were: a shortage of trained individuals in the field of urban planning, a lack of planning standards, and a lack of suitable legislative frameworks for implementation (NUPI, 2003). The process of plan implementation effort in Ethiopia is seen as being in its early stages, according to studies (Kalekirstos, 2002) on the difficulties of urban plan implementation. However, although being frequently perceived as favorable, urban planning lacks appropriate execution, according to research by (Simie and Jillo, 2012). Ethiopia found that the most common challenges to land use plan implementation were lack of capacity, lack of community participation, and political interference. The study recommended that the government invest in capacity building, engage the community in the land use planning process, and depoliticize land use planning (Tadesse, Kassa, and Tamir, 2022)

Dukem town is experiencing rapid urbanization, which is putting pressure on the land use plan. The sub-city government is struggling to keep up with the demand for new housing, commercial development, and infrastructure (Tadesse, Kassa, and Tamir, 2022). This was caused by unprofessional municipality staff that had the necessary skills to convert graphics into the ground

(Girma, 2021). The lack of qualified personnel to prepare and implement urban land use plans and a lack of funding to compensate nearby farmers will lead to illegal housing practices, according to a study by (Mulugeta, 2017) about the current structural plan implementation situation in Injibara town. These are the main factors that have had an impact on the preparation and implementation of urban plans. Therefore, the primary goal of this study was to assess land plan implementation challenges in the case of Dukam town.

1.2. Statement of the Problem

The process of plan implementation effort in Ethiopia is seen as being in its early stages, according to studies on the difficulties of implementing urban plans. (Belachewu, 2002). However, a research project by (Habtamu, 2011) and (Desta, 2010) despite the fact that the urban plan can be viewed as positive. Lack of knowledge, dedication, and material and technical capacity on the part of the municipalities are the main reasons for poor plan implementation in the nation. The trend of planned development is more common today than at any other time in history. The types of plans created have evolved over time, moving from comprehensive plans to a more specific instrument called strategic urban planning, which looks at the relationship between local policy and the creation of strategies to coordinate urban planning decisions. Additionally, the Local Development Plan - Urban Design, which is a more detailed and focused set of plans, is being used to support these trends and is thought to facilitate and improve urban development.

The Dukem town has the same issues with the implementation of land use plans as previously stated. Dukem town, which serves as Oromia's main development corridor, is presently facing increasing urbanization, population pressure, and the expansion of businesses and industries (such as the east industry zone). Despite the presence of an urban plan, the development of the

town as a whole is not well guided by it. As a result, a number of stakeholders have complained about the town's inadequate execution of the land plan.

Dukem town has experienced rapid urbanization in recent years, leading to a number of challenges, including unplanned and haphazard development, inadequate infrastructure and services, and increased poverty and inequality. The sub-city government has a land use plan in place, but it has struggled to implement the plan effectively. There are a number of factors that have contributed to the challenges of land use plan implementation in Dukem town, including:

Rapid urbanization: Dukem town is experiencing rapid urbanization, which is putting pressure on the land use plan. The sub-city government is struggling to keep up with the demand for new housing, commercial development, and infrastructure; Political interference:

Land use planning in Dukem town is sometimes influenced by political factors. This can lead to decisions that are not in the best interests of the sub-city as a whole, and it can make it difficult to implement long-term land use plans. Rapid urbanization; Dukem town is experiencing rapid urbanization, which is putting pressure on the land use plan. The sub-city government is struggling to keep up with the demand for new housing, commercial development, and infrastructure. Challenges of land use plan implementation in Dukem town affects: all residents of Dukem town, Residents of informal settlements and businesses and investors may find it difficult to acquire land for new development projects.

A study by the Ethiopian Urban Institute found that informal settlements in Dukem town have limited access to safe drinking water, sanitation facilities, and electricity. The study also found that informal settlements are often located in areas that are prone to flooding and landslides (Tadesse, Kassa, and Tamir, (2022)). The lack of planning and coordination in informal

settlements can also lead to congestion and pollution. For example, informal settlements often have narrow streets and alleyways, which can make it difficult for traffic to flow. Additionally, informal settlements often lack proper waste management systems, which can lead to the accumulation of garbage and pollution (Afolabi, and Aboyeji, 2021).

Moreover, the updated structure plan is presently open to modification and other changes prior to its planning period. Planning efforts to update the structure plan are still being made in the town. The primary impediment to the proper implementation of the urban plan has been addressed in some way by the municipality of the Dukem town, but the issue has persisted in the community.

Specifically, the following are some research motives for studying the challenges of land use plan implementation: to understand the specific challenges that the sub-city is facing, to identify the root causes of the challenges, to assess the impact of the challenges on residents and to inform policy and practice. The research motives for studying the challenges of land use plan implementation in Dukem town, and particularly in informal settlements, are to improve the quality of life for residents and promote sustainable and equitable urban development.

1.3 Objective of the Study

1.3.1 General Objective

The general objective of this study was to assess the challenges of implementing urban land use plan in Dukem town, Oromia, Ethiopia

1.3.2 Specific Objectives

The specific objectives of this study are to:

- ✓ analyze the current status of Dukem town structural plan
- ✓ examine major Challenges related to land planning implementation of Dukem town
- ✓ develop potential strategies to improve urban land use plan implementation in Dukem town

1.4 Research Questions

The above research's general and specific objectives motivate the following research questions in light of the study's broad and detailed aims.

- 1) How Dukem town implemented the current structural plan?
- 2) What are the main challenges in putting the Dukem town Structural Plan into practice?
- 3) What remedies are provided for issues with structural plan implementation?

1.5 Scope of the Study

The main purpose of this study is to explain the Cause and consequence of urban land use plan implementation challenges, as well as how these challenges were managed concerning its goals

and objectives. All kebeles of Dukem town that are now recognized as the political administrative boundaries are included in the study's geographic or spatial scope. In doing so, various geographic regions that were managed by the town government and city administration.

1.6 Significance of the Study

The results of this study benefit all parties involved by generating and supplying a clear and thorough knowledge of what is happening in what circumstance and to what extent about the execution of plan and design in connection to anticipated objectives, outputs, and outcomes. In order to better implementation, the research aids the municipalities of Bishoftu Town and Gelan sub cities as well as the latter's urban development office and land-related office in identifying gaps, weak points, and inefficient regions and also provide evidence to support the development of effective land use policies and plans. This evidence can help to ensure that policies and plans are realistic, achievable, and in the best interests of the community.

Research on the challenges of land use plan implementation in Dukem town is of significant academic and practical importance. This research can help us to better understand the challenges that rapidly urbanizing cities in developing countries face in implementing land use plans, as well as the impact of these challenges on residents. Additionally, this research assists relevant organizations in facilitating and providing crucial resources and hints to potential intervention areas, enabling them to take proactive measures in the present and future plan and design implementation processes of the study town specifically and other similar cases generally. In general, recognizing causes, difficulties, gaps in planning and implementation, and problems aids in the engagement of proactive steps in the future planning preparation, means and strategies for implementation, and land use plan implementation process of the study town.

1.7 Limitation of the study

The results may not be generalizable to other towns or cities because the study was only done in Dukem town. Some of the respondents were not willing to respond the questionnaires. There were difficulties collecting the data within the allotted time since the sub city was undergoing a reformation to become a sub city from the town. These lead the researcher to more costs. The study concentrated on the difficulties in implementing the land plans for sub cities, but it did not take into account the accomplishments and best practices of the sub cities. The study did not take into account anticipated future changes in the difficulties of implementing urban land plans, such as the effects of climate change or population growth. Lack of secondary data like base maps, and description of the structural plan at sub city level. However, the researcher collected the data from Oromia Plan Institute to solve the problem. Other challenges were Time, financial, and transportation limitations to collect data.

1.8. Organization of the Paper

There are five chapters in this thesis. The background of the study, explanation of the problem, objectives, research questions, and study organization are included in the first chapter, which is titled Introduction. The second chapter looks at a survey of relevant literature that focuses on Theoretical Literature Reviews, Arguments for and against planning, theories of urban plan implementation, Defining Urban Planning and urban land use Plan Implementation, the evolution of urban planning implementation, Experience with the Challenges of Urban Plan Implementation, theory of urban planning and implementation in Ethiopia, Oromia and the Gelan sub city, Urban Planning Approaches in Ethiopia.

In the third chapter, a brief overview of the research area's geographical characteristics, population makeup, climate, and other physical characteristics of the town are provided. The study's methodology is also covered in this chapter. The study's analysis and results are discussed in the fourth chapter, and the final chapter examines the summary, conclusion, and recommendations

CHAPTER TWO: LITERATURE REVIEW

This chapter provides theoretical and empirical frameworks for the study by reviewing related literature on the planning and implementation problems in two broad sections. The first section presents theoretical literature on the arguments for and against planning, planning implementation, and planning implementation problems. The second section is devoted to the reviews of empirical studies in other countries at large and in Ethiopia, along with the gaps observed, in particular. By intervening in each section, the researcher identifies the gaps witnessed in the empirical studies and shows that those will be bridged by this study.

2.1 Theoretical Literature Reviews

The issue of planning has long been an area of debate for many scholars and researchers. This has chiefly emanated from the divergence between theoretical arguments and empirical findings. Planning is a continuous process of making entrepreneurial decisions with an eye to the future and methodically organizing the effort needed to carry out these decisions. All consider planning as a guide to execution and as a means of determining a course of action (Mintzberg, 1994).

What Factors Influence Whether Something Is "Good" or "Bad" Planning is a question that must naturally pique our interest as planners? Of course, this is closely related to another topic that has generated some discussion over the years: what is planning? Considering (Vickers', 1968) simple statement that "planning is what planners do" and the potential obviousness of evaluating planning effectiveness, it is possible that both of these questions are trivial.

2.1.1 Argument for and Against Planning

Town Planning Review does a fantastic job of summarizing the historical criticisms and justification for continuing the practice (Richardson, 1985). It helps put the profession into

perspective. Around the world, criticism of planning is growing in the media, academia, and politics. In response to these criticisms, this article examines four major categories of arguments for and against planning in a contemporary democratic "free market" society: economic arguments based on the benefits and drawbacks of competitive markets, pluralist arguments based on the advantages and disadvantages of pluralist group interactions, traditional arguments used by the early planning profession, and contemporary "neo-Marxist" arguments for and against planning (Healey, 1997).

Together, these viewpoints imply that planning can be justified on theoretical grounds as serving four fundamental social functions: advancing the community's common interests; taking into account the external consequences of individual and group action; enhancing the informational basis for public and private decision-making; and defending the interests of the most vulnerable members of society. Planning, however, can only be evaluated in the end based on how well it accomplishes these task (Klosterman, 1985). It is best to read the table below one row at a time, from left to right. Imagine someone arguing against planning (which is just a euphemism for "government intervention" in general), and the planning profession responding with counterarguments.

Economic arguments claim that government regulation is unnecessary because it hinders innovation, discourages entrepreneurial initiative, and increases administrative and financial burdens. The most effective way for resources to be distributed in a society is through the invisible hand of the free market. Whereas the planning counters claimed that there is no such thing as an ideal market. Some forms of market failures can be fixed by the government alone. Governments are required in a variety of situations, such as those involving public goods, negative externalities, the prisoner's dilemma, and unequal distributions (Brisk, 2022).

Where according to pluralist arguments; ideas opposed to planning claimed that the current political negotiations sufficed. Competition between groups pursuing different objectives makes sure that all perspectives are taken into account and that no group takes over the situation. Only the government should have the authority to set the guidelines and approve the results of political adjustment. Special "advocacy" campaign organizers have the power to give groups that don't typically have one a voice (Dahl, 1961). The political landscape, according to counter for planning, is dominated by obnoxious players like corporate lobbyists. Governments frequently favor business tax breaks in this system. Minority and low-income groups lack the necessary resources, leadership, education, experience, and knowledge to effectively participate in discussions. Small vocal groups with focused interests can collaborate to appeal to larger bases (i.e. consumers generally). Only public sector planners are able to effectively identify a community's shared objectives, coordinate the efforts of individuals and groups, and consider long-term effects (Hall, and Mark, 2012).

As traditional arguments, those who were opposed to planning argued that politicians and the physical city are two things with which planners are overly preoccupied. Technical solutions reveal a particular viewpoint of city life. The wealthy civic and business elites are the main beneficiaries of efforts to advance the general welfare of society (Hall, and Mark, 2012). Coordination of public and private development is not possible, either organizationally or politically. Conversely, those who opposed the plan claimed that the "fourth power" of the government was to advance the general/public interest over the specific conflicting interests of people or groups. Through the careful application of professional expertise, instrumental rationality, and scientific methods, the overarching goals of government can be more effectively advanced (Hall, and Mark, 2012).

Marxist Arguments said that; the real issue is the fundamental social and economic structures based on a capitalistic society. Any government exists solely to advance capital's long-term interests in the private sector. Conditions are created and maintained by governments to advance the long-term objectives of the capitalist class (Hall, and Mark, 2012).

Marxist Arguments against planning; the fundamental social and economic structures based on a capitalistic society are the real problem. Any government exists only to further the long-term objectives of capital in the private sector. Governments set up and maintain conditions to further the long-term goals of the capitalist class (Hall, and Mark, 2012). Only through labor revolutions and the replacement of antiquated social structures will real advancements be made. Whereas According to Counter for Planning, reform-minded planners can only advance in the short term by drawing on their specialized knowledge because a Marxist radical transformation of society is extremely unlikely to occur in the near future. Planning in the modern era need not only serve the interests of capital. Additionally, relying solely on the market or political competition is not a good idea (Hall, and Mark, 2012).

2.1.2 Theories of Planning Implantation

Urban planning may incorporate urban renewal through modifying urban planning techniques for already-existing cities that are experiencing a decline. Alternately, it may be about the enormous difficulties brought on by urbanization, particularly in the Global South. All in all, there are many distinct types of urban planning that handle a wide range of concerns. The drive for urban reform, which emerged in the middle of the 19th century as a response to the chaos of the industrial metropolis, is where contemporary urban planning had its start. Anarchism, which gained popularity at the turn of the 19th and 20th centuries, served as an inspiration for many of the early innovators. The newly envisaged urban shape was intended to coexist with a new

civilization based on voluntary cooperation among self-governing communities. Radical perspective, and the humanist or phenomenological (Peter and Mark, 2012).

Blueprint planning

Urban planning has typically been considered to be the physical planning and design of human societies at least since the Renaissance and the Age of Enlightenment. It was therefore considered to be connected to architecture and civil engineering and should be done by such professionals. It involves creating master plans and blueprints that would perfectly depict the "end-state" of land usage, much like architectural and engineering plans. Similar to this, visionary planning and design that would show how the perfect city should be organized spatially was the core focus of urban planning theory (John, 1987).

Garden city movement

The Garden city movement was founded by Ebenezer Howard (1850-1928). His ideas were expressed in the book *Garden Cities of To-morrow* (1898). Howards' vision was to create a Town-Country, and unique setting that would integrate the greatest aspects of both the city and the rural. To accomplish this, a group of people would create a limited-dividend corporation to purchase inexpensive agricultural land, which would subsequently be developed with investment from businesses and homes for the employees.

Linear city

Arturo Soria y Mata (1844-1920) idea of the linear city replaced the traditional idea of the city as having a center and a perimeter with the notion of building linear infrastructure - roads, railroads, gas, water, etc. Along an ideal line and then connecting the other elements of the city along the length of this line. The goal of the linear city was to "ruralize the city and urbanize the

countryside," and it was designed to be universally applicable as a ring around already-existing towns, a strip linking two cities, or an altogether new linear town over an area that was not yet urbanized.

Regional planning movement

According to Patrick Geddes (1864–1922), planning must begin with surveying such a region by creating a "Valley Section" that depicts the general slope from mountains to the sea that can be identified across scale and place in the world, with the natural environment and the cultural environments produced by it included. He created the word "conurbation" because he believed that technology was transforming cities into more regional settlements. He also shared the garden city movements; and belief that these metropolitan areas needed to have more green space.

Towers in the park

Le Corbusier (1887–1965) His approach was based on defining the house as 'a machine to live in. He founded his general planning philosophy on the idea that specialists should "work out their plans in utter independence from party pressures and special interests" and that "once their plans are created, they must be followed without objection."

2.1.3 Theories of Urban Land Use Plan Implantation

A key component of sustainable urban development is urban land use planning, which directs the distribution of land resources and shapes the physical structure of cities. But putting urban land use plans into action is not always easy, especially in poorer nations. Rapid urbanization, ineffective governance, a lack of institutional capacity, and competing stakeholder interests are some of the complex interplaying elements that cause this. With changing urban surroundings

and an increasing awareness of the difficulties in implementing plans, the theoretical literature on the difficulties in urban land use planning has changed throughout time (Healey, P. 2005).

Originating in the early 1900s, the rational planning paradigm places a strong emphasis on the role that specialists and technical expertise play in directing the planning process. It presumes that planners have all the information they need and base their choices on a thorough examination of the goals, limitations, and possible results. This paradigm promotes a top-down method of planning in which specialists create plans and implementers carry them out (Friedmann, J. 1987). The importance of stakeholder participation and cooperation in the planning and implementation process is emphasized by the collaborative planning theory. Urban land use plans are acknowledged to be executed by a network of government agencies, private sector companies, civil society organizations, and community people rather than by a single authority. This idea emphasizes how crucial trust, cooperation, and relationships between various actors both horizontal and vertical are to the successful execution of a strategy (Arnstein, S. R, 1969).

The planning and execution process benefits greatly from stakeholder participation and cooperation, according to the collaborative planning hypothesis. It acknowledges that a network of governmental agencies, businesses, civil society organizations, and local residents carry out the implementation of urban land use plans rather than a single authority. This idea emphasizes how crucial it is for various players to collaborate, have trust in one another, and interact both horizontally and vertically in order to carry out plans effectively (Healey, P, 1997).

2.2 Conceptual Framework

Policymakers, stakeholders, and urban planners may all better understand the potential and problems related to implementing urban land use plans by using a conceptual framework. In order to guarantee that urban land use plans are implemented and create sustainable and habitable cities for the future, this information may guide the creation of more effective planning methods, institutional setups, and stakeholder engagement techniques. Primary challenges that arise during the planning implementation process includes; governance and institutional capacity, socio-economic and political factors and planning and policy Issues. In addition, propose strategies to address the identified challenges and their underlying factors includes; strengthening governance, promoting stakeholder engagement, enhancing plan flexibility and improving monitoring and evaluation.

Conceptual framework benefits Provides a systematic approach to understanding the complexities of plan implementation challenges. Also considers the interplay between various factors and their cumulative impact on plan implementation. It also benefits to Informs the development of targeted strategies that address specific challenges and their underlying causes and Facilitates effective communication among stakeholders by providing a shared understanding of the challenges and strategies.

2.3 Defining Urban Planning and Land Use Plan Implementation

Urban planning, design, and regulation of space usage focus on the physical characteristics, economic purposes, and social effects of the urban environment as well as the placement of various activities within it. Urban planning is both a technical profession and an endeavor

requiring political will and public engagement since it draws on engineering, architectural, social, and political considerations.

Urban planning involves defining objectives, gathering and analyzing data, predicting, designing, using strategic thinking, and consulting the public. It also deals with both the development of open space (also known as "Greenfields sites") and the regeneration of existing areas of the city. In order to map the current urban structure and forecast the effects of changes, geographic information systems (GIS) technology has become more and more prevalent. With the aid of urban planning, questions like "What, Where, When, and by whom" may be addressed. Also, how? Development of cities should (Davidson, 1996).

Hiraskar, (2007). indications are that town planning, also known as urban planning, is viewed as an art that involves directing the physical development of a community and designing environments and buildings to meet the needs of all people, regardless of their socioeconomic status. This leads to the social and economic prosperity of the majority of humanity. A beautiful city creates a better society, hence the goal was to make urban areas physically fit for reasonable existence.

It is used to test whether the prepared plan for a particular urban center is accurately implemented and has achieved the intended aim or not since it is used after the achievement of the urban plan. So plan implementation is the process of putting a plan into action (Bekele, 2010). Plan execution is a systematic process for converting development strategies into doable tasks. It is the most challenging step in both industrialized and developing nations' planning processes (Birke, 1996).

2.4 Land-Use Controls

Controlling land usage involves restricting how it is used. It is a technique for governments to control how people use land and other natural resources in order to further certain public policy objectives. Land use restrictions can be utilized to assure the availability of affordable housing, foster economic growth, and safeguard the environment.

Subdivision Regulations:

Land can be divided into smaller lots under the control of subdivision regulations, which are a collection of laws and restrictions. They're often put into practice by local governments and are intended to make sure that new subdivisions are built in a method that's safe, effective, and sustainable.

Subdivision regulations frequently contain the following specifications:

- ✓ The size and shape of individual parcels
- ✓ The width and alignment of streets
- ✓ The provision of utilities and infrastructure
- ✓ The preservation of open space
- ✓ The protection of environmental resources

Although there might be regional variations in subdivision laws, they usually all share the same fundamental objectives. These objectives include:

- To ensure that new subdivisions are safe and accessible
- To promote efficient development
- To protect the environment

- To provide for the needs of the community

2.5 Experience on the Challenges of Urban land Use Plan Implementation

Large inconsistencies exist between the plan's overall goals and some of its measures and implementation tools. Among the various challenges, the most common are high crime levels, unemployment, health issues, poverty, overstretched public facilities/infrastructures, high population density, and poor planning and implementation policies (Nedovic, 2011). It encourages planned development by distributing plots for different land uses systematically and logically. This ensures effective use of the limited land resources. Because one of the ultimate purposes of urban planning is to allocate plots for different land use functions.

Rizwan and Obaidullah (2006) show that the difficulties of inadequate urban plan implementation led to the waste of money, time, and human resources on the plan-making organizations, which genuinely offers a problem to the government. As a result, even while a plan is a tool to direct and govern the evolution of an urban core, poor execution will do nothing to further urban development.

(Abdal, 1993) explained in his section that there are two significant challenges to putting master plan recommendations into action. The first is that there hasn't been any attempt to positively influence private sector activity by using the plan as a planning tool. The municipality's restricted ability to carry out development or acquire land to facilitate development is the second.

2.6 Urban Land Use Planning and Plan Implementation in Ethiopia

Urban land use plans in Ethiopia are difficult to implement because land resources are under severe strain due to the country's recent rapid urbanization. The difficulties in putting land use

plans into practice in Ethiopia are caused by several variables (Terfa, Hailu, and Teka, 2020). To address these issues, the Ethiopian government has put in place a variety of laws. One such law is the urban property Lease Policy of 1993, which permits the government to lease urban property to private developers for use in residential, commercial, and industrial projects. The goal of the strategy was to stimulate mixed-use community development and investment in urban development (Alebel and Berihu, 2014).

Urban planning in Ethiopia is still in its infancy, but it has a very fascinating history. (MWUD, 2007). Urban planning has been used for more than 60 years, with various governments placing varying amounts of emphasis on it (Belachew, 2002). Despite the fact that urban planning has been practiced for the past 60 years, the government pays less attention to it and the services it provides are fragmented and disjointed (Teka, 2004). Urban, Peri-urban, and rural area borders are difficult to define. They are not cleanly divided by lines on a map. Contrarily, the expansive nature of urban expansion causes the areas to converge. It may be challenging to determine a town's size based on its population or physical area when there is no obvious boundary. Data on population size is gathered for planning and administrative purposes, but decisions must still be taken (Peter and Mark, 2012).

During the Italian conquest of Ethiopia, the first contemporary urban planning method was developed. Patric Abercrombie, a well-known planner, and architect, Up until 1974, Polony and other foreign urban planners contributed to the creation of Addis Ababa's urban plan (Melaku, 2008). The lesson from these expatriate planners is that they made plans based on the national context, without taking the local context into account, and according to their needs. As a result, there was a huge gap between what was planned and what was happening.

Due to the significant policy changes made by the new administration (which forbade private investment and involvement in urban development), the expansion of Addis Ababa and other urban centers came to an abrupt halt in 1974 with the transition of the government and political system. In addition, the lack of rural residents moving into their neighborhoods had an adverse effect on urban growth rates and urban planning techniques (ORAAMP, 2000).

The establishment of NUPI in 1987 changed the attitude towards urban planning and promoted urban plan as a key development instrument, leading to its renaming as FUPI and now FUPCO, the Federal Urban Planning Coordination Office. The institution was responsible for preparing urban plans and providing consultancy services. FUPI has created master and development plans for more than 120 urban districts prior to the foundation of regional urban planning institutes in four regions (MWU D, 2006).

Ethiopia's largest and capital city, Addis Ababa, is a prime example of the difficulties in putting urban land use plans into practice. The city has seen a sharp increase in population, which has exacerbated the problem of inadequate infrastructure and services as well as the emergence of informal settlements. Adopted in 2006, the Addis Ababa City Master Plan has encountered many challenges in its execution, such as (Berhanu and Gedamu, 2014).

2.7 Urban Land Use Planning in Oromia Region

Urban planning in Oromia was done by NUPI and was comparable to what was done nationally before the foundation of the current administration. Four towns in the area Asella, Adama, Negele Borena, and Ziway have master plans produced by NUPI, while 15 other towns Woliso, Fitcha, Nekemte, Jimma, Ambo, Chiro, Robe, Bishoftu, Shashemenne, Gimbi, Metu, Goba, Agaro, Dembidolo, and Modjo have development plans (NUPI, 2002).

In the present administration, the Bureau of Works and Urban Development of Oromia (BWUDO) worked with NUPI to address urban planning issues. With a small staff of specialists and surveying equipment, the office helped prepare urban plans and base maps for towns and cities. Later, NUPI changed its focus from preparation to the construction of an urban planning institute in each of the four regions, giving them the tools they need to create urban plans for the towns and cities in their respective areas.

Oromia has experienced rapid urban growth, leading to the expansion of informal settlements, which are often unplanned and not aligned with formal land use plans. This can strain infrastructure, hinder service delivery, and complicate land titling and regularization processes (Getahun and Teka, 2019). Oromia has experienced rapid urban growth, leading to the expansion of informal settlements, which are often unplanned and not aligned with formal land use plans. This can strain infrastructure, hinder service delivery, and complicate land titling and regularization processes (UNDP, 2020).

2.8 Urban Land Use Planning Implementation Challenges in Adama Town

The town of Adama in Ethiopia's Oromia Region has rapidly become more urbanised in recent years, which has made the implementation of urban land use planning more difficult. These difficulties comprise. Adama's quick development has surpassed the local government's capacity to efficiently plan and regulate land usage. This has caused erratic and unplanned growth, resulting in a tight mix of residential, business, and industrial uses. The infrastructure, which includes roads, water supplies, and sanitary facilities, has also been strained by the quick expansion. Congestion, low-quality water, and insufficient sanitation services are the results of this.

Low-income people find it more difficult to find affordable homes due to land speculation brought on by the increasing demand for land. Unofficial settlements, where people live without access to infrastructure or basic services, have grown as a result of this. The absence of community engagement in the urban land use planning process has resulted in individuals not being aware of or comprehending the plans. Resistance to plan execution and problems with compliance have arisen as a result. Plans for urban land use are frequently not adequately implemented by local government due to a lack of funding. Delays in the construction of infrastructure, a lack of resources for oversight and enforcement, and difficulties obtaining property for public use have resulted from this.

2.9 Challenges of Urban Land Use plan implementation in Galan Sub City

2.9.1. Introduction

The difficulties encountered in implementing Galan Town's urban design may be roughly categorized into three groups. Due to the ground water catchment region being inside Galan's planning limit yet Addis Ababa's population using the water, these challenges with the plan's execution. Additionally, there were some investments both before and after the town was founded. Therefore, the research makes an effort to analyze these challenges and make recommendations for plan implementation (Habtamu, 2011).

2.9.2. Land Use Plan Implementation Challenge & Ground Water Catchment

The Akaki ground water catchment zone contains 29 deep wells. 17% of the water needed by Akaki, Saris, Bole Bulbula, Wello Sefer, Stadium, Mekenisa, and Ayer Tena up to Kara kore is derived from these deep wells. If everything is ideal for water pumping, the average daily contribution of the Akaki ground potential site for the population of southern Addis Ababa is

45,000m³ (Habtamu, 2011). Addis Ababa receives 16,912,985m³ of water on average each month. There are currently 335 hectares in the ground water catchment area. The region is marked as reserved on the structural plan for any appropriate building. What matters is compatibility, albeit, in what sense? Is there compatibility with the site's planned land uses or with the region where groundwater collects?

According to the source: 2007 Galan Town land use plan, location of catchment area it makes sense that if the land is going to be utilized for extensive development, flood risks would rise owing to compaction, which will diminish water recharge and harm farmers' ability to make a living. Additionally, Gelan & AAWSA have only sporadic institutional ties to ground water.

2.9.3. Investments Prior To Gelan & Implementation Challenges

The majority of the investments made prior to the development of Gelan sub city were along the Addis Ababa-Adama route, with the exception being Mesfin Industrial Engineering, which is situated only 200 meters from a railroad. The size of the blocks under these ventures ranges from 1.7 hectares (Aadaa'al Industrial Plc.) to 7.6 hectares (KOSPI). The accessibility of land uses in the back is a challenge caused by these substantial blocks of investments. Before Gelan sub city was built, the main leisure areas along the highway were already developed. Furthermore, they have expansive blocks with sizes ranging from 0.5 hectares (the Gelan Recreation Center) to 5 hectares (Atlas Resort Center). The 4-hectare wooded area and the 2-hectare RAMSA area lie in the middle of these two extremes.

Before the founding of Gelan, the majority of investments were made on imported inputs. This includes Trackon Trading, KOSPI, and DH. Geda Plc. Dot Pencil, NOVA Star Garment Factory, and Mesfin Industrial Engineering. They don't have any connections to domestic input.

2.9.4. Implementation Challenges after the Establishment of Gelan

At the conclusion of Ethiopia's 2007 budget year, Gelan sub city and Akaki district were awarded the status of the township after the urban-rural boundary between them was established. To entice investors from other regions of Ethiopia and from beyond, the Oromia National State gave Gelan a status for economic and political purposes. There were no taskforces for plan execution, assessment, or monitoring before or after the founding of Gelan and during the validity period of the proposed structural plan. There isn't a guidebook for monitoring and evaluating programs, a checklist, an action plan, implementing bodies, or a timetable.

According to regulation number 16/2004, a taskforce for the plan's implementation can be set up to identify urban redevelopment intervention areas, environmental considerations, and industry zones based on the experience of cities like Addis Ababa. A local development plan must be created and put into effect during the validity period in order to carry this out. Towns will therefore be accountable for carrying out plans through various organs.

Despite the fact that Gelan sub city lacks a taskforce for plan implementation, a special taskforce made up of members of institutions with stakes in the town has been established with the goal of facilitating investment execution. Designing corrective actions to support Gelan's plan implementation process in accordance with the structure plan manual also aids in this process. Establishing a set of goals, objectives, and tactics for the plan's implementation process in accordance with Gelan's proposed structure plan, promotes the plan's implementation process and, in turn, the town's growth. As part of the plan implementation process, it's crucial to compare objectives, targets, and strategies with proposed land uses.

Allocation on the unspecified legal framework and developing irregular land use morphology leading to limited land for investment before the end of the structure plan period. Gelan sub city needs priority areas to have a similar pattern of development to the structure plan without affecting its financial capacity and relocating incompatible land uses, strengthening its financial capacity. Investment activities in Gelan sub city are due to poor land administration, informal land transactions, and speculators. The municipality is responsible for supervising buildings and construction processes to minimize wastage of capital and land use change. Nobody to cross check socio-economic reports against the structure plan proposal in Gelan, hindering clarity, consistency, and conformity.

The main land uses in Gelan's structural plan are social services, manufacturing, administration, business, green space (parks, forests, open spaces, and urban agriculture), reserved space, single-family homes, mixed-use, and infrastructure. They are suggested in accordance with the guidelines in the Matheos Consult structural plan handbook.

2.10 Urban Land Use Planning Approaches in Ethiopia

Urban planning approaches in Ethiopia are imported from developed countries but differ in practice. Urban planning practice in developing countries is affected by political situations. Planning approaches focus on land use, with a variety of plans available (Assefa, 2019).

Master Plan: It is a physical/spatial planning with supplemental maps (land use and road network with I: 2000 and I: 5000 scales) and illustrative text for studies with a long time horizon (as long as 20 years). In Ethiopia, master planning was used to develop the majority of the urban plans for the country's numerous metropolitan centers. As a result of their rigidity, the majority

of these ideas did not work as intended and were placed on the shelves (FUPI, 2006). Both Ethiopia and Oromia share the same broad global reality of the master planning strategy.

Development Plan: It is a medium-term plan in which it is expected that the provided recommendations would be carried out within the planning period. This method of planning is comparatively the most effective one, taking into account each and every proposal that is depicted in the spatial plan. These plans often have a prescriptive aspect, meaning that their contents are predetermined. The major goal of this strategy is to go into great depth about the key factors that the plan takes into account (Belachew, 2002).

Structure Plan: Structure plan is linked to global and national plans, strategies and policies, sub-regional and regional plans, Sectorial Development Plans, Local Development Plans, and Integrated Infrastructure plan (FUPI, 2006). Additionally, it is the geographical manifestation of anticipated and projected economic and social transformations that come about as a result of the processes and activities outlined in this study.

Action Planning: Action planning is a participatory process to use resources to meet objectives in a defined area, with community participation and local adaptations. (Belachew, 2002) Urban land protection, financial capacity, and managerial commitment are key issues with this approach.

Integrated Development Planning (IDP): Performance-oriented planning is a type of urban development planning that originated in South Africa. It directs and informs all municipal planning, budgeting, management, and decision-making. The municipality's capabilities have been taken into account as we prepare the IDP.

Local Development Plan (LDP): On the basis of the structural plan, it is a technique to implement the general plan in a detailed proposal. (Oejene, 2005) states that the goal of LDP is to specify the specifics of areas chosen for development based on the terms of land use models and other pertinent factors. Additionally, according to (NUPI, 2004), "LDP is utilized in chosen regions based on their unique contribution to the towns and cities growth coupled with the establishment of legislation and urban design suggestions. Additionally, according to (FUPI, 2006), LDP is the lower-level urban plan, which is created within the framework of a structural plan and is mostly employed in particular locations inside an urban center for immediate implementation.

2.11 Legal Framework of Urban Land Use Planning and Plan Implementation in Ethiopia

Urban plan preparation and implementation is hindered by a lack of legal provisions and institutional frameworks. Proclamations were publicized in 1942 and 1947 under public health. This Proclamation focused on land use control (Demissew, 1996). Urban planning legislation did not exist until the establishment of the National Urban Planning Institute in 1987 by Proc No 31711987. Proclamation decentralizes power to local governments and private consultants (Federal Negarit Gazeta No 16th May 2008).

The current government has launched a comprehensive urban development policy to fasten the development of urban areas and create better linkage with rural areas. Cities and towns are essential for economic growth and socio-economic opportunities. Urban planning has been affected by the change of government. A policy change by the government affects the planning process of the country (Getnet, 2019).

2.12 Legal Framework of Urban Land Use Planning and Implementation in Oromia Region

Regional governments can have their legal proclamation within the framework of the federal government. Urban planning and management have improved since 2003, leading to better legal frameworks (Bekele, 2010).

The derived and used legal frameworks are listed below;

- ✓ Establishment of Oromia urban planning institution, reg. no 67/ 2006
- ✓ A proclamation to provide for the establishment of Bureaus of Oromia land and environmental protection, proc. No 147/2009.
- ✓ Urban local government, proclamation No. 65/2003

2.13 Strategies to Improve Urban Land Use Planning Implementation

For cities to be resilient, livable, and sustainable, urban land planning must be implemented effectively. Several techniques can be used to close the gap between expectations and reality. Improve coordination mechanisms between government agencies, developers, and community representatives to guarantee plan alignment and timely execution. Clearly define roles and duties among the many parties engaged in urban planning and implementation. Encourage the public to participate actively in the planning process. Use community workshops, online polls, and public hearings as participatory methods to get input and include local goals and needs in the planning framework. Make the process of acquiring construction permits and other land-use approvals more straightforward and quick. In order to promote compliance and avoid delays, lessen administrative costs and increase transparency (New Urban Agenda, 2016).

Additionally, give priority to investments in vital infrastructure, including electricity grids, water and sanitation systems, and transportation networks. To make cities more livable, create and preserve excellent public areas like parks, plazas, and pedestrian-friendly streets. Integrate sustainable practices, such as waste management, green infrastructure, water conservation, and energy efficiency, into urban design. Promote the use of environmentally friendly building supplies and methods. Provide systems to oversee the implementation of urban land use plans (United Nations, 2015).

A key component of city development is urban land use planning, which guarantees the orderly and sustainable expansion of metropolitan regions. However, there are several obstacles in the way of effective implementation of land use plans, which prevents cities from developing to their full potential. These difficulties cover a range of topics related to urban planning, such as public participation, government level coordination, and enforcement methods (World Resources Institute, 2012). Planning for urban land use is further complicated by the burgeoning informal settlements and rapid urbanization. The increase in unplanned settlements and migration can put a burden on infrastructure and resources by overwhelming current land use regimes. In order to overcome these obstacles, thorough planning techniques that take into account the requirements of informal settlements and include them into the official urban fabric are needed (The World Bank, 2018).

Technological developments provide fresh chances to improve urban land use planning. Tools for data analytics and geographic information systems (GIS) can offer important insights into population trends, land use patterns, and environmental conditions. But to use these technologies to their full potential, money must be spent on infrastructure, data management, and training (International Growth Centre, 2019).

2.14. Summary of the Literature Review and Identified Research Gaps

2.14.1 Summary of Literature Review

The fundamental goals of urban land use planning are to develop ways to reduce socioeconomic inequality in the industrial towns of the 19th century. Comprehensive planning in this sense deals with the optimal use of land for future community expansion or decline. It also serves as a policy guide. A structure plan helps guide development by defining land use patterns, open space, and infrastructure. Planning is a cyclical process that involves identifying and solving problems. Ethiopia's urban development policy requires urban centers to provide agricultural tools, services, and technical assistance to increase the productivity of farmers.

2.14.2 Identified Research Gaps

Urban planning and implementation techniques have come a long way, but there are still a number of research gaps that need to be filled in order to fully comprehend and solve the difficulties that come with carrying out urban land use plans. These gaps demonstrate the need for more study and creativity to improve plan implementation efficiency and guarantee that urban land use plans result in concrete benefits that raise urban people' quality of life.

- Examining rapid urbanization,
- Identifying impact of commercial and industrial growth (like east industry zone),
- Impact of population pressure
- Expansion of illegal settlement
- Land use plan violation
- Identifying land use incompatibility impact

CHAPTER THREE: MATERIALS AND METHODS

3.1 Description of the Study Area

Dukem town is situated along the route to Adama 37 kilometers to the south-east of Addis Ababa. Geographically, the research area spans a total of 9630.6 hectares and is located between $8^{\circ} 45'25''\text{N}$ $8^{\circ} 50'30''\text{N}$ latitudes and $38^{\circ} 51'55''\text{E}$ - $38^{\circ} 56'5''\text{E}$ longitudes.

The town is bordered to the southeast by Bishoftu Town, but to the majority of the north by Gelan sub city of Shagar. Four nearby peasant kebele of Akaki woreda form the eastern and western boundaries of the remaining portions of the town (OUPI, 2017). Wajitu Dibdibe is the southern peasant kebele which covers largest border with Dukem Dukem town. The Gogecha Peasant kebele, located in the town's north, comes after that. TedechaYatu defines the perimeter of Dukem sub city third-largest area. Oda Nabe is Dukem sub city neighbor with the narrowest border in the northwest. The northern peasant kebele situated inside the boundaries of Dukem town are the furthest away from the town's center, while the remaining peasant associations in the east and south are found closer to Dukem town (OUPI, 2017). Poverty, environmental deterioration, and fast urbanization are some of the other issues Duke Sub city is dealing with. Effective urban land use planning is being hampered by these issues, which are also placing a pressure on the town's infrastructure and resources.

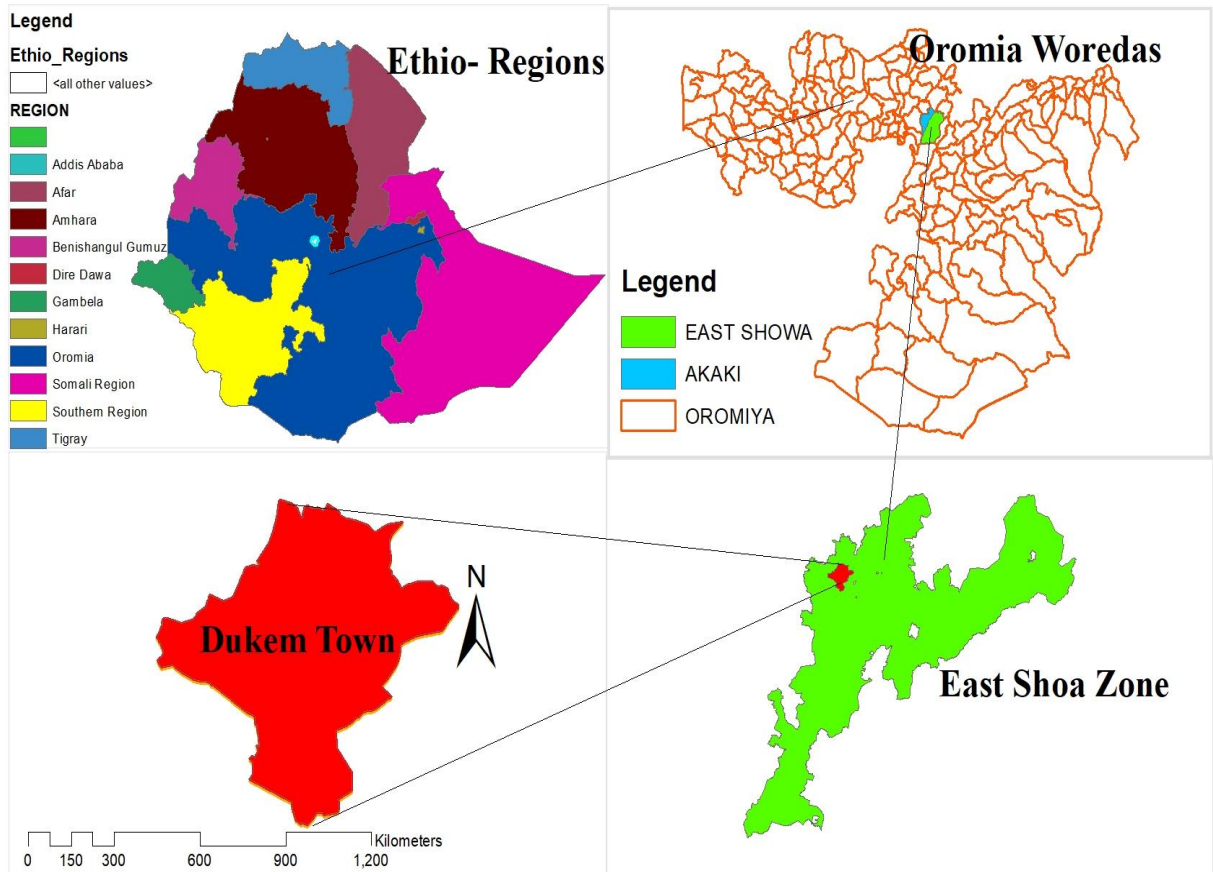


Figure 3.1 Location Map of Dukem town (Source: field survey, 2022)

3.2 Research Methodologies

The approach that will be used for the desired research project will be outlined in this section. This provide a framework for the research process, from defining the research question to collecting and analyzing data. There are two main types of research methodologies used for this study; qualitative approach used for the study of non-numerical data, including people's experiences, attitudes, and beliefs. It frequently makes use of techniques like focus groups, interviews, and observations. And also quantitative approach used for understanding of

numerical data, including measurements and statistics. It frequently makes use of techniques including experiments, surveys, and statistical analysis.

3.3 Research Design

This research used a mixed-methods approach to explore the challenges to urban land use plan implementation in Dukem town. The research involved; a review of the existing literature on urban land use plan implementation challenges. This helps to identify the key challenges that are likely to be relevant to Dukem town, Primary and secondary data will be collected. The primary data collected through interviews and questionnaires' with stakeholders, such as government officials, urban planners, the secondary data will be collected from government reports, academic studies, and other sources. The data collected were analyzed using a combination of qualitative and quantitative methods. The qualitative analysis were focused on identifying the key themes and patterns that emerge from the data. The quantitative analysis were used to identify the most important factors that contribute to urban land use plan implementation challenges and presents the findings of the research, as well as recommendations for overcoming the challenges to urban land use plan implementation in Dukem town.

3.4 Types and Sources of Data

Both primary and secondary sources were used to gather data. Investigation of the pattern and general conditions under inquiry were made possible by field observation. The required data will be gathered using a qualitative approach, which will be utilized to describe and evaluate the data. Checklists, interviews, observations, and digital cameras were used to gather data under the qualitative method from primary sources, and relevant published and unpublished documents

like official reports, journals, policy documents, proceedings, and books were used from secondary data sources.

The main sources of data used are desired as follows.

Primary data

It is collected directly from the source, rather than from secondary sources. For this study, Primary data were collected through a variety of methods, including surveys, interviews, experiments, and observations

- **Survey:** list of closed or multiple choice questions that are distributed to a sample in person.
- **Interview:** Semi-structured interview questions revealed a wide range of ideas. Under this checklist were given to Dukem town municipality to ensure reliable information. This helps to identify the current status of structure plan implementation and land use against the proposed land use category. And also Digital camera were used to collect land use violations in the structure plan
- **Observation:** Systematic observation to compare proposed and implemented structure plans.
- **Focus Group Discussion (FGDs):** One sort of focus group were used to collect the data. The FGD has involved three experts who were involved in the drafting of the structural plan.

Secondary data

Secondary data were a valuable source of information for this study, as it can save time and money. Secondary data can be found in a variety of sources, including:

Reports: Government agencies collect a wide variety of data, including census data, economic data, and social data.

Literature: Various academic publications and articles relating to the study subjects were used. These articles frequently contain information that can be used by further researchers.

Examination of documents like master plans, development plans, land use plans, road network plans, municipal development plans, and urban designs, among others relation to facts on the ground enables to identify of actual performance and challenges that exist during plan preparation and implementation.

The mayor, managers, process owners, experts, administrators, department heads, and planning and monitoring organizations are just a few examples of the officials at various levels of power who will be sources of data and information. This is done in an effort to capitalize on the town's background, their perceptions, the work they put in, and the biggest obstacles they faced.

3.5 Sampling Design

3.5.1 Sample Population

In this study, the researcher took into consideration employees who are currently employed by the government agency in the six offices. These six offices are;- Dukem town land Management office, Construction Authority, Cadaster office, Planning office, Investment Office, Dukem town Municipality office. These offices were chosen because the researcher thought they would be able to obtain all the information required for the study from them and because they were involved in planning and implementation. The organization or office under examination has a total of 157 employees in these six offices, according to the data collected from Dukem town. Since it would be hard to analyze the whole population, the researcher will choose some representative samples.

Table 3.1 Target population

No	Name the office	Employee
1	Investment and industry office	19
2	Cadaster office	18
3	Municipality office	35
4	Construction office	27
5	Land management office	52
6	Planning and economic development office	6
		<u>157</u>

3.5.2 Sample Size Determination

The target population size is taken into account while calculating the sample size for the study using the simplified method presented by (Yamane, 1997), which was quoted in (Fisseha, 2011):

$$n = N / (1 + N (e^2))$$

When, n- is a sample size, N- Is the population size and e -Is the level of precision.

For the sake of calculating the sample size for this investigation, a 95% confidence interval is assumed, and e = 0.05. In light of this, the study's sample size is determined in the manner shown below.

$$N= 157$$

$$e= .05$$

$$n= 157/ (1+157*.05^2) = 112.7\sim 113$$

Table 3.2 Sample design of the respondent

No	Name the office	Employee	% sample	Sample size
1	Investment and industry office	19	12.39	$19 \times 113 / 157 = 14$
2	Cadaster office	18	11.5	$18 \times 113 / 157 = 13$
3	Municipality office	35	22.12	$35 \times 113 / 157 = 25$
4	Construction office	27	16.82	$27 \times 113 / 157 = 19$
5	Land management office	52	33.63	$52 \times 113 / 157 = 38$
6	Planning and economic development office	6	3.54	$6 \times 113 / 157 = 4$
		<u>157</u>		<u>113</u>

3.5.3 Sampling Technique

The educational backgrounds, types of occupations, and other characteristics of the respondents are varied. As a result, a stratified sampling technique is used to prevent this population heterogeneity as shown in the Table 3.2. With random sampling technique, the population is separated into smaller groups that are each more homogeneous than the entire population. Afterward, it is feasible to choose things from each stratum to make up a sample.

3.6 Data Collection Methods

The main data collection methods that used to collect data on urban land use plan implementation challenges in the case of Dukem town were anticipated to be used throughout the data-collecting phase. The questionnaire data with open-ended and closed-ended surveys can be analyzed to identify the most common challenges and suggestions from stakeholders. This information can be used to develop recommendations for improving the implementation of the

urban land use plan in Dukem town. This interview guide can be used to interview stakeholders from a variety of backgrounds, such as government officials, urban planners, community members, and business owners. Others include field observation with a checklist.

3.6.1. Questionnaires'

Data was gathered from a variety of government office respondents using questionnaires, and also both closed-ended and open-ended questionnaires were prepared. In addition, two likert scale data were asked to identify the challenges of land use plan implementation and impact of land compensation ways on land use plan implementation.

3.6.2. Semi-Structured Interviews

A sample of office leader, group leader and planner was interviewed to assess their response on existing structural plan, proposed land use plan and urban land use planning implementation challenges in their opinion. And also, better ways to improve or reduce urban land use plan implementation challenges were identified.

3.6.3. Observations

For the purpose of interpreting and overseeing the implementation of the land use plan, Dukem's current structural plan is important. It describes how property owners, government employees, specialists, and planners are responsible for the majority of land use challenges. The study thoroughly observed the current plan, possibilities and challenges, and paving approach to enhance the difficulties associated with implementing land use plans.

3.6.4 Focus Group Discussion (FGDs)

One sort of focus group were used to collect the data. The FGD has involved three experts who were involved in the drafting of the structural plan. Purposively experts, group leader and town

planer were selected from all offices to identify Dukem town land use plan implementation challenges and opportunity to improve those challenges.

3.7 Data Analysis and Presentation

Data were processed and presented mostly using descriptive and quantitative methods. A small amount of the qualitative method were used. Data presentation should employ tables, maps, graphs, and charts. In order to support and establish the actual situation on the ground, photographs and figures were incorporated into the investigation. Presentation approaches were included appropriate computer applications, such as Photoshop, Illustrator, SPSS, Excel, etc. with enough verbal descriptions.

3.7.1 Spatial Analysis

Examining data patterns and linkages in a geographic setting is a component of spatial analysis approaches. Land use, infrastructure, and environmental variables were examined by the researcher using Geographic Information Systems (GIS). The study used GIS to pinpoint areas where the plan has been violated, where land uses are compatible, where unlawful settlement has taken place, and where landowner opposition is present.

3.7.2 Statistical Analysis

Throughout the research Data is gathered and analyzed using statistical methods to identify trends and patterns, eliminate bias, and guide decision-making. In this investigation, two statistical methods were employed.

- ✓ Descriptive statistics: These methods are employed to condense data and highlight its key characteristics. For instance, computing a collection of data's mean, median, and standard deviation.

- ✓ Inferential statistics: These methods are employed to draw conclusions about a population from data sample. This includes determining the percentage of a population that has a certain attribute, determine the significance of relationships between variables, Make predictions about future land use changes and evaluate the effectiveness of land use policies and programs

3.7.3 Stakeholder Surveys and Interviews

Qualitative information about challenges and obstacles to land use plan was obtained by conducting questionnaires and interviews with the various parties engaged in the implementation of urban land plans. Insights from developers, urban planners, and other professionals were used for data gathered.

3.7.4. Cause and Effect Analysis

Case studies of the implementation of urban land plans in comparable settings can be examined. Examining successful and failed examples in other towns or cities allows for the identification of similar difficulties, important success factors, and lessons gained. Land use plans are often politically contentious, and politicians may be reluctant to support plans that could alienate their constituents. This can lead to a lack of commitment to implementing land use plans and can make it difficult to resist pressure from developers and other stakeholders. Many local governments lack the capacity to effectively implement land use plans. This may be due to a lack of skilled staff, financial resources, or legal authority. Weak institutional capacity can make it difficult to enforce land use regulations and to monitor the implementation of land use plans. Land use plan implementation can be costly, requiring financial resources for planning, enforcement, and monitoring. Many local governments also lack the skilled staff necessary to implement land use plans effectively.

3.8 Method of Data Presentation

The implementation of urban land use planning in Dukem Town has both opportunities and challenges that must be effectively communicated through data presentation. These are some appropriate techniques for presenting information on this study.

3.8.1 Map

Different land use categories may be shown clearly on color-coded maps, and the interaction of land use with other elements like land use incompatibility, industry zone, transit routes, and environmental dangers can be shown by superimposing data layers on top of one another.

3.8.2 Charts and Graphs

Graphs and charts were provided to concise summary of numerical data and trends pertaining to Dukem Town's land use planning challenges. Bar charts can be used to compare likert scale data to identify level of land use planning implementation challenges.

3.8.3 Tables

Tables offer a methodical and comprehensive way to display quantitative information about Dukem Town's land use plans. In this study Tables were used to compare data collected from various respondent.

3.9 Data Validation

Validating data is essential to guaranteeing the precision, dependability, and credibility of research findings. This is especially true when the study is named "Urban Land Use Plan Implementation Challenges in the Case of Dukem Town." The following are some crucial methods for validating the data in this study.

3.9.1 Triangulation

This facilitates data cross-checking for consistency and helps spot any biases or mistakes. For example, integrating information from surveys, observations, interviews, and document analysis can result in a more thorough and nuanced knowledge of Dukem Town's land use planning concerns.

3.9.2 Member Checking

This allows this study to verify interpretations and ensure that the findings reflect the experiences and perspectives of those directly involved in land use planning. For example, sharing preliminary research findings with Dukem Town residents, government officials, and land use planners can help refine the data and enhance its credibility.

3.9.3 Contextualization and Generalizability

To fully understand the implications and usefulness of the findings, the study place them within the particular setting of Dukem Town. In order to address land use planning difficulties, and also take into account the town's distinct historical, social, economic, and political elements.

CHAPTER FOUR: RESULT AND DISCUSSION

4.1 Result

This section presents the data obtained through data collection instruments

The results section of the study on urban land plan implementation challenges in the case of Dukem town shows the results of the investigation carried out to determine the principal problems and challenges encountered in the town's land plans plan implementation. The section will provide a detailed analysis of the information gathered through a variety of research techniques, such as surveys, interviews, and observations. The results will be presented in a logical and systematic manner, highlighting the key findings and their consequences for the implementation of urban land plans in the Dukem town.

This chapter in its part also explains the cause and consequences of urban land use planning implementation based on the collected data. It starts from the description of the respondents up to discussion of the results gained in the research. All of the sampled 113 participants were surveyed. Where, all of them were from the government office of the study area. Thankfully, 113 of the participants have fully completed both of the open ended and closed ended parts of the questionnaire so that the analysis of the data is conducted based on these collected data.

4.1.1 Socio-Demographic Characteristics of the Respondents

A sample of 113 employees from six offices took part in the survey for this study. The demographic background of respondents was depicted in the following Tables 4.1

Table 4.1 Respondents back ground

		Count	Column N %
Sex	Male	84	74.3%
	Female	29	25.7%
Age	18-24	8	7.1%
	25-34	48	42.5%
	35-44	42	37.2%
	45-54	13	11.5%
	55-64	2	1.8%
	above 65	0	0.0%
	Educational level	TVET	1
Diploma		18	15.9%
Degree		78	69.0%
MA/MSc		16	14.2%
Others		0	0.0%
Years of Experience	less than 1	3	2.7%
	1-5	26	23.0%
	6-10	46	40.7%
	11-15	20	17.7%
	16-20	9	8.0%
	above 20	9	8.0%
Specialization	Urban land planner	2	1.8%
	Management staff	5	4.4%
	Expert or Engineer	83	73.5%
	Team Leader	17	15.0%
	Others	6	5.3%

Out of the total responders, as depicted in table 4.3, 74.3% were male, while the remaining 25.7% were women. In the research region, there are more male employees than female employees, which is reflected in the sample's composition because it was drawn by simple random sampling. The bulk of responders (69%) had only received their first degree in education. Graduates with a diploma and a master's degree respectively made up 15.9% and 14.2% of the sample. ATVET level could be 4% of the respondents. The respondents generally range in educational attainment, and it was discovered that they understood the survey's purpose well enough to offer insightful answers to its questions.

The bulk of responders (40.7%) had a service year between 6 and 10 years. Additionally, a sizable portion of responders (23%) had served between 1 to 5 years. 17.7% of the sampled respondents had between 11 and 15 years of service. Both respondents 8% each served for between 16 and 20 years as well as more than 20 years. From the entire sample, 73.5% of the respondents were engineers or experts. While 5.3% of the sample's total positions were held by others, 15% of the sample were team leaders. Management workers made up 4.4% of the sample. Urban planners made up 1.8% of the entire sample.

4.1.2. Connection between Age and Work Experience

The relationship between age and work experience found that older employees were more likely to have more work experience as shown in Table 4.2.

Table 4.2 Relationship between age and work experience

		Years of Experience											
		less than 1		5-Jan		10-Jun		15-Nov		16-20		above 20	
		Count	Layer Total N %	Count	Layer Total N %	Count	Layer Total N %	Count	Layer Total N %	Count	Layer Total N %	Count	Layer Total N %
Age	18-24	2	1.80%	5	4.40%	1	0.90%	0	0.00%	0	0.00%	0	0.00%
	25-34	0	0.00%	11	9.70%	29	25.70%	8	7.10%	0	0.00%	0	0.00%
	35-44	1	0.90%	9	8.00%	11	9.70%	11	9.70%	8	7.10%	2	1.80%
	45-54	0	0.00%	1	0.90%	5	4.40%	1	0.90%	1	0.90%	5	4.40%
	55-64	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	2	1.80%
	above 65	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%

The study analyzed data from a six Dukem town office of 113 employees and found that 25.7% of individuals aged 25-34 had 6-10 years of work experience, Additionally, the study found that individuals aged 45-54 were the most likely to have more than 20 years of work experience, with 4.4% reporting having done so.

4.2 Current Structural Plan of the Study Area

The Dukem town Structural Plan is a comprehensive plan that outlines the sub-city's growth and development plans for the next 10 years. According to the outcome of the interview and observation Conflicts between various land uses, such as commercial and residential or residential and industrial, arise in the Dukem town due to the existing land use problems with land compatibility. Zoning laws, environmental issues, and opposition from the local community are just a few of the reasons why these disputes might arise.

Take Dukem East Industry Zone, which is situated in Koticha Kebele and situated between Dukem Dukem town and Bishoftu Town, as an illustration. This industrial region covers 22.89ha. and sandwiched between a business and residential sector, and it also serves as a barrier between the developments of the two towns. On the other hand, there is a land compatibility issue, particularly between residential and industrial and commercial and industrial, in Gogecha and koticha kebele.

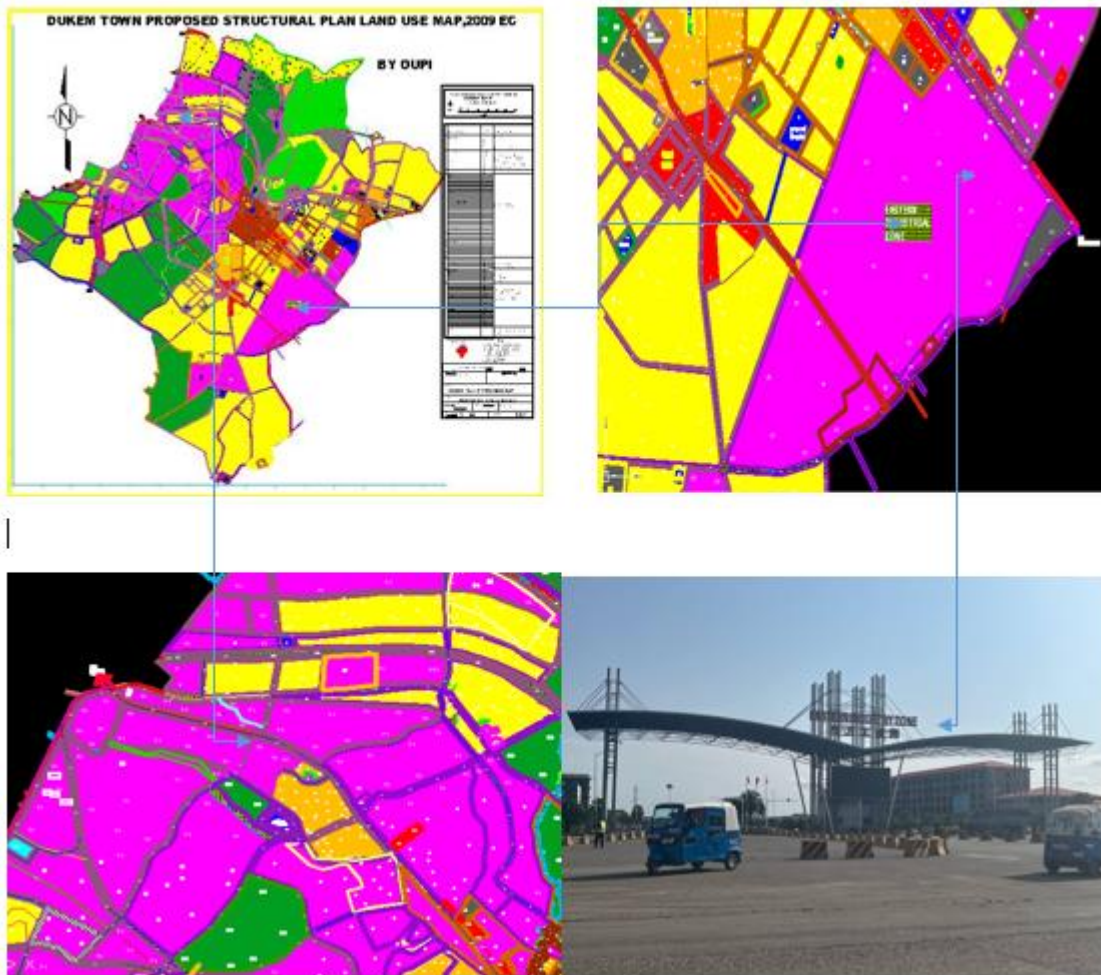


Figure 4.1 Land use incompatibility areas (Source: ST of Dukem, 2010)

All of the kebeles in the Dukem town have an issue with land use incompatibility, as seen in Figure 4.1. However, land use incompatibility driven by the construction of residential homes in industrial areas has a serious impact on Gogecha, Koticha, and Mendallo Kebele. This causes a variety of pollutants, including air pollution, water pollution, and noise pollution, which can endanger the health of locals. Additionally, residential property values will decline. This is related to the fact that consumers are frequently afraid to acquire properties that are close to industrial operations due to possible health and safety issues.

Other critical issues of Dukem town are connected to other challenges with land use zoning change, such as the nearly all-commercial nature of the structures in the two kebele Koticha and Xadacha, which disagree with the city's structural design.

1. Residential land owner needs to construct a commercial building.
2. Commercial land owner needs to construct industry or warehouse

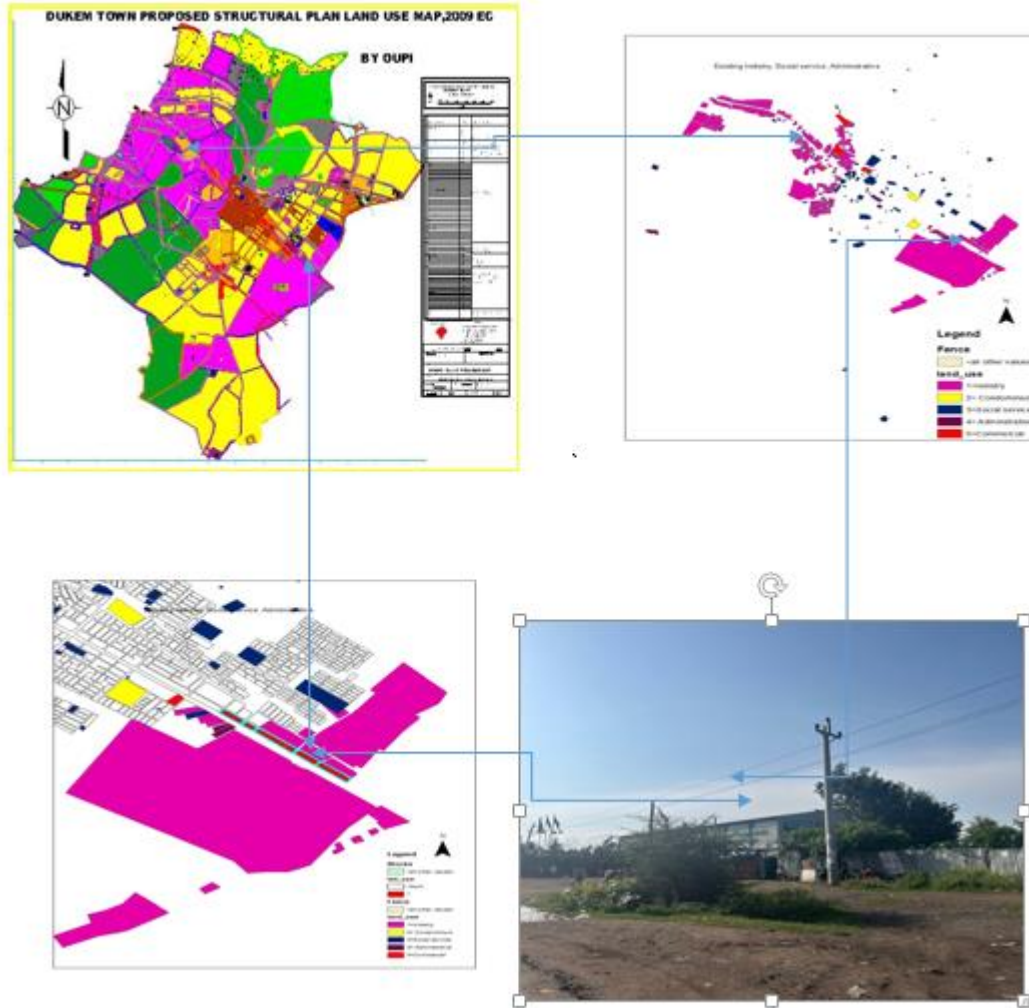


Figure 4.2 Land use incompatibility areas (source: structural plan of Dukem, 2010 and GIS)

Landowners have an impact on the area in front of East Industry, along the major route from Dukem to Addis Abeba, and Bishoftu Town, as represented in Figure 4.2. The owner of the land is opposed to the land use plan and needs to build what they want. The fact that Dukem town is close to Addis Ababa and serves as a gateway for the import and export of goods and services, the ownership needs to construct industrial and commercial buildings.

4.3 Major Challenges of Urban Land Use Planning Implementation

4.3.1 Dukem Town Linkages/Connections with Other Sub-Cities/Town

The level of various challenges related to a city's links with another sub city or city was a question that respondents were asked. Unfortunately, the vast majority of responders had valid replies to these claims. The growth of the town toward the Peasant Administration might have an impact on the implementation of the plan, according to 85% of respondents (96 respondents) overall. Only 15% (17 respondents) said that the growth of the town toward the Peasant Administration couldn't have an impact on the implementation of the plan.

According to the result of the study 103 respondents with 91.2% answered that Urban and rural areas clash during plan execution and have an impact on plan implementation. The rest 10 respondents 8.8 said that urban and rural areas clashing during plan implementation has no impact. All 113 respondents had rated the form urban and rural areas clash during the plan implementation process. According to the study's findings, 105 respondents or 92.9% indicated that how the farmers included in the planning boundary of Dukem town sell their agricultural products have an effect on the plan's implementation. On the other hand, how the farmers included in the planning boundary of Dukem town sell their agricultural products had no influence on plan implementation, according to the remaining 8 respondents.

Table 4.3 Descriptive statistics of town linkages/connections with other sub-cities/town

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
1. Expansion of the town	113	1	2	1.15	0.359
2. Urban rural conflict	113	1	2	1.09	0.285
3. Market for agricultural product	113	1	2	1.07	0.258
Valid N (list wise)	113				

The 1st form of town linkages/connections with other town was with average rating an M=1.07 as shown in Table 4.3. The outcome demonstrates that the location of the farmers who are a part of the Dukem town planning limit has a significant impact on how the planning is carried out. Conflicts between urban and rural regions throughout the plan implementation process had the second important issue of town linkages/connections with other sub-cities/cities, with an average value of M=1.09. The average rating to the extent of growth of the town toward the Peasant Administration might have an impact on the implementation of the plan, was M=1.15, which was ranked as the 3rd and foremost issue town linkages/connections with other sub-cities in the study area.

Table 4.4 One Sample t-test for town linkages/connections with other sub-cities/town

One-Sample Test						
	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
1. Expansion of the town	34.056	112	0	1.15	1.08	1.22
2. Urban rural conflict	40.56	112	0	1.088	1.04	1.14
3. Market for agricultural product	44.183	112	0	1.071	1.02	1.12

In general, as shown in Table 4.4 all types of sub city interconnections and connections with other sub-cities/cities had a significant impact on how the Dukem town land plan was implemented.

4.3.2. Government Support for Land Use plan Preparation

In relation to the government support for land plan preparation, three topics were chosen for respondents to rate, as shown in Table 4.5.

Table 4.5 Descriptive Statistics of Government support for land plan preparation

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
1. Money support for land use plan preparation	113	1	2	1.1	0.298
2. Coordination support for plan preparation	113	1	2	1.06	0.242
3. Mobilization of community	113	1	2	1.09	0.285
Valid N (list wise)	113				

Statement 2 was the most issue the lack of support from the government to prepare land plan successfully with an average rating of $M=1.06$; 93.8% of the respondents identified this as the most issue that need support from the government to prepare land plans. Thus, Dukem town administration had the luck of strong participation to coordinate stockholders for a successful full preparation of a land plan.

The second issue, which had an average rating of $M=1.09$ from respondents, was recognized by 91.2% of them as the second area where the government had luck assistance in order to successfully execute the land plan preparation. The last issue for which the government luck assistance in effectively preparing a land plan, with an average rating of $M=1.1$; 90.3% of respondents named this issue as the last issue from the government in executing a land plan preparation.

Table 4.6 One Sample Statistics for Government support for land plan preparation

One-Sample Test						
	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
1. Money support for land use plan preparation	39.18	112	0	1.097	1.04	1.15
2. Coordination support for plan preparation	46.62	112	0	1.062	1.02	1.11
3. Mobilization of community	40.56	112	0	1.088	1.04	1.14

As shown in Table 4.6 the overall relevance of the three concerns is graded with an average rating of $M=1.08$ ($p\text{-value} = 0.000.05$), and each of the three issues was substantially above the

moderate level rating (p-values 0.05). This shows that the Dukem town Government faces difficulty in the execution of urban land plan preparation.

4.3.3. Land Use Planning Items

The magnitude of various Land use Planning Items concerns in the Dukem town was a question that was posed to the respondents. Unfortunately, a very substantial proportion of the respondents provided accurate replies to these assertions as shown in Table 4.7

Table 4.7 Descriptive statics of land planning items

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
1. lack of Land use compatibility issue	113	1	2	1.09	0.285
2. Challenges from land owners	113	1	2	1.12	0.331
3. Impact of illegal settlement	113	1	2	1.08	0.272
4. lack of socio-economic data	113	1	2	1.11	0.309
Valid N (listwise)	113				

A total of 113 respondents gave their opinion on the possibility of illegal settlement in the Dukem town. The overall rating for the statement was M=1.08 and ranked 1st for land planning items. Among them, the majority 104 (92%) answered yes. The majority of respondents 71 (62.8%) were degrees, 38.9% of the group aged 25 to 34, and 34.5% of the group aged 35 to 44. The result showed the primary issue that requires a government response is unlawful settlement. Only 8% of respondents said that Dukem town does not have any illegal settlements.

For the item possible occurrence of land use compatibility issues received responses from 113 individuals in all. The overall rating for the statement was M=1.09 and ranked 2nd for land

planning items. The bulk of them 103 (92%) responded yes to the survey. 39.8% of the group aged 25 to 34 and 31.9% of the group aged 35 to 44 made up the respondent's 70 (61.9) degree total. The outcome demonstrated that the respondents were younger, degree-holding individuals and that Dukem town was a victim of land use compatibility. Only 8% of respondents claimed that Dukem town has no issues with conflicting land uses.

113 people responded to the town's concerns regarding the land plan item, providing socioeconomic data that was utilized to build the structure design that was compatible with the submitted spatial plan. The overall rating for the statement was $M=1.11$ and ranked 3rd for land planning items. The socioeconomic data used to create the structure plan in accordance with the submitted spatial plan to the town concerns got replies from 113 people overall for the land plan item. 101 of them, or 89.4%, said they agreed with the statement. 38.9% of the 25 to 34 year old group and 31.9% of the 35 to 44 year old group. 68 (60.2%) of the respondents overall were degree holders. The results showed that Dukem town had prepared a land plan by analyzing socioeconomic data that was compatible with the submitted spatial plan. Only 10.6% of respondents answered the structural plan was prepared without socio-economic data.

Concerns from the municipality regarding the land plan item, issues from the landowner relating to land use, and what the owner needs to build the building received responses from 113 persons. The overall rating for the statement was $M=1.12$ and ranked 4th for land planning items. 113 people responded to this topic. 87.6%, or 99 people, said that they agreed with the statement. 37.2 percent of people aged 25 to 34 and 32.7 percent of people aged 35 to 44. Degree holders made up 71 (62.8%) of the respondents. Only 12.4% of respondents indicated that there were no issues from the landowner relating to land use, and what the owner needs to build the building.

Table 4.8 One Sample statistics for land use planning items

One-Sample Test						
	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
1. Land use compatibility issue	40.56	112	0	1.088	1.04	1.14
2. Challenges from land owners	36.102	112	0	1.124	1.06	1.19
3. Illegal settlements may exist in your town?	42.202	112	0	1.08	1.03	1.13
4. Impact of illegal settlement	37.999	112	0	1.106	1.05	1.16

In general, as shown in Table 4.8 each of the aforementioned factors had a significant impact on how consistently urban land plans were developed. The overall significance of these reasons was a high-level factor, with an M=1.10 average rating, that had produced consistency with urban land planning.

4.3.4 Land Compensation Ways for the Farmer

The various land compensation items concerns in the Dukem town was a question that was posed to the respondents and the result shown in Table 4.9

Table 4.9 Descriptive statics of land compensation items

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
5.1 Compensation is given for their land	113	1	5	4.31	0.708
5.2 Compensation is given for their crops	113	2	5	4.02	0.756
5.3 Compensation is given for their trees	113	1	5	3.84	0.841
Valid N (listwise)	113				

The highest ranked of the three reasons, M=4.31, and fall to strongly agree, provides compensation for their farmland in terms of land (statement 5.1). This was confirmed by 48 (42.5% of the respondents) who answered the statement with a strongly agree and 54 (47.7%) who did so with a "agree" While 10 (8.8%) respondents were neutral about receiving compensation in terms of land for their farmland. The statements are strongly disagreed with by 1 (.9%) of the respondents.

Compensation for their agricultural crops (statement 5.2) is the second-ranked justification of the three, with an M=4.02 score falling into agree. This was supported by 31 respondents (27.4%), who said "strongly agree," and 55 respondents (48.7%), who said "agree." 25 (22.1%) respondents had a neutral opinion regarding whether or not farmers receive compensation for their crops. Only 2 of the respondents (1.8%) strongly agree with the remarks.

Third-placed among the three justifications, with an M=3.84 score fall in to agree, is "Compensation is given for their permanent trees interims of cash" (statement 5.3). A total of 51 respondents (45.1%) and 25 respondents (22.1%), who both indicated "agree," and "strongly agreed" with this. Regarding whether or not farmers receive payment for their

permanent trees, 32 (28.3%) respondents had a neutral attitude. Only a small percentage of responders (.9%) strongly disagreed with the statements.

Table 4.10 One-Sample Test for land compensation items

One-Sample Test						
	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
5.1 Compensation is given for their land	64.698	112	0	4.31	4.18	4.44
5.2 Compensation is given for their crops	56.514	112	0	4.018	3.88	4.16
5.3 Compensation is given for their trees	48.571	112	0	3.841	3.68	4

As shown in Table 4.10, we looked for high-level significance (p-values less than 0.05) across all possible causes. This implies that the government gave compensation to the farmer for different items like land, grains, and trees. But only one item got compensation from the three items. That means for one location only one item was calculated for compensation depending on the interest of the farmer.

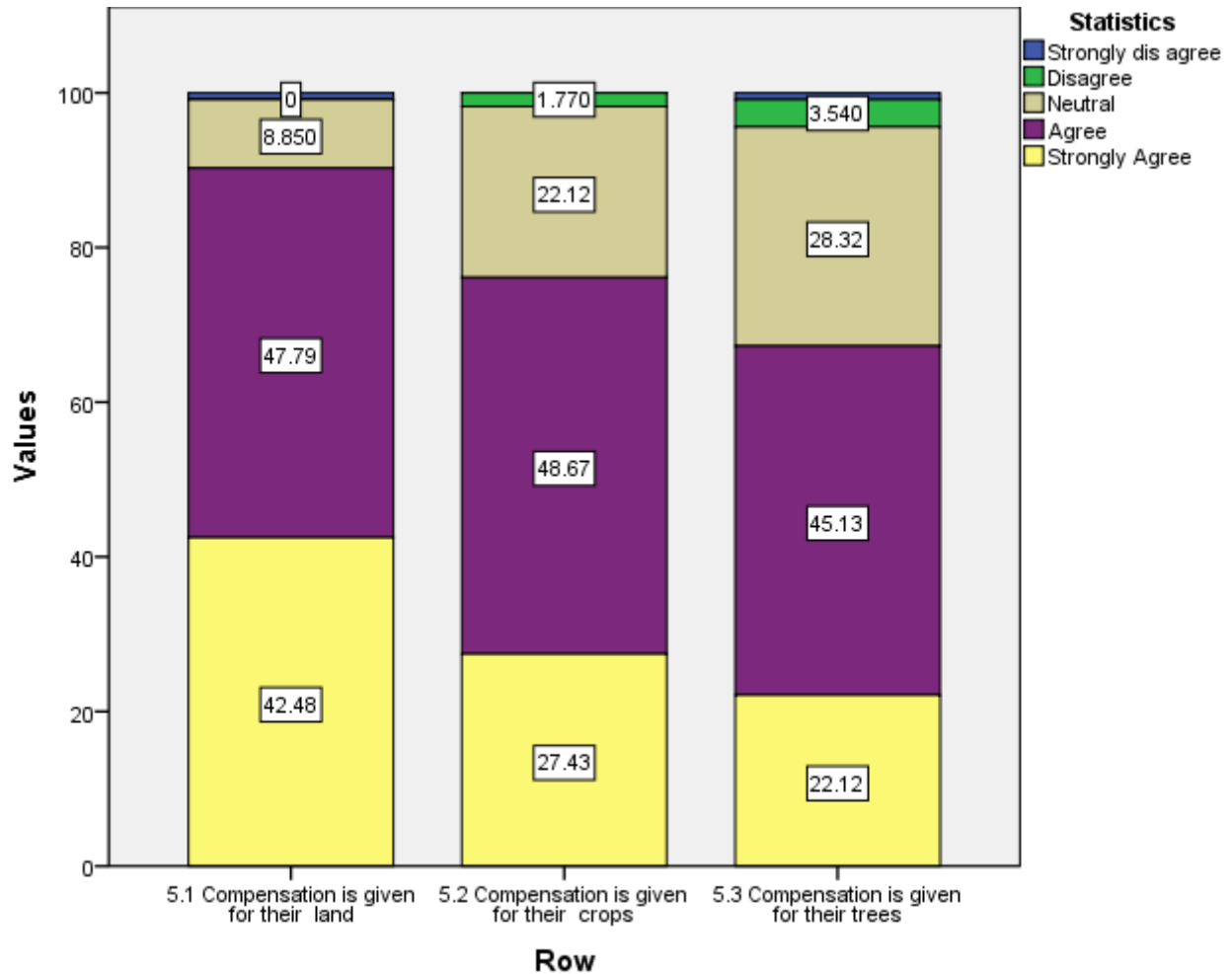


Figure 4.3 Descriptive statics of data for land compensation ways for the farmer

Based on the Figure 4.3 majority of respondents (47.79%) are agreed with the compensation is given to their farm land. However, there is also a significant number of respondents who are strongly agree (42.48%) or neutral (8.85%). Majority of respondents (48.67%) are agreed with the compensation is given to their crops. However, there is also a significant number of respondents who are strongly agree (27.43%) or neutral (22.12%). The bar graph also shows that very few respondents are dis agree (1.77%).

4.3.5. Land Use Plan Implementation Challenges

All the respondents have answered the questionnaires as showed the results in Table 4.11

Table 4.11 Descriptive statics of land use plan implementation challenges items

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
6.1 lack of Financial support for land use plan implementation	113	1	5	4.46	0.768
6.2 Plan violations problem	113	3	5	4.34	0.635
6.3 Illegal land tenure/transfer problem	113	1	5	4.13	0.891
6.4 Effective monitoring and evaluation problem	113	2	5	4.12	0.792
6.5 Absence of stakeholders' involvement in plan preparation and implementation	113	2	5	4.07	0.842
6.6 Lack of Good governance	113	2	5	4.25	0.738
Valid N (listwise)	113				

Based on Table 4.11, the highest ranked of the six factors, with M=4.46 the result shows that strongly agree, was inadequate financing for the implementation of the land plan (statement 6.1). This was confirmed by 65 (57.5%) of the respondents who acknowledged the statement with strongly agreeing to it and 40 (35.4%) who agreed, while 4 (3.5%) respondents thought it would only have a minimal influence on how the land is implemented.

Land plan execution was hindered by plan violation, which was placed second among the six causes (statement 6.2) with an M=4.34 the result showed strongly agree. This was verified by 48 (42.5%) of the respondents who strongly agreed with it, 55 (48.7%) of the respondents who

stated they agreed with it, and 10 (8.8%) of the respondents who had a neutral opinion of the impact of plan violations on the implementation of land plans.

Lack of effective governance, which was ranked third among the six factors (statement 6.6) and had an M=4.25 the result showed slightly strongly agree, had an impact on the implementation of land plans. The impact of good governance on the implementation of land plans was confirmed by 45 (39.8%) of the respondents who strongly agreed with it, 54 (47.8%) of the respondents who said they agreed with it, and 11 (9.7%) of the respondents who had a neutral attitude. 3 (2.7%) respondents disagreed that good governance affected the implementation of the land plan.

The implementation of land plans was affected by illegal land tuner or transfer, which was placed fourth among the six causes (statement 6.3) and had an M=4.13 and fall to agree. By 44 (38.9%) of the respondents who strongly agreed with it, 48 (42.5%), of the respondents who stated they agreed with it, and 14 (12.4%) of the respondents who had a neutral view, the problem of illegal land tuner or land transfer on the implementation of land plans was verified. 6 respondents (5.3%) disagreed that illegal land tuner or land transfer had an impact on how the land plan was implemented. Also, the statement is strongly disagreed with by 1 (0.9%) respondents.

Effective monitoring and evaluation, which was ranked fifth among the six factors (statement 6.4) and had an M=4.12 and fall to agree, had an impact on the execution of land plans. The issue of lack of effective land plan implementation monitoring and evaluation was confirmed by 39 (34.5%) of the respondents who strongly agreed with it, 53 (46.9%) of the respondents who agreed with it, and 17 (15%) of the respondents who had a neutral opinion. Effective land plan monitoring and evaluation, according to 4 respondents (3.5%), had no effect on how the land plan was carried out.

Lack of stakeholder involvement in the preparation and implementation of plans, which was placed last among the six criteria (statement 6.5) and had an M=4.07 and fall to agree, had an effect on how land plans were implemented. 38 respondents (33.6%) who strongly agreed, 51 respondents (45.1%) who agreed, and 18 respondents (15.9%) who had a neutral opinion. According to 6 respondents (5.3%), the lack of stakeholder involvement in the planning process had no impact on how the land plan was implemented.

Table 4.12 one-Sample Test for plan implementation challenges

One-Sample Test						
	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
6.1 lack of Financial support for land use plan implementation	61.73	112	0	4.46	4.32	4.6
6.2 Plan violations problem	72.543	112	0	4.336	4.22	4.45
6.3 Illegal land tenure/transfer problem	49.28	112	0	4.133	3.97	4.3
6.4 Effective monitoring and evaluation problem	55.346	112	0	4.124	3.98	4.27
6.5 Absence of stakeholders' involvement in plan preparation and implementation	51.384	112	0	4.071	3.91	4.23
6.6 Lack of Good governance	61.154	112	0	4.248	4.11	4.39

Based on Table 4.12, high level significance (p-values less than 0.05) was examined for each probable explanation. All the points mentioned above were a significant impact on Dukem town land plan implementation.

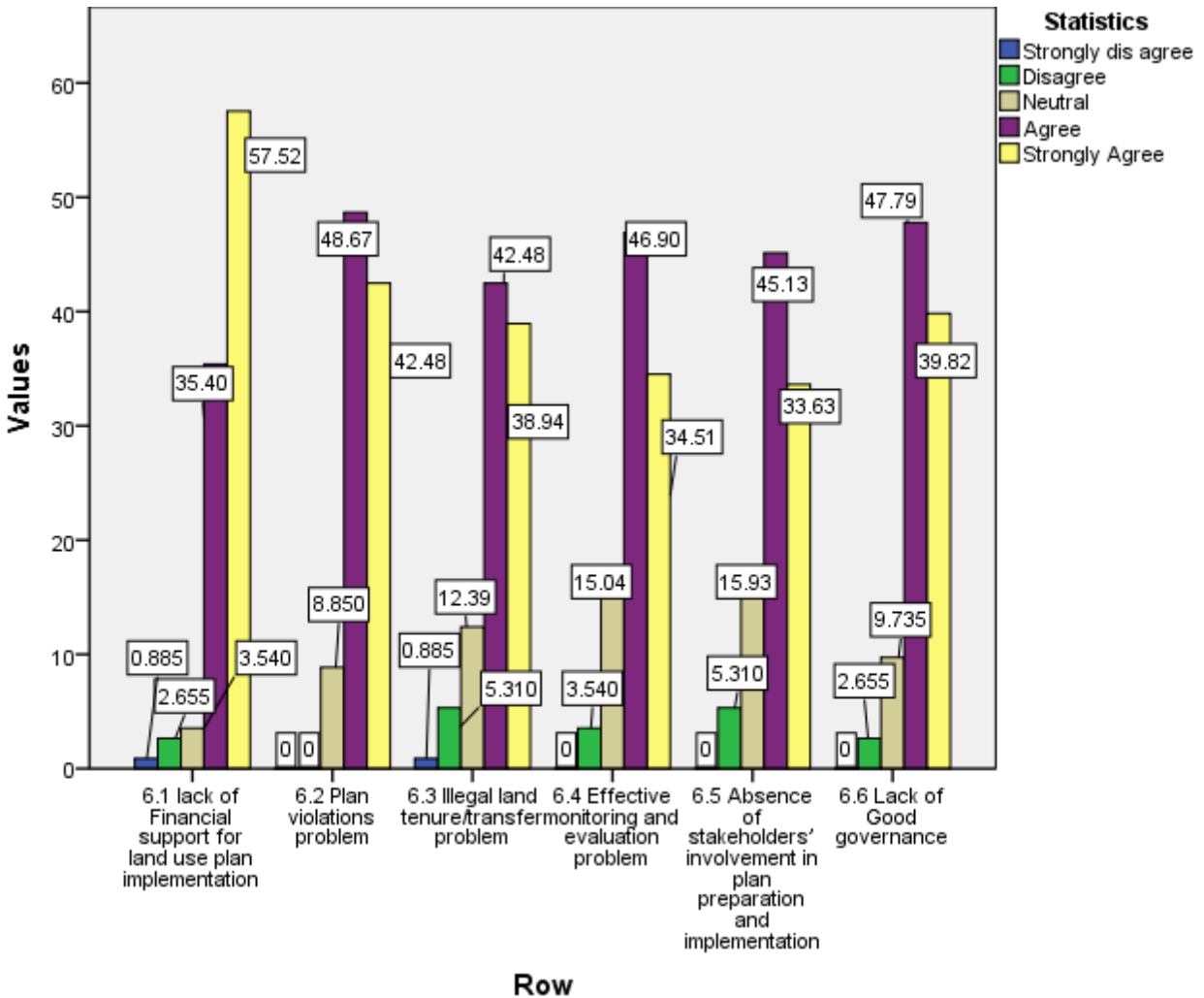


Figure 4.4 Descriptive statics of plan implementation challenges items

Based on the Figure 4.4 majority of respondents (57.52%) are agreed with the lack of government support for plan implementation. However, there is also a significant number of respondents who are strongly agree (35.7%) or neutral (3.54%) disagree (2.655) and strongly disagree (.885). Majority of respondents (48.67%) are agreed with the land use plan violation is an impact on plan implementation. However, there is also a significant number of respondents who are strongly agree (42.48%) or neutral (8.85%).

4.4 Urban Land Use Plan Tools and Methodologies for Better Implementation

Urban land planning is the process of developing and implementing a vision for the future of a city or town. It involves considering a wide range of factors, such as population growth, economic development, environmental protection, and social equity. Urban land planning tools and methodologies can help to ensure that plans are implemented effectively and efficiently. Divides a city or town into different districts and assigns each district a specific set of land uses. Zoning can be used to protect residential areas from commercial development, to promote mixed-use development, and to conserve agricultural land. Smart growth that aims to create livable, walkable, and sustainable communities. Smart growth principles include focusing on infill development, mixed-use development, and transit-oriented development.

Here are some tips for better implementation of urban land planning tools and methodologies: Plans should include a timeline for implementation, with clear milestones and deadlines, Plans should identify the resources needed for implementation, such as funding, staff, and technical expertise and Plans should be monitored and evaluated on a regular basis to ensure that they are being implemented on schedule and on budget.

4.5 DISCUSSION

4.5.1 Current Structural Plan of Dukem Town

The history of land planning in Duke Sub City includes the development and implementation of plans to control and coordinate land use in a specific location. Zoning laws, infrastructure development, environmental concerns, and urban growth control are a few examples of elements that are frequently included in land planning.

OPI (Oromia Plan Institute) and the Dukem town bodies in charge of the area's urban development office had worked together to plan the area's land use, and allocate land for various uses (such as residential, commercial, industrial, etc.), and assess the need for infrastructure.

Throughout its history, the Dukem town has had three chances to draft or establish an urban physical plan as shown in Table 4.13. The table below lists the years and types of Dukem town land plans that were created.

Table 4.13: Terms of plan preparation for Dukem town

Terms of a plan prepared	Year of prepared	Categories of plan	Prepared by
1 st	2000	SP	OPI
2 nd	2010	SP	OPI
3 rd	2014	LDP	OPI

The absence of an all-inclusive structural plan is one of the primary issues facing the Dukem sub-city. Unplanned urban sprawl, poor land use, and a lack of suitable infrastructure are just a few of the issues resulting from this. Dukem sub-city structural plan has had a lot of detrimental

effects. For instance, the sub-city's fast expansion has beyond the capacity of the city's planning officials to keep up. Unplanned urban sprawl as a result of this has given rise to several issues, like.

Here are some of the specific elements that are lacking in the current structural plan of Dukem sub-city:

- ✓ Land use plan compatibility
- ✓ A simple and transparent plan for the future of the city
- ✓ An detailed land use map specifying regions suitable for various development types
- ✓ A transportation plan consisting of bike lanes, public transportation, and roadways
- ✓ A utility service plan that covers power, sewage, and water

4.5.2 Major Challenges in Implementing Urban Land Use Plan in Dukem Town

A. Dukem town linkage

Dukem town has been quickly growing in recent years, which has boosted rates of urbanization. But along with this urban growth also comes a surge in tensions between urban and rural areas over land use and resource distribution. Particularly when integrating rural areas in to the boundaries of the town and government own lands from the farmer, the connection between cities and rural peasants can be fraught with conflict. This is especially true when it comes to the marketing of agricultural goods. The need for food increases along with the urban population, placing more and more pressure on farmers to meet this demand. However, it might be challenging for farmers to sell their goods and make a decent living due to a lack of adequate transportation infrastructure and market access. Due to its proximity to Addis Ababa, Dukem town is an important location for numerous transit of goods and services. This town served as a conduit for the majority of foreign deities. Due to this, economic activity is booming and

urbanization is growing. Additionally, the East Industrial Zone creates a lot of employment opportunities and improves connectivity among Gela, Bishoftu town, Addis Ababa and Adama.

B. Land use plan preparation challenges

For land plans to be successfully prepared, there must be effective collaboration between government offices. According to the response given during the interview, land use planning frequently includes several different government agencies and stakeholders, each with their own duties and goals. Lack of good coordination and communication can cause the land plan implementation process to become fragmented and disconnected, leading to delays and inefficiencies. According to research, collaborative planning initiatives have a higher chance of being successful and accomplishing their goals than those that are created independently.

Based on data gathered from an interview question and analyzed data, another finding was made: Dukem town mobilizing the necessary resources including technical, financial, and human ones is essential for the successful land plan preparation. This involves not just providing the necessary infrastructure and technologies, but also ensuring that staff have the training and skills they need to do their duties effectively. Sometimes, this may also entail communicating with other stakeholders, such as investors from the business sector or community organizations, in order to mobilize more resources and knowledge.

Based on the study; finding appropriate money is frequently one of the biggest obstacles to putting land plan preparation. This is especially true when the plans call for major infrastructural improvements or extensive changes to the way land is used. According to the study, government funding is crucial for effective land plan preparation. This can be true in Dukem town in a

number of shapes, such as direct financing for the project, financial aid or tax breaks for investments made in the private sector, or public-private partnerships.

C. Impact of illegal settlement

For urban areas, like Dukem town, illegal settlements are a significant problem. Illegal settlement is a significant obstacle to the growth of Dukem town. Environmental deterioration, a rise in crime, economic difficulties, an increase in slum areas, overcrowding, and land use conflict, overpopulation, a poor aesthetic outlook for the sub-city, and social difficulties are all results of illegal settlement in Dukem town. Different strategies, such as encouraging sustainable land use practices and gaining access to basic infrastructural services, are required to address those challenges.

In Dukem town, a large number of people have settled on land that is owned by the government or private individuals illegally. Thousands of people are currently living in illegal settlements. Which has expanded over time. There are illegal settlements in every kebele in Dukem town. The presence of illegal settlement is widespread in Dukem town for a variety of reasons. Due to the town's relatively high land prices, it is challenging for low-income inhabitants to own or rent legal dwellings, and proximity to Addis Ababa and Bishoftu Town. The ineffective planning and enforcement practices of the government are another factor that makes it challenging to stop the development of illegal settlements.

Another way of illegal settlement in Dukem town are Illegal land tuners and land transfers; which take place when people or groups unlawfully purchase property or land and use it for development without adhering to the plan's development criteria. This may result in difficult to construct infrastructure, development of structures that do not follow the design, causing

environmentally unsaved, create slum area and a decline in aesthetic value. Prevailing illegal settlement, reducing land value,

D. Land use compatibility

The compatibility of land uses has a big influence on Dukem town growth. Some of the difficulties include conflicts between the use of industrial and residential property, the conversion of agricultural land or expansion of the town to a rural area, insufficient zoning laws, informal settlements, and infrastructure problems. In order to address the problems mentioned above, it is necessary to promote sustainable land use practices and improve the infrastructure for Dukem town growth.

E. Government Land acquisition process

For a number of reasons, including land acquisition for public projects, investment, housing, conservation initiatives, or in the event of a natural disaster, Dukem town may offer compensation to farmers. Depending on how soon compensation should be provided and the government's policy, the compensation offered could change. The government gives the current market price for the land or trees compensation. This means that the government will pay what the property is worth using the current market value as a standard. According to the interviewer, the compensation that given to the farmers was insufficient to raise their level of living, thus they frequently complain about the amount of money they were paid.

Farmers may be needed to submit proof of their ownership or usage of the land or trees, as well as any other pertinent information requested by the government, in order to get compensation. The government may also verify the history of the particular area for which compensation has been requested. The compensation could be paid out in a lump sum or installments. The

government may only have to pay once for a certain piece of land, thus if it is covered in grain, trees, or other plants, the payment may only have to be calculated once (for the land value or for the trees or plants alone).

F. Land plan violation

The Dukem town land plan can be violated in a number of ways, including by building construction without a building permit that were under standard, constructing structures in prohibited areas, changing the function of the building, going over the height limit and under the height limit or using the land for purposes other than those specified in the plan. This may result in environmental deterioration and a decline in the town's visual appeal. Also has a significant influence on the land's tax value, which makes the government unable to collect enough taxes and increases tensions between the law's enforcers and those who break it.

In certain circumstances, official entities like experts and kebele employees violate Dukem town land plan. This leads to the expansion of unlawful settlement as well as the building of a structure in a zoning district that restricts that kind of development. This causes land degradation, inconsistent development, challenging infrastructure development, the presence of incompatible land uses, and a rise in unlawful property ownership.

G. Land plan implementation challenges

Like many other municipalities, Dukem town could face financial difficulties when implementing urban land plans. This may include a financing limitation. For instance, the municipality might not have sufficient funds to implement the social services and infrastructure projects that were planned for the sub city's land plan. Therefore, the implementation of suggested infrastructure and social services will often take a long period.

A large sum of funds is needed for the infrastructure needed to implement land plans, as well as for surveying, and mapping. The proposed land plan, however, might not be implemented by Dukem town due to a lack of funding. In particular to deliver social services, and environmental improvements, and to develop green legacy development in accordance with the suggested strategy. Due to this, most of the time, the Dukem town proposed land plan expired before most of the aforementioned key services were implemented. This might cause the land plan to be completed slowly or perhaps be completely scrapped.

In the Dukem town, there was less stakeholder involvement throughout plan implementation, such as community involvement and landowner engagement. So Failure of the land plan might result from the lack of stakeholders throughout the implementation process. Community engagement in plan implementation fosters investor interest, addresses issues facing low-income or impoverished areas, increases ownership of the plan, and spurs individual interest in taking part in each plan's implementation.

Putting Dukem town's land plans into action requires effective governance. Corruption might make it difficult to carry out the strategy because of poor governance. The execution of the land plan must thus be done in a way that promotes accountability, transparency, and involvement. The media, civil society groups, and other stakeholders should be included in the implementation process to help achieve this.

H. Enhancing Monitoring and Evaluation of land plan implementation

To make sure the goals of the land plan are met, Dukem town needs efficient monitoring and assessment of the plan's implementation. There were, however, less effective monitoring and evaluation systems. As a result, the scheme would have failed. Individual government employee interests and political influence have an impact on the monitoring and assessment process. This may lead to improper usage of land for personal gain. Not being informed of the plan's development, which causes delays and changes from the goals of the plan.

In the case of Dukem town, there may be a number of obstacles to implementing, assessing, and monitoring a land plan. When monitoring and evaluating land plans, Dukem town frequently encounters the following difficulties:

- Inadequate funding: This restricts the growth of social services, infrastructure, and efforts to involve the public and capacity-building programs.
- Stakeholder Resistance to land plan change: The implementation process of Dukem town hindered by resistance from landowners, various employees of government agencies with personal interests, developers, or members of the community with conflicting interests or perspectives.
- Data accuracy and availability: Effective monitoring and assessment of a land plan depends on the collection of reliable, current data on land use, demographics, infrastructure, and environmental factors. However, the Dukem town had issues with the lack of data or the low quality of the data, which made it difficult to assess progress and carry out the land plan. Today, Dukem town is attempting to show off the Cadaster software and make improvements to the land management system that are essential for overcoming this difficulty.

- Lack of public participation: Due to a lack of public participation, landowners in the Dukem town frequently oppose land usage. Therefore, it is preferable to have discussions with landowners and community representatives during the land plan preparation process.

In order to create ways to overcome them and improve the chance of the land plan's implementation, assessment, and monitoring in Dukem town, Dukem town has to foresee and anticipate these issues throughout the planning process.

4.5.3 The Consequences of Urban Land Use Implementation Challenges in Dukem Town

The Dukem town urban land use implementation issues have wide-ranging effects that can significantly lower people' quality of life. Unplanned urban sprawl is the result of the Dukem town fast expansion in the absence of a thorough structural design. This has led to a number of issues, like as conversion of agricultural land, proliferation of informal settlements and inadequate infrastructure. The Dukem town currently has inefficient land use patterns, with a significant amount of area devoted to low-density residential construction. This resulted in; traffic congestion, air pollution and limited access to public transportation. Environmental deterioration has resulted from the use of land for non-agricultural uses and inadequate infrastructure, including; deforestation, soil erosion and water pollution. Challenges in implementing urban land use have substantial social and economic effects as well includes; limited access to affordable housing, increased poverty and reduced quality of life.

4.6 Strategies to Improve Urban Land Use Plan Implementation Challenges in Dukem Town

Plans should outline the resources required for implementation, such as funds, personnel, and technical know-how. They should also contain an implementation plan with distinct deadlines

and milestones. To make sure that plans are being carried out on time and within budget, they should be reviewed and checked often. The urban land use planning process in Dukem Town has to be thorough, inclusive, and grounded on facts. A stakeholder should include the government, the business, and the community. Roles and responsibilities for each stakeholder should be clearly defined, and the process should be transparent and responsible.

When it comes to urban land use planning in Ethiopia, there is sometimes a lack of cooperation between the various levels of government. Effective land use plan implementation may be hampered by this, and it may result in contradictory laws and regulations. The Dukem Town administration has to set up explicit channels of communication for collaboration with the local, state, and federal governments in order to resolve this problem. This might entail holding frequent gatherings, working together on planned projects, and creating common data platforms.

More capacity building is required for Dukem Town's urban land use planning. Planners, government employees, and other stakeholders will all receive training from this. The creation of new technology and tools for land use planning is also a part of it. The Dukem Town administration need to fund employee training initiatives and work with academic institutions and other training providers to create fresh curriculum, exercises, and training materials in addition to creating shared data platforms.

The advantages of successfully implemented land use plans and the significance of urban land use planning should be understood by the general population. Public education campaigns and community engagement initiatives can be used to accomplish this. Urban land use planning should be made more widely known through public education initiatives that the Dukem Town council should create and carry out. To do this, you might want to hold seminars, hand out pamphlets, and use social media to connect with more people. For land to be utilized in line with

the plan, limits on land use must be properly enforced. Penalties, rewards, and other forms of enforcement may be necessary for this. A methodical and transparent system of enforcing land use laws should be established by the Dukem Town government. Using technology to track changes in land use, employing additional regulators, and stiffening the penalty for infractions.

Understanding Dukem Town's present land use patterns in great detail is the first step towards resolving land compatibility issues. Mapping the distribution of various land use categories, including residential, commercial, industrial, and recreational spaces, is part of this process. To find any contradictions and conflicts of compatibility, a zoning regulation study is also essential. Furthermore, evaluating the effects of current land uses on the environment and society is crucial to figuring out if land use patterns are generally appropriate and how they contribute to Dukem Town's sustainability and livability.

CHAPTER FIVE: CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusion

There are a number of obstacles to overcome while adopting a land plan in the Dukem town. The identified issues can be divided into a number of categories, including difficulties with land plan preparation, legal and institutional issues, land plan violations, land use compatibility issues, illegal settling, social and cultural issues, difficulties with government land acquisition processes, and difficulties with monitoring and evaluation. Illegal settlements in urban areas like Dukem town hinder growth, causing environmental deterioration, crime, economic difficulties, slum areas, overcrowding, land use conflict, and social issues. Strategies like sustainable land use and access to basic services are needed to address these challenges.

Land compatibility is crucial for Dukem town growth, but conflicts between industrial and residential properties, agricultural land conversion, insufficient zoning laws, informal settlements, and infrastructure issues arise. To address these issues, sustainable land use practices and infrastructure improvements are needed. Zoning laws, environmental concerns, and local community opposition contribute to these disputes. Dukem town may offer compensation to farmers for various reasons, such as land acquisition, investment, housing, conservation, or natural disasters. The government uses the current market price as a standard, but farmers often complain about the compensation. They must submit proof of ownership, usage, and verify the area's history. Compensation can be paid in lump sums or installments, and the government may only pay once for specific lands, such as land covered in grain, trees, or other plants.

Dukem town land plan violations can lead to environmental deterioration, decline in visual appeal, and a significant impact on land tax value. Violations include building without permits,

constructing in prohibited areas, altering building functions, exceeding height limits, and using land for other purposes.

Dukem town faces financial difficulties in implementing urban land plans due to funding limitations. The proposed land plan may not deliver social services, environmental improvements, or green legacy development, resulting in delayed completion or scrapping of key services. The lack of funds may cause the plan to expire before key services are implemented, causing slow or even scrapped completion. Dukem town land plan implementation lacks stakeholder involvement, including community and landowner engagement. This could lead to failure.

Dukem town requires efficient monitoring and assessment of its land plan to ensure its goals are met. However, less effective systems, government employee interests, and political influence can hinder the process. Obstacles include improper land usage, Inadequate funding, Stakeholder Resistance to land plan change, Data accuracy, and availability, Lack of public participation, lack of informed development, and delays in achieving the plan's goals.

Generally implementing a land plan in Dukem town requires careful consideration of legal, institutional, land use, compatibility, and illegal settlement, social, cultural, financial, and technical challenges. A comprehensive approach can overcome obstacles, achieving sustainable urban development and improved quality of life for residents.

5.2 Recommendation

There may be a number of challenges that need to be overcome when implementing a land plan in an urban area like the Dukem town. The following recommendations are provided to address challenges related to the implementation of the collective land plan:

During Plan Preparation

- ✓ Recognizing the previous implementation issues with land plans and establishing a remedy for the upcoming proposed plan
- ✓ Asking the community about the future development goals of the sub-city leads to transparently including them in the preparation of the land plan
- ✓ In order to prepare an effective land plan, the municipality needs to try to sustain finances by requesting funding from various private bodies and governments.

During Plan Implementation

For Dukem town administrative

- Prepare regular evaluation and monitoring of the suggested land plan.
- Facilitate the land use change procedure when a remedy is needed for the proposed land use.
- Improve data management system that is quick, simple, and easy to use.
- Develop an effective land plan Monitoring and evaluation of the implementation process to reduce violations of the plan, issues with land use compatibility, environmental concerns, and land use problems
- Regular supervision of construction in the sub city to reduce expansion of illegal settlement, plan violation and incompatibility.

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Appendix 1: Publishable Manuscript

IMPACTS OF LAND USE PLAN IMPLEMENTATION CHALLENGES ON URBAN: THE CASE OF DUKEM TOWN, OROMIA, ETHIOPIA

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Abstract

Evaluation of the effects of land plan implementation on urban land, particularly for towns dealing with these difficulties, is quite important. Inefficient land use, a lack of affordable housing, urban sprawl, and unequal development are just a few of the detrimental effects that land plan implementation issues may have on metropolitan regions. Numerous things, such as a lack of stakeholder participation, limited institutional capability, and poor technological utilization, might contribute to these difficulties. The research were conducted using a mixed-methods approach. Quantitative data were collected through questionnaires with sub city planners, implementers and key government officials. Qualitative data were collected through interviews with key experts, team leaders and planners of key government officials. After data collection, the data was used in a SPSS to analyze impact of land planning implementation challenges on urban. The result of the study showed that factors affecting land plan implementation challenges relative to health issues, social and economic, physical, and environmental factors; conflicts between different land uses, plan violations, the growth of illegal habitation, and other environmental issues. Finally the research recommends: preventing unlawful settlement before any building begins; increasing community participation in land plan preparation and implementation; and regularly monitoring and evaluation of the plan's implementation.

Keywords: land plan implementation, urban, challenges, impacts, inefficiencies, urban sprawl

1. INTRODUCTION

Making cities that are desirable places to live, work, and raise a family requires the use of urban planning as a key instrument. Residents' quality of life may be enhanced, economic growth can be accelerated, and environmental protection can be achieved. Although urban land planning is a complicated and difficult discipline, it is crucial for building cities that are desirable places to live, work, and raise a family.

Urban planning is a design to order the use of land and other physical resources for the public interest to improve the quality of life and well-being of people who live in cities. Urban areas, especially in developing nations, are expanding rapidly and at an unprecedented pace, which presents significant difficulties. They must be properly planned and effectively guided by these plans because they are locations where development opportunities and challenges collide

A variety of stakeholders, including governmental organizations, neighborhood associations, and commercial developers, are involved in this complicated and challenging field. Urban planners try to build livable, sustainable, as well as equitable cities. In their work, they take a variety of aspects into account, such as population growth and demography, economic development, transportation, the environment, and housing.

The existence of an urban plan and its successful execution are crucial for the efficient use and management of resources in urban areas. In the modern world, it is also an essential instrument for achieving sustainable urbanization. Urban planning is practiced differently in different nations of the world. Most African nations have historically used the master planning (MP) strategy to direct the physical development of their cities and towns

According to studies, fewer than 25% of Ethiopia's formally recognized urban areas have no plans to direct their spatial development and even those that do struggle to put the plans into practice. It is believed that the first conventional urban planning method was developed in Entoto, Ethiopia, under Menelik II's

The main problems affecting the preparation and implementation in the field of urban planning, are a lack of planning standards, and a lack of suitable legislative frameworks for implementation.

Due to the fact that Dukam town was founded without a basic plan, implementation of the plan proved challenging. The basic plan, on the other hand, has difficulty on its own since it neglects to include a design for social service organizations in a space that was formerly residential.

2. REVIEW LITERATURE

Planning is a continuous process of making entrepreneurial decisions with an eye to the future and methodically organizing the effort needed to carry out these decisions. All consider planning as a guide to execution and as a means of determining a course of action. Urban planning may incorporate urban renewal through modifying urban planning techniques for already-existing cities that are experiencing a decline. Alternately, it may be about the enormous difficulties brought on by urbanization, particularly in the Global South. The newly envisaged urban shape was intended to coexist with a new civilization based on voluntary cooperation among self-governing communities. Radical perspective, and the humanist or phenomenological.

Urban planning has typically been considered to be the physical planning and design of human societies at least since the Renaissance and the Age of Enlightenment. It was therefore considered to be connected to architecture and civil engineering and should be done by such professionals. It involves creating master plans and blueprints that would perfectly depict the "end-state" of land usage, much like architectural and engineering plans. Similar to this, visionary planning and design that would show how the perfect city should be organized spatially was the core focus of urban planning theory.

Urban planning, design, and regulation of space usage focus on the physical characteristics, economic purposes, and social effects of the urban environment as well as the placement of various activities within it. Urban planning is both a technical profession and an endeavor requiring political will and public engagement since it draws on engineering, architectural, social, and political considerations. It also deals with both the development of open space (also known as "Greenfields sites") and the regeneration of existing areas of the city. It is used to test whether the prepared plan for a particular urban center is accurately implemented and has achieved the intended aim or not since it is used after the achievement of the urban plan. So plan implementation is the process of putting a plan into action. Plan preparation is a systematic process for converting development strategies into doable tasks. It is the most challenging step in both industrialized and developing nations' planning processes.

Difficulties of inadequate urban plan implementation led to the waste of money, time, and human resources on the plan-making organizations, which genuinely offers a problem to the government. As a result, even while a plan is a tool to direct and govern the evolution of an urban core, poor execution will do nothing to further urban development. Urban, Peri-urban, and rural area borders are difficult to define. They are not cleanly divided by lines on a map. Contrarily, the expansive nature of urban expansion causes the areas to converge. It may be challenging to determine a town's size based on its population or physical area when there is no obvious boundary.

Urban planning approaches in Ethiopia are imported from developed countries but differ in practice. Urban planning practice in developing countries is affected by political situations. Planning approaches focus on land use, with a variety of plans available. Due to the significant policy changes made by the new administration (which forbade private investment and involvement in urban development), the expansion of Addis Ababa and other urban centers came to an abrupt halt in 1974 with the transition of the government and political system. The establishment of NUPI in 1987 changed the attitude towards urban planning and promoted urban planning as a key development instrument, leading to its renaming as FUPI and now FUPCO, the Federal Urban Planning Coordination Office.

In the present administration, the Bureau of Works and Urban Development of Oromia (BWUDO) worked with NUPI to address urban planning issues. With a small staff of specialists and surveying equipment, the office helped prepare urban plans and base maps for towns and cities. Later, NUPI changed its focus from preparation to the construction of an urban planning institute in each of the four regions, giving them the tools they need to create urban plans for the towns and cities in their respective areas.

2.1 Effect of Land Planning on Urban Development

Urban growth is significantly shaped by land planning. It entails the methodical distribution and use of land for a range of uses, including the construction of residential, commercial, industrial, recreational, and infrastructural facilities. Land planning in urban is impacted by a variety of elements including the level of planning, the context of the local area, stakeholder participation, and execution. Land planning facilitates the provision of essential infrastructure and utilities, Efficient Land Use, integrates environmental considerations into urban development, stimulates

economic growth and development, facilitates the provision of affordable housing, social services, and community facilities in accessible locations and influences the visual aesthetics and overall quality of urban environments.

However, Poor land planning can lead to unsustainable urban development, inadequate infrastructure, social segregation, environmental degradation, and inefficient land use, necessitating comprehensive, participatory processes and robust policies. Therefore, Comprehensive and participatory land planning processes, supported by policies and regulations, are essential for achieving positive urban development outcomes.

2.2 Urban Land Plan Implementation in Ethiopia

Ethiopian urban land planning implementation entails a methodical strategy for controlling land use, infrastructural growth, and urban growth. The following actions can be performed to put an urban land plan into effect in Ethiopia: Develop a comprehensive policy and legal framework that outlines the objectives, principles, and guidelines for urban land planning and management, Conduct a comprehensive spatial analysis to identify areas suitable for urban development, taking into account factors such as population growth, economic activities, environmental considerations, and infrastructure availability, Allocate land for various uses, such as residential, commercial, industrial, institutional, and recreational purposes, Plan and implement the necessary infrastructure to support urban development, including transportation networks, water supply and sanitation systems, energy facilities, and public spaces, Engage with local communities, stakeholders, and residents in the planning process to ensure their participation and input, Strengthen land administration and management systems to ensure effective implementation of the land plan, Establish a monitoring and evaluation framework to assess the effectiveness of the implemented land plan and develop mechanisms for enforcing land use regulations and ensuring compliance with the land plan.

However, it's important to remember that putting an urban land plan into action calls for cooperation and coordination across several federal departments, local governments, and stakeholders. Urban land planning is a difficult and ongoing process that calls for constant monitoring, evaluation, and adjustment to changing situations.

3. MATERIALS AND METHODS

3.1 Background of Dukem sub city

Dukam town is situated along the major route to Adama 37 kilometers to the southeast of Addis Ababa and named as Dukam town in 2015 E.C under Bishoftu town. Geographically, the research area spans a total of 9630.6 hectares and is located between latitudes $8^{\circ} 45'25''N$ $8^{\circ} 50'30''N$ and longitudes $38^{\circ} 51'55''E$ - $38^{\circ} 56'5''E$. It is situated at a typical elevation of 2100 meters above sea level. The town is bordered to the southeast by Bishoftu town, but to the majority of the north by Gelan sub city. Four nearby peasant organizations in the Akaki region form the eastern and western boundaries of the remaining portions of the town. Wajitu Dibdibe is the southern peasant organization with the greatest border with Dukam town.

The Dukam town Land Plan was created for the first time in 2008. The objective of the plan was to direct the orderly and sustainable growth of the community. According to the design, the town is divided into several land use zones, including zones for residential, commercial, industrial, and recreational purposes. Green space and infrastructural development are also addressed in the design. With some success, the Dukam town Land Plan has been implemented. However, there have also been some difficulties. But there have also been some difficulties. The town's fast expansion, which has strained the existing infrastructure, is one issue. Another further issue is the unregulated and informal settlement land, which has prompted the growth of certain unauthorized communities.

3.2 Data and sampling

Both primary and secondary sources will be used to gather data. Investigation of the pattern and general conditions under inquiry will be made possible by field observation. The required data will be gathered using a quantitative approach by questionnaires' and a qualitative approach, which will be utilized to describe and evaluate the data. Checklists, interviews, observations, and digital cameras will be used to gather data under the qualitative method from primary sources, and relevant published and unpublished documents like official reports, journals, policy documents, proceedings, and books will be used from secondary data sources.

In this study, the researcher took into consideration employees who are currently employed by the government agency in the six offices. These six offices are; - Dukam town land Management

Office, Construction Authority, Cadaster Office, Planning Office, Investment Office, Dukam town Municipality Office. These offices were chosen because the researcher thought they would be able to obtain all the information required for the study from them and because they were involved in planning and implementation. The organization or office under examination has a total of 157 employees in these six offices, according to the data collected from Dukem sub city. Since it would be hard to analyze the whole population, the researcher will choose some representative samples. To measure respondent's observation of the urban land implementation challenges attributes, a five-point Likert scale measurement was used(i.e., strongly disagree = 1, disagree = 2, neutral = 3, agree = 4, strongly agree =5)

The target population size is taken into account while calculating the sample size for the study using the simplified method presented by Yamane, 1997, For the sake of calculating the sample size for this investigation, a 95% confidence interval is assumed, and $e = 0.05$. In light of this, the study's sample size is determined as 113.

3.3 Demographic Characteristics of the Respondent

Out of the total responders, as depicted in Table 3.1, 74.3% were male, while the remaining 25.7% were women. In the research region, there are more male employees than female employees, which is reflected in the sample's composition because it was drawn by simple random sampling. The bulk of responders (69%) had only received their first degree in education. Graduates with a diploma and a master's degree respectively made up 15.9% and 14.2% of the sample. ATVET level could be 4% of the respondents. The respondents generally range in educational attainment, and it was discovered that they understood the survey's purpose well enough to offer insightful answers to its questions.

Employees who were over the age of 18 were included in the study, considering the age distribution. 42.5% of respondents were between the ages of 25 and 34, which made up the largest percentage of respondents. The second-highest sample size was made up of those aged 35 to 44, who made up 37.2% of the total. Additionally, 11.5% of the sample size's participants were between the ages of 45-54. Ages 18 to 24 were the youngest age group represented in the sample with 7.1%. Only 1.8% of the respondents were senior responders (above 55 years old).

All age groups are determined to have been represented in the age composition. The bulk of responders (40.7%) had a service year between 6 and 10 years. Additionally, a sizable portion of

responders (23%) had served between 1 to 5 years. 17.7% of the sampled respondents had between 11 and 15 years of service. Both respondents 8% each served for between 16 and 20 years as well as more than 20 years. From the entire sample, 73.5% of the respondents were engineers or experts. While 5.3% of the sample's total positions were held by others, 15% of the sample were team leaders. Management workers made up 4.4% of the sample. Urban planners made up 1.8% of the entire sample.

Table 3.1 Respondents background

		Count	Column N %
Sex	Male	84	74.3%
	Female	29	25.7%
Age	18-24	8	7.1%
	25-34	48	42.5%
	35-44	42	37.2%
	45-54	13	11.5%
	55-64	2	1.8%
	above 65	0	0.0%
Educational level	TVET	1	0.9%
	Diploma	18	15.9%
	Degree	78	69.0%
	MA/M Sc	16	14.2%
	Others	0	0.0%
Years of Experience	less than 1	3	2.7%
	1-5	26	23.0%
	6-10	46	40.7%
	11-15	20	17.7%
	16-20	9	8.0%
	above 20	9	8.0%
What is your current position?	Urban land planner	2	1.8%
	Management staff	5	4.4%
	Expert or Engineer	83	73.5%
	Team Leader	17	15.0%
	Others	6	5.3%

4. RESULT

4.1 Land use planning items

The magnitude of various Land use Planning Items concerns in the Dukam town was a question that was posed to the respondents as shown in Table 4.1.

Table 4.1 One sample statistics for land use planning items

One-Sample Test						
	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
1. lack of Land use compatibility issue	40.56	112	0	1.088	1.04	1.14
2. Challenges from land owners	36.102	112	0	1.124	1.06	1.19
3. Impact of illegal settlement	42.202	112	0	1.08	1.03	1.13
4. lack of socio-economic data	37.999	112	0	1.106	1.05	1.16

A total of 113 respondents gave their opinion on the possibility of illegal settlement in the Dukam town. The overall rating for the statement was M=1.08 and ranked 1st for land planning items. The result showed the primary issue that requires a government response is unlawful settlement. Only 8% of respondents said that Dukam town does not have any illegal settlements.

For the item possible occurrence of land use compatibility issues received responses from 113 individuals in all. The overall rating for the statement was M=1.09 and ranked 2nd for land planning items. The bulk of them 103 (92%) responded yes to the survey. 39.8% of the group aged 25 to 34 and 31.9% of the group aged 35 to 44 made up the respondent's 70 (61.9) degree total. The outcome demonstrated that the respondents were younger, degree-holding individuals and that Dukam town was a victim of land use compatibility. Only 8% of respondents claimed that Dukam town has no issues with conflicting land uses.

113 people responded to the town's concerns regarding the land plan item, and The overall rating for the statement was $M=1.11$ and ranked 3rd. providing socioeconomic data that was utilized to build the structure design that was compatible with the submitted spatial plan. The socioeconomic data used to create the structure plan in accordance with the submitted spatial plan to the town concerns got replies from 113 people overall for the land plan item. 101 of them, or 89.4%, said they agreed with the statement. 38.9% of the 25 to 34 year old group and 31.9% of the 35 to 44 year old group. The results showed that Dukam town had prepared a land plan by analyzing socioeconomic data that was compatible with the submitted spatial plan. Only 10.6% of respondents answered the structural plan was prepared without socio-economic data.

The issues from the landowner relating to land use, and what the owner needs to build the building received responses from 113 persons. The overall rating for the statement was $M=1.12$ and ranked 4th for land planning items. 113 people responded to this topic. 87.6%, or 99 people, said that they agreed with the statement. 37.2 percent of people aged 25 to 34 and 32.7 percent of people aged 35 to 44. Degree holders made up 71 (62.8%) of the respondents. Only 12.4% of respondents indicated that there were no issues from the landowner relating to land use, and what the owner needs to build the building.

4.2 Plan implementation challenges

The respondents were asked to rate the severity of several land use planning challenges in the Dukam town.

Table 4.2 Descriptive statistics of plan implementation challenges items

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
1. lack of Financial support for land use plan implementation	113	1	5	4.46	0.768
2. Illegal land tenure/transfer problem	113	3	5	4.34	0.635
3. Illegal land tenure/transfer problem	113	1	5	4.13	0.891
4. Effective monitoring and evaluation problem	113	2	5	4.12	0.792
5. Absence of stakeholders' involvement in plan preparation and implementation	113	2	5	4.07	0.842
6. Lack of Good governance	113	2	5	4.25	0.738
Valid N (listwise)	113				

Based on Table 4.2, the highest ranked of the six factors, with M=4.46 the result shows that strongly agree, was inadequate financing for the implementation of the land plan (statement 6.1). This was confirmed by 65 (57.5%) of the respondents who acknowledged the statement with strongly agreeing to it and 40 (35.4%) who agreed, while 4 (3.5%) respondents thought it would only have a minimal influence on how the land is implemented.

Land plan execution was hindered by plan violation, which was placed second among the six causes (statement 6.2) with an M=4.34 the result showed strongly agree. This was verified by 48 (42.5%) of the respondents who strongly agreed with it, 55 (48.7%) of the respondents who stated they agreed with it, and 10 (8.8%) of the respondents who had a neutral opinion of the impact of plan violations on the implementation of land plans.

Lack of effective governance, which was ranked third among the six factors (statement 6.6) and had an M=4.25 the result showed slightly strongly agree, had an impact on the implementation of land plans. The impact of good governance on the implementation of land plans was confirmed by 45 (39.8%) of the respondents who strongly agreed with it, 54 (47.8%) of the respondents who said they agreed with it, and 11 (9.7%) of the respondents who had a neutral attitude. 3 (2.7%) respondents disagreed that good governance affected the implementation of the land plan.

The implementation of land plans was affected by illegal land tuner or transfer, which was placed fourth among the six causes (statement 6.3) and had an M=4.13 and fall to agree. By 44 (38.9%) of the respondents who strongly agreed with it, 48 (42.5%), of the respondents who stated they agreed with it, and 14 (12.4%) of the respondents who had a neutral view, the problem of illegal land tuner or land transfer on the implementation of land plans was verified. 6 respondents (5.3%) disagreed that illegal land tuner or land transfer had an impact on how the land plan was implemented. Also, the statement is strongly disagreed with by 1 (0.9%) respondents.

Effective monitoring and evaluation, which was ranked fifth among the six factors (statement 6.4) and had an M=4.12 and fall to agree, had an impact on the execution of land plans. The issue of lack of effective land plan implementation monitoring and evaluation was confirmed by 39 (34.5%) of the respondents who strongly agreed with it, 53 (46.9%) of the respondents who agreed with it, and 17 (15%) of the respondents who had a neutral opinion. Effective land plan monitoring and evaluation, according to 4 respondents (3.5%), had no effect on how the land plan was carried out.

Lack of stakeholder involvement in the preparation and implementation of plans, which was placed last among the six criteria (statement 6.5) and had an M=4.07 and fall to agree, had an effect on how land plans were implemented. 38 respondents (33.6%) who strongly agreed, 51 respondents (45.1%) who agreed, and 18 respondents (15.9%) who had a neutral opinion. According to 6 respondents (5.3%), the lack of stakeholder involvement in the planning process had no impact on how the land plan was implemented.

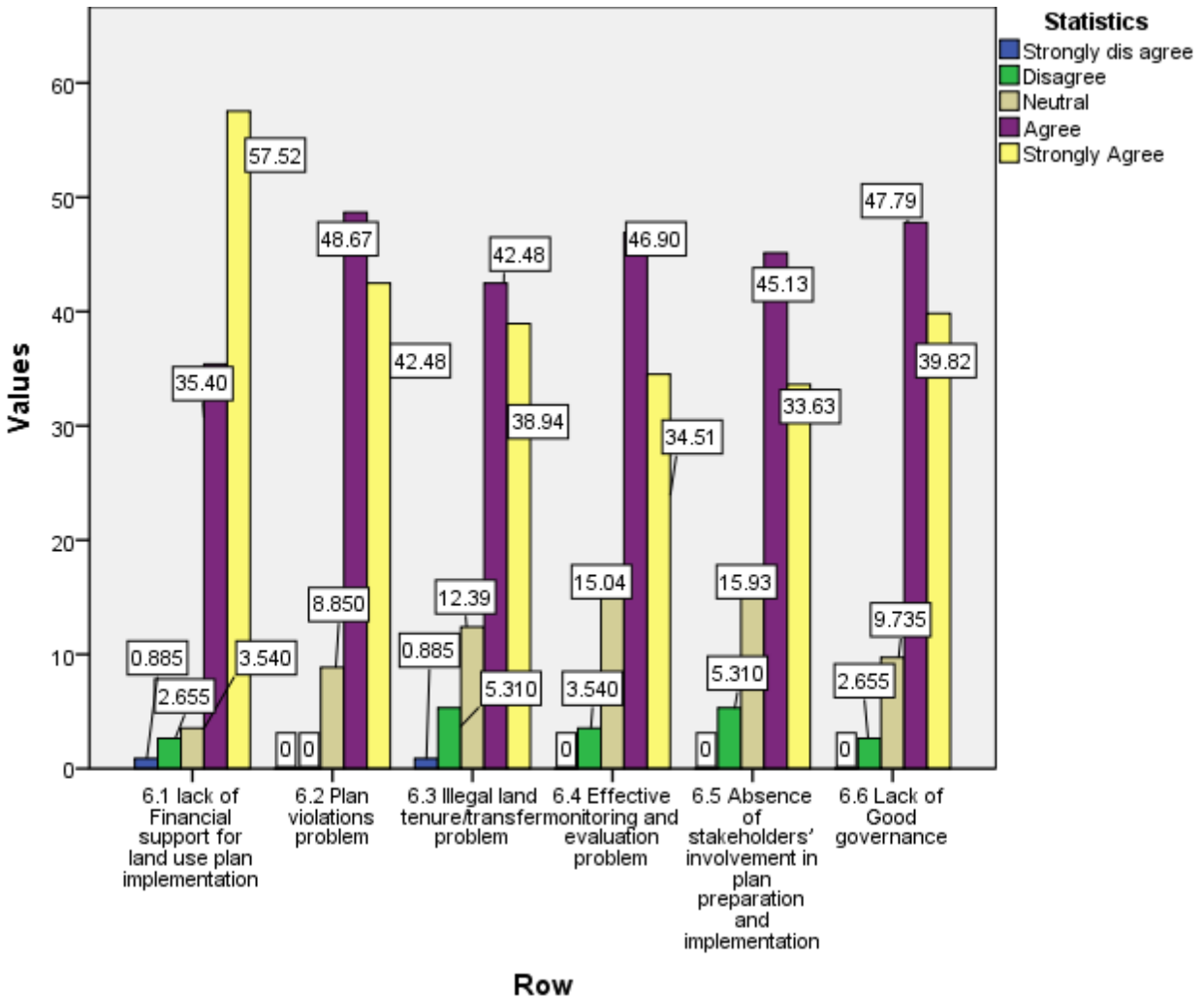


Figure 4.1 Descriptive statics of plan implementation challenges items

5. DISCUSSION

5.1 Land Use Plan in Dukam town

The history of land planning in Duke Sub City includes the development and implementation of plans to control and coordinate land use in a specific location. Zoning laws, infrastructure development, environmental concerns, and urban growth control are a few examples of elements that are frequently included in land planning. OPI (Oromia Plan Institute) and the Dukam town bodies in charge of the area's urban development office had worked together to plan the area's land use, and allocate land for various uses (such as residential, commercial, industrial, etc.), and assess the need for infrastructure. Throughout its history, the Dukam town has had three chances to draft or establish an urban physical plan.

5.2 Dukam town linkage

Dukam town has been quickly growing in recent years, which has boosted rates of urbanization. But along with this urban growth also comes a surge in tensions between urban and rural areas over land use and resource distribution. Particularly when integrating rural areas into the boundaries of the town and government own lands from the farmer, the connection between cities and rural peasants can be fraught with conflict. This is especially true when it comes to the marketing of agricultural goods.

Due to its proximity to Addis Ababa, Dukam town is an important location for numerous transit of goods and services. This town served as a conduit for the majority of foreign deities. Due to this, economic activity is booming and urbanization is growing. Additionally, the East Industrial Zone creates a lot of employment opportunities and improves connectivity among Gela, Bishoftu town Addis Ababa and Adama.

Overall, the growth of Dukam town has been somewhat impacted by its closeness to Addis Abeba. The community has benefited from improved infrastructure, more economic activity, and easier access to healthcare and education. Nevertheless, the town has also suffered from environmental degradation, a growth in slums, an extension of industrial regions, a rise in land prices, a rise in living expenses, and urban sprawl.

5.3 Impact of illegal settlement

For urban areas, like Dukam town, illegal settlements are a significant problem. Illegal settlement is a significant obstacle to the growth of Dukam town. Environmental deterioration, a rise in crime, economic difficulties, an increase in slum areas, overcrowding, and land use conflict, overpopulation, a poor aesthetic outlook for the sub-city, and social difficulties are all results of illegal settlement in Dukam town. Different strategies, such as encouraging sustainable land use practices and gaining access to basic infrastructural services, are required to address those challenges.

In Dukam town, a large number of people have settled on land that is owned by the government or private individuals illegally. Thousands of people are currently living in illegal settlements. Which has expanded over time. There are illegal settlements in every kebele in Dukam town. The presence of illegal settlement is widespread in Dukem town for a variety of reasons. Due to the town's relatively high land prices, it is challenging for low-income inhabitants to own or rent legal dwellings, and proximity to Addis Ababa and Bishoftu town. The ineffective planning and enforcement practices of the government are another factor that makes it challenging to stop the development of illegal settlements.

Another way of illegal settlement in Dukam town is Illegal land tuners and land transfers; which take place when people or groups unlawfully purchase property or land and use it for development without adhering to the plan's development criteria. This may result in difficult to construct infrastructure, the development of structures that do not follow the design, causing environmentally unsaved, create slum area and a decline in aesthetic value. Prevailing illegal settlement, reducing land value,

5.4 Land use compatibility

The compatibility of land uses has a big influence on Dukam town growth. Some of the difficulties include conflicts between the use of industrial and residential property, the conversion of agricultural land or expansion of the town to a rural area, insufficient zoning laws, informal settlements, and infrastructure problems. In order to address the problems mentioned above, it is necessary to promote sustainable land use practices and improve the infrastructure for Dukam town growth.

According to the outcome of the interview Conflicts between various land uses, such as commercial and residential or residential and industrial, arise in the Dukam town due to problems with land compatibility. Zoning laws, environmental issues, and opposition from the local community are just a few of the reasons why these disputes might arise.

Take Dukem East Industry Zone, which is situated in Koticha Kebele and situated between Dukem town and Bishoftu town, as an illustration. This industrial region is sandwiched between a business and residential sector, and it also serves as a barrier between the developments of the

two towns. On the other hand, there is a land compatibility issue, particularly between residential and industrial and commercial and industrial, in Gogecha and koticha kebele.

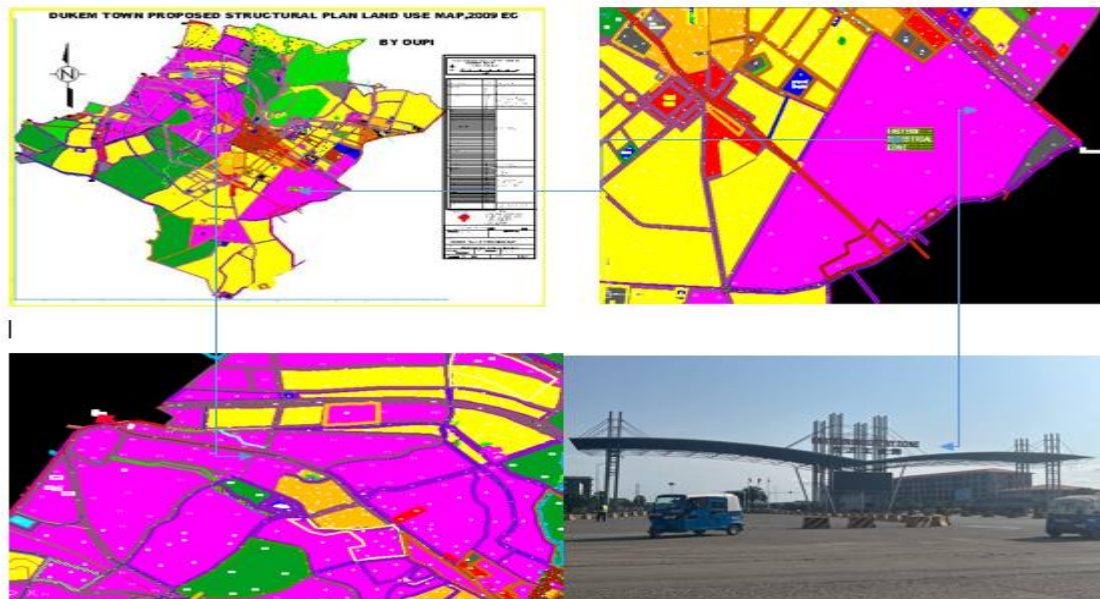


Figure 5.1 land use incompatibility areas source structural plan 2009

All of the kebeles in the Dukam town have an issue with land use incompatibility, as seen in Figure 5.1. However, land use incompatibility driven by the construction of residential homes in industrial areas has a serious impact on Gogecha, Koticha, and Mendallo Kebele. This causes a variety of pollutants, including air pollution, water pollution, and noise pollution, which can endanger the health of locals. Additionally, residential property values will decline. This is related to the fact that consumers are frequently afraid to acquire properties that are close to industrial operations due to possible health and safety issues.

Other critical issues of Dukam town are connected to other issues with land use zoning change, such as the nearly all-commercial nature of the structures in the two kebele; Koticha and Xadacha, which disagree with the city's structural design.

- Residential land owner needs to construct a commercial building.
- Commercial land owner needs to construct industry or warehouse

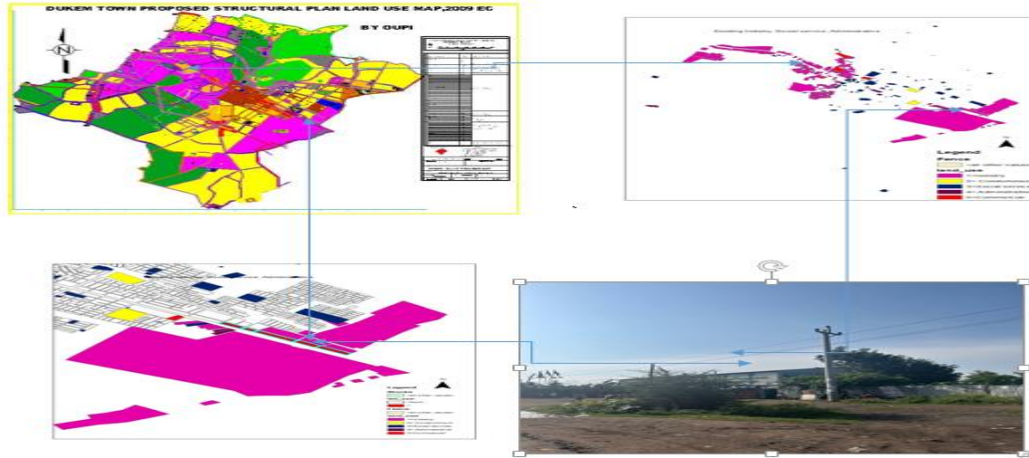


Figure 5.2 Land use incompatibility areas source structural plan 2009 and GIS

Landowners have an impact on the area in front of East Industry, along the major route from Dukem to Addis Abeba, and Bishoftu town, as represented in Figure 5.2. The owner of the land is opposed to the land use plan and needs to build what they want. The fact that Dukam town is close to Addis Ababa and serves as a major gateway for the import and export of goods and services, the ownership needs to construct industrial and commercial buildings.

5.5 Land plan violation

The Dukam town land plan can be violated in a number of ways, including by building construction without a building permit that were under standard, constructing structures in prohibited areas, changing the function of the building, going over the height limit and under the height limit or using the land for purposes other than those specified in the plan. This may result in environmental deterioration and a decline in the town's visual appeal. Also has a significant influence on the land's tax value, which makes the government unable to collect enough taxes and increases tensions between the law's enforcers and those who break it.

In certain circumstances, official entities like experts and kebele employees violate Dukam town land plan. This leads to the expansion of unlawful settlement as well as the building of a structure in a zoning district that restricts that kind of development. This causes land degradation, inconsistent development, challenging infrastructure development, the presence of incompatible land uses, and a rise in unlawful property ownership.

Monitoring and Evaluation of land plan implementation

To make sure the goals of the land plan are met, Dukam town needs efficient monitoring and assessment of the plan's implementation. There were, however, less effective monitoring and evaluation systems. As a result, the scheme would have failed. Individual government employee interests and political influence have an impact on the monitoring and assessment process. This may lead to improper usage of land for personal gain.

When monitoring and evaluating land plans, Dukam town frequently encounters the following difficulties: Inadequate funding restricts the growth of social services, infrastructure, and efforts to involve the public and capacity-building programs, lack of data or the low quality of the data, which made it difficult to assess progress and carry out the land plan. Today, Dukam town is attempting to show off the Cadaster software and make improvements to the land management system that are essential for overcoming this difficulty and lack of public participation, landowners in the Dukam town frequently oppose land usage. Therefore, it is preferable to have discussions with landowners

5.6 Impact of Land Plan Implementation Challenges on Dukam town

Dukam town development may be negatively affected by difficulties with the land plan's implementation. These issues can result in project delays or failures, higher costs, environmental harm, a lack of coordination between government agencies, corruption manifestations, a lack of capacity and resources to carry out projects, an increase in project costs, and development projects that are not carried out in accordance with land use regulations.

Like many other municipalities, Dukam town could face financial difficulties when implementing urban land plans. This may include a financing limitation. For instance, the municipality might not have sufficient funds to implement the social services and infrastructure projects that were planned for the sub city's land plan. Therefore, the implementation of suggested infrastructure and social services will often take a long period.

A large sum of funds is needed for the infrastructure needed to implement land plans, as well as for surveying, and mapping. The proposed land plan, however, might not be implemented by Dukam town due to a lack of funding. In particular to deliver social services, and environmental improvements, and to develop a green legacy development in accordance with the suggested

strategy. Due to this, most of the time, the Dukam town proposed land plan expired before most of the aforementioned key services were implemented. This might cause the land plan to be completed slowly or perhaps be completely scrapped.

In the Dukam town, there was less stakeholder involvement throughout plan implementation, such as community involvement and landowner engagement. So Failure of the land plan might result from the lack of stakeholders throughout the implementation process. Community engagement in plan implementation fosters investor interest, addresses issues facing low-income or impoverished areas, increases ownership of the plan, and spurs individual interest in taking part in each plan's implementation.

Putting Dukam town land plans into action requires effective governance. Corruption might make it difficult to carry out the strategy because of poor governance. The execution of the land plan must thus be done in a way that promotes accountability, transparency, and involvement. The media, civil society groups, and other stakeholders should be included in the implementation process to help achieve this.

6. CONCLUSION AND RECOMMENDATION

6.1 Conclusion

There are a number of obstacles to overcome while adopting a land plan in the Dukam town. The identified issues can be divided into a number of categories, including difficulties with land plan preparation, legal and institutional issues, land plan violations, land use compatibility issues, illegal settling, social and cultural issues, difficulties with government land acquisition processes, and difficulties with monitoring and evaluation. Effective collaboration between government offices is crucial for successful land plans, as land use planning involves multiple agencies and stakeholders. Poor coordination can lead to fragmented implementation, delays, and inefficiencies. Collaborative planning initiatives are more likely to achieve goals. Communication with stakeholders and obtaining appropriate funding is crucial for successful land plan preparation. Government funding, such as direct financing, financial aid, tax breaks, and public-private partnerships, can help overcome obstacles in land plan preparation.

Illegal settlements in urban areas like Dukam town hinder growth, causing environmental deterioration, crime, economic difficulties, slum areas, overcrowding, land use conflict, and

social issues. Strategies like sustainable land use and access to basic services are needed to address these challenges. Dukam town has thousands of illegally settled people, primarily due to high land prices, low-income housing challenges, and proximity to Addis Ababa and Bishoftu town. The government's ineffective planning and enforcement practices make it difficult to stop the development of illegal settlements. Illegal land tuners and transfers in Dukam town involve unlawfully purchasing property without adhering to development criteria, causing infrastructure difficulties, environmental issues, slums, and reduced land value.

Land compatibility is crucial for Dukam town growth, but conflicts between industrial and residential properties, agricultural land conversion, insufficient zoning laws, informal settlements, and infrastructure issues arise. To address these issues, sustainable land use practices and infrastructure improvements are needed. Zoning laws, environmental concerns, and local community opposition contribute to these disputes. Dukem East Industry Zone, located in Koticha Kebele, is a barrier between Dukam town and Bishoftu town, causing land compatibility issues between residential and industrial sectors. The sub-city's primary issues are related to land use zoning change, with commercial structures in Koticha and Xadacha conflicting with the city's structural design.

Dukam town land plan violations can lead to environmental deterioration, decline in visual appeal, and a significant impact on land tax value. Violations include building without permits, constructing in prohibited areas, altering building functions, exceeding height limits, and using land for other purposes. Dukam town requires efficient monitoring and assessment of its land plan to ensure its goals are met. However, less effective systems, government employee interests, and political influence can hinder the process. Obstacles include improper land usage, Inadequate funding, Stakeholder Resistance to land plan change, Data accuracy, and availability, Lack of public participation, lack of informed development, and delays in achieving the plan's goals.

Generally implementing a land plan in Dukam town requires careful consideration of legal, institutional, land use, compatibility, and illegal settlement, social, cultural, financial, and technical challenges. A comprehensive approach can overcome obstacles, achieving sustainable urban development and improved quality of life for residents

6.2 Recommendation

There may be a number of challenges that need to be overcome when implementing a land plan in an urban area like the Dukam town. The following recommendations are provided to address challenges related to the implementation of the collective land plan:

During plan preparation

- ✓ Recognizing the previous implementation issues with land plans and establishing a remedy for the upcoming proposed plan
- ✓ Asking the community about the future development goals of the sub-city leads to transparently including them in the preparation of the land plan
- ✓ In order to prepare an effective land plan, the municipality needs to try to sustain finances by requesting funding from various private bodies and governments. Along with that, we ensure to follow up by evaluating and monitoring the plan preparation process.

During plan implementation

- Prepare regular evaluation and monitoring of the suggested land plan.
- Facilitate the land use change procedure when a remedy is needed for the proposed land use.
- Improve the Land Administrative Office's ability to serve customers better and to facilitate work with a high-quality data management system that is quick, simple, and easy to use.
- Develop an effective land plan Monitoring and evaluation of the implementation process. This will make it easier to give solutions and keep a record of difficulties encountered during the execution of a land plan, such as violations of the plan, issues with land use compatibility, environmental concerns, and land use problems, as well as the progress of plan implementation and any areas that require improvement.
- Before building any construction, attempt to resolve land ownership issues like illegal settlement to save money and protect people. To prevent misunderstandings and disputes during the implementation of a land plan, make clear any concerns with land ownership and title. As soon as the government acquires the land from the farmers, the government must authenticate the farmers' land compensation.
- Ensure that the overall plan is implemented in a coordinated way by working with other governmental organizations. Working with the Land Administrative Office to guarantee that building permits are granted in accordance with the land plan or the Ministry of Finance to get financing for enforcement efforts might be two ways to go about doing this. Detecting issues with the draught land plan, working to resolve them with the land administration office, and submitting the results to the appropriate agency for plan improvement. Prior to the implementation of the infrastructure plan, right-of-way must be identified, managed and regulate municipality office to be free off.

Appendix 2: Questioners

Section I: Demographic Characteristics

1. Sex A) Male B) Female

2. Age A) 18-24 B) 25-34 C) 35-44 D) 45-54 E) 55-64 F) Above 65

3. Your level of education: A) TVET, B) Diploma C) Degree D) MA/MSc E. Others

4. Year of Experiences? A) Less than 1 B) 1-5 C) 6-10 D) 11-15 E) 16-20 F) Above 20

5. What is your current position? A) Urban land planner B) Management staff C) Experts or Engineers D) Team Leader E) Others

Section II: The following items are with regard to the Sub city linkages/connections with other sub-cities/city

1. Do expansion of town towards Peasant Administration could affect plan implementation?

Yes No

If yes for the above questions what kind of solution has been taken by Town administration to minimize the problem?

2. Do urban and rural areas clash during the execution process? Yes No

If yes for the above questions how was the urban-rural tension settled during the execution of the plan?

3. Do the farmers included in the planning boundary of Dukam town sell their agricultural products? Yes No

If yes please where the farmers can sell their product?

Section III: Government Support for Plan preparation

1. Are there lack of Money assistance supports provided by the local authority (Dukam town Administration) for a plan's or designs effective preparation? Yes No

2. Are there lack of assistance with coordination provided by the local authority (Dukam town Administration) for a plan's or designs effective preparation? Yes No

3. Are there lack of any efforts being made to mobilize and organize the town's citizens and community by the local authority (Dukam town Administration) for a plan's or designs effective preparation?

Yes No

Section IV: Land use Planning Items

1. Is there land use compatibility problem in your sub city? Yes No

If yes for the above questions specify the type of land use

2. Is there any difficulty to build the construction considering land use with respect to the interest of the land ownership? Yes No

If yes please what kind of land use is difficult to implement?

3. Illegal settlements may exist in your town? Yes No

If yes please specify the name of the kebele?

4. Are the socioeconomic data used to prepare the structure plan consistent with the filed spatial plan to the town? Yes No

Direction: for each statement, please indicate how much you agree or disagree with the statement by putting a check in the box on the right side of each statement. 1: Strongly Dis

Agree 2: Disagree 3: Neutral 4: Agree 5: Strongly Agree

5. How are the farms of Dukam town compensated in relation to the zoning boundary?

Compensation for the farmer	Strongly agree	Agree	Neutral	Disagree	Strongly dis agree
5.1 Compensation is given for their farm land in terms of land					
5.2 Compensation is given for their agricultural crops					
5.3 Compensation is given for their permanent trees interims of cash					

6. What are the main challenges faced during plan implementation?

Plan implementation challenge	Strongly agree	Agree	Neutral	Disagree	Strongly dis agree
6.1 Plan implementation is affected due to financial problem					
6.2 Plan implementation is affected due to Plan violations problem					
6.3 Plan implementation is affected due to Illegal land tenure/transfer problem					
6.4 Plan implementation is affected due to Lack Of effective monitoring and evaluation problem					
6.5 Plan implementation is affected due to Absence of stakeholders' involvement in plan preparation and implementation					
6.6 Plan implementation is affected due to Good governance problem					

Part IV: Questionnaire for Cadaster office

1. How many times did Dukam town have the chance to prepare, have, or create an urban physical plan throughout its existence (including the present one); and who prepared it?

Terms of plan prepared	Year of prepared	Prepared by
1 st		
2 nd		
3 rd		
Others		

2. What were the different categories of plans created and executed during each preparation phase? (Master plan, Development plan, Structural plan, Local development plan = urban design, Neighborhood plan ...)?

- A. The 1st plan: _____
- B. The 2nd plan: _____
- C. The 3rd plan: _____
- D. Others (please specify): _____
- E. 8. Please specify land use proportion

Interviews questions for key Informants

Part I: Background information about the respondents/organization/ institute

1. Name (optional): _____
2. Phone no.(optional): _____ Email (optional): _____
3. Specific work/task _____
4. Years of experience: _____
5. Year of stay in the town /area _____

Part II: interview questions

1. How do you explain land use plan implementation in Dukem Dukam town (koticha, Xadecha, Mandello, Gogecha kebele)?
2. How do you evaluate land use plan that should be implemented?
3. Do you think that land use plan implementation is based on proposed structural plan of the sub city?
4. If your answer for the above question is Yes or No what is your justification?
5. In your opinion what are the main challenges of land use plan implementation in Dukam town (koticha, Xadecha, Mandello, Gogecha kebele)?
6. In your opinion are the above challenges of land use plan implementation challenges affect the development of the sub city?
7. Which land use type is difficult to implement in respect of land owner? And why?
8. In your opinion how to solve land use plan implementation challenges in Dukam town?

