ADDIS ABABA UNIVERSITY

COLLEGE OF TECHNOLOGY AND BUILT ENVIRONMENT

SCHOOL OF BUILT ENVIRONMENT

DEPARTMENT OF URBAN AND REGIONAL PLANNING

Housing and Infrastructure provision Challenges in Addis Ababa: In the case of Lideta sub-city

BY

ABEBA ESHETE

Addis Ababa, Ethiopia

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A Thesis Submitted to the School of Graduate Studies of Addis Ababa University, college of Technology and Built Environment, in partial fulfillment of the requirements of the Degree of Master of Science in Urban Planning

Advisor:

Birhanu Girma (PHD, Associate Professor)

Addis Ababa, Ethiopia

JUN, 2025

DECLARATION

I, the undersigned, declare that the thesis presented in this document is my own original work and has not been given a degree in any other University, and that all sources of material used for the thesis has been duly acknowledged, following the scientific guidelines of the Institute.

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APPROVAL

The Board of Examiners have read and evaluated the thesis prepared by Abeba Eshete with the research title, "**Housing and Infrastructure provision Challenge in Addis Ababa: In the Case of Lideta sub city"** to the. College of Technology and Built Environment, 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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ACKNOWLEDGEMENTS

First and foremost, I would like to thank the Almighty God for giving me strength and perseverance throughout this journey. My heartfelt thanks go to my husband for his endless love, patience, and unwavering support throughout my studies. I am also deeply grateful to my advisor, Birhanu Girma (PHD, Associate professor), for their valuable guidance, support, and encouragement. Finally, I extend my appreciation to my, colleagues, friends, and family for their continuous encouragement and assistance during my thesis work.

Abstract

Background: There has been high-paced urbanization in Ethiopia, particularly in Addis Ababa, resulting in severe housing and infrastructure issues. Lideta Sub-City is no exception with overpopulation, old infrastructure, and slums.

Problem Statement: The study aims to address the pressing housing and infrastructure requirements of Lideta that adversely affect the quality of life, mobility, and economic prospects of the inhabitants.

Objective: The main goal of the study is to assess the current conditions and issues of housing and infrastructure in Lideta Sub-City and their impact on inhabitants.

Methods: A cross-sectional design with a Mixed-methods approach was employed. Quantitative survey, interview results were supplemented with secondary analysis of municipal records to verify the findings through triangulation. Descriptive statistics were used in quantitative data analysis with SPSS (version 25). Thematic analysis was applied to qualitative data.

Findings: 98.8% of the survey has been returned. Over half the population lives in slums and densely populated habitats, and 60% of them reported a deficiency in proper living places. Fifty percent of the families unfavorably assessed the state of their residence. Over 21.6% of the population lives in slums that lack minimum facilities and contribute to an overall worsening of living standards. Infrastructure shortfalls are the regular outage of electricity and water supply, poor sanitation, and the absence of satisfactory road connectivity. The survey was supported by the interview, which confirmed these observations. The interview also emphasized further issues of coordination and poor community engagement.

Conclusion: The findings confirm that housing and infrastructure issues exert a considerable impact on residents' quality of life and economic activities, thereby generating a high demand for relocation.

Recommendations: The rehabilitation of existing housing stock must be prioritized. Informal settlements regularized and upgraded. Basic utility infrastructures should be improved, and participation of communities in urban planning increased. These interventions will ensure sustainable urban development in Lideta Sub-City and improve the standards of living of its population.

Keywords: Urban Planning, Housing Challenges, Overcrowding, Slums

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List of Abbreviations

UN-Habitat: United Nations Human Settlements Program

SDG: Sustainable Development Goals

IHDP: Integrated Housing Development Program

AACRA: Addis Ababa City Road Authority

ETB: Ethiopian Birr (currency)

WHO: World Health Organization

NGO: Non-Governmental Organization

AAWSA: Addis Ababa Water and Sewerage Authority

IRB: Institutional Review Board

SPSS: Statistical Package for the Social Sciences

ERA: Ethiopian Road Authority

Chapter 1: Introduction

1.1. Back ground of the study

Urbanization is a global process that reshapes societies, economies, and environments around the world. It is estimated that 56% of the world's population currently lives in urban areas, projected to rise to 68% by 2050(UN-DESA, 2018) . The rapid urbanization presents opportunities for economic development as well as significant challenges, such as housing, infrastructure shortages, and environmental pressure (UN-Habitat, 2021). Most particularly in developing nations, the rate of urbanization is higher than available formal planning capacity, which leads to widespread informal settlements and service delivery backlogs (OECD, 2018; UN-Habitat, 2017)

Sub-Saharan Africa's urbanization is the most rapid globally, with cities expanding at rates of about 3.6% per annum, and urban residents are estimated at 1.5 billion by 2050 (UN-Habitat, 2022a). This expansion is fueled by natural growth and rural-to-urban migration, with more than 60% of the urban population residing in informal settlements with minimal infrastructure and secure tenure (Cunningham et al., 2024). Urban challenges like narrow road networks, intermittent water and electricity supply, and weak institutional governance enhance urban vulnerabilities (UN-Habitat, 2021).

In the context of this region, Ethiopia's urban profile has evolved significantly in the last two decades. The population of the country's cities increased from approximately 14 million in 2010 to over 23 million in 2023 and is expected to exceed 42 million by 2037 through further rural-urban migration and natural growth (UN-Habitat, 2021). Addis Ababa, as the capital city and central economic and administrative center, is a testament to this rapid change. The city, with a population of more than 5 million, faces mounting needs for housing and urban services that have surpassed its current infrastructure capacity (The World Bank, 2019c).

Urbanization in Addis Ababa has been heavily uncontrolled, resulting in extensive urban sprawl, slum growth, and socio-economic inequality (Linares, 2016; G. Teshome, 2009). Nearly 70% of the population in Addis Ababa live in substandard housing—typically informal settlements with overpopulation, insecure tenure, and low coverage of water, sanitation, and electricity (The World

Bank, 2021; UN-Habitat, 2021). These conditions are detrimental to the quality of life and challenge the city's resilience and sustainability.

In Addis Ababa, Lideta Sub-City is particularly representative of such dynamics. Situated near commercial and administrative hubs, it faces severe pressures from urbanization, extreme land scarcity, aging infrastructure systems, and extensive encroachment by informal settlements (Acioly, 2022; UN-Habitat, 2018) Informal settlements in Lideta are intensely concentrated and often lack minimum road access, drainage, safe water, and sanitation facilities (Gezahegn Berhe et al., 2017; Hdug, 2023a) In 2014, a project of upgrading in Lideta destroyed over 1,134 public houses and 339 private houses, an indicator of ongoing issues related to housing shortages and infrastructure deficits (UN-Habitat, 2021).

Government initiatives by the Ethiopian government include large-scale programs such as the Integrated Housing Development Program (IHDP), which was launched in 2004. IHDP delivered over 250,000 housing units in Addis Ababa to low-income groups; however, steep entry costs, limited geographical spread, and poor link with complementary infrastructure are questioned as significant limitations by critics (African Development Bank Group, 2021; PASGR, 2018; UN-Habitat, 2011). To this end, the swift inflation of Lideta condominium prices has excluded the urban poor from formal housing markets, further hastening the spread of informal settlements (Acioly, 2022; Getachew, 2016b).

Urban conditions of infrastructure mirror these housing deficiencies. In Addis Ababa, a paltry 26.3% of the total road network (~3,761 km) is paved, with lesser-paved local and collector roads supporting stupendous wear and congestion (AACRA, 2025). Lideta benefits from recent infrastructural development on roads, such as the Lideta-Tsebel – AU – Bulgaria corridor and housing projects' access roads, but water supply is unreliable with interruptions reaching four times per week and about 40% of its population having to rely on illegal water sources during shortages Garbage disposal is inadequate with 58% of residences disposing of garbage in public open areas and 60% of organized waste collections delayed, aggravating environmental health risks (Force, 2025; Rode et al., 2011).

Despite policies from the government to emphasize infrastructure and housing upgrades, like slum rejuvenation schemes following the 2008 elections, implementation has been hampered by inadequate citizen outreach, limited maintenance programs, and weak localized data for informing interventions targeted to areas of need (Ficquet et al., 2016; Rode et al., 2011). Additionally, the governance structure is characterized by centralization with weak empowerment to sub-city governments, precluding responsiveness to the needs of local inhabitants (The World Bank, 2021).

Against this backdrop of these continuing challenges of quality of life, urban equity, and sustainability, a clear knowledge gap exists for localized research on housing and infrastructure in Lideta Sub-City. Most existing research is done in Addis Ababa, if on the metropolitan level, or in more recent urban expansion areas, and remains silent on the older, densely populated inner-city areas, where abandonment is the order of the day and citizens' voices are silenced(The World Bank, 2019a; Urban resilience, 2018). There is scarce community-based, triangulated evidence involving residents' and planners' perspectives required for intelligent, context-sensitive urban policy-making.

This study, therefore, aims to fill this lacuna through carrying out a substantive assessment of Lideta's housing and infrastructure problems through mixed methods like community surveys, practitioner interviews, and examination of municipal documents. It aims to determine appropriate, sophisticated data to inform sustainable urban design and service delivery in one of Addis Ababa's strategically most important yet vulnerable sub-cities.

1.2. Statement of the Problem

Ethiopia's city expansion, represented by the country's capital city, Addis Ababa, has led to disastrous housing shortages and declining infrastructure quality that threaten Lideta Sub-City's urban habitability and sustainability to the gravest extent. Being one of the oldest and densest sub-cities in the city, Lideta suffers from constant lack of cheap housing and old public utilities, as realized in overcrowded neighborhoods, dilapidated housing stocks, poor sanitation facilities and roads, and unreliable water supply (Assefa, 2018; Getachew, 2016b; Hdug, 2023a).

Approximately 70% of Addis Ababa's citizens reside in poor or informal housing, and Lideta encapsulates these citywide failures in extreme form. Lideta informal settlements are characterized by poor infrastructure, insecure tenure, and overpopulation, which have a negative impact on the health and general urban resilience of residents (Kitaw, 2020; The World Bank, 2019a; UN-

Habitat, 2021). Water supply disruptions occur on average four times a week for about 32% of the households; more than 40% rely on informal water sources during shortages, which exacerbate hygiene and health risks (Tadesse, 2024) Solid waste collection is irregular, leading to wide-scale illegal dumping and environmental pollution, affecting over half the population in some areas.

There are no significant achievements by existing government housing and infrastructure initiatives, such as the IHDP and slum upgrading programs, due to high fees, tiny development areas, insecurity of tenure, and minimal participation of the local population (PASGR, 2018; Ficquet et al., 2016). Aging public housing estates decay structurally, and urbanization is faster than infrastructure development and maintenance (AACRA, 2025; Zewdie et al., 2021).

Unless these housing and infrastructure deficits are addressed, residents are likely to experience deteriorating living conditions, increased public health hazards, restricted services and economic opportunities, and more social inequalities, hindering Addis Ababa's broader urban development aspirations and international obligations (Ejigu, 2018; UNICEF, 2022).

This study thus focuses on the core problem issues of housing deficit and inadequate infrastructure, specifically in Lideta Sub-City. It seeks to use primary data in order to reveal localized issues and accumulate these into workable information capable of informing policy interventions to optimize local livability, equity, and sustainability.

1.3. Research Objectives

1.3.1. General Objective:

- To examine the housing and infrastructure challenge in Lideta sub-city to assess their impact on the quality of the residence rewrite by this way

1.3.2. Specific Objectives:

1. To identify the current state and the challenges of the housing experience by residents
2. To assess the current state and challenges of physical infrastructure
3. To investigate the challenges of housing and infrastructure on the quality of life

4. To develop strategies for improving housing and infrastructure planning in Lideta Sub-City

1.4. Research Questions

1. What is the current state of housing and the key housing challenges faced by residents in Lideta Sub-City?
2. What are the existing conditions and challenges related to physical infrastructure in the area?
3. How do housing and infrastructure challenges impact the overall quality of life of residents in Lideta?
4. What feasible strategies can be developed to improve housing and infrastructure planning in the sub-city?

1.5. Research Hypotheses

- **H1**: Poor housing conditions are significantly associated with lower quality of life among residents in Lideta Sub-City.
- **H2**: Inadequate physical infrastructure (e.g., roads, water, sanitation, electricity) significantly reduces residents' access to essential services.
- **H3**: Residents who experience fewer housing and infrastructure problems report higher satisfaction with their living environment

1.6. Significance of the Study

The research is practically and academically relevant and is likely to benefit different stakeholders of urban development and planning in Ethiopia. Locally, it provides evidence-based findings specific to Lideta Sub-City, a long-established and populous neighborhood in Addis Ababa. Through delimiting key housing and infrastructure problems, such as overcrowding, deteriorating housing stock, poor road coverage, and pervasive occurrence of informal settlements, the study advises targeted interventions for the improvement of living conditions for the inhabitants. These findings will be most valuable to Woreda administrators and sub-city planners who engage in urban service delivery and planning.

On a city level, the study contributes to the Addis Ababa City Administration (AACA) by offering pertinent policy recommendations on rehabilitation of housing, infrastructure upgrading, and community-sensitive redevelopment. The results complement AACA's general urban regeneration plan and have implications for institutions such as the Addis Ababa Water and Sewerage Authority (AAWSA), the Addis Ababa Road Authority, and the Ministry of Urban Development and Construction (MoUDC). The institutions can apply the evidence to prioritize high-priority areas, follow in-situ upgrading, maximize resource allocation, and use participatory budgeting tools. Moreover, the study offers pragmatic approaches to fundamental urban development needs in housing and infrastructure. These approaches include strengthening urban governance by reinforcing building codes and improving information systems. Also, the improvement of community participation and cultural awareness is recommended in an effort to reduce resistance and increase the sustainability of urban interventions.

The research provides localized suggestions to policymakers. It advises on methods to develop urban resilience and livability, specifically in low-income neighborhoods. The importance of participatory planning, mechanisms for community participation, and culturally responsive redevelopment are highlighted. These considerations are most relevant to NGOs, donors, and development partners involved in housing and infrastructure development, like AAWSA, AACA, and Ethiopian Road Administration (ERA).

Academically speaking, the study fills a significant empirical gap in the literature on urbanization and sub-city service delivery in Ethiopia. The study bridges the gap between the macro-strategies of urban planning and micro-realities of sub-cities where urban inhabitants live in high-density, informal, or underserved settlements. The study findings serve as a foundation for additional studies, such as comparative studies across other Addis Ababa sub-cities and similar urban settings within low- and middle-income countries.

Beneficiaries of the results and conclusions of the study are stakeholders that include the Addis Ababa City Administration, Woreda and Sub-City Urban Planning Offices, the Ministry of Urban Development and Construction, urban planners, architects, policymakers, program designers, NGOs, civil society organizations, and members of academia and the scientific community. By synthesizing sub-field information and policy-focused strategies, this study hopes to support inclusive, sustainable, and evidence-based urban planning in Lideta Sub-City and the whole of Addis Ababa.

1.7. Scope of the Study

1.7.1. Thematic Scope

The study aims to determine the housing and physical infrastructure issues of Lideta Sub-City, Addis Ababa. The thematic scope comprises two major themes: housing and physical infrastructure. Housing concerns include the quality, availability, affordability, and spatial distribution of residential dwellings, particularly in low-income and high-density neighborhoods. The infrastructure component comprises core urban facilities such as road networks, water systems, sanitation plants, electricity access, and solid waste management. The study also explores the effect of deficiency in these areas on the quality of life of residents and city livability. Issues outside the housing and infrastructure domains—such as education, health, labor, or city government systems separate from infrastructure—are outside the scope of this study.

1.7.2. Geographic Scope

Geographically, the study was limited to Lideta Sub-City, one of the older and more urbanized sub-cities in Addis Ababa. The study primarily focuses on residential areas, informal/slum settlements, and public spaces, most affected by poor housing conditions and insufficient infrastructure services. The findings and conclusions are therefore limited to Lideta Sub-City and cannot be generalized to the entire city or other sub-cities with diverse urban dynamics and infrastructure needs.

1.7.3. Temporal Scope

The temporal scope of the research goes from 2015 to 2025, including the latest available data and trends observable at the time of research. While historical context is afforded a preliminary overview to be in a position to interpret patterns of development, the central emphasis is placed on current conditions and issues of housing and infrastructure as they are nearing and within the year

2025. The study does not project future trends beyond this time frame and does not examine long-term patterns of urbanization within the broader metropolitan area of Addis Ababa.

1.8. Research Limitations

One limitation of the research is the use of a cross-sectional design, which gives only a snapshot of housing and infrastructure at a single point in time and does not reflect shifting dynamics over time. The design is not feasible for making causal inferences or observing trends in housing and infrastructure over an extended period. Further, the mixed-methods approach, while valuable for data triangulation, has the potential to introduce biases if qualitative interviews are not fairly representative of various opinions of all the stakeholders, particularly residents with experiences different from those of urban planners. The method of sampling employed in this case, i.e., the two-stage cluster sampling, has the potential to lead to selection bias since it focuses on specific woredas and would not be generalizable to the experience of inhabitants in informal or inaccessible settlements. Also, the use of self-reported data by surveys has the potential to lead to response bias where the respondents give socially accepted answers rather than their own experience. These methodological limitations underscore caution in interpreting findings and demonstrate the merits of longitudinal studies and more extensive sampling approaches in future work to understand evolving urban processes in Lideta.

1.9. Organization of the Paper

This paper is organized into several chapters. Chapter 1 gives the background of high urbanization in Ethiopia, particularly in Addis Ababa, and outlines the specific housing and infrastructure issues of Lideta Sub-City, the research question, objectives, significance, and scope. Chapter 2 covers relevant literature on urban planning, housing, infrastructure issues, informal settlements, governance, quality of life, and concludes with gaps in localised studies. Chapter 3 describes the research methodology, e.g., study place, method, design, population, sampling techniques, data collection and analysis techniques, as well as ethical considerations. Chapter 4 presents a schedule of work for the research operations, and Chapter 5 provides an estimate of the budget for conducting the study.

Chapter 2: Literature Review

2.1. Introduction

This chapter provides a review of the literature on the topic area. The chapter begins with the definition of key concepts on urban planning, housing, and infrastructure. The chapter discusses local perspectives on urbanization. It then examines existing research on the problems of housing, infrastructure deficits, and informal settlements, primarily in Addis Ababa and other similar urban environments. With the identification of practice and knowledge gaps, the chapter provides a foundation for the methodology and analysis in subsequent sections.

2.2. Urban Planning &Indicators of Urban Planning

Urban planning is a methodical process of managing services, resources, and land use in cities and towns for the purposes of stimulating economic growth, conserving the environment, and promoting human welfare. Urban planning entails many activities, including zoning, transport planning, infrastructure planning, environmental management, and delivery of social services. Structured processes typically comprise such as procedures as data collection and situation analysis, the setting of development goals, policy formation and strategy making, stakeholder involvement, strategy execution, and progress monitoring. Urban planning is required in an effort to manage urban spread, improve access to services, mitigate environmental risks, and ensure equitable development (Hall & Tewdwr-Jones, 2019). It guarantees that the city grows in a manner that serves the current needs, in addition to ensuring sustainability and resilience in the long term.

Urban planning indicators and criteria form key points of reference when measuring and guiding such processes. Such indicators cut across functional areas like housing, infrastructure, transport, environmental management, and social equity. They form the foundation upon which to assess the effectiveness, inclusiveness, and sustainability of cities and also direct evidence-based policy. International policies like the Sustainable Development Goals (SDG 11 in particular) and the Global Urban Monitoring Framework identify the significance of standard indicators to gauge achievement toward inclusive and resilient urban development (UN-Habitat, 2017, 2021). Using them, planners can identify areas of service deficiencies, track progress, and direct investments towards marginalized communities.

Housing indicators could perhaps be the most significant tool to gauge the adequacy, affordability, and accessibility of urban housing. The key indicators are housing cost-to-income ratio, number of people living in informal settlements, occupancy, quality of buildings, and coverage of basic services. According to UN-Habitat (2020), the optimum minimum level of affordability is that housing should not exceed 30% of household spending. Occupancy should be limited to two individuals per room to avoid overcrowding. Moreover, at least 90% of urban residents should be given access to better water and sanitation, and the houses should be safe, well-constructed, and use good materials. Protection from forced eviction—security of tenure—is also a major indicator. These measures allow governments to establish housing deficiencies, prevent slum growth, and ensure city residents have proper levels of living standards (Hall & Tewdwr-Jones, 2019; The World Bank, 2019b).

Infrastructure indicators assess the provision and quality of basic services like electricity supply, transport, water supply, sanitation, and waste disposal. All these are essential to both public health and urban functioning. The World Health Organization (2011) recommends that 50–100 liters per day of safe water and improved sanitary facilities must be accessible to all, respectively, and at least 90% of the population must be supplied with them. The World Bank (2019) recommends that at least 95% of urban households be supplied with a reliable source of electricity. High-density areas need more than 1km per square kilometer of road density to offer connectivity (Angel et al., 2021). There must be capacities in solid waste collection covering at least 80% of urban housing if it is going to be in a position to determine that there are no environmental and health hazards. Minimum such capacities enable the cities to attain balanced and sustainable delivery of services as population increases and diversifies in cities.

2.3. Global Urbanization Trends and Challenges

Urbanization continues to change global patterns of settlement. According to UN DESA (2022), over 56% of the world's population currently lives in urban areas, and by 2050, it will rise to 68% (UN-DESA, 2018). The phenomenon is most clearly seen in developing countries where urbanization is occurring at a higher speed due to a combination of natural growth, rural-to-urban migration, and administrative reclassification of rural towns into urban areas. This international urbanization has promoted economic expansion, creativity, and cultural unification, but also presents sophisticated challenges. They encompass the spread of slums, shortage of housing, traffic congestion, environmental contamination, deepening disparity, and increasing call for water, sanitation, power, and waste services. Asian, Latin American, and African metropolitan cities are facing infrastructure backlogs and coordination challenges in land use planning and service delivery, typically exacerbated by weak institutional coordination and limited budgetary capacities (UN-Habitat, 2021). Urbanization is a worldwide phenomenon, and experience in diversified metropolitan settings provides insightful advice on how to address urban growth and its consequences.

Across the globe, cities have experimented with varied approaches to housing delivery, infrastructure planning, and informal settlement integration. For example, in Latin America, "sites and services" has been the pre-eminent approach to delivering basic infrastructure and secure land tenure, enabling incremental housing improvement by low-income residents. This model is concerned with enabling residents with the delivery of serviced plots and allowing self-help housing development, a strategy that is increasingly appreciated as transferable to most of the fastest-growing cities in Africa (OECD, 2018).

In Asia, Singapore and South Korea demonstrate how active government policies, robust financing mechanisms, and long-term urban planning can successfully scale up affordable housing and infrastructure (Korean Herald, 2016). These demonstrate the importance of coordinated land and housing strategies, strong public institutions, and cooperative partnerships with private and community actors.

But international experiences also warn of pitfalls. Major public housing schemes in other fast-growing cities have been blighted by poor maintenance, social segregation, and inappropriate design compared to the needs of residents. Investment in urban infrastructure also disproportionately benefits wealthier parts of cities, which entrenches inequalities and spatial segregation (OECD, 2018). Urban policy lessons from international cases thus highlight inclusive, context-dependent, and sustainable urban policies.

2.4. Urbanization in Africa

Africa has the fastest urban growth of any continent, and the urban population of Africa is projected to reach 1.5 billion by 2050 (UN-Habitat, 2022b). The rate of urbanization in Africa is around 3.6% annually, most of which is driven by population growth and rural-to-urban migration. Lagos, Accra, Nairobi, and Kinshasa are expanding rapidly, often with minimal formal planning. The result is a dominance of informal settlements, which house more than 60% of Sub-Saharan Africa's urban residents (Cunningham et al., 2024). The informal settlements typically lack quality infrastructure, services, and secure tenure. Furthermore, African urbanization has income and spatial inequalities, in which affluent enclaves exist alongside large, low-income and underserved populations. Despite increased decentralization reforms, various African local authorities lack the capacity, autonomy, and resources to address these multi-dimensional issues (Fox, 2014). Climate change, hunger, and health issues such as infectious disease outbreaks aggregate urban governance. Sub-Saharan Africa presents distinct urbanization patterns, including a high youth bulge and the presence of dual economies.

Urbanization, which is youth-dominated, has led to high increases in informal employment and the emergence of informal slums. Despite that, job creation has lagged behind migration to lead to high levels of unemployment and social openness in cities (Bank, 2021). The housing market remains underdeveloped, with formal housing production unable to keep up with growing demand. The unaffordability of construction, unavailability of land, fragile financing mechanisms, and administrative constraints all contribute to an increasing urban shortage of housing. Infrastructure deficits are also critical, such as road density, availability of electricity, and provision of public transport that all remain well below global standards. Governmental institutions are often fragmented, with inefficient coordination between national, regional, and local governments. Planning systems are also inherited from colonial governments and are out of touch with local conditions (UNHSP, 2020).

2.5. Urban Housing Policy Framework in Ethiopia

The Ethiopian housing policy has evolved through successive national development plans. The most important intervention, the Integrated Housing Development Program (IHDP), was initiated in 2004 with the support of the Addis Ababa City Administration and the international community. IHDP aimed at reducing the backlog in housing, creating jobs, and stimulating the construction sector by offering low-cost condominium housing. Although the program succeeded in coming up with over 250,000 units in cities like Addis Ababa, critics note its failure based on the following: high entry costs for poor households, limited geographical coverage, and inadequate combined infrastructure and services (PASGR, 2018; UN-Habitat, 2011).

The Growth and Transformation Plans (GTP I and II) prioritized urban development and housing as areas of focus. Implementation has been patchy, however, due to financing constraints, regulatory inefficiencies, and poor coordination among institutions. Housing finance remains underdeveloped, with very low mortgage penetration and an undercapitalized housing bank. In recent years, Ethiopia's Homegrown Economic Reform Agenda has emphasized public-private partnerships and market-friendly approaches, yet state interventions have remained the mainstream of affordable housing delivery(A Homegrown Economic Reform Agenda: A Pathway to Prosperity , 2020).

Second, Ethiopia's Urban Land Lease Holding Proclamation controls access to urban land, yet its functioning has been criticized as opaque, inflexible, and vulnerable to corruption. Informal land markets continue to exist, a testament to the inefficiencies of formal arrangements. A lack of a strategic and integrated national urban policy has inhibited the development of an integrated housing strategy that harmonizes spatial planning, provision of infrastructure, and poverty reduction goals (Ministry of Justice, 2011).

To solve its urban housing crisis, Ethiopia requires policies that increase inclusivity, affordability, sustainability, and local government capacity. The priority interventions are informal settlement upgrading, serviced land expansion, diversification of housing finance instruments, and local planning institution capacities.

2.6. Urbanization and Housing in Ethiopia

There is speeding up urbanization in Ethiopia, with Addis Ababa at the forefront. Over the past two decades, the nation's urban population has increased tremendously from approximately 14 million in 2010 to over 23 million in 2023. The trend is expected to continue, with the urban population projected to exceed 42 million by 2037, primarily due to rural-to-urban migration and natural increase (UN-Habitat, 2021). Addis Ababa, the center of politics, administration, and the economy of Ethiopia, is the focal point of this revolution. But this dynamic expansion of the city, its infrastructure growth, and housing expansion are not in scale to their magnitude. Urban sprawl, slums, and mounting housing tensions have created a city that has no capacity for its population to feed into it(Linares, 2016; Teshome, 2009). Ethiopia is facing one of Sub-Saharan Africa's highest rates of urbanization, which is higher than 4% annually. Cities such as Addis Ababa, Hawassa, Bahir Dar, and Dire Dawa have grown rapidly, both in terms of numbers and physically. The nation's urban population will be more than 42 million by 2037, doubling 2019 figures(Linares, 2016; G. Teshome, 2009).

Addis Ababa city alone has over 5 million inhabitants, and the demand for housing and basic services is growing enormously. Expansion has largely been uncontrolled, producing sprawling slums, congested public infrastructure, and growing socio-economic disparities. The quality of housing in the majority of cities remains bad, with widespread utilization of makeshift materials, overcrowding, and limited access to sanitation facilities. Land administration and urban government institutions are underperforming, with double delegations and a lack of technical and financial capability at the municipal level. Planning has been customary top-down, with little scope for community involvement and poor coordination between the infrastructure provision and the development of residences (Cunningham et al., 2024; The World Bank, 2019c).

Generally, housing in Addis Ababa has not kept pace with demand. The majority of the population of the city lives in informal house settlements without access to clean water, sanitation, and solid construction.

The World Bank has shown that nearly 70% of Addis Ababa citizens live in sub-average-quality housing. Lideta Sub-City, which is one of the most historical and densely populated parts of the capital, is a good representation. Its urban areas are characterized by decaying buildings, overpopulation, and the relentless expansion of slums. Slums are likely to arise due to unaffordable formal housing markets and tend to be built unplanned or unapproved, further complicating problems of tenure insecurity and poor provision of services (The World Bank, 2019c).

Government programs to combat the housing crisis are spearheaded by initiatives such as the Integrated Housing Development Program (IHDP), initiated in 2004. IHDP is targeted at producing low-cost condominium apartments and generating employment opportunities through large-scale construction. IHDP finished over 250,000 housing units in Addis Ababa by 2020. The program has also been criticized for being unaffordable in a restricted sense, bureaucratic inefficiencies, and inability to link with infrastructure and public services (Sebawit G. Bishu, 2017; UN-Habitat, 2021). Moreover, the application of such programs in aging sub-cities like Lideta could be low due to limited spaces, high density, and high cost of land, leaving the majority of residents beyond reach by opportunity in formal housing. Specifically, housing supplies in Addis Ababa have not been able to match demands. Most of the population of the city lives in informal building forms, without minimum provisions of clean water supply, sanitation, and permanent structure. The World Bank (2020) estimates that almost 70% of Addis Ababa's population dwells in low-quality housing (The World Bank Group, 2015).

Old and predominantly settled city areas of the capital contain old buildings, overcrowding, and the expansion of slums. Informal buildings typically take the form due to unaffordability within the formal housing market and are built without the consent of approved planning. This creates tenure insecurity and inadequate provisions of services (UN-Habitat, 2021).

Government-led interventions are what measure up in order to address the housing crisis. For instance, a Lideta Slum Development Project was undertaken following the 2008 city council election under the scope of a five-year strategic urban development plan, 2008/09-2012/13.

Though originally 45 days were planned for consultation with residents and demolition in line with the original guide for implementation, the process itself lasted over 11 months with strong popular opposition and logistical delays. The aim was to rehabilitate 26 hectares of deteriorated inner-city slum land in Lideta Sub-City into an integrated, modern, and mixed-use urban residential estate. The anticipated outputs were the development of condominium housing over 8 hectares for middle-income residents and the upgrading of 4 hectares of commercial buildings and 5 hectares of multi-purpose areas. The project further sought to provide improved land and housing choices to private individuals and on-site resettlement alternatives to public housing (Kebele) residents where possible. Besides providing shelter, redevelopment was intended to enhance infrastructure, enhance access to social services, increase green space, and enhance sanitation facilities. Its overall aim was to substitute the unplanned, congested, and aged slum with a new, habitable urban landscape and refurbish the image of Addis Ababa as an upcoming diplomatic and economic hub in Africa (Acioly, 2022). Nevertheless, its application faced resistance (Ficquet et al., 2016).

This Integrated Housing Development Programme (IHDP), introduced in 2004. IHDP was directed to provide affordable condominium housing, along with the generation of employment in mass developments. IHDP constructed over 250,000 units of housing on the periphery of Addis Ababa by 2020. The scheme, however, has been criticized as being partially affordable only, plagued by inefficiencies in bureaucracy, and not being able to leverage infrastructure and public services (UN-Habitat, 2021).

Rising condominium prices in Lideta have made housing inaccessible to the urban poor, while high- and middle-income earners take up residence in the apartments even as they struggle with down payments and installments.

Some of the significant issues include scarcity of water, tiny room space, lack of open space, and household noise. Some of the advantages include access to services, higher quality of housing, and employment of youths. In order to provide affordability and livelihood conditions, there must be increased income-generating activities, a culture of saving must be created, and water deficiency in supply must be stemmed. Action on the part of the government must be to guide the supply of low-cost housing units that fall within the purchasing power of the urban poor (Getachew, 2016b).

Even kebele housing complexes suffer from structural decay, e.g., leaky roofs and loose foundations. Most public housing blocks in Addis Ababa have exceeded their designed lifespan (Zewdie et al., 2021).

2.7. Infrastructure Challenges in Urban Ethiopia

The rapid urban growth in Ethiopia has imposed an enormous strain on its physical infrastructure. Infrastructure development in urban areas like Addis Ababa is not synchronized with population growth, resulting in a range of urban management issues. Roads, water supply, sanitation, electricity, and waste management infrastructure are often underdeveloped, inadequately maintained, or even entirely absent in most places (UN- Habitat, 2008; UN-Habitat, 2017).

2.8. Housing and Infrastructural Challenges in Addis Ababa

Shelter and infrastructure lie at the core of urban health and sustainable development, but in the majority of African cities, they are severely in deficit. The problems are systemic and structural, sustained by population growth, a deficiency of policy frameworks, and governance issues.

2.8.1. Informality and Governance in Addis Ababa

Informal housing is caused in part by faults in the formal sector to generate income-generating supply and the prohibitively high price of formal housing. Governance failure, however, is also at play in the continuation of informality. Addis Ababa city land management is plagued by redundant institutional mandates, ineffective land use control enforcement, and a lack of proper community representation in planning. This disjunctive organizational form hinders the promotion of upgrading informal settlements or their integration into planned urban development. Furthermore, the politico-economic distribution of land privileges elite interests and produces socio-economic segregation and spatial exclusion. Informality, instead of being sometimes viewed as a temporary stage, has become institutionalized and, therefore, undermined orthodox urban planning paradigms. Overcoming informality involves inclusive governance changes that balance regulatory control with people's empowerment and participatory approaches (Hailu et al., 2024; Kassahun, 2010).

2.8.2. Road Infrastructure of Addis Ababa

Road infrastructure is a highly important issue. Addis Ababa is fast-growing, putting its road infrastructure under increasing strain. Of the total length of roads estimated to be 3,761 kilometers, only 26.3% (approximately 990 km) of city roads are paved. This is far from international (AACRA, 2025). While arterial streets, such as the Ring Road, principal arterial roads, and sub-arterial roads, have a comparatively high level of pavement at 95.7%, the local and collector streets trail behind with only 15.9% paving. This sort of observation puts all the traffic into the relatively few arterial roads, which are well-paved, causing them to be used to excess, wear out rapidly, and become congested frequently. Between the years 2016 and 2019, the road occupancy ratio increased from 13.5% to 18%—a remarkable feat, but still below the 25% average recommended for urban cities. In a bid to do away with this, AACRA has begun an entire city project to improve and expand road infrastructure.

The largest part of this project is the rebuilding of old roads that were no longer in a position to accommodate the increasing traffic (AACRA, 2019). More than 2,763 kilometers of asphalted roads in varying widths have been constructed in priority corridors that the mayors had identified. Among them are key arterials such as Kality to Meskel Square, Gotera Interchange, Pushkin

Square, Gofa, Arat Kilo to Menelik II, Meskel Square to Bole Ring Road, Megenagna to Mexico via Lideta, and Georgis to Coca via Autobus Tera and Sebategna. These have relieved congestion, enhanced intra-city connectivity, and played a key role in enhancing the transport backbone of the city (AACRA, 2025). Apart from mega road redevelopments, AACRA introduced a cobblestone program for non-paved city road (AACRA, 2025).

2.8.3. Inadequate Sanitation and Water Supply

Road construction in the Lideta zone includes Lideta-Tsebel – AU – Bulgaria road corridor (extended by its second phase to Meskel Flower), road networks for Lideta 40/60 condominium projects, and adjacent developments. These roads have improved accessibility, mobility, and delivery of social services in one of the urban city's densely populated areas. Similarly, the Sengatera neighborhood has been greatly upgraded by opening roads to the Sengatera 40/60 condominiums (AACRA, 2025). 2.7.3. Sanitation and Water Supply

Addis Ababa's municipal solid waste amounts to around 750.000 tons/year (2020), per capita average household waste is 0.45 kg/day. The waste is discarded at landfills during collection. Open dumping and incineration are, despite their prohibition, also common in urban and rural cultures.

Most landfills in Ethiopia are open dumps lacking organized management systems. 85 percent of Addis Ababa's collected garbage is disposed of at the city's Koshe landfill, and the other fraction in the nearby waste-to-energy facility, Reppie (Giz, 2023).

Sanitation is also a service delivery area that is not uniform. It is a serious environmental and public health hazard. It is particularly threatening in densely populated residential areas with poor sanitation and drainage. A decade ago, sanitation coverage in the slum cities of Addis Ababa was extremely low, and only 11.4% of the population made use of improved sanitary facilities. This was significantly lower than the entire sanitation coverage of the capital city, which was 41.2%. The prevalence of a lack of sufficient sanitation facilities among the slum populations resulted in open defecation habits, which covered approximately 8.2% of the slum population (Beyene, 2015).

Subsequent to this significant portion of the population develops allied health consequences. Lower education level and overcrowded households are especially the most vulnerable groups for this public health hazard (Yallew et al., 2024).

This may be prevalent in the case of Lideta Sub-city, where there are big slum settlements with high population density. This is supported by past surveys indicating that 60% of the inhabitants might not be segregating solid waste at the household level (Hdug, 2023b).

Water shortages and pressure inconsistencies also remain critical concerns. The city's aging distribution systems struggle to meet the increasing demand for potable water, particularly in low-income neighborhoods (Tadesse & Demisse, 2018). Frequent water outages impact daily life and limit access to clean drinking water.

Frequent water outages impact daily life and limit access to clean drinking water. Gebresilassie (2021) also conducted a household survey in Lideta and found that 47% of the households rely on public sanitation facilities. The study further reported that 32% of the households experience frequent shortages of water, which has implications for hygiene and health.

A statistical study by Tadesse and Demisse (2018) revealed that water supply disruptions in Lideta happen on average 4 times a week, mainly because of aging distribution systems and rising demand. Research has found that about 40% of the residents in the sub-city use informal sources of water during shortages.

2.8.4. Waste Management Deficiencies

The collection of waste in Lideta Sub-City is random, resulting in massive illegal dumping. According to Yohannes and Bekele (2022), the inhabitant’s dispose of waste in public places or drainage channels since the municipal waste collection is ineffective. This exacerbates public health conditions and environmental degradation.

Insufficient waste management policies and the absence of enforcement tools have allowed uncontrolled waste disposal mechanisms to continue, leading to air and water pollution in certain areas (Urban Age Task Force, 2025).

Empirical evidence from Yohannes and Bekele (2022) suggests that 58% of households in Lideta dispose of garbage in open spaces because the collection is not frequent. Environmental pollution by illegal dumping has been caused, resulting in pollution diseases that have increased by 15% in the worst-affected areas.

Besides, a city report by Urban Age Task Force (2025) quantified that 60% of scheduled waste collection is delayed, leading to uncontrolled solid waste accumulation. Survey respondents are dissatisfied with waste management services, highlighting disparities and a lack of community-based responses.

2.8.5. Inadequate Water, Electricity, and Connectivity

40% of its entire daily water supply. It is even more acute in poor sub-cities like Lideta Sub-City. Due to this limited supply, the Addis Ababa Water and Sewerage Authority (AAWSA) has established a water rationing schedule, in which others are only supplied with water for two or three days within a week. The majority of these households are reliant on other sources like yard taps, public taps, and water vendors. But buying water from vendors is costly, which is a load on the families in these regions (Sharma, 2008).

Unstable power supply is common in Addis Ababa, and Lideta Sub-City is not an exception. The power outages are due to high power demand, aged infrastructure, and frequent maintenance faults. The Ethiopian Electric Power Corporation's efforts to enhance the capacity of electricity generation notwithstanding, electricity supply problems continue to interfere with daily consumption, affecting residential and business consumers (Meles, 2020; Selamawit Mengesha, 2023).

Internet penetration in Addis Ababa also has its challenges. Internet penetration, while better than among states within the region, is 40% for Addis Ababa (Ayele Addis Ambelu, 2024). Disruption of service is an everyday experience. In densely populated cities such as Lideta Sub-City, network congestion and slow surfing may be an everyday experience. Although the government is striving to expand fiber-optic coverage, access and affordability remain factors hindering access to reliable internet services for the majority of inhabitants (Eyasu Zekariyas, 2024).

2.8.6. Informal Settlements and Urban Livability

Expansion of the informal settlements can be expected in urbanization. In Ethiopia, particularly in Addis Ababa, so it has been. Informal settlements as unplanned and illegal constructions, and they occupy over half of the city's houses. Informal settlements normally emerge as a result of the non-existence of affordable houses and are found in environmentally fragile or peripheral areas (Abagissa, 2019).

Informal settlements have physical, spatial, social, and legal characteristics. The slums of Addis Ababa, for example, are poorly served by the municipality. The houses are also made of substandard materials. Sanitation, water, and electricity issues are characteristics of the slums. The second, i.e. the spatial characteristics, can be observed from the poorly planned slums, several times built on the slopes or the flood plains. Thirdly, there is also a concentration of low-income groups among them. These are new urban-urban or rural-urban migrants. The final and most typical of these settlements is their basis in law or tenure security. For instance, as late as the 1970s, just a quarter of housing units in Addis Ababa had been legally authorized by the municipalities. The majority of Addis' residential stock never had a permit, but eventually came to solidify as formal tenure (UN- Habitat, 2008).

Lideta Sub City consists of a high proportion of such settlements, in which dwelling units are densely settled and constructed with non-degradable materials. Minimum infrastructure facilities or services like public roads, drainage, and water and sanitation services do not exist in these settlements. Then in 2014 slum upgrade project area of 26 hectares, 1134 Public housing and 339 private housing were demolished within Lideta Sub city. Most of them were Kebele houses (Gezahegn Berhe et al., 2017).

2.8.7. Urban Governance and Policy Response

Government and institutional facets increase the level of complexity in urban Ethiopia. Urban planning and management are extremely centralized in Ethiopia, and sub-city and municipal governments have limited decision-making authority. Addis Ababa city government, despite being tasked with service provision, often lacks the capacity, resources, and information necessary to make effective and responsive urban policies (The World Bank, 2021). The government has made efforts to improve urban infrastructure and housing, including slum upgrading, road expansion, and promoting public-private initiatives. All these efforts have been criticized as piecemeal, badly planned, and top-down. In Lideta, for instance, efforts to upgrade infrastructure have occasionally been pursued, including the construction of asphalt roads and condominium apartments.

Nonetheless, these kinds of projects lack community engagement and upkeep programs, and the results end up being unsustainable and, in some instances, the displacement of low-income residents without appropriate resettlement plans (Rode et al., 2011).

Second, inaccessibility to reliable data at the sub-city level hinders evidence-based planning. Urbanization requires localized monitoring and evaluation systems to guide it. Policymakers are unable to adequately define priorities, allocate resources appropriately, or assess the performance of interventions without comprehensive and disaggregated data. The current governance architecture is therefore unable to address interdependence among housing and infrastructure deficits in a people-oriented and integrated manner

2.8.8. Quality of Life and Socioeconomic Impacts

Lideta Sub-City housing and infrastructure shortfalls have a wider range of impacts on residents' quality of life and socio-economic well-being. Ventilation-scarce homes that are extremely ventilator-scarce, extremely dense homes transmit more prevalent infectious ailments. Urban residential area residents who live in poorly served living areas report higher rates of respiratory diseases, diarrheal disease, and infection vectors compared to residents of well-served settings (Kitaw, 2020).

Poor infrastructure aggravates these issues. Clean water supply, electricity, and transportation facilities are limited, and the residents cannot participate in economic activities, go to schools and health care centers, and enjoy a decent standard of living. The economic cost is borne mainly by women in carrying water and child care if public centers are not available. Besides that, children raised under such conditions are developmentally behind due to poor nutrition, health, and schooling (Ejigu & Abraha, 2018; Hdug, 2023b; Meles, 2020; We Aspire, 2023).

Social cohesion is also eroded where infrastructure is poor and service delivery is uneven. Discontentment with service delivery, insecurity of tenure, and risks of eviction can be translated to social unrest and distrust between citizens and local authorities. These processes close down the potential of inclusive and sustainable urban development, fuelling poverty and exclusion spirals (UNICEF, 2022).

2.9. Gaps in Literature and the Need for Localized Research

Despite growing concern with Ethiopian urbanization, empirical studies at the sub-city level remain miserably lacking. The bulk of the research has been on city- or country-level trends, however significant these are, and is open to neglecting localized processes at the level of single districts. Lideta Sub-City, to take one example, remains very much under-studied and very much short of much scholarly as well as policy consideration despite population concentration, strategic location, and urban diversity. Empirical evidences so far indicate challenges in condominium housing and specific projects. Their results are not generalizable.

Studies such as the World Bank's Addis Ababa Urban Profile (2020) and the Urban Resilience Study (2018) pinpoint the importance of studies at the neighborhood level in order to undertake targeted interventions. Without research at a local level, policies become universalized and will not be in a position to address the specific requirements of the communities. Data poverty also leads to a vicious cycle of exclusion under which specific areas remain under-funded or neglected in urban planning. This study seeks to bridge this gap through a rich contextualized understanding of housing and infrastructure challenges in Lideta Sub-City. By presenting site-level data, the study hopes to assist in more efficient, equitable, and sustainable urban planning interventions. This would further assist in improved living standards, improved service delivery, and improved urban resilience in one of the oldest but still most disadvantaged Addis Ababa neighborhoods.

2.10. Theoretical Framework on Urban Housing

Theoretical underpinnings substantiating issues of housing have to be able to portray the dynamic interplay between socio-economic determinants, policy, and city structure.

The Housing Ladder Theory considers that households aim to improve their housing status step by step—from informal or transient housing to formal owned homes, along with increases in their income and security. But in the majority of African environments, the ladder is broken by deep-seated barriers such as land deficiency, lack of credit availability, and stringent regulations (Grisolia et al., 2025; Morrow-Jones & Wenning, 2005).

Urban Political Economy Perspective is also a useful perspective with which to understand housing since it positions housing in power relations and capitalist market operations. It holds that housing markets are defined by the interests of capital, state policy, and social forces, resulting in exclusionary spatial forms and chronic informality (Harvey, 2008). It highlights the ways in which governance, patterns of investment, and land speculation determine urban housing outcomes (Dakito Alemu, n.d.; Matsumoto & Crook, 2021).

Finally, the Sustainable Livelihoods Framework emphasizes housing's multifaceted nature as not only shelter but also the intersection of livelihood, social capital, and security. Housing strategies in line with this framework emphasize community participation, incremental upgrading, and integrated service delivery.

Chapter 3: Methodology

3.1. Introduction

This chapter outlines the methods that should be employed to conduct the study. It includes details on the location of the study, duration of the study, research design, and study method. It also indicates the target population, sampling plan, determination of sample size, and inclusion. Furthermore, the chapter explains methods of data collection, methods of data analysis, quality controls, and ethical considerations. Finally, it indicates the manner in which findings of the research would be disseminated.

3.2. Study Area

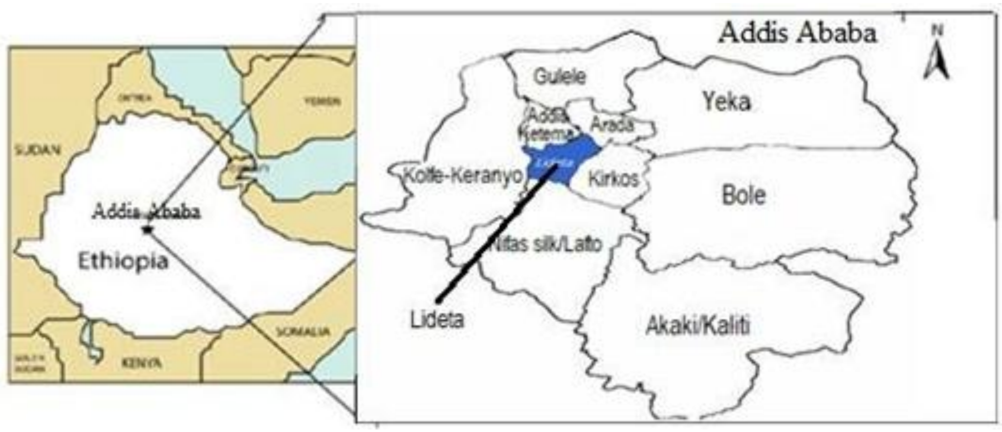

Figure 1: Map of Lideta sub city

Lideta Sub-City is among the 11 sub-cities of Addis Ababa (Figure 1). It is located in the central region of Addis Ababa. It is one of the city's oldest sub-cities in Addis Ababa. Lideta Sub-City is one of the most urbanized and oldest sub-cities. Lideta comprises ten administrative woredas. The sub-city is characterized by high-density housing, old infrastructure, and a high level of urbanization that has outgrown basic services development. It covers around 9.18 km². It has a mix of residential, commercial, and public spaces, with a high proportion of its population living in informal settlements. It has a population of 220,000.

The sub-city features various road networks, electricity supply sources, commercial centers, government offices, and public service points that are integral to understanding the housing and infrastructural challenges examined in this study. Additionally, road density and electricity infrastructure distribution data were collected and analyzed to provide a holistic understanding of urban service coverage.

The majority of areas in Lideta are informal settlements, where residents experience poor housing conditions, poor piped water accessibility, poor sanitation facilities, congested roads, and unsatisfactory electricity. Its location in close proximity to central government and commercial institutions positions it as an integral component of the city's infrastructure, yet these same demands have also given rise to infrastructural decay and overpopulation.

Thus, Lideta offers a significant case to examine the relationship between housing quality, provision of infrastructure, and urban governance.

3.3. Study Period

The study was completed from December 2024 to May 2025. The timeframe includes preparatory work, instrument development and pilot-testing, data gathering, analysis, and submission of final reports. This six-month timeframe provides adequate time to engage with members of the community, local government officials, urban planners, and other relevant stakeholders to obtain comprehensive and genuine data.

3.4. Study Approach

The study employs a mixed-method approach that combined quantitative and qualitative data gathering methods. Quantitative data were collected through standardized questionnaires to provide statistically representative descriptions of sampled households' residential and infrastructure conditions. These statistics were complemented by qualitative data through key informant interviews of decision-makers and stakeholders directly involved in urban planning and service delivery. Spatial statistics stored in the sub-city's urban planning office were accessed and analyzed to benchmark findings against available development indicators.

3.5. Study Design

The study used a descriptive cross-sectional design. The design allows one to capture a snapshot of the situation prevailing in the housing and infrastructure conditions of the selected locations of

Lideta Sub-City. It allowed the study of differences between and within communities as well as the determination of trends in basic services. Further, through the incorporation of spatial data, a geographic aspect is added to the analysis that allows the determination of infrastructure gaps and disparities among woredas.

3.6. General Population

The sample population for the aim of this study is all residents of Lideta Sub-City. According to projections by the Central Statistical Agency of Ethiopia and the Addis Ababa City Administration, the sub-city's population is estimated to be around 220,000. The population is diverse in socioeconomic status, age structure, and housing ownership, which adds richness and depth to the investigation of housing and infrastructural challenges.

3.7. Sampling Population

From the general public, the study incorporated adult residents aged 18 and above who have been residing in their current location within Lideta Sub-City for more than one year. The residents are likely to have adequate knowledge of the infrastructure and housing conditions of their area. The sample population excludes people who are temporarily residing in the area, such as short-term renters and migrant laborers, and owners of commercial buildings who reside elsewhere.

3.8. Sample Size determination

For representativeness, sample size is calculated using Cochran's formula for estimating proportions in large populations. At a 95% level of confidence (Z = 1.96), an assumed prevalence of 50% for maximum variability (p = 0.5), and a margin of error of 5% (e = 0.05), the minimum sample size is: 384.

Cochran’s Formula:

$$n_0 = \frac{Z^2 \cdot p \cdot (1-p)}{e^2}$$

Figure 2: Cochran`s Formula

Where:

- n0 = required sample size
- Z^2 = Z-value (e.g., 1.96 for 95% confidence level)
- p = estimated proportion of the population (if unknown, use 0.5 for maximum variability)
- e = desired margin of error (e.g., 0.05 for ±5%)

$$n0 = \frac{1.96^2 * 0.5 * 0.5}{0.05^2} = \frac{3.8416 \cdot 0.25}{0.0025} = 384.2 \; n0 \approx 384.16 \approx 384$$

Considering a 10% non-response rate, we add 38.4. Thus, the total sample size amounts to approximately 422 households. This sample size is sufficient to draw conclusions and identify trends in the study population.

3.9. Sampling Techniques

For the quantitative survey, the Two-stage cluster sampling method was employed. First, three of Lideta Sub-City's nine woredas, i.e., Woreda 01, Woreda 07, and Woreda 09, were randomly selected to serve as primary sampling units. The woredas were chosen to ensure geographic location, population density, and housing characteristics diversity. Household selection in each of the total population of the chosen woredas was randomly sampled in stage two.

Table 1: Sample size calculation of each woreda 01, 07, and 09 in Lideta Sub-city, Addis Ababa

Woreda	Population	Proportion	Sample Size
Woreda 01	30,000	27.27%	115
Woreda 07	45,000	40.91%	173
Woreda 09	35,000	31.82%	134
Total	**110,000**	**100%**	**422**

In stage two, the sampling size of households was allocated per each woreda to be representative of its approximated population size: 115 in Woreda 01 (population ~30,000), 173 in Woreda 07 (~45,000), and 134 in Woreda 09 (~35,000). The approach brings about more even representation across the sub-city.

Non-probability convenience sampling was utilized for the qualitative interviews because the principal aim of this component was not statistical generalization, but rather to acquire the richest, most precise, and most suitable information from firsthand experts in urban planning. The population of interest—20 urban planners working within Lideta Sub-City—is limited, specialist, and has particular institutional knowledge critical to understanding the housing and infrastructure matters at hand. In these circumstances, voluntary selection of participants according to their availability and level of comprehension ensures access to information-rich cases that will provide subtle and meaningful differences. In addition, qualitative research uses information saturation in lieu of predetermined sample sizes, and therefore, interviews can only be carried out until the point of no new themes emerging. Convenience sampling is then methodologically appropriate, ethically feasible, and practically necessary, given the planners' constrained time frames as well as the need to respect voluntary participation.

As the sampling was convenience, individuals with specialized knowledge and direct involvement in urban planning and service delivery within Lideta Sub-City were targeted. These key informants included urban planners and woreda administrators. Informants were chosen based on their roles, decision-making authority, and years of experience, making them particularly well-suited to illuminate issues not easily captured through household surveys.

For the secondary data, all available most recent records in the Lideta Sub-city Administration were examined accordingly.

3.10. Eligibility Criteria

For the qualitative survey, eligible participants are those who are 18 years or older and have resided in the selected woreda for at least one year. Participants must be capable of providing informed consent and responding to questions about their residential status. Participants who are not permanent residents, have severe communication disability without caregivers, or refuse to provide consent were excluded from the study.

For the qualitative survey, all urban planning professionals working at the sub-city level, with most information on the housing and infrastructural challenges in Lideta sub-city, should be included.

3.11. Operational Definition of Variables

- **Housing Issues:** These are issues of insufficient, overcrowded, unaffordable, or poorly constructed residential housing, including limited access to durable housing, secure tenure, and basic services.
- **Informal Settlement:** These are residential settlements that have emerged without organized or legal sanction. They normally have limited access to basic infrastructure such as water, sanitation, electricity, and waste services. It is measured from self-reporting of survey participants.
- **Infrastructure Issues:** This represents the below-average condition or deficiency of the fundamental services, such as roads, water supply, sanitation, electricity, drainage, and waste management in the research area. It could also include frequent and random interruptions of these services.
- **Quality of Life:** It is the standard of living of the residents, as measured by the general happiness of the residents, the availability of good housing, infrastructure, clean surroundings, and satisfaction with daily living conditions. It also includes a sense of safety and security associated with these conditions.

3.12. Data Collection Methods

The study made use of a mix of data collection techniques to ensure robustness and triangulation. Primary data were collected through structured interviews utilizing a pre-tested household survey tool. The instrument collects a wide range of information, such as housing structure, availability of water, sanitation, provision of electricity, access to roads, and attitude to service quality. Data collection was through trained data enumerators familiar with Amharic and familiar with the local environment.

Secondary data were collected from Lideta Sub-City's Urban Planning Department and Department and other relevant city offices, including housing and infrastructure offices. Existing reports and statistical information on main urban indicators such as road length per capita, water connection density, sanitation coverage, and housing condition classes are included.

Qualitative information was gathered through key informant interviews with planners, woreda administrators, and community leaders. Interviews provide rich contextual data on policy implementation, institutional dynamics, and the historical evolution of Lideta's urban infrastructure.

3.13. Data Analysis Techniques

Quantitative information was cleaned, coded, and analyzed using SPSS (version 26.)Descriptive statistics such as frequencies, percentages, means, and standard deviations were used to summarize the variables. Cross-tabulations and chi-square tests were used to explore the correlations between demographic indicators and infrastructure accessibility. Spatial data was analyzed for infrastructure availability to identify geographic disparities. The findings were assessed in comparison with international literature.

Thematic analysis was conducted for the qualitative data. Emerging themes were used to inform and develop the quantitative findings and add interpretative depth to the results. It was done after the quantitative survey and secondary data analysis. It was meant to deepen understanding by inviting planners to remark on the housing, infrastructure, and community problems exposed in the survey data. This sequential mixed-methods design allowed not only examination of what the problems are, but why they persist and how institutional facts shape outcomes on the ground. Under the grounded theory method, the interview transcripts were coded inductively, extracting the key themes that integrate planners' daily experiences, technical knowledge, and nuanced understandings of urban development processes.

3.14. Data Quality Assurance

To ensure the reliability and integrity of the data, certain quality control measures were implemented. All the data collection instruments were pre-tested in a comparable environment outside the study woredas. Training on ethical concerns, data collection rules, and household mobilization for two days was provided for the data collectors. Supervisors verified completed questionnaires daily for completion and accuracy. Double data entry was conducted to minimize input errors, and discrepancies were settled through cross-checking the original questionnaires.

3.15. Reliability and Validity

Household questionnaire reliability for the LIKERT scale was confirmed with Cornbrash's alpha to establish multi-item scale internal consistency, at a minimum value of 0.70. Face and content validity were established through expert review by urban planners, scholarly researchers, and community development experts. Data triangulation—e.g., survey reply, administrative records, and expert interviewing contributed to the overall validity and credibility of the study results.

3.16. Ethical Considerations

Ethical clearance of the study protocol was provided by the Institutional Review Board (IRB) of Addis Ababa University, College of Technology and Built Environment. Permission was taken from Lideta Sub-City Administration and from the participating woredas. Informed consent was obtained from all the participants, and they were informed of their right to withdraw from the study at any point. Confidentiality was upheld formally, and there was no identifiable information in the final datasets. Information was stored in password-accessible files and released only to the lead researchers.

3.17. Dissemination of Results

On completion, the research was submitted for publication in peer-reviewed journals to enhance wider academic dissemination. Copies of the final research report were filed at the library to aid future researchers and serve as a reference for future studies.

Findings of this study will be disseminated in collaboration with Addis Ababa University (AAU) and the Lideta Sub-City Planning Office. Ownership of the data and results will be maintained by AAU, with active involvement of Lideta authorities to facilitate practical applications and policy implications. Results can also be presented in the form of abstracts or posters at national and international scientific conferences for broader professional discussion and knowledge exchange.

Chapter 4: Results and discussion

This study has a high response rate. Of the 422 questionnaires disseminated, 417 have been completed the survey, resulting in a response rate of 98.8%.

4.1. Sociodemographic Characteristics of participants

Table 2: Demographic and Household Characteristics of Respondents

Category	**Subcategory**	**Count (%)**
Age Group	18–24	83 (19.9%)
	25–34	70 (16.8%)
	35–44	91 (21.8%)
	45–54	87 (20.9%)
	55+	86 (20.6%)
Gender	Male	239 (57.3%)
	Female	178 (42.7%)
Household Size	1–3 members	83 (19.9%)
	4–6 members	159 (38.1%)
	7+ members	175 (42.0%)
Employment Status	Full-time	64 (15.3%)
	Part-time	101 (24.2%)
	Self-employed	113 (27.1%)
	Unemployed	82 (19.7%)
	Student	55 (13.2%)
	Retired	2 (0.5%)
Monthly Household Income	<2,000 ETB	43 (10.3%)
	2,000–5,000 ETB	104 (24.9%)
	5,001–10,000 ETB	112 (26.9%)
	10,001–15,000 ETB	107 (25.7%)
	>15,000 ETB	51 (12.2%)
Years Living in Lideta	<1 year	143 (34.3%)
	1–5 years	136 (32.6%)
	6–10 years	67 (16.1%)
	>10 years	71 (17.0%)

The respondents are fairly evenly distributed across age ranges, with the largest group in 35–44 (21.8%), followed by 45–54 (20.9%) and 55+ (20.6%). This indicates a mature population with established potential housing circumstances and formed community networks. The respondents are male-dominated (57.3% male, 42.7% female).

Large families are dominant, with 42.0% having seven or more members and 38.1% having between four to six members. A mere 19.9% live in small families (1–3 members), which indicates high residential density and housing and infrastructure pressure. Employment status indicates self-employment (27.1%) and part-time employment (24.2%) as the most common, and full-time employment is low (15.3%). A large 19.7% are unemployed, and very few are retired (0.5%), which indicates economic insecurity and informality.

The level of income is low, ranging from 2,000–15,000 ETB for the majority, and only 12.2% with incomes above 15,000 ETB. This indicates affordability, especially towards shelter and basic services. Nearly two-thirds (66.9%) have been in Lideta for less than five years, which shows high mobility and may affect the stability and engagement of the community.

Briefly, Lideta Sub-City is characterized by extended families, economic vulnerability, and migrant communities. All these impose a huge strain on housing, services, and infrastructure and require special, inclusive urban planning intervention

4.2. Housing Typology & Challenges

Table 3: Distribution of Housing Conditions, Building Age, and Perceived Housing Space Sufficiency among Residents in Lideta Sub-City

Variable	Category	Frequency (%)
Housing Condition	Very Poor	86 (20.6%)
	Poor	122 (29.3%)
	Average	105 (25.2%)
	Good	48 (11.5%)
	Excellent	56 (13.4%)
Building Age	< 5 years	143 (34.3%)
	6 - 10 years	129 (30.9%)
	11 - 20 years	91 (21.8%)
	21+ years	54 (12.9%)

Housing Space Sufficient?	Yes	160 (38.4%)
	No	257 (61.6%)

The information on the data of housing conditions shows that a significant proportion of Lideta Sub-City residents experience poor living standards. Nearly 49.9% of the households described their housing condition as "Very Poor" (20.6%) or "Poor" (29.3%), which is widespread in problems of housing quality. Nearly one-fourth of the respondents (24.9%) indicated that they had their housing conditions classified as "Good" or "Excellent," indicating a wide gap in high-quality housing standards.

The majority of the houses (65.2%) are relatively new (10 years or less old). This may suggest ongoing development in the sub-city. However, nearly one-third (34.7%) of buildings are over 10 years old. Of these, 12.9% are over 21 years old. This suggests there might be an aging infrastructure that should be repaired or updated.

In regard to housing space sufficiency, 6 in 10 respondents (61.6%) deemed their housing space to be inadequate. This points to a concern affecting the quality of living for residents. Only 38.4% of respondents considered their houses. Over half of the population (51.3%) live in rented houses. Only 27.1% are homeowners, while a significant percentage (21.6%) are informal settlers. This is a trend of oversubscription to rental housing, which is inherently unstable, and the prevalence of a significant proportion living in slums with minimal basic services. Amongst home-owners, over half (54.9%) had inherited their homes, fewer purchasing homes new (21.2%) or second-hand (23.9%), suggesting home-ownership limitation through traditional markets. Additionally, rent affordability is the main issue, with nearly 40% of home-renters indicating their home to be unaffordable and thus costing a significant portion of the population money. These findings confirm extensive housing insecurity, with numerous residents in insecure housing, economic hardship, and limited channels to secure housing.

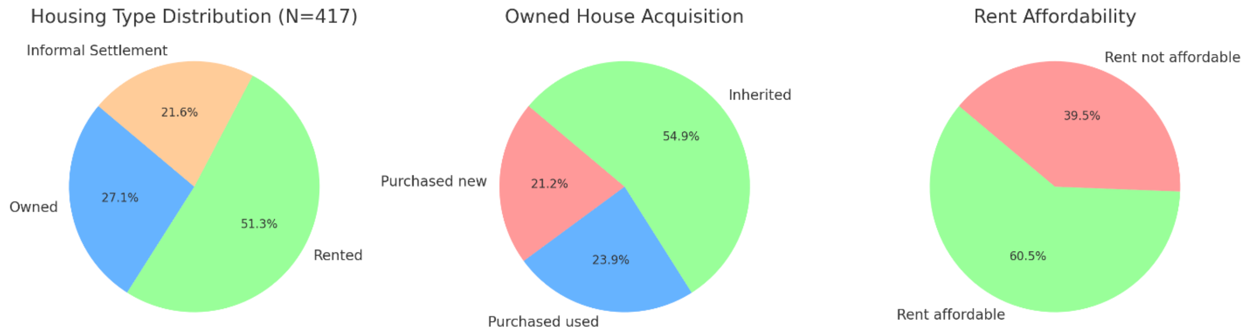

Figure 3: Housing Ownership Status, Acquisition Methods, and Rental Affordability among Residents in Lideta Sub-City

The Lideta housing case sets a desolate context of sub-standard living and insecurity. Over half of the residents (51.3%) live in rented houses. Only 27.1% are homeowners, while a significant percentage (21.6%) are informal settlers. This is a trend of oversubscription to rental housing, which is inherently unstable, and the prevalence of a significant proportion living in slums with minimal basic services. Amongst home-owners, over half (54.9%) had inherited their homes, fewer purchasing homes new (21.2%) or second-hand (23.9%), suggesting home-ownership limitation through traditional markets. Additionally, rent affordability is the main issue, with nearly 40% of home-renters indicating their home to be unaffordable and thus costing a significant portion of the population money. These findings confirm extensive housing insecurity, with numerous residents in insecure housing, economic hardship, and limited channels to secure housing. The findings emphasize the importance of continued research into housing policy and support structures to further address these needs.

Lideta Sub-City is one of the ten sub-cities of Addis Ababa, Ethiopia, characterized by high urban settlements, old infrastructures, and high-density public housing. It occupies a total area of 9.18 km² with a population of 201,613 (2013 GC), ranking among the most densely populated urban areas of the capital, with a population density of 21,952.42 individuals/km².

One of the primary spatial characteristics of Lideta is the prevalence of Kebele houses, accounting for 29,741 houses and occupying 7.89 million m². These public houses, which were built decades ago, are mostly in disrepair, congested, and lacking modern amenities such as in-house sanitation and appropriate access to water.

There are 16,762 private houses, occupying 800,036.59 m², and, overall, better kept. Condominium apartments, despite being advertised throughout recent decades as ideal for inner-city redevelopment, total a mere 1,722.

Public uses like government buildings, city offices, and public buildings total over 7,000 structures, representing mixed-use development with low residential usage.

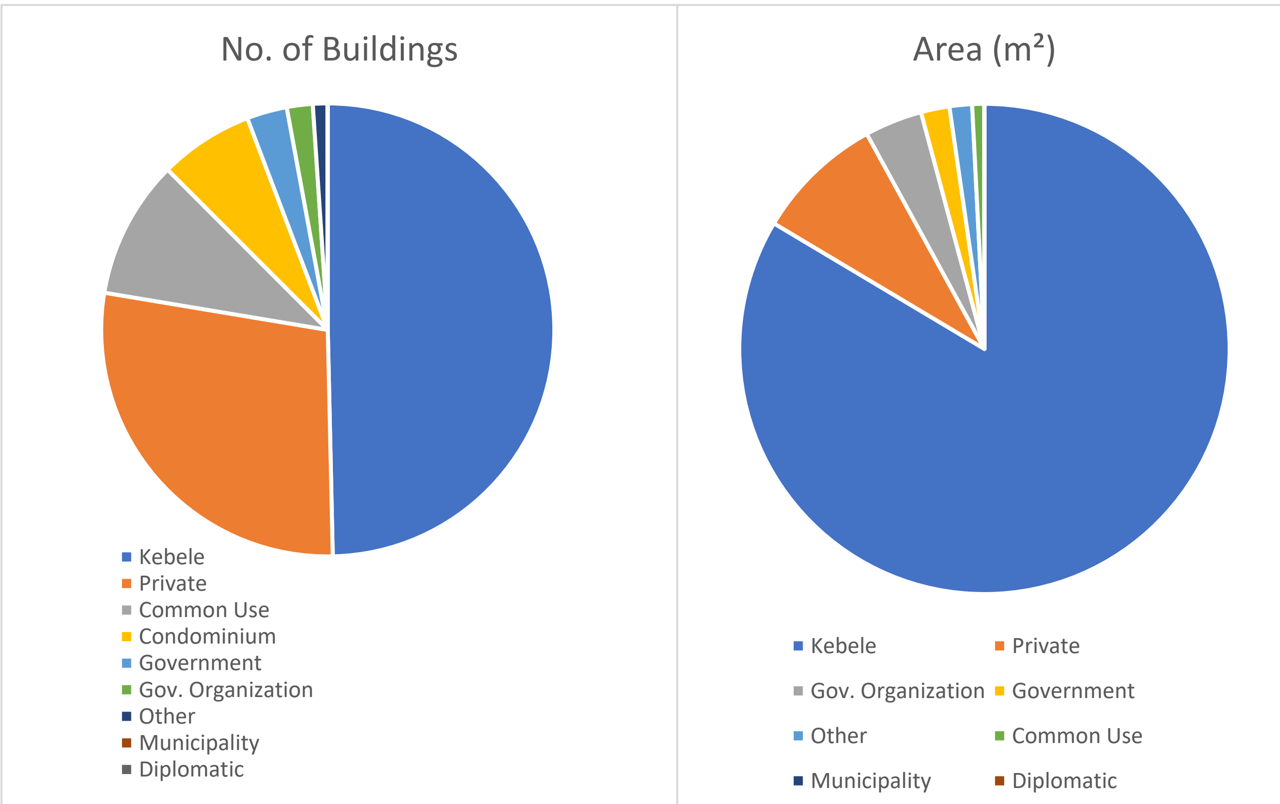

Figure 4: Lideta Subcity Land Use Distribution Pattern 2024

The two pie charts provide a clear visual representation of the spatial distribution of buildings within Lideta Sub-City by number and land area, revealing significant imbalances in urban land use. The "No. of Buildings" chart highlights that Kebele housing overwhelmingly dominates the urban landscape, accounting for over half of the total structures with nearly 29,741 units, reflecting the heavy reliance on public housing. Private residences constitute the second largest category, making up about 28–30% of the building stock with 16,762 units, while institutional and mixed-use buildings—including government, organizational, municipal, and diplomatic facilities—represent less than 20%, underscoring their limited presence in the area. The land area allocation chart accentuates this spatial disparity even further: Kebele housing, despite already being the majority in number, occupies an outsized share of over 75% of the total built-up land, indicating that public housing in Lideta is not only aging and overcrowded but also highly space-consuming, leaving little room for new development or redevelopment. In contrast, private residences, although numerous, occupy only about 8% of the land area (approximately 800,037 m²), suggesting these homes are typically constructed on smaller plots. Government offices, public facilities, and other non-residential uses cover around 15–17% of the area, a modest share that implies potential for more intensive land use to better balance the spatial distribution within the sub-city.

This extensive public housing is predominantly sited in the Mixed Residence (R) land use zone, itself taking up the largest area in the sub-city, at 876.9 hectares or 58.42% of the total area. This signifies that most residential buildings—Kebele and private houses, condominiums—are clustered in mixed-use residential areas, reflecting a high level of population density and socio-economically mixed urban environment. Private houses number 16,762 and cover approximately 800,036.59 square meters, taking up a comparatively smaller amount of land and also keeping themselves comparatively in good conditions compared to Kebele units.

Administrative services and social services collectively occupy around 12.87% of land with government offices, hospitals, and schools, but these services are normally centralized, thus resulting in uneven access, particularly in outlying residential neighborhoods. Environmental protection zones like reserved green areas and mixed environmental protection cover around 12% of the area, yet even that is insufficient to overcome the habitability and ecological issues in such a high-density situation.

Commercial land use, municipal services, transport facilities, and urban agriculture collectively occupy small areas, so little space is reserved for economic development, administration, and sustainable urban food systems. The dominance of residential land use, accompanied by inadequate road infrastructure, limited social and commercial services, and sparse green spaces, helps to uncover the primary spatial challenges of Lideta.

Overcrowding, ageing infrastructure, and spatial inequality are thus aggravated by inadequate provision of land for public amenities and mobility. This staggering disparity between the number of buildings and the land they occupy reveals fundamental spatial inefficiencies in Lideta's city form. Kebele housing occupies disproportionate urban space at the cost of failing to offer acceptable living conditions. Dominance by aging public housing means population concentration in sub-standard conditions. Land fragmentation plus restricted parcel size reduces redevelopment potential.

The sub-city has seen 22 Local Development Plans. Of these, 12 were Upgrading Plans (for slum upgrading), and 10 were renewal plans (for comprehensive redevelopment). These LDPs are planned interventions in response to slum and aging housing, but only for a small portion of the 75 neighborhoods, indicating spatially constrained reach. Renewal plans often lead to displacement with no resettlement guarantee, further increasing urban inequality.

In the interviews, the housing reality and prevailing challenges were vividly portrayed. While the government has initiated various schemes of housing, low-cost prefabricated dwellings, condominium schemes, and public rental accommodations managed by kebeles, planners across the board described these as well-meaning but limited in scale and access. One of the basic issues is that most of the residents, especially those in the low-income segments, perceive these housing options as out of their reach due to financial constraints and bureaucratic hassle. In addition, the planners identified high-profile but often overlooked cultural and emotional dimensions of housing. A planner summed that up nicely as "a house is not just walls — it's a history, a community, a life," underscoring the fact that any home intervention has to take into account residents' emotional connections to place, social networks, and traditions.

Informal settlements are often propelled by necessity rather than lawlessness. Hence, participants urged a more empathetic and realistic approach to viewing informal settlements. These settlements are most often beset by poor access to basic infrastructure such as water, sanitation, electricity, and road links, which contributes to the residents' daily hardships and exposes them further.

This socio-cultural alienation tends to result in resistance to redevelopment plans or schemes for resettlement, where people risk losing more than just their physical homes. Poor decent participation of residents by the planners in the development and implementation of housing policy contributed to mistrust as well as low community buy-in. The combined impact is a housing environment that lacks affordability issues, insecurity, and dissatisfaction, warranting more inclusive, culturally sensitive, and economically affordable housing policies.

4.3. Infrastructural Reality & Challenges

Table 4: Service Access and Perception of Security among Lideta Residents

Variable	Category	Frequency (%)
Access to Basic Services	All services	135(32.4%)
	Some services	282 (67.6%)
Satisfied with Safety & Security	Yes	155 (37.2%)
	No	161 (38.6%)
	Not sure	101 (24.2%)
Separate Entrance?	Yes	196 (46.9%)
	No	221 (53.0%)

A pleasing 32.4% of the respondents reported the availability of all the fundamental services, including water, electricity, waste disposal, and sanitation. However, the higher percentage (67.6%) reported availability of some of the services, evidencing ongoing infrastructure delivery gaps. Although a total lack of access was ruled out (redistributed), the reality that two-thirds of residents reported experiencing partial access characterizes persistent inequities in service quality, dependability, and accessibility, common to older urban areas with informal settlements and outdated infrastructure. Safety perceptions of residents were divided nearly evenly, with 37.2% reporting satisfaction and 38.6% discontent. The 24.2% didn't know, and it might imply shaky safety levels or low faith in public security institutions. These results point towards inadequate, consistent, or visible security presence and may be a sign of inadequate enforcement, minor offence, or inadequate lighting in parts of the sub-city. The results also show that almost half (46.9%) of the respondents live in houses with an independent entrance, while the rest (53.0%) do not. This may be a sign of the prevalence of collective housing systems, i.e., joint compounds or subsidized "kebele" homes. Absence of exclusive entrance typically means overcrowding, limited privacy, and potential sanitation problems, especially in multi-household residences—a feature common in most of Lideta.

Table 5: Residents' Assessment of Roads, Water, Waste, Sanitation, and Electricity Conditions in Lideta Sub-city

Indicator	Very Poor (%)	Poor (%)	Average (%)	Good (%)	Excellent (%)
Roads & Transportation Condition	29.6	27.9	13.5	16.3	12.7
Water Supply Condition	16.1	37.5	23.8	10.8	11.8

Waste Management Condition	21.4	35.1	16.1	11.8	15.6
Sanitation Facilities Condition	12.0	20.4	31.4	22.5	13.7
Electricity Supply Condition	25.9	32.6	11.8	14.6	15.1

Overall, the majority of residents characterized the condition of basic infrastructure, such as roads, water, waste, sanitation, and electricity, as poor. Transport and roads had the highest percentage of "Very Poor" (29.6%), and collectively, 57.5% ranked them as "Poor" or "Very Poor." It points towards the serious problems with road maintenance, traffic, or connectivity that may impede movement and access to amenities.

The sub-city has only 10.87% (163.08 hectares) area covered by roads. This is far below the recommended 20-25% threshold for effective urban mobility (Kraus, 2018). This limited road coverage results in the overcrowding of residential areas and restricts access and mobility, particularly in already overpopulated residential areas. Inadequate road coverage isolates inner neighborhoods and suppresses economic development, particularly for small businesses and informal traders who rely on mobility.

Water supply was the most underperforming among all categories, where 53.6% of the respondents gave it a low rating. Low satisfaction could be due to problems of inconsistency of supply, breaks in the pipe, or non-coverage, problems with direct impact on public health and living conditions. Even the waste management service was given a low rating by 56.5% of the respondents. This may be an indicator of inefficiencies of waste collection systems, improper means of disposal, or inadequacy of public education and facilities to facilitate effective waste management.

Sanitation facilities were rated as poor or very poor by 32.4% of the residents. In the meantime, 36.2% rated them as "Good" or "Excellent". This would suggest that even with potential improvement in certain aspects, there is an issue with sanitation among residents. Access to participants scoring it as poor. This can suggest frequent power outages, intermittent supply of voltage, or an absence of enough constant electricity supply in cities or slums.

Table 6: Infrastructure Access and challenges of residents in Lideta sub city

Category	**Indicator**	**Frequency (%)**
Frequent Interruptions	Electricity (Yes)	208 (49.9)
	Water Supply (Yes)	280 (67.1)
	Waste Collection (Yes)	212 (50.8)
Access to Services	Distance to Water (<10 min)	180 (43.2)
	Distance to Water (10–30 min)	118 (28.3)
	Distance to Water (30 min – 1 hr)	61 (14.6)
	Distance to Water (>1 hr)	58 (13.9)
Infrastructure Challenge	Public Transport (Yes)	219 (52.5)
	Transport Challenge (Yes)	302 (72.4)
	Road Paved (Yes)	239 (57.3)
	Frequent Flooding	54 (12.9)
	Occasional Flooding	175(42)

This table shows that service interruption on a frequent basis is a top problem. Nearly half of the respondents (49.9%) had reported normal electricity outages, and more than two-thirds (67.1%) reported normal interruption in the water supply. More than that, 50.8% reported irregular waste collection services. These figures show that coverage for the provision of basic utilities is not only inadequate but also irregular in practice, affecting routines, sanitation, health, and productivity in the area.

In terms of access to water, the data show that only 43.2% of respondents can access water within a 10-minute walk from their homes. An additional 28.3% must travel 10 to 30 minutes, while 14.6% and 13.9% walk 30 minutes to 1 hour and over an hour, respectively. This indicates that nearly 30% of the population faces significant barriers to accessing water, which may affect water usage patterns, hygiene behaviors, and health outcomes, especially for women, children, and the elderly who often bear the burden of water collection.

On infrastructure-related problems, even the situation here appears to be just as grim. Over half of the interviewees (52.5%) reported access to public transport as an issue, and an astounding 72.4% reported transport issues in general. While 57.3% of the roads were reported as paved, the remaining section must consist of unpaved, conditionally maintained, or inaccessible roads, which may be one of the causes of the transport issues citizens' face. Flooding was also a common problem, with 12.9% of respondents experiencing frequent flooding and a further 42% experiencing occasional flooding. This shows there are underlying issues with drainage, urban planning, and road infrastructure that get exacerbated when it rains.

In 2017, EC, Lideta had 6 Hospitals, 28 Clinics, and 3 Health Posts. This is below the WHO recommendations, especially in terms of the population size. Moreover, the skewed spatial distribution is likely to favor central neighborhoods at the expense of peripheral and informal settlements.

Lideta hosts 119 schools: 59 Kindergartens (39 private, 18 government, 2 others), 47 Primary Schools (25 private, 21 government), 11 Secondary Schools, 2 Preparatory Schools. Primary and kindergarten education is relatively accessible, whereas secondary and preparatory studies are spatially constrained. Pupils need to traverse extensive distances as upper-level schools are concentrated in some areas. This is below international and local standards. Ethiopian urban planning guidance recommends that secondary schools serve students within a 3–5 km catchment radius, aligned with national and global norms (Abraha, 2019; Ministry of Urban Development, 2017). As this undermines accessibility, there is a need to establish more schools in the sub-city.

The interview revealed that the physical infrastructure of Lideta is scattered. Development and maintenance are done in a reactive fashion. Road networks, water supply systems, electric supply networks, and sanitation services are some of the sectors of infrastructure that are frequently planned and implemented in isolation. This is contributing to inefficiency and gaps in service delivery. For instance, water and sewerage systems are plagued by technical issues and spatial limitations in extending and upgrading. Roads are commonly in bad condition. This makes the collection of trash as well as other urban services, challenging. "Fix-it-when-it-breaks" culture was highlighted to exist by planners. They indicated that infrastructure is fixed only when it breaks down. Urban planning management employed is more proactive than preventive in approach.

Besides weak technical ability, shortages of staff, and limited resources, there are also impediments to the ability to create and sustain infrastructure comparable to urban growth. There was some guarded optimism over attempts to involve the community in infrastructure management. There was emphasis by planners that green infrastructure is not just a technical upgrade issue but an issue of institutional transformation and change of attitude amongst the public, actively involving citizens in the maintenance of services and utilizing resources in a sustainable way.

4.4. Impact on Daily Life and Economic Activities

Table 7: Perceived Impact of Housing and Infrastructure on Daily Life and Economic Activities in Lideta Sub-City

Category	Indicator	Frequency (%)
How Housing/Infrastructure Affects Daily Life	Limited basic services	197 (47.2%)
	Increased commute time	67 (16.1%)
	Poor health/sanitation	42 (10.1%)
	Increased financial burden	50 (12.0%)
	Reduced quality of life	61 (14.6%)
Infrastructure Impact on Economic Activities	Majorly impacts	170 (40.8%)
	Slightly impacts	166 (39.8%)
	Does not impact	81 (19.4%)
Housing Impact on Economic Activities	Majorly impacts	216 (51.8%)
	Slightly impacts	131 (31.4%)
	Does not impact	70 (16.8%)

The table indicates that nearly half of the respondents in the survey (47.2%) cited inadequate access to basic services, such as water, sanitation, electricity, and waste management, as the most significant impact of poor housing and infrastructure. This confirms that deficits in basic urban services remain a fundamental hindrance to decent living.

An additional 16.1% indicated increased commuting time as a daily inconvenience, which likely mirrors the inadequacies in public transport systems and poorly connected road networks. Prolonged commuting times can reduce productivity, constrain employment and service access, and have negative impacts on mental and physical health. A smaller percentage (10.1%) indicated that the housing condition results in poor sanitation. This could ultimately lead to health problems as a direct consequence of their housing environment, which points to the public health implications of poor housing and infrastructure.

Financial stress was also noted, with 12.0% saying they have additional financial stress from finding themselves under these challenges. This is possibly due to having transportation or health-related costs linked with these, or coping mechanisms such as purchasing water or paying for generators. Finally, 14.6% described a general reduction in the quality of life, a catch-all but handy variable that suggests these issues are not necessarily functional.

When exploring the economic impact more specifically, 40.8% of respondents believed that infrastructure challenges "majorly" impact their economic activities, while 39.8% noted a "slight" impact. Only 19.4% reported no impact. These findings show that infrastructure-related constraints, such as unreliable utilities, poor road conditions, and flooding, can disrupt livelihoods, business operations, and job access.

Interestingly, housing conditions appeared to have an even more pronounced effect on economic activities. Over half (51.8%) of respondents stated that housing issues "majorly" impact their economic life. This could include overcrowding, unsafe structures, or high rent relative to income. Another 31.4% felt a slight impact, and only 16.8% indicated no effect.

Table 8: Perceptions of Government Action on Housing and Infrastructure and Willingness to Participate in Improvement Programs in Lideta Sub-City

Category	**Item**	**Frequency (%)**
Government Action	Housing addressed	256 (61.4%)
	Housing not addressed	161 (38.6%)
	Infrastructure addressed	200 (48.0%)
	Infrastructure not addressed	217 (52.0%)
Willing to Participate in Improvement Programs	Yes	301 (72.2%)
	No	116 (27.8%)

The figures indicate that the majority of the respondents (61.4%) find that the government has done something to address housing issues in Lideta Sub-City, while a significant percentage (38.6%) find that there are not enough efforts being made on housing issues. On infrastructure, people are divided more: 48.0% notice government effort to improve the infrastructure, but over half (52.0%) still find that infrastructure issues are not addressed.

Significantly, there is great willingness among residents to participate in housing and infrastructure construction projects, with 72.2% expressing willingness to participate. This shows a populace that not only is aware of existing government programs but also willing to collaborate towards enhancing their living environment. The relatively high ratio of residents who are willing to participate indicates a window of opportunity for policymakers and planners to involve the community in development efforts directly, which can lead to more sustainable and acceptable results.

Table 9: Community Perceptions, Preferences, and Challenges Related to Housing and Infrastructure in Lideta Sub-City

Category	**Item**		**Frequency (%)**
Housing Satisfaction	Very satisfied		3 (0.7%)
	Satisfied		112 (26.9%)
	Neutral		168 (40.3%)
	Dissatisfied		133 (31.9%)
Desired Improvements	Affordable housing		135 (32.4%)
	Better roads		128 (30.7%)
	Better water supply		92 (22.1%)
	Improved sanitation		62 (14.9%)
Key Housing Challenges	Safety		146 (35.0%)
	Poor infrastructure		132 (31.7%)
	Affordability		71 (17.0%)
	Space		68 (16.3%)
Preferred Housing Type	Low-cost		180 (43.2%)
	Luxury		91 (21.8%)
	Middle-income		74 (17.7%)
	Mixed-type		72 (17.3%)
Plan to Relocate (Next 12 Mo.)	Yes 210 (50.4%)	Better housing	74 (35.2%)
		Better infrastructure	74 (35.2%)
		Lower rent	46 (21.9%)
		Other	16 (7.6%)

Only 0.7% of respondents reported that they were very satisfied with their accommodation, and about a quarter (26.9%) were satisfied. A large proportion were neutral (40.3%), and a large proportion were dissatisfied (31.9%), which demonstrates a high level of scope for improvement in housing.

As for what they desired to be better, low-cost houses ranked the highest (32.4%), followed by quality roads (30.7%), quality water supply (22.1%), and sanitation (14.9%). These signify that individuals are not only concerned with the houses themselves but with the facilities around them as well as basic utilities, validating the interdependence of quality housing and city amenities.

The most important housing concerns cited by the respondents are safety concerns (35.0%) and substandard infrastructure (31.7%), which were cited more than affordability (17.0%) or shortage of space (16.3%). This suggests that beyond the cost and space, the security and functional condition of dwellings and neighborhoods are essential concerns that impact the quality of life of the residents.

Upon inquiry into preferred housing, nearly half (43.2%) of them opted for low-income housing, in accordance with their economic status in their situation. The options for luxury and middle-class housing were 21.8% and 17.7% respectively, and 17.3% went for housing of mixed type.

Of special interest, 50.4% of the interviewees intended to relocate within the next year. Among those who wished to relocate, the most frequent reasons were better living conditions and better infrastructure (each 35.2%), followed by lower rent (21.9%). These motivations are directly related to problems and wished-for change and express an actual need for enhanced living standards.

The interview also indicated that poor housing and infrastructure have extensive negative implications for Lideta residents' quality of life. Informal settlements, a common feature in the sub-city, were described as "planning gray zones,". Planners noted that informality is more likely to be driven by necessity rather than lawlessness and urged a more realistic and sympathetic approach to understanding informality.

The participants also stressed the social and psychological impacts of these challenges. These include insecurity and marginalization. Also, the lack of real community participation in planning and decision-making maximizes exclusion, further exacerbating the problem. This reduces confidence in government programs. It is usually manifested through opposition to urban renewal efforts and suspicion of official housing programs. Collectively, the interviewees described a scenario in which shortages of housing and infrastructure directly diminish wellbeing, social cohesion, and residents' ability to thrive.

4.5. Association of housing challenges with Income level

Table 10: Cross-tabulation of income level with sufficient housing space, satisfaction with safety and security, and perceived impacts in Lideta sub city

Variable (Category)	<2000	2000–5000	5001–10000	10000–15000	>15000	Chi-Square (χ^2)	p-value
Sufficient Housing Space						4.429	>0.05
Yes	13	43	49	35	20		
No	30	61	63	72	31		
Satisfied with Safety & Security						22.210	<0.01
Yes	14	29	32	54	26		
No	16	44	48	37	16		
Not sure	13	31	32	16	9		
Infrastructure Impact on Economic Activities						41.867	<0.01
Majorly impacts	8	44	66	45	7		
Slightly impacts	23	36	32	44	31		
Does not impact	12	24	14	18	13		
Housing Impact on Economic Activities						38.182	<0.01
Majorly impacts	12	51	75	64	14		
Slightly impacts	22	32	27	25	25		
Does not impact	9	21	10	18	12		

Following cross tabulation of Income groups and adequacy of housing space, satisfaction, and impact on economic activity (housing and infrastructural), it was revealed that income status of residents was strongly associated with these variables. The low-income groups (<5,000 ETB) were strongly likely to be unsafe or uncertain; high-income groups (>10,000 ETB) were more satisfied. This revealed that perceived safety tends to rise with income, perhaps due to better housing conditions, neighborhood quality, or the presence of private security. This reflects spatial inequality in daily life. Similarly, there was a strong association (Chi-square = 41.867, $p < 0.001$) between income level and perceived influence of infrastructure. Middle-income groups (5,001–10,000 ETB) bore the highest impact; higher-income groups were less affected. This is evidence that Infrastructure constraints hinder economic activity more in middle and low-income groups, possibly due to the use of public infrastructure and informal trade channels. Wealthier households may compensate through private alternatives.

There was a significant association between economic income level and the manner in which housing conditions affect economic life (Chi-square = 38.182, $p < 0.001$). Low-income subjects gave more frequent responses that housing has a significant impact on economic productivity. There were fewer economic disruptions of housing issues in high-income groups. This indicates that Poor housing conditions—overcrowding, lack of stability, or insufficiency of space—excessively limit the economic potential of low-income residents. Therefore, Poor living conditions such as overcrowding, instability, or insufficient space disproportionately limit the economic potential of lower-income residents.

4.6. Discussion

4.6.1. Assessment of Housing Challenges

The Lideta Sub-City has a critical housing problem. It has poor, old, and congested residential settings that require prompt and comprehensive intervention. Physical segregation of land plots further inhibits any genuine redevelopment, trapping residents in a vicious circle of disrepair and abandonment. Our findings closely align with prior literature. For instance, the high percentage of state houses with communal toilet facilities has been reported by Yenoineshet (2007). The author has demonstrated the issue of overcrowding/congestion in Lideta (Yenoineshet, 2007). The findings of Bihon (2004) and Kassahun (2010) additionally indicate prevailing dilapidation and proliferation of slum development in Addis Ababa (Bihon, 2004; Kassahun, 2010). This situation has been noted to be pervasive in Lideta in our findings as well. The problems that were being faced in the 20/80 Condominium Housing Project, according to Nigussie (2022), also reflect the broader affordability and accessibility issues that affect persons in Lideta (Nigussie, 2022). Moreover, the issues of sanitation and crowding have been noted to affect cities like Addis Abeba, whose infrastructure growth has not yet reached the optimum level of urban growth (Mengesha, 2023; Tadesse, 2024).

4.6.2. Infrastructural Challenges Assessment

The residents of Lideta Sub-City face significant infrastructural challenges. There is inaccessibility to water supply, a lack of access to good sanitation, and limited access to electricity. These findings reflect the broader patterns seen in Addis Ababa and other rapidly expanding cities in sub-Saharan Africa. The city's water supply infrastructure can only serve 50–60% of demand, with continuous disruption and uneven supply, particularly in the periphery and poorer wards (Arup, 2021; REACH, 2024). Prior publication in Lideta's also confirms sanitation breakdown, where communal latrines typically do not deliver clean conditions (Berhanu, 2022).

Whereas electricity access is on paper everywhere, practical availability could be (Energy, 2023) poor due to old infrastructure and growing urban load. Road network development is also desperately lagging and spatially disparate, at a minuscule fraction of what is recommended by city planners, in line with recent transport studies results (Kumar, 2021). Drainage and flood risk are compounded by uncontrolled growth and inefficient municipal control, increasing risk during rainy seasons (Center, 2022). Waste management is at risk due to inefficient infrastructure, enforcement, and logistics (Arup, 2021).

Most importantly, we have to note that these problems are interlinked. For instance, a faulty road network deteriorates waste collection; defective drainage worsens flooding and sanitation; and poor planning slows the urban extension of electricity and water supply. As the interviews confirm, government responses are often piecemeal and reactive.

4.6.3. Impact of Housing & Infrastructure Challenges on the quality of Life

Housing and infrastructure challenges are key concerns in Lideta Sub-City, having extensive implications for mobility, the economy, and overall quality of life. They are factors in poor living conditions since the residents have limited access to basic services and amenities.

Poor transport accessibility is a key mobility limitation. Poorly maintained roads and limited public transport force citizens to walk or rely on informal transport, which increases travel time and transportation costs. Many citizens live far from areas of employment, which exacerbates these problems. Safety issues, such as a shortage of pedestrian infrastructure and inadequate lighting, also discourage walking and cycling.

Economically, these mobility problems reduce job prospects, particularly for poor residents without private transport access. It costs more to transport, and it takes a high percentage of their income, economizing on them and reducing investment in education and healthcare. Small enterprises are also affected, as poor roads deter new businesses and discourage customer visits.

These factors adversely affect Lideta's quality of life. Access to services that are vital, like healthcare and education, is affected, and there is a deterioration of health and education levels. Social isolation increases with longer travel times, which undermines social relationships and systems of support. In addition, the daily struggle with mobility and economic factors compounds into psychological distress and unhappiness with life.

Compared to existing literature, our findings in Lideta Sub-City validate but extend the long-standing problems of urban development and redevelopment in Addis Ababa. As with much prior research, such as Charitonidou (2021; 2022), which has investigated spatial and social disturbance caused by urban redevelopment and condominium development (Charitonidou, 2021, 2022). Our findings also reveal that in Lideta, the problem is exacerbated by infrastructural degradation, spatial limitations, and resident dissatisfaction. Girmay (2024) highlighted the absence of true community engagement in redevelopment, a refrain that rang loudly in our interviews (Girmay, n.d.). Similarly, Baraki (2018) documented how relocation policies frequently result in reduced livelihoods (Baraki, 2018). Our research indicates that more than half of residents perceive that housing conditions affect productivity and income directly, further establishing the socioeconomic impacts of poor infrastructure and coercive urban changes.

This study has several urgent implications for urban policy, infrastructure, development, and quality of life in Lideta Sub-City. Our findings spotlight that urban policy must shift toward proactive frameworks. Rehabilitation of aging housing and formalizing informal settlements through culturally sensitive, community-inclusive approaches, ensuring enforcement of land-use regulations to promote safe and orderly growth, should be given utmost priority. Infrastructure investments are also critical. The improvements of roads, water, sanitation, and electricity services will not only enhance mobility but also reduce flooding risks and expand access to essential services. This is most important, especially in underserved areas.

In order to create a sustainable urban development, an integrated, multi-sector planning approach that aligns housing, transport, utilities, and social services is needed. It should also maximize resource efficiency and support livelihoods to break cycles of poverty. Collectively, these measures will significantly improve residents' quality of life. It will boost economic opportunities, health outcomes, social cohesion, and overall urban resilience.

4.7. Strengths and Limitations of the study

Whereas the earlier studies primarily focused on policy-level and relocation impacts, our mixed-method design—combining surveys, secondary data, and interviews—provides more nuanced insight into how everyday life, community trust, and economic security are stretched under current housing and infrastructure realities. Hence, the combination of primary survey, secondary data, and in-person interview has given our study the advantage to triangulate the problem at hand and give a 360-degree view of the persisting challenges. Hence, in this regard, our study enriches existing literature on urban housing and infrastructural challenges.

However, this study is not without its limitations. There was a significant lack of data, especially on documents at the sub-city level. The GIS system is not well integrated and not readily used. The population and land data currently available dates back inconsistently from 1 to 10 years, limiting our ability to see the complete picture. Yet, this is the most recent available data they use for the decision-making. Moreover, we can confidently assume the population has grown exponentially over the years, driven by many factors, indicating that our paper has captured the baseline challenge that could have worsened now. Here, it is important to note the methodological limitations associated with cross-sectional design and in-person interviews, which could affect the data identified.

Chapter 5: Conclusion & Recommendations

5.1. Conclusion

This study established that the major problems of housing in Lideta Sub-City are dilapidated, overpopulated, and poor-quality houses that have a significant impact on the living conditions of residents. The paucity of physical infrastructure, including poor roads, inadequate public transport, and poor utilities, further exacerbates the housing challenges. All these cumulative factors impose huge mobility limitations on residents, which limit their access to work, education, and social services.

The housing and infrastructure problems strongly influence the well-being in Lideta. Poor access to basic services, high costs of transport, and poor walking conditions reduce economic opportunity and create social isolation and psychological distress among the residents. The negative effects highlight the utmost importance of enhancing both housing and infrastructure deficits to increase well-being.

Similarly, the research developed strategic solutions that targeted rehabilitation of existing housing, improvement of slum settlements, expansion of infrastructure, and encouraged greater involvement of people in planning. The strategies encourage collective action by local actors such as AACA, AAWSA, and the Road Authority to enable sustainable development, which is culturally sensitive, economically feasible, and reflective of the voices of the residents.

Overall, solving both the connected housing and infrastructure challenges in Lideta with these targeted approaches will improve substantially mobility, economic opportunity, and quality of life for its residents.

5.2. Recommendations

- **Rehabilitate Existing Housing & Reduce Overcrowding**

Over 84% of the homes are over 20 years old, and 67% of the families are living in overcrowded conditions. Woreda offices and AACA must prioritize in situ upgrading and allow the expansion of low-cost houses through microfinance or subsidies. This improves safety, keeps communities together, and avoids costly relocations.

- **Upgrade Informal Settlements & Basic Services**

21.6% live in informal settlements, typically without water, sanitation, or electricity. Instead of forced clearance, AAWSA, Woreda administrations, and NGOs ought to be responsible for participatory upgrading—provision of utilities, giving tenure security, and improving access. Specialized budgets have to attend to these high-priority areas.

- **Improve Road, Drainage & Waste Infrastructure**

With 10.87% road coverage and frequent flooding, Lideta needs urgent investment in roads, drainage, and solid waste facilities. The Road Authority and Woreda engineers must embark on expansion and maintenance using city infrastructure financing in flood-prone and inaccessible zones.

- **Ensure Community Involvement & Cultural Sensitivity**

Fear of displacement and low community trust decrease project acceptance. Woreda officials must develop feedback forums and involve residents in planning. AACA must implement culturally responsive redevelopment standards and include livelihood protection in all urban interventions.

- **Strengthen Urban Governance & Data Systems**

Planning is weakly enforced and lacks good data. AACA and Woreda bureaus must upgrade enforcement of building codes and establish a centralized GIS-based system to inform resource allocation. Training, digital tools, and data collection must be funded to enable smart urban management.

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Annex I : Publishable Manuscript

Title: Housing Challenges in Addis Ababa City: In the case of Lideta

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Abstract

Rapid urbanization in Ethiopia and in particular, the city of Addis Ababa, has been paralleled by significant housing challenges. This study tries to assess the current conditions & challenges of housing in Lideta Sub-city and how it affects residents. It employed a cross-sectional design with a mixed-method approach that utilized the quantitative surveys, qualitative interviews of urban planners, and secondary data from municipal records to triangulate the problem. The results reveal that a substantial portion of the population lives in overcrowded and dilapidated housing, with 60% of residents reporting insufficient living space, with evident overcrowding in aged houses. Poor inter-agency coordination, inadequate community engagement, and the cultural significance of housing further complicate efforts to alleviate these challenges. The study concludes by recommending that future urban planning endeavors to prioritize the rehabilitation of existing housing stock, regularize and upgrade the slums, and boost the participation of the community in urban planning processes.

Key Words: Urban Planning, Housing Challenges, Over-crowding, Slums

1. Introduction

Ethiopian urbanization has been progressing at a highly accelerated rate, mainly in the political, economic, and cultural center of Ethiopia, the nation's capital Addis Ababa. The United Nations Department of Economic and Social Affairs has estimated sustained expansion in the city population by means of rural-urban migration and natural increase (UN-DESA, 2018). This expansion resulted in drastic adjustments in housing and urban facilities and posed a multifaceted challenge to policymakers and urban planners (The World Bank, 2019a).

Lideta Sub-City is a densely populated and historically rich section of Addis Ababa. It presents a unique blend of opportunities and challenges. It is located near commercial and administrative centers virtually makes it vulnerable to land shortage pressures, aging infrastructure, and informal settlement encroachment (Acioly, 2022).

The government of Ethiopia, along with its development partners such as the African Development Bank, has set its focus on infrastructure investment and housing construction through programs such as the Integrated Housing Development Program (Ministry of Urban Development and Construction, 2021)(African Development Bank Group, 2021; UN-Habitat, 2018).

However, the extent and nature of the problems in Lideta are becoming increasingly apparent. Neighborhoods are becoming full. Old housing, dilapidated road infrastructure, unpredictable water supply, poor sanitation, and bad waste disposal prevail (Assefa, 2018). These shortfalls propel environmental degradation, restrict mobility and service access, and increase public health risks (Hdug, 2023; Kitaw, 2020). Informal settlements have expanded as low-cost housing options dwindle, and urban infrastructure has failed to match the expanding city population. The synergistic impact of these challenges erodes not only personal health but also overall urban resilience and equity (Acioly, 2022; Ejigu & Abraha, 2018; Kitaw, 2020).

Several studies have identified different dimensions of housing problems in Addis Ababa. Slum growth, accessibility of basic facilities, road conditions, and urban management in Lideta sub-city has been analyzed priorly (Assefa, 2018; Ejigu, 2018; Ejigu & Abraha, 2018; Getachew, 2016; Hdug, 2023). These works give insight into the policy and structural drivers of the urban expansion. They identify the perpetuation of slum life, inadequate access to the delivery of basic services, and the increasing issue of accelerated urbanization. In addition, they emphasize integrated planning models, democratic decision-making processes, and increased service delivery as fundamental solutions to addressing the multi-dimensional issues of cities. Nevertheless, most existing literature is at the metropolitan or macro level and is prone to using secondary data or concentrating on the newer urban expansion zones.

Nonetheless, most of the available literature is at macro level and often uses secondary data or concentrates on the newer urban growth areas. Thus, a huge gap in localized studies for older inner-city neighborhoods like Lideta still exists, where neglect and abandonment continue to dominate. Also, the perspective of residents and front-line urban planners is frequently marginalized, creating an important gap in understanding how housing and infrastructure issues actually get felt and managed on the ground. In order to address this research gap, the study aims to analyze and assess the current housing and condition of Lideta Sub-City with a mixed-methods study design. Utilizing a triangulation of data from interviews of urban planning practitioners, community questionnaires, and readily available municipal records, the study will try to produce an aggregate, evidence-based picture of the issue

2. Literature Review

2.1. Urbanization and Housing in Ethiopia

Ethiopia is experiencing rapid urbanization, with Addis Ababa taking the lead. In the last twenty years, the urban population of the nation has risen significantly from about 14 million in 2010 to more than 23 million as of 2023. This trend is anticipated to sustain itself, with the urban population set to surpass 42 million in 2037 largely because of rural-to-urban migration and natural increase (UN-Habitat, 2021). Addis Ababa, the center of politics, administration, and economy of Ethiopia, is the focal point of this revolution. However, this dynamite growth of the city, its infrastructure development and housing growth are not proportionate in scale. Urban sprawl, slums, and mounting housing pressures have created a city that has no capacity to absorb its population into it (Linares, 2016; G. Teshome, 2009).

In particular, housing in Addis Ababa has not kept up with demand. A significant majority of the city's inhabitants live in informal house structures, often without access to clean water, sanitation, and resilient construction. The World Bank reports that nearly 70% of Addis Ababa residents live in substandard-quality housing. Lideta Sub-City, one of the oldest and densely populated parts of the capital, is a case in point. Its residential zones are characterized by dilapidated buildings, congestion, and the relentless expansion of informal settlements. These settlements have the tendency to arise due to inaccessible formal housing markets and are typically built without a plan or official approval, which further aggravates concerns related to tenure insecurity and poor service provision (The World Bank, 2019b).

Efforts to mitigate the housing crisis are were not adequate. Hence they have faced significant criticism for its limited affordability, inefficiencies in bureaucracy, and inability to link to infrastructure and public services (Sebawit G. Bishu, 2017; UN-Habitat, 2021).

2.2.Informal Settlements and Urban Livability

The expansion of informal settlements can be expected during in urbanization. In Ethiopia, particularly in Addis Ababa this has been the case. Informal settlements, being unplanned and constructed without regulations, comprise over half of the city's houses. Informal settlements usually emerge owing to the non-availability of affordable housing and are typically located in environmentally susceptible or peripheral areas (Abagissa, 2019).

Lideta Sub city has a significant proportion of such settlements, with dwelling units tightly packed and constructed of non-degradable materials. In these settlements, there are no minimum infrastructure facilities or services, including public roads, drainage, and water and sanitation services. Later under slum upgrade project in 2014 26 Hectare area, 1134 Public housings and 339 private housings were destroyed within Lideta Sub city. A majority of those units were Kebele houses (Gezahegn Berhe et al., 2017).

2.3.Urban Governance and Policy Response

Government and institutional factors increase the level of difficulty in urban Ethiopia. Urban planning and management are very centralized in Ethiopia, and sub-city and municipal governments have limited decision-making authority. Addis Ababa city administration, despite its responsibility for delivering services, often does not have the capacity, resources, and information that facilitate effective and responsive urban policies (The World Bank, 2021).

Efforts have been made by the government to upscale urban infrastructure and housing, including slum upgrading, road expansion, and promoting public-private partnerships. Most of these initiatives, however, have been criticized as top-down, piecemeal, and poorly planned. In Lideta, for instance, schemes of renovating infrastructure have occasionally been implemented, involving the construction of asphalt roads and condominium apartments. But these projects often lack community engagement and long-term maintenance schemes, leading to unsustainable results and, in some instances, the removal of low-income residents without proper resettlement plans(Rode et al., 2011).

Secondly, the unavailability of reliable data at the sub-city level hinders evidence-based planning. Urban development requires localized evaluation and monitoring systems to guide it. Policymakers cannot adequately identify priorities, deliver resources efficiently, or determine the performance of interventions without comprehensive and disaggregated data. The current governance framework therefore cannot address the interdependence of housing and infrastructure shortages through an inclusive and integrated response.

3. Methods

3.1.Study Area

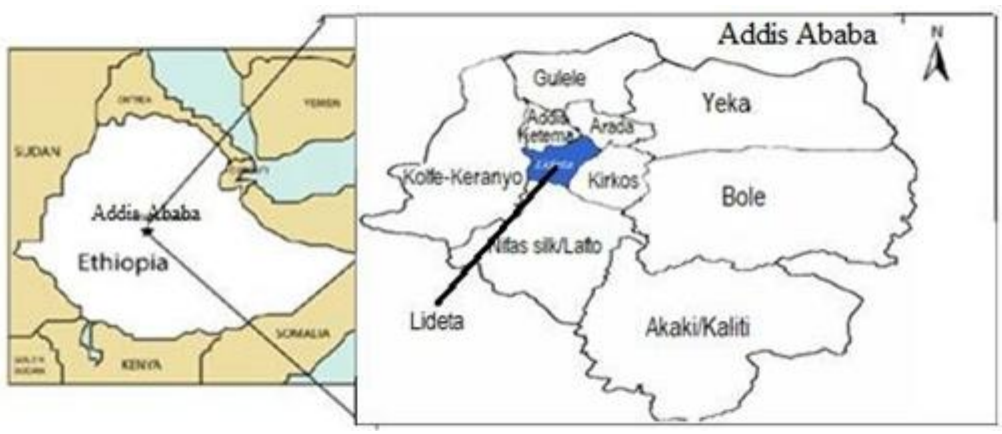

Figure 5: Map of Lideta sub city

The study takes place in Lideta Sub-City, located in the middle of Addis Ababa, Ethiopia. One of the most urbanized and oldest sub-cities, Lideta comprises ten administrative woredas. The sub-city is characterized by high-density housing, old infrastructure, and a high level of urbanization that has outgrown basic services development. The majority of areas in Lideta are informal settlements, where residents experience poor housing conditions, poor piped water accessibility, poor sanitation facilities, congested roads, and unsatisfactory electricity. Its location in close proximity to central government and commercial institutions positions it as an integral component of the city's infrastructure, yet these same demands have also given rise to infrastructural decay and overpopulation. Thus, Lideta offers a significant case to examine the relationship between housing quality, provision of infrastructure, and urban governance.

3.2.Study Period

The study was completed from December 2024 up to May 2025. The timeframe includes preparatory work, instrument development and pilot-testing, data gathering, analysis, and submission of final reports. This six-month timeframe provides adequate time to engage with members of the community, local government officials, and urban planners in a bid to get comprehensive and genuine data.

3.3.Study Approach

The study employs a mixed-method approach. Quantitative data were collected through standardized questionnaires to provide statistically representative descriptions of sampled households' residential and infrastructure conditions. These statistics were complemented by qualitative data through key informant interviews of decision-makers and stakeholders directly involved in urban planning and service delivery. Spatial statistics stored in the sub-city's urban planning office were accessed and analyzed to benchmark findings against available development indicators.

3.4.Study Design

The study used a descriptive cross-sectional design. The design allows one to capture a snapshot of the situation prevailing in the housing and infrastructure conditions of the selected locations of Lideta Sub-City.

3.5.General Population

The sample population for the aim of this study is all residents of Lideta Sub-City. According to projections by the Central Statistical Agency of Ethiopia and the Addis Ababa City Administration, the sub-city's population is estimated to be around 220.,000 The population is diverse in socioeconomic status, age structure, and housing ownership, which adds richness and depth to the investigation of housing and infrastructural challenges.

3.6.Sampling Population

From the general public, the study incorporates adult residents aged 18 and above who have been residing in their current location within Lideta Sub-City for more than one year. These residents are likely to have adequate knowledge of the infrastructure and housing conditions of their area. The sample population excludes people who are temporarily residing in the area, such as short-term renters and migrant laborers, and owners of commercial buildings who reside elsewhere.

3.7.Sample Size Calculation

For representativeness, sample size is calculated using Cochran's formula for estimating proportions in large populations. At a 95% level of confidence (Z = 1.96), an assumed prevalence of 50% for maximum variability (p = 0.5), and a margin of error of 5% (e = 0.05), the minimum sample size is: 385.

Cochran's Formula:

$$n_0 = \frac{Z^2 \cdot p \cdot (1-p)}{e^2}$$

Figure 2: Cochran`s Formula

Where:

- n0 = required sample size
- Z^2 = Z-value (e.g., 1.96 for 95% confidence level)
- p = estimated proportion of the population (if unknown, use 0.5 for maximum variability)
- e = desired margin of error (e.g., 0.05 for ±5%)

In order to provide space for non-responses or incomplete questionnaires, a 10% contingency is also added, and thus the total sample size amounts to approximately 422 households. This sample size is sufficient to draw conclusions and identify trends in the study population.

3.8.Sampling Techniques

For the quantitative survey, the Two-stage cluster sampling method was employed. First, three of Lideta Sub-City's nine woredas, i.e., Woreda 01, Woreda 07, and Woreda 09, were randomly selected to serve as primary sampling units. The woredas were chosen to ensure geographic location, population density, and housing characteristics diversity. Household selection in each of the chosen woredas was randomly sampled in stage two. The sampling size of households per woreda is representative of its approximated population size: 115 in Woreda 01 (population ~30,000), 173 in Woreda 07 (~45,000), and 134 in Woreda 09 (~35,000). The approach brings about more even representation across the sub-city.

For the qualitative interview, however, non-probability convenient sampling of urban planners in the urban planning office was used. There are a total of 20 urban planners in the subcity. The interview should be conducted until information saturation is reached.

For the secondary data, all available most recent records in the Lideta Sub-city Administration should be examined accordingly.

3.9.Eligibility Criteria

For the qualitative survey, eligible participants are those who are 18 years or older and have resided in the selected woreda for at least one year. Participants must be capable of providing informed consent and responding to questions about their residential status. Participants who are not permanent residents, have severe communication disability without caregivers, or refuse to provide consent were excluded from the study.

For the qualitative survey, all urban planning professionals working at the sub-city level, with most information on the housing and infrastructural challenges in Lideta sub-city, were included.

3.10. Data Collection Methods

The study made used of a mix of data collection techniques to ensure robustness and triangulation. Primary data were collected through structured face-to-face interviews utilizing a pre-tested household survey tool. Data collection was through trained data enumerators familiar with Amharic and familiar with the local environment.

Secondary data were collected from Lideta Sub-City's Urban Planning Department and other city offices. Qualitative information was gathered through key informant interviews with planners, woreda administrators. Interviews provide rich contextual data on policy implementation, institutional dynamics, and the historical evolution of Lideta's urban infrastructure.

3.11. Data Analysis Techniques

Quantitative information was cleaned, coded, and analyzed using SPSS version 26. Descriptive statistics such as frequencies, percentages, means, and standard deviations were used to summarize the variables. Cross-tabulations and chi-square tests were used to explore the correlations between demographic indicators and infrastructure accessibility. Spatial data was analyzed for infrastructure availability to identify geographic disparities. The findings were assessed in comparison with international literature. Thematic analysis was conducted for the qualitative data. Emerging themes were used to inform and develop the quantitative findings and add interpretative depth to the results.

3.12. Data Quality Assurance

To ensure the reliability and integrity of the data, certain quality control measures were implemented. All the data collection instruments were pre-tested in a comparable environment outside the study woredas. Training on ethical concerns, data collection rules, and household mobilization for two days was provided for the data collectors. Supervisors verified completed questionnaires daily for completion and accuracy. Double data entry was conducted to minimize input errors, and discrepancies were settled through cross-checking the original questionnaires.

3.13. Reliability and Validity

Household questionnaire reliability for the LIKERT section was confirmed with Cronbach's alpha to establish multi-item scale internal consistency, at a minimum value of 0.70. Face and content validity were established through expert review by urban planners, scholarly researchers, and community development experts. Data triangulation—e.g., survey reply, administrative records, and expert interviewing also contributed to the overall validity and credibility of the study results.

3.14. Ethical Considerations

Ethical clearance of the study protocol was provided by the Institutional Review Board (IRB) of Addis Ababa University, College of Technology and Built Environment. Permission was taken from Lideta Sub-City Administration and from the participating woredas. Informed consent was obtained from all the participants, and they were informed of their right to withdraw from the study at any point. Confidentiality was upheld formally, and there was no identifiable information in the final datasets. Information was stored in password-accessible files and released only to the lead researchers.

4. Findings

This study has a high response rate; 422 questionnaires sent out 417 have returned completed questionnaires (98.8%).

The age range of the respondents is fairly dispersed, with the largest cohort in 35–44 (21.8%), followed by 45–54 (20.9%) and 55+ (20.6%). This indicates a mature population with settled potential housing circumstances and established community networks. The respondents are male-dominated (57.3% male, 42.7% female). Large families dominate, with 42.0% having seven or more members and 38.1% having four to six members. Just 19.9% live in small families (1–3 members), indicating high residential density and pressure on housing and infrastructure. Employment status indicates self-employment (27.1%) and part-time employment (24.2%) as the most common, and full-time work is negligible (15.3%). A noteworthy 19.7% are unemployed, and barely any are retired (0.5%), indicating economic insecurity and informality. The income level is low, ranging from 2,000–15,000 ETB for the majority, and only 12.2% earn more than 15,000 ETB. This is indicative of affordability, especially towards shelter and basic services. Nearly two-thirds (66.9%) have been present in Lideta for less than five years, a sign of high mobility that may affect stability and engagement of the population.

4.1.Aging Houses and Poor Conditions

More than half (52.6%) of the residents live in houses aged 21 to 50 years, and another 31.7% reside in structures more than 50 years old, which means that more than 84% of the residents of Lideta live in aging, structurally deficient housing units. These homes were frequently described by residents as dilapidated, damp, poorly ventilated, and overcrowded. Indeed, 37.5% of respondents in the survey described their homes as "very poor" or "poor," and only a meager 5.6% considered them "adequate."

The dilapidation is not merely aesthetic or structural—it impacts daily living considerably. Residents gave accounts of leaking roofs, collapsing ceilings, and homes lacking individual toilets or kitchens. These were not fragmented problems; they reflect a systemic failure to update housing stock originally planned for a different era. Excessive reliance on kebele housing, which constitutes the majority of the public residential units, illustrates this deterioration. Kebele houses—typically decades old—are small and lack access to modern sanitation and utilities. This situation of the city was described in interviews as "a trap of disrepair," with families stuck in houses they cannot afford to fix, or are not allowed to improve.

4.2.Overcrowding and Spatial Constraints

Most alarming is the incidence of overcrowding. 51% of housing units house more than one family, a definite sign that space shortages have reached crisis levels. Also, 67% of the interviewees stated that their homes do not have sufficient space to meet even the minimum standards. Its population density is 21,952 persons/km². Its urban setting is marked by 29,741 public Kebele homes, which occupy over 7.89 million m². Private homes, which are relatively better maintained, consist of 16,762 with a coverage of about 800,000 m². Condominium apartments, as inner-city redevelopment alternatives, remain few (1,722 units). Institutional and public buildings total over 7,000 structures, which occupy around 15–17% of the land, in mixed-use areas. Most of the residential buildings are clustered in the Mixed Residence zone, which covers 58.42% of Lideta's land. Administrative and social services (12.87%) are centralized, with limited access in peripheral locations. Green and environmental protection zones cover around 12%, which is inadequate to offset high-density concerns. Commercial, municipal, transport, and urban agriculture lands are low, demonstrating spatial inefficiencies and a lack of provision for economic activity and amenity. Such imbalances reinforce congestion, infrastructure decay, and spatial inequality.

This overcrowding has psychological, social, and health effects. Parents described children sleeping in kitchens or living rooms, and privacy is all but unknown. As planners described, "a home is not a sanctuary anymore—it's a storage box for survival."

Table 11: Housing Age & Condition in Lideta Sub-City

AGE OF HOUSE	FREQUENCY (%)	SELF-RATED CONDITION	FREQUENCY (%)
0–20 YEARS	15.7%	Very Poor/Poor	37.5%
21–50 YEARS	52.6%	Fair	56.9%
>50 YEARS	31.7%	Adequate	5.6%

4.3 Tenure Insecurity, Informal settlements, and Ownership

The question of substandard housing ownership reveals extreme disparities. Over half of residents (51.3%) are tenants, 27.1% are owners, and a worrisome 21.6% live in informal settlements or squatter housing. Interviews confirmed that these informal settlements, while technically illegal, were often long-standing and viable communities. As one planner commented: "Informality is not criminal—it's what people do when the system leaves them behind." These settlements, excluded as they are, hold a lot of Lideta's residents and manifest institutional abandonment.

The interview indicated that informal settlements are usually driven by need instead of criminality. Therefore, participants called for a more realistic and compassionate way of looking at informal settlements. Informal settlements are most commonly plagued by inadequate access to basic infrastructure like water, sanitation, electricity, and road connections, which adds to the inhabitants' everyday struggles and leaves them more vulnerable.

Among those who were homeowners, 54.9% had inherited their home, and fewer had purchased homes through market buy, 21.2% new, and 23.9% second-hand. This skewed pattern of ownership suggests that homeownership through the open market is effectively beyond most, with rising construction expenses and housing scarcity. A number of interviewees were irritated that even though policies exist for affordable housing or condominium ownership, prices remain far beyond the means of the typical wage earner.

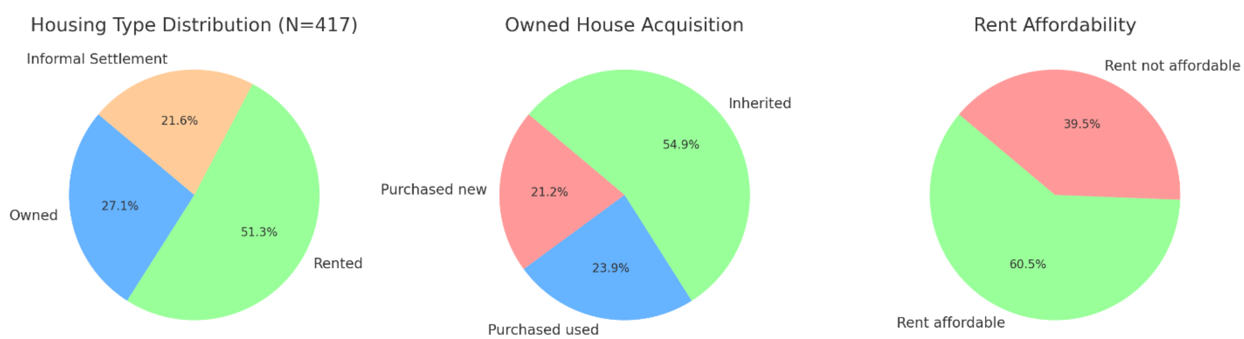

Figure 6: Housing Ownership Status, Acquisition Methods, and Rental Affordability among Residents in Lideta Sub-City

4.4 Housing Preference and Future Plans

When asked to rank their satisfaction level with housing, only 0.7% were very satisfied, and 26.9% were satisfied. A large majority (40.3%) were neutral, and nearly a third (31.9%) were actively dissatisfied. While neutrality can reflect resignation as much as satisfaction, the dissatisfaction clearly demonstrates an urgent need for reform.

The survey also asked respondents to identify the most significant improvements they would want to see. Affordable housing topped the list (32.4%), followed by better roads (30.7%), water supply

(22.1%), and sanitation (14.9%)—indicating the interlinkage between the quality of housing and accessibility to urban services. The findings indicate a polarized perception of government response. A majority of respondents (61.4%) acknowledged that the government has made some effort at addressing the problem of housing. However, 38.6% also thought that government action is still inadequate. More striking, however, is residents' willingness to become involved—72.2% said they would participate in community-driven housing improvement activities if given the opportunity. This was supported by interviewees who explained that while they are typically consulted by way of meetings or surveys, "actual participation is rare." Planners agreed that most participatory measures are procedural, in which decisions are already made before public engagement. This top-down approach not only dissuades trust but also sabotages sustainable housing solutions.

Table 12: Future Plans of Residents with Regards to Housing

Relocation Plans & Reasons	**Frequency (%)**
Plan to relocate (next 12 mo.)	50.40%
Reason: better housing	35.20%
Reason: better infrastructure	35.20%
Reason: lower rent	21.90%

The survey also revealed deep concerns regarding safety (35%), and affordability (17%) as the most significant housing problems. The residents also indicated desires for low-cost housing (43.2%), reflecting their low purchasing power and the unavailability of affordable units. The desire for mixed-type housing (17.3%) also speaks to the demand for more inclusive urban spaces. Interestingly, over half (50.4%) of the residents plan to move out in the next 12 months, and most of them mention better housing (35.2%), better infrastructure (35.2%), and lower rent (21.9%) as the primary reasons

The sub-city has seen 22 Local Development Plans. 12 were Upgrading Plans (for slum upgrading), and 10 were renewal plans (for comprehensive redevelopment). These LDPs are intervention plans in response to slums and old housing, but only for a limited section of the 75 neighborhoods, implying spatially limited coverage. Renewal plans displace with no promise of resettlement, which further contributes to urban inequality.

The housing reality and the existing challenges were starkly described in the interviews. While the government has initiated a number of housing schemes—low-cost prefabricated housing, condominium schemes, and public rental housing under the management of kebeles—planners in general described them as well-intentioned but small in scope and coverage. Among the basic issues is that most of the residents, especially those in the lower-income brackets, consider these housing options to be out of their league due to expense and bureaucratic hassle. Apart from this, the planners also identified high-profile but often overlooked cultural and emotional dimensions of housing. A planner summed that up so well as "a house is not just walls — it's a history, a community, a life," emphasizing that any housing intervention needs to take into account inhabitants' emotional attachments to place, social networks, and traditions. Also, continued socio-cultural alienation will most likely result in resistance to redevelopment plans or resettlement programs, wherein people have more to lose than mere physical housing. The failure of sufficient decent engagement of residents by the developers in the formulation and implementation of housing policy was accountable for suspicion and also restricted community ownership. The cumulative impact is a housing environment that is free from affordability issues, insecurity, and dissatisfaction, worthy of more inclusive, culturally sensitive, and economically affordable housing policy.

5. Discussion

The housing condition in Lideta Sub-City illustrates a deepening urban crisis characterized by structural decay, overcrowding, affordability challenges, and inadequate infrastructure. Our findings reveal that more than 84.7% of houses are over 20 years old, and nearly one-third exceed 50 years—figures that reflect a housing stock that has significantly outlived its intended lifespan.

Perhaps the saddest part is that such units are not being preserved as historical assets but instead are deteriorating. One of the planners made this point forcefully, stating, "These houses are not aging with dignity—they're rotting in silence." This aligns with previous findings by Yenoineshet (2007), who documented the ubiquitous nature of government-owned public housing in Lideta, much of which lacked in-house sanitation, shared toilet facilities, and intense overcrowding(Yenoineshet, 2007). The fact that there are 29,741 Kebele houses in over 75% of the land implies not just spatial inefficiency but also stagnation in regenerating the urban areas. These findings are in line with city-wide trends documented by Bihon (2004) and Kassahun (2010), who wrote about widespread deterioration in housing and growth in Addis Ababa informal settlements, with Lideta being a focal point area(Bihon, 2004; Kassahun, 2010).

Affordability remains the largest barrier to improving decent housing. Our results indicate that only 25% of the respondents are homeowners and have a significant percentage of informal occupants or renters. Nearly a third of residents complained about their current housing, and over 50.4% expressed a need to shift within one year, mainly in pursuit of better housing (35.2%), better infrastructure (35.2%), and lower rent (21.9%). These sentiments coincide with Nigussie (2022), who had critically examined the 20/80 Condominium Housing Project and determined that it had failed to tackle the needs of low-income households due to affordability issues, delayed delivery, and restricted access(Nigussie, 2022). While 61.4% of the residents conceded that the government has tried something to address the housing problem, 38.6% of them believed that interventions were insufficient. Also, 32.4% of the respondents cited affordable housing as the number one priority for improvement, followed by roads, water, and sanitation, highlighting housing quality and urban infrastructure interdependence. Despite having various Local Development Plans (LDPs), which have encompassed 12 slum upgrading and 10 renewal schemes, their coverage has remained limited. Renewal schemes typically result in displacement with little compensation or resettlement guarantee, further widening socio-economic inequality.

Alongside the issues of affordability, the social and emotional dimensions of housing emerged forcefully in both the survey results and qualitative interviews. Although 72.2% of the residents said that they would be happy to participate in community-led schemes, planners and community members noted that participation is symbolic rather than substantive. Since one of the planners grumbled, "People attend the meetings, but decisions are already made." This top-down way of planning undermines people's confidence and diminishes the legitimacy of housing programs. Kassahun (2010) also claimed that the lack of authentic participation of people in slum upgrading has been a persistent flaw in urban planning in Addis Ababa. Additionally, planners emphasized that a home is not merely a tangible asset but also a deeply cultural and emotional one. Anon added, "A house is not just walls—it's a history, a community, a life," stressing the intangible losses residents bear due to forced eviction or gentrification. Informal settlements, as much as they are a product of lawlessness, are an attestation to the failure of formal housing systems in offering the most elementary shelter for the poor. Where such places lack roads, sanitation, water, and electricity, they are also sites of systematic exclusion. Inclusive, participatory, and culturally responsive housing policies informed by equitable land use planning and infrastructure investment are therefore necessary to address the complex realities of Lideta's citizens.

6. Conclusion

This study reveals the serious housing and infrastructure shortage of Lideta Sub-City residents, Addis Ababa. Housing in the sub-city is mainly old, congested, and dilapidated in physical terms, whereas the majority of the families live in informal settlements with insecure and sub-standard housing. These deficits result in everyday sufferings that afflict residents' well-being, health, and economic efficiency.

Government efforts at rectifying housing and infrastructure upgrading through redevelopment schemes are faced with daunting challenges.

Our findings corroborate previous research on urban housing challenges in Addis Ababa and other rapidly urbanizing cities in sub-Saharan Africa. However, the current research goes one step ahead by integrating household surveys, secondary data, and stakeholder interviews to provide a composite image of the physical, social, and economic dimensions of the crisis in Lideta that are interconnected. Despite data constraints, the evidence calls for consistent and sustainable responses that address both the physical environment and the social fabric of communities.

7. Recommendations

To address the poor housing conditions in Lideta Sub-City, intervention should be directed towards the rehabilitation of existing houses, the majority of which are over 20 years old. Overcrowding can be addressed by low-cost housing provided through incremental extensions and subsidized low-cost units. More than one-fifth of housing covered by informal settlements should be formalized and upgraded through participatory approaches. Culturally sensitive redevelopment policies are needed to respect residents' attachments and prevent resistance. Institutionalization of community involvement in planning must occur to build trust and create responsive, locally tailored housing policies.

No less important is housing integration with livelihood support programs, given the clear impact of bad housing on income and productivity. Urban data systems need to be upgraded and inter-agency coordination ensured to increase planning and resource allocation. Affordable home improvement financing—in the form of subsidies, microloans, or low-interest credit—can mobilize residents to preserve and improve their homes. Land use and building regulation enforcement must be strengthened to provide safe, regulated development. Last but not least, sound relocation and social support mechanisms are required to cushion displaced residents and facilitate transition in redevelopment efforts

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Annex II: Consent Form (English)

Title of the Study: Housing and Infrastructure provision Challenges in Addis Ababa: The case study of Lideta sub-city

Introduction: You are invited to participate in a research study aimed at examining housing and infrastructure challenges in Lideta Sub-City and triangulated approach. This study seeks to understand residents' experiences with housing and infrastructure, including roads, water, sanitation, and electricity, and how these affect your quality of life.

Purpose of the Study: This research would try to examine the housing and infrastructure challenges in Lideta Sub-City

What Participation Involves: If you agree to participate, you would be asked to complete a questionnaire that includes questions about your demographics, housing conditions, infrastructure access and quality, and how these issues impact your daily life. The questionnaire would take approximately 20-30 minutes to complete.

Voluntary Participation: Your participation is completely voluntary. You may choose not to participate or to withdraw from the study at any time without any penalty or loss of benefits.

Confidentiality: All information you provide would be kept confidential and used only for research purposes. Your responses would be anonymized so that no one would be able to identify you personally in any reports or publications resulting from this study.

Risks and Benefits: There are no anticipated risks or direct benefits to you from participating in this study. However, your input would contribute valuable knowledge that may help improve housing and infrastructure services in your community.

Contact Information: If you have any questions about this study or your rights as a participant, you may contact the researcher, Abeba, +251 91 193 5069

Consent Statement: By signing below, you acknowledge that you have read and understood the information provided above, and you have agreed to participate voluntarily in this study.

Thank you for your valuable participation!

Annex III: Questionnaire (English)

Section 1: Demographic Information

1. Age:

   I. 18-24
   II. 25-34
   III. 35-44
   IV. 45-54
   V. 55+

2. Gender:

   I. Male
   II. Female

3. Household Size:

   I. 1-3 people
   II. 4-6 people
   III. 7+ people

4. Employment Status:

   I.
   II. Employed full-time
   III. Employed part-time
   IV. Self-employed
   V. Unemployed
   VI. Student
   VII. Retired

5. Monthly Household Income:

   I. Less than 2,000 ETB
   II. 2,000 - 5,000 ETB
   III. 5,001 - 10,000 ETB
   IV. More than 10,000 ETB

6. Type of Housing:

   I. Owned
   II. Rented
   III. Informal settlement

7. How long have you been living in Lideta Sub-City?

   I. Less than a year
   II. 1-5 years
   III. 6-10 years
   IV. More than 10 years

Section 2: Housing Conditions

8. What is the condition of your housing? (1 = Very Poor, 2 = Poor, 3 = Average, 4 = Good, 5 = Excellent) ______
9. How old is the building where you live?
   I. Less than 5 years
   II. 6-10 years
   III. 11-20 years
   IV. 21+ years
10. Do you have sufficient space in your housing unit?
    I. Yes
    II. No
11. Are you satisfied with the safety and security of your housing?
    I. Yes
    II. No
    III. Not sure
12. Does your housing unit have access to basic services (water, electricity, etc.)?
    I. Yes, all services
    II. Yes, some services
13. If house is rental, do you believe the rent you pay is affordable for your income?
    I. Yes
    II. No
14. If house is owned, how did you acquire it?
    I. Purchased new
    II. Purchased used
    III. Inherited
    IV. Other (specify)
15. How many rooms does your dwelling have? __________
16. How many of those rooms are used for sleeping? ________
17. Does your home have a separate entrance?
    I. Yes
    II. No

Section 3: Infrastructure Conditions

Infrastructure/Service Question	*1 (Very Poor)*	*2 (Poor)*	*3 (Average)*	*4 (Good)*	*5 (Excellent)*
*18. **What is the condition of the following infrastructure in your area?***					
a) Roads and transportation	☐	☐	☐	☐	☐
b) Water supply	☐	☐	☐	☐	☐
c) Waste management	☐	☐	☐	☐	☐
d) Sanitation facilities (toilets, sewage systems)	☐	☐	☐	☐	☐
e) Electricity supply	☐	☐	☐	☐	☐
*19. **Do you experience frequent interruptions in any of the following services?***					
a) Electricity	☐	☐	☐	☐	☐
b) Water supply	☐	☐	☐	☐	☐
c) Waste collection	☐	☐	☐	☐	☐
d) Public transport	☐	☐	☐	☐	☐

20. How far is the nearest source of clean water from your home?

I. Less than 10 minutes
II. 10-30 minutes
III. 30 minutes – 1 hour
IV. More than 1 hour

21. Do you face transportation challenges in your area?
    I. Yes: Specify________________
    II. No
22. Is your road or street paved?
    I. Yes
    II. No
23. How often does your neighborhood face flooding or drainage issue?
    I. Never
    II. Occasionally
    III. Frequently

Section 4: Impact on Daily Life & Economy

24. How do the housing and infrastructure challenges in your area affect your daily life?
    I. Limited access to basic services (water, electricity, etc.)
    II. Increased time spent on commuting or transportation
    III. Poor health and sanitation conditions
    IV. Increased financial burden (e.g., for private services)
    V. Reduced quality of life
    VI. Other (please specify)
25. How does the lack of adequate infrastructure impact your economic activities or livelihood?
    I. Majorly impacts my economic activities
    II. Slightly impacts my economic activities
    III. Does not impact my economic activities
26. How do housing challenges affect your economic activities or livelihood?
    I. Majorly impacts my economic activities
    II. Slightly impacts my economic activities
    III. Does not impact my economic activities
27. Do you believe the government is taking sufficient action to improve housing conditions?
    I. Yes
    II. No

28. Do you believe the government is taking sufficient action to improve infrastructure in your area?
    I. Yes
    II. No

Section 5: Future Outlook

29. What improvements would you like to see in housing and infrastructure in your area?
    I. More affordable housing
    II. Improved sanitation
    III. Better road infrastructure
    IV. Better water supply
    V. Other (please specify)
30. Do you plan to move to a different residence in the next 12 months?
    I. Yes
    II. No
31. If yes, what is the primary reason for your move?
    I. Better housing conditions
    II. Lower rent
    III. Better infrastructure/services
    IV. Other (please specify)
32. How satisfied are you with the overall condition of housing in Lideta Sub-City?
    I. Very satisfied
    II. Satisfied
    III. Neutral
    IV. Dissatisfied
33. What is the most significant challenge you face regarding your housing situation
    I. Affordability
    II. Space
    III. Poor infrastructure (water, roads, etc.)
    IV. Safety
    V. Other (please specify)

34. What type of housing would you like to see more of in your area?
    - I. Low-cost housing
    - II. Middle-income housing
    - III. Luxury housing
    - IV. Mixed housing (affordable and high-end)
35. Would you be would ing to participate in programs aimed at improving housing and infrastructure in your area?
    - I. Yes
    - II. No

Annex IV: consent Form (Amharic)

<u>የመጠይቅ ስምምነት ቅጽ</u>

የጥናቱ ርዕስ ፡ በአዲስ አበባ ከተማ ልደታ ክፍለ ከተማ ያሉ የመኖሪያ ቤትና የመሠረተ ልማት ተግዳሮቶች ማወቅ

መግቢያ - በልደታ ክፍለ ከተማእና በሶስት ማዕዘን አቀራረብ የመኖሪያ ቤት እና የመሰረተ ልማት ችግሮችን ለመመርመር የታቀደ የምርምር ጥናት ላይ እንድትሳተፉ ተጋብዛችኋል። ይህ ጥናት መንገዶች፣ ውሃ፣ የንጽህና እና የኤሌክትሪክ ኃይል ጨምሮ የመኖሪያ ቤት እና መሰረተ ልማት ጋር ነዋሪዎች ተሞክሮ ለመረዳት ይፈልጋል፣ እና እነዚህ በእርስዎ የኑሮ ጥራት ላይ ምን ተጽዕኖ እንደሚያሳድሩ።

የጥናቱ ዓላማ :- ይህ ጥናት በልደታ ክፍለ ከተማውስጥ ያሉትን የመኖሪያ ቤት እና የመሰረተ ልማት ችግሮች ለመመርመር ይሞክራል

ተሳትፎ ምን ያካትታል? ለመሳተፍ ከተስማሙ ስለ የእርስዎ ንብረት፣ የመኖሪያ ቤት ሁኔታ፣ የመሰረተ ልማት ሁኔታዎች እና ጥራት ያለውን ነባራዊ ሁኔታ የሚጠይቁ ፤ እንዲሁም በ ቤትዎ እና በመሰረታዊ ልማት በኩል ያጋጠምዎ ችግር በዕለት ተዕለት ሕይወትዎ ላይ ያለውን ተጽዕኖ የሚጠይቁ ጥያቄዎችን ይመልከሳሉ።

ጥያቄው ለመጠናቀቅ በግምት 20-30 ደቂቃ ይወስዳል።

የፈቃደኝነት ተሳትፎ፡ የእርስዎ ተሳትፎ ሙሉ በሙሉ በፈቃደኝነት ነው። ተሳትፎ አለማድረግ መብትዎ ነው። እርሱን ተከትሎ የሚመጣ ቅጣት ሆነ ጥቅማ ጥቅም የለም። በማንኛውም ጊዜ ጥናቱን ማቋረጥ ይችላሉ።

ምስጢራዊነት፡- የሚሰጡት መረጃ ሚስጥራዊነት የተጠበቀ ነው። የሚሰጡት መረጃ ሁሉ ለምርምር ብቻ የሚውል ይሆናል። የእርስዎን መለየት የሚያስችል የግል መረጃ አይወሰድም።

አደጋዎች እና ጥቅሞች በዚህ ጥናት ላይ በመሳተፍዎ ምንም የሚጠበቅ አደጋ ወይም ቀጥተኛ ጥቅም የለም። ይሁን እንጂ የሚያበረክቱት አስተዋጽኦ በአካባቢዎ ያሉ የመኖሪያ ቤትና የመሠረተ ልማት አገልግሎቶችን ለማሻሻል የሚረዳ ጠቃሚ እውቀት እንዲኖር ያደርጋል።

የአጥኚው አድራሻ፡ በዚህ ጥናት ወይም በተሳታፊነት መብትዎ ላይ ጥያቄ ካለዎት ተመራማሪውን፣ አበባ፣ +251 91 193 5069

የስምምነት መግለጫ፡ ከላይ የቀረቡትን መረጃዎች አንብበው ከተረዱ እና በዚህ ጥናት ለመሳተፍ በፍቃደኝነት ከተስማሙ ከዚህ በታች ይፈርሙ።

ለእርስዎ ጠቃሚ ተሳትፎ እናመሰግናለን!

Annex V: Questionnaire (Amharic)

ክፍል 1 ፡ የግለሰቡ መረጃ

1. እድሜ -

    VI. 18-24
    VII. 25-34
    VIII. 35-44
    IX. 45-54
    X. 55+

4. ፆታ
    I. ወንድ
    II. ሴት
5. የቤት ውስጥ ነዋሪ ብዛት መጠን ፡-
    I. 1-3 ሰዎች
    II. 4-6 ሰዎች
    III. 7+ ሰዎች
6. የስራ ሁኔታ ፡-
    I. ሙሉ ቀን ተቀጥሮ የሚሰራ
    II. የተወሰነ ሰዓት ተቀጥሮ የሚሰራ
    III. የግል ስራ
    IV. ሥራ አጥ
    V. ተማሪ
    VI. ጡረታ የወጣ
7. ወርሃዊ የቤት ገቢ -
    I. ከ2,000 ያላነሰ

II. 2,000 – 5,000

III. 5,001 - 10,000

IV. ከ10,000 በላይ

8. የቤቱ ባለቤትነት

I. የራሱ የሆነ ንብረት

II. የተከራዩ

III. መደበኛ ያልሆነ ሰፈራ (ጨረቃ ቤት)

9. በልደታ ክፍለ ከተማ ለምን ያህል ጊዜ ነው የኖርከው?

I. አንድ ዓመት ሳይሞላው

II. 1-5 ዓመት

III. 6-10 ዓመት

IV. ከ10 ዓመት በላይ

ክፍል 2 ፡ የመኖሪያ ቤት ሁኔታዎች

10. የእርስዎ የመኖሪያ ቤት ያለበት ደረጃ ምንድን ነው? (1 = እጅግ የተጎዳ 2 = የተጎዳ 3 = መካከለኛ 4 = ጥሩ ደረጃ 5 = በጣም ጥሩ) _______

11. የሚኖሩበት ቤት ምን ያህል ጊዜ ነው የቆየው?

    I. ከ5 ዓመት ያነሰ

    II. 6-10 ዓመት

    III. 11-20 ዓመት

    IV. 21+ ዓመት

12. በመኖሪያ ቤትዎ ውስጥ በቂ ቦታ አለ?

    I. አዎ

    II. አይ

13. በመኖሪያ ቤትዎ ደህንነትና ደህንነት ረክተሃል?

    I. አዎ

    II. አይ

    III.እርግጠኛ ያልሆነ

14. የእርስዎ የመኖሪያ ቤት መሠረታዊ አገልግሎቶችን (ውሃ, ኤሌክትሪክ, ወዘተ) ማግኘት ይችላልን?

    I. አዎ, ሁሉም አገልግሎቶች

    II. አዎ, አንዳንድ አገልግሎቶች

15. ቤትዎ ኪራይ ከሆነ የምትከፍለው የቤት ኪራይ ለገቢዎ ተመጣጣኝ ነው ብለው ያምናሉ?

    I. አዎ

    II. አይ

16. ቤትዎ ንብረት ከሆነ እንዴት አገኙት?

I. አዲስ ገዝቼ

II. ሌላ ሰው የሚኖርበትን ገዝቼ

III. የወረስነው

IV. ሌላ (ግለጽ)

17. መኖሪያ ቤትዎ ስንት ክፍል አለው? ___________

18. ከእነዚህ ክፍሎች ውስጥ ለመተኛት የሚያገለግሉት ስንት ናቸው? _________

19. ቤትዎ የተለየ መግቢያ አለው?

I. አዎ

II. አይ

ክፍል 3 ፡ የመሰረተ ልማት ሁነቶች

የመሠረተ ልማት/አገልግሎት ጥያቄ	*1 (በጣም የተጎዳ)*	*2 (የተጎዳ)*	*3 (አማካይ)*	*4 (ጥሩ)*	*5 (በጣም ጥሩ)*
*20. **በእርስዎ አካባቢ የሚከተሉት መሰረተ ልማት ሁኔታ ምን ደህረ-ገፅ ነው?***					
ሀ) መንገዶች ና ትራንስፖርት	☐	☐	☐	☐	☐
ለ) የውሃ አቅርቦት	☐	☐	☐	☐	☐
ሐ) የቆሻሻ አያያዝ	☐	☐	☐	☐	☐
መ) የንጽህና ተቋማት (መፀዳጃ ቤቶች፣ የፍሳሽ ማስወገጃዎች)	☐	☐	☐	☐	☐
ሠ) የኤሌክትሪክ አቅርቦት	☐	☐	☐	☐	☐
*21. **ከዚህ በታች በተዘረዘሩት አገልግሎቶች ላይ በተደጋጋሚ ጊዜያት መቋረጥ ያጋጥም ይሆን?***					
ሀ) ኤሌክትሪክ	☐	☐	☐	☐	☐
ለ) የውሃ አቅርቦት	☐	☐	☐	☐	☐
ሐ) የቆሻሻ ስብስብ	☐	☐	☐	☐	☐
መ) የህዝብ መጓጓዣ	☐	☐	☐	☐	☐

22. ከቤታችሁ የንጹህ ውሃ ምን ያህል ቅርብ ነው?

I. ከ10 ደቂቃ ያነሰ

II. 10-30 ደቂቃ

III.30 ደቂቃ – 1 ሰዓት

IV. ከ1 ሰዓት በላይ

23. በአካባቢዎ የመጓጓዣ ችግሮች ያጋጥሞታል?

I. አዎ ይግለጹ_________________

II. አይ

24. መንገድዎ አስፋልት ነው?

I. አዎ

II. አይ

25. በአካባቢዎ የጎርፍ መጥለቅለቅ ወይም የፍሳሽ ማስወገጃ ችግር ምን ያህል ጊዜ ያጋጥማቸዋል?

I. በፍጹም

II. አልፎ አልፎ

III. ብዙ ጊዜ

ክፍል 4 ፡ በዕለት ተዕለት ሕይወት ላይ ያሳደረው ተጽእኖ እና ኤኮኖሚያዊ ተጽእኖ

26. በአካባቢዎ ያለው የመኖሪያ ቤትና የመሠረተ ልማት ችግር በዕለት ተዕለት ሕይወትዎ ላይ ምን ተጽዕኖ ያሳድራል?

I. የመሰረታዊ አገልግሎቶችን (ውሃ፣ ኤሌክትሪክ፣ ወዘተ) የማግኘት ውስንነት

II. በመጓጓዣ ወይም በመጓጓዣ ላይ የሚውለው ጊዜ መጨመር

III. የጤና እና የንፅህና አጠባበቅ ችግር

IV. የገንዘብ ጫና መጨመር (ለምሳሌ ለግል ግል ግል,ጋሎት)

V. የኑሮ ደረጃ መቀነስ

VI. ሌላ (እባክዎን ይግለጹ)

27. በቂ የመሠረተ ልማት አለመኖር በኢኮኖሚ እንቅስቃሴዎ ወይም በኑሮዎ ላይ ምን ተጽዕኖ ያሳድራል?

I. በኢኮኖሚ እንቅስቃሴዬ ላይ ከፍተኛ ተጽእኖ ያሳድራል

II. በኢኮኖሚ እንቅስቃሴዬ ላይ ትንሽ ተጽዕኖ አሳድሬያለሁ

III. በኢኮኖሚ እንቅስቃሴዬ ላይ ተጽዕኖ አያሳድርም

28. የመኖሪያ ቤት ተፈታታኝ ሁኔታዎች በኢኮኖሚ እንቅስቃሴዎ ወይም በኑሮዎ ላይ ምን ተጽዕኖ ያሳድራሉ?

I. በኢኮኖሚ እንቅስቃሴዬ ላይ ከፍተኛ ተጽእኖ ያሳድራል

II. በኢኮኖሚ እንቅስቃሴዬ ላይ ትንሽ ተጽዕኖ አሳድሬያለሁ

III. በኢኮኖሚ እንቅስቃሴዬ ላይ ተጽዕኖ አያሳድርም

29. መንግሥት የመኖሪያ ቤት ሁኔታዎችን ለማሻሻል በቂ እርምጃ እየወሰደ ነው ብለው ያምናሉ?

I. አዎ

II. አይ

30. መንግሥት በአካባቢያችሁ ያሉ የመሠረተ ልማት ተቋማትን ለማሻሻል በቂ እርምጃ እየወሰደ ነው ብለው ያምናሉ?

I. አዎ

II. አይ

ክፍል 5 ፡ የወደፊት ዕውቀት

31. በአካባቢዎ በመኖሪያ ቤትና በመሠረተ ልማት ረገድ ምን ማሻሻያዎችን ማየት ይፈልጋሉ?

I. ብዙ ወጪ የማይጠይቁ መኖሪያ ቤቶች

II. የተሻለ ጽዳት ማስወገድ

III. የተሻለ የመንገድ መሰረተ ልማት

IV. የተሻለ የውሃ አቅርቦት

V. ሌላ (እባክዎን ይግለጹ)

32. በቀጣዮቹ 12 ወራት ውስጥ ወደ ሌላ ስፈር ለመዛወር አስበሃል?

I. አዎ

II. አይ

33. ምላሽዎ አዎን ከሆነ ወደ ሌላ አካባቢ እንድትዛወር የሚያነሳሳህ ዋነኛው ምክንያት ምንድን ነው?

I. የተሻለ የመኖሪያ ቤት ሁኔታ

II. ዝቅተኛ የቤት ኪራይ

III. የተሻለ የመሰረተ ልማት/አገልግሎት

IV. ሌላ (እባክዎን ይግለጹ)

34. ልደታ ክፍለ ከተማ ውስጥ በአጠቃላይ የመኖሪያ ቤት ሁኔታ ምን ያህል እርካታ አለዎት?

I. በጣም ረክቻለው

II. በመጠኑ ረክቻለው

III. ገለልተኛ ነኝ

IV. አልረካሁም

V. በጣም አልረካሁም

35. የመኖሪያ ቤት ሁኔታዎን በተመለከተ የሚያጋጥምህ ከሁሉ የላቀ ተፈታታኝ ሁኔታ ምንድን ነው?

I. ብዙ ገንዘብ መክፈል

II. ቦታ

III. የተዳከመ መሰረተ ልማት (ውሃ፣ መንገድ ወዘተ.)

IV. ደህንነት

V. ሌላ (እባክዎን ይግለጹ)

36. በአካባቢህ ምን ዓይነት መኖሪያ ማግኘት ትፈልጋለህ?

I. ዝቅተኛ-ወጪ የመኖሪያ ቤት

II. መካከለኛ ገቢ ያለው መኖሪያ ቤት

III. የቅንጦት መኖሪያ ቤት

IV. የተቀላቀለ የመኖርያ ቤት (ዋጋያለው እና ከፍተኛ-መጨረሻ)

37. በአካባቢህ ያለውን የመኖሪያ ቤትና የመሠረተ ልማት መዋቅር ለማሻሻል በሚያስችሉ ፕሮግራሞች ላይ ለመሳተፍ ፈቃደኛ ነዎት?

I. አዎ

II. አይ

Annex VI: Data Abstraction Tool

Variable / Indicator	Definition / Description	Source	Data Type	Level (Woreda/Kebele)	Year	Finding	Remark
Total Population							
Area							
Residential Houses							
Commercial Buildings							
Mixed-Use							
Years of Residential Building	*< 5 years*						
	5-10 years						
	10-15 years						
	15- 20 years						
	20 -25 years						
	> 25 years						
Housing Condition							
House hold crowding (person/room)							
Housing density							
Types of Housing (Gov`t or private)							
Rented houses							
Informal Houses							
Informal Settlement Area							
% of household with pipe water							
% of household with electricity							
Road density or sq km							
Paved: unpaved roads							
Road Conditions							
Time to public transport Accessibility Index							
No. of Hospitals							
No. of Schools							
Green Spaces (No. & Area)							
Parks (No & Area)							

Annex VII: Interview Questions

1. **Urban Planning Practice**

- What urban planning strategies are currently used in Lideta?
- What are the main challenges in putting these plans into action?

2. **Housing Conditions and Affordability**

- Many houses in Lideta are old and overcrowded. What are the biggest problems in improving these homes?
- How is the government helping residents get better housing without making it too expensive or forcing them to move?

3. **Informal Settlements and Land Use**

- How do informal settlements affect land use and service delivery in Lideta? What is the data in this regard?
- Are there any plans to upgrade or include these areas in development projects?

4. **Roads and Public Spaces**

- Roads make up only 11% of Lideta's land, and green spaces are also very limited. How does this affect daily life, transportation, and safety?
- Are there any ongoing or planned projects to improve roads and create more public spaces?

5. **Access to Water and Electricity**

- Many neighborhoods face shortages of water and electricity. How serious are these problems, and what is being done to fix them?

6. **Waste and Sewage Management**

- The data doesn't provide enough information on waste and sewage systems. Can you explain the current situation?
- How effective is the current waste collection system, and what problems still exist?

7. **Community Involvement**

- Are local residents involved in planning and decision-making?
- What can be done to make urban development more inclusive for everyone?

8. **Data and Information Gaps**

- How the lack of does detailed local data affect planning and services in Lideta?
- Are there efforts to improve data collection to guide better decisions?