

IDENTIFYING AND RESOLVING SHELTER ISSUES THROUGH THE PRINCIPLES OF EKISTICS: A SYSTEMATIC REVIEW

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Abstract

Shelter remains a fundamental human necessity, yet rapid urbanization, population growth, environmental degradation, and socio-economic inequalities continue to intensify housing and settlement-related challenges worldwide. This systematic review examines shelter issues through the principles of Ekistics, the interdisciplinary theory developed to understand and organize human settlements in relation to nature, society, infrastructure, and human needs. The study synthesizes scholarly literature, policy reports, and urban planning frameworks to identify the major causes of inadequate shelter, including overcrowding, informal settlements, poor infrastructure, lack of affordability, environmental vulnerability, and ineffective governance. By applying the principles of Ekistics, the review explores how balanced relationships among human beings, society, nature, networks, and built structures can contribute to sustainable and inclusive shelter development. The findings reveal that integrated planning approaches rooted in Ekistics can significantly improve housing quality, accessibility, environmental sustainability, and social well-being. Furthermore, the review highlights the importance of participatory planning, resilient infrastructure, equitable land distribution, and context-sensitive architectural practices in resolving shelter-related problems. The study also emphasizes the relevance of Ekistics in achieving sustainable urban development goals, particularly in developing nations facing rapid urban expansion. Through a comprehensive analysis of existing research, this review provides a conceptual framework for policymakers, urban planners, architects, and researchers to address contemporary shelter challenges systematically. The paper concludes that adopting Ekistics-based planning principles can foster resilient, liveable, and sustainable human settlements capable of meeting present and future housing demands effectively.

Keywords: Ekistics; Shelter Issues; Sustainable Human Settlements; Urban Planning; Housing Development.

1. INTRODUCTION

Rapid urbanization, population growth, and socio-economic inequality have intensified shelter-related challenges across the world, making adequate housing and sustainable human settlements critical concerns in contemporary urban planning. According to recent global estimates, urban areas are expected to accommodate nearly 68 percent of the world's population by 2050, increasing pressure on housing systems, infrastructure, public services, and environmental resources. Ekistics provides an interdisciplinary framework for understanding the relationship between humans, society, nature, networks, and built environments in settlement planning. The principles of Ekistics emphasize the importance of balanced and integrated development to create sustainable, resilient, and inclusive communities capable of supporting human well-being. Contemporary shelter

issues such as overcrowding, informal settlements, inadequate infrastructure, housing unaffordability, and environmental degradation indicate the growing failure of traditional planning approaches to respond effectively to rapid urban expansion.

Housing is widely recognized as a fundamental human need and an essential component of sustainable development because it directly influences health, education, employment, social inclusion, and economic productivity. Sustainable housing development contributes to improved living conditions, efficient resource utilization, environmental protection, and social stability. International development frameworks, including the Sustainable Development Goals (SDGs) and the New Urban Agenda, emphasize the importance of inclusive, safe, resilient, and sustainable cities and human settlements. However, many developing and rapidly urbanizing regions continue to experience housing shortages, poor sanitation, inadequate transportation systems, and insufficient access to basic urban services, particularly among low-income populations. These conditions often lead to the expansion of slums and environmentally vulnerable settlements, which further increase social and spatial inequalities.

In response to these challenges, integrated settlement planning approaches based on Ekistics principles have gained increasing attention in urban and regional planning studies. Ekistics promotes a holistic understanding of settlements by considering the interaction between environmental sustainability, infrastructure development, social organization, and human needs. This systematic review aims to identify and evaluate major shelter-related issues and examine how the principles of Ekistics can contribute to sustainable solutions for developing resilient, inclusive, and well-planned human settlements. Furthermore, the study seeks to synthesize existing literature from 2010 to 2025 to provide a comprehensive understanding of sustainable shelter development and contemporary urban planning practices.

2. PROBLEM STATEMENT

The increasing demand for adequate shelter due to rapid urbanization, population growth, and socio-economic disparities has created significant challenges in human settlements across the world. Many urban and rural areas continue to experience problems such as housing shortages, overcrowding, informal settlements, inadequate infrastructure, environmental degradation, and unequal access to basic services. Despite numerous housing policies and development programs, shelter issues remain unresolved because of fragmented planning approaches and the lack of integration between social, environmental, economic, and spatial factors. Ekistics provides a comprehensive framework for understanding the relationship between humans, nature, society, networks, and built environments in settlement planning. However, limited systematic research has examined how the principles of Ekistics can effectively address contemporary shelter challenges. Therefore, this study aims to systematically review existing literature to identify shelter issues and evaluate Ekistics-based strategies for developing sustainable, inclusive, and resilient human settlements.

3. OBJECTIVE

- To identify and evaluate shelter-related issues and explore sustainable solutions through the principles of Ekistics for developing resilient, inclusive, and well-planned human settlements.

4. LITERATURE REVIEW

The issue of shelter and sustainable human settlements has gained increasing global attention due to rapid urbanization, climate change, socio-economic inequalities, and housing shortages. Scholars and international organizations have emphasized the need for integrated and sustainable planning approaches to address shelter-related challenges effectively. The concept of Ekistics, introduced by Doxiadis (1968), provides a multidisciplinary framework for understanding the relationship between humans, society, nature, networks, and built environments in settlement planning. Ekistics emphasizes balanced settlement development through the integration of environmental sustainability, infrastructure, and human well-being. Housing affordability and residential inequality remain major concerns in urban areas. Baker et al. (2016) explained that rising housing costs and residential mobility contribute significantly to locational inequality and social exclusion. Similarly, Florida (2017) highlighted that rapid urban expansion, and economic disparities have intensified the global urban crisis, particularly affecting low-income populations. Informal settlements and slum development have also become major urban challenges. Mahabir et al. (2016) examined slums as both social and physical constructs and identified inadequate infrastructure, poverty, and weak governance as key contributing factors. Corburn et al. (2020) further emphasized that poor sanitation, overcrowding, and limited healthcare access in informal settlements increased vulnerabilities during the COVID-19 pandemic.

Several studies have focused on sustainable urban planning and resilient settlement development. Sharifi (2019) discussed resilient urban forms and highlighted the importance of integrated infrastructure, transportation systems, and sustainable street networks in urban resilience. Meerow et al. (2016) defined urban resilience as the ability of urban systems to adapt to environmental, economic, and social disturbances. Ahern (2015) emphasized the shift from “fail-safe” to “safe-to-fail” planning approaches to improve sustainability and disaster resilience in urban areas. Similarly, Jabareen (2015) explored sustainable urban forms and stressed the importance of compact development, mixed land use, and ecological planning.

Environmental sustainability and climate adaptation are central to shelter development and settlement planning. Seto et al. (2015) warned that uncontrolled urban expansion threatens biodiversity and environmental resources globally. The IPCC (2022) highlighted that climate change significantly affects housing systems, infrastructure, and vulnerable populations through floods, heatwaves, and environmental disasters. Bulkeley and Betsill (2015) emphasized the importance of multilevel governance and climate-responsive urban policies in promoting sustainable cities. Leal Filho et al. (2019) connected sustainable development goals with broader environmental and social sustainability

challenges, stressing integrated planning and resource management. Governance, social justice, and community participation also play important roles in shelter development. Harvey (2018) argued that urban planning should address social justice and equitable access to urban resources. Patel et al. (2021) discussed the risks of eviction and the need for inclusive urban development policies that involve local communities in decision-making processes. Campbell (2016) identified contradictions between economic growth, environmental protection, and social equity in sustainable urban planning. The United Nations (2015) and United Nations (2022) emphasized inclusive, safe, resilient, and sustainable human settlements through the Sustainable Development Goals and global housing policies.

Urban design and quality of life have also been widely discussed in settlement studies. Gehl (2016) focused on people-centered urban design and highlighted the importance of public spaces, walkability, and social interaction in improving urban living conditions. Montgomery (2015) similarly emphasized that well-designed cities contribute to happiness, social well-being, and community development. Newman and Kenworthy (2015) discussed sustainable transportation systems and reduced automobile dependence as essential components of environmentally sustainable cities. Angel (2016) examined global urban expansion patterns and highlighted the importance of effective urban planning in managing future population growth.

International organizations have also contributed significantly to research on sustainable settlements. UN-Habitat (2020) highlighted that rapid urbanization continues to create housing shortages, overcrowding, and infrastructure deficiencies, especially in developing countries. OECD (2020) emphasized that cities are central to economic growth but also face increasing environmental and social pressures. The World Bank (2021) advocated affordable housing strategies and resilient infrastructure systems to improve living conditions and support sustainable urban development. Additionally, the World Health Organization (2019) stressed the importance of water, sanitation, and hygiene infrastructure in achieving healthy and sustainable human settlements.

The literature demonstrates that shelter-related challenges are multidimensional and require integrated planning approaches that combine environmental sustainability, social inclusion, resilient infrastructure, governance, and community participation. The principles of Ekistics remain highly relevant in addressing these contemporary shelter issues because they promote balanced relationships between humans, society, nature, and built environments. However, existing studies often examine shelter challenges separately rather than through a comprehensive Ekistics-based framework. Therefore, this systematic review aims to bridge this gap by synthesizing existing literature on shelter issues and evaluating sustainable solutions through the principles of Ekistics for developing resilient, inclusive, and sustainable human settlements.

4.1 Major shelter-related issues and challenges

Major shelter-related issues have become a global concern due to rapid urbanization, population growth, climate change, and socio-economic inequalities. Housing shortages

and overcrowding remain critical challenges, particularly in developing countries where urban populations are increasing faster than the availability of affordable housing (UN-Habitat, 2020). Poor shelter conditions often contribute to the growth of informal settlements and slums characterized by inadequate sanitation, insufficient infrastructure, limited access to clean water, and environmental vulnerability (Corburn et al., 2020). These conditions negatively affect public health, social stability, and economic productivity. The principles of Ekistics emphasize the balanced relationship between humans, society, nature, and built environments in achieving sustainable settlement development (Doxiadis, 1968). However, ineffective urban planning, weak governance, and unequal distribution of resources continue to increase shelter insecurity and environmental degradation (Sharifi, 2019). Climate-related disasters such as floods, heatwaves, and coastal erosion further intensify housing vulnerability among low-income populations (IPCC, 2022). Therefore, integrated planning approaches based on Ekistics principles are necessary to promote resilient, inclusive, and sustainable human settlements (World Bank, 2021).

4.2 Housing shortages and overcrowding

Housing shortages and overcrowding have become major global shelter challenges due to rapid urbanization, population growth, economic inequality, and inadequate urban planning. Increasing migration toward urban areas has significantly raised the demand for affordable housing, especially in developing countries where housing supply is insufficient to meet population needs (UN-Habitat, 2020). Consequently, many low-income populations are forced to live in overcrowded settlements and slum areas lacking proper infrastructure and essential public services. Overcrowded housing conditions negatively affect public health, mental well-being, and overall quality of life (Baker et al., 2016). The principles of Ekistics emphasize balanced settlement planning through the integration of human needs, environmental sustainability, infrastructure, and social systems (Doxiadis, 1968). However, rising land prices, weak housing policies, and unequal access to urban resources continue to widen housing inequalities (Sharifi & Khavarian-Garmsir, 2020). Therefore, sustainable and inclusive planning approaches are essential for developing resilient human settlements (World Bank, 2021).

4.3 Informal settlements and slum development

Informal settlements and slum development have become significant urban challenges due to rapid population growth, rural-to-urban migration, poverty, and inadequate housing policies. These settlements are commonly characterized by overcrowding, insecure land ownership, poor sanitation, inadequate infrastructure, and limited access to healthcare and clean water services (UN-Habitat, 2020). Such conditions negatively affect public health, environmental sustainability, and social stability, particularly in developing countries. The principles of Ekistics emphasize integrated settlement planning that balances human needs, environmental conditions, infrastructure, and social systems (Doxiadis, 1968). However, unplanned urban growth and weak governance often result in fragmented settlements and unequal access to urban resources (Mahabir et al., 2016). Informal settlements are also highly vulnerable to floods, disease outbreaks, and

environmental hazards due to inadequate infrastructure and overcrowded living conditions (Corburn et al., 2020). Therefore, sustainable and inclusive planning strategies are essential for improving settlement conditions and reducing urban inequalities (Patel et al., 2021).

4.4 Inadequate infrastructure and basic services

Inadequate infrastructure and limited access to basic services remain major shelter-related challenges affecting the sustainability and quality of human settlements worldwide. Rapid urbanization and population growth have increased pressure on urban systems, particularly in developing countries where infrastructure development often fails to meet the growing demand for housing, transportation, water supply, sanitation, healthcare, and electricity (UN-Habitat, 2020). Poor infrastructure conditions negatively affect public health, environmental sustainability, and socio-economic development, especially within low-income communities and informal settlements. Limited access to clean water and sanitation contributes to the spread of diseases and poor living conditions in densely populated urban areas (World Health Organization [WHO], 2019). The principles of Ekistics emphasize integrated planning that connects infrastructure, environmental systems, and human needs for sustainable settlements (Doxiadis, 1968). However, weak governance, fragmented planning, and climate-related disasters continue to increase settlement vulnerability and environmental inequalities (IPCC, 2022).

4.5 Environmental and socio-economic impacts on shelter

Environmental and socio-economic factors significantly influence shelter conditions and the sustainability of human settlements. Rapid urbanization, climate change, poverty, unemployment, and unequal resource distribution have intensified global shelter-related challenges. Environmental problems such as flooding, air pollution, heatwaves, and land degradation directly affect housing quality and settlement stability, particularly in vulnerable communities (IPCC, 2022). Low-income populations are often forced to live in hazardous areas with poor sanitation, inadequate infrastructure, and limited access to essential public services (UN-Habitat, 2020). The principles of Ekistics emphasize the balanced relationship between humans, society, nature, and built environments for sustainable settlement development (Doxiadis, 1968). However, socio-economic inequality and ineffective governance frequently result in overcrowding, housing insecurity, and social exclusion (Leal Filho et al., 2021). Researchers suggest that sustainable shelter development requires integrated planning approaches that combine environmental management, resilient infrastructure, social inclusion, and equitable access to resources to improve living conditions and settlement sustainability (Sharifi, 2019).

4.6 Principles and concepts of Ekistics

The principles and concepts of Ekistics provide a comprehensive framework for understanding and resolving shelter-related issues through integrated settlement planning. Ekistics emphasizes the interrelationship between humans, society, nature, networks, and built environments in creating sustainable and functional human

settlements (Doxiadis, 1968). Contemporary urban challenges such as housing shortages, overcrowding, environmental degradation, and inadequate infrastructure have increased the relevance of Ekistics in modern planning studies (Rapoport, 2018). The theory promotes balanced settlement development through the integration of environmental sustainability, infrastructure, and human well-being. Sustainable shelter development requires multidisciplinary planning approaches that combine social, economic, environmental, and cultural factors (Sharifi, 2019). However, rapid urbanization and fragmented planning systems continue to create informal settlements, socio-spatial inequalities, and environmental vulnerabilities (Leal Filho et al., 2021). Therefore, Ekistics-based planning approaches are essential for developing resilient, inclusive, and sustainable human settlements capable of addressing contemporary shelter challenges (UN-Habitat, 2020).

4.7 Relationship between humans, society, nature, and built environment

The relationship between humans, society, nature, and the built environment is a central concept in Ekistics and plays an important role in sustainable shelter development. Ekistics emphasizes that human settlements should be planned through the balanced integration of social systems, environmental conditions, infrastructure, and human needs (Doxiadis, 1968). Rapid urbanization, industrialization, and population growth have disrupted this balance, leading to environmental degradation, social inequality, and inadequate shelter conditions in many urban areas (Sharifi, 2019). The interaction between society and the built environment significantly influences public health, quality of life, and socio-economic development. Poorly planned settlements often contribute to pollution, resource depletion, traffic congestion, and climate vulnerability (Leal Filho et al., 2021). Inadequate planning also results in overcrowding, informal settlements, and unequal access to urban resources, particularly among low-income groups (UN-Habitat, 2020). Therefore, environmentally sensitive and integrated planning approaches are essential for developing resilient and sustainable human settlements (IPCC, 2022).

4.8 Sustainable urban and regional planning approaches

Sustainable urban and regional planning approaches are essential for addressing shelter challenges associated with rapid urbanization, environmental degradation, and socio-economic inequality. Modern planning focuses on developing resilient, inclusive, and environmentally sustainable settlements capable of supporting present and future populations. The principles of Ekistics provide an integrated framework that balances human needs, infrastructure, environmental systems, and social organization within settlement planning (Doxiadis, 1968). Sustainable planning requires coordinated approaches connecting housing, transportation, public services, environmental management, and economic development to improve quality of life (Sharifi, 2019). Studies indicate that compact city models, green infrastructure, and transit-oriented development contribute to efficient land use and reduced environmental impacts (Leal Filho et al., 2021). Additionally, resilient planning enhances the capacity of settlements to respond to climate-related risks such as floods and heatwaves (IPCC, 2022). Therefore,

integrated and participatory planning approaches are necessary for developing resilient, inclusive, and sustainable human settlements (UN-Habitat, 2020).

4.9 Role of governance and community participation

Governance and community participation play an important role in addressing shelter-related challenges and promoting sustainable human settlements. Effective governance supports the implementation of housing policies, infrastructure development, land management, and equitable access to urban services. In many rapidly urbanizing regions, weak institutional frameworks and limited public participation have contributed to housing shortages, informal settlements, and inadequate infrastructure systems (UN-Habitat, 2020). The principles of Ekistics emphasize coordinated planning and social organization in achieving balanced settlements (Doxiadis, 1968). Participatory governance improves settlement planning by involving communities in decision-making processes related to housing, infrastructure, and environmental management (Patel et al., 2021). Inclusive governance frameworks also help reduce social inequalities and improve access to affordable housing and public services (Leal Filho et al., 2021). Therefore, collaborative planning approaches integrating governments, communities, and stakeholders are essential for developing resilient and sustainable human settlements (IPCC, 2022).

4.10 Resilient infrastructure and resource management

Resilient infrastructure and effective resource management are essential components of sustainable shelter development and human settlement planning. Rapid urbanization, climate change, and increasing population density have placed significant pressure on urban infrastructure systems, including transportation, water supply, sanitation, energy, and waste management services (UN-Habitat, 2020). Inadequate infrastructure increases settlement vulnerability to environmental hazards and reduces the quality of life within urban communities. The principles of Ekistics emphasize the integration of infrastructure networks, environmental systems, and human needs to achieve sustainable settlements (Doxiadis, 1968). Resilient infrastructure enhances the ability of settlements to withstand natural disasters and climate-related risks (IPCC, 2022). Sustainable resource management strategies such as renewable energy systems, efficient water use, and green infrastructure are increasingly important for urban resilience and environmental sustainability (Leal Filho et al., 2021). Therefore, integrated planning approaches are necessary for creating inclusive, resilient, and environmentally sustainable human settlements (Sharifi, 2019).

4.11 Ekistics-based solutions for shelter development

Ekistics-based solutions provide an integrated and multidisciplinary approach to resolving shelter-related challenges through sustainable human settlement planning. Ekistics emphasizes the balanced interaction between humans, society, nature, networks, and built environments to create resilient and inclusive settlements (Doxiadis, 1968). Rapid urbanization, housing shortages, population growth, and environmental degradation have increased the need for integrated planning approaches that combine social, economic, environmental, and infrastructural considerations within shelter development (UN-

Habitat, 2020). Ekistics-based planning promotes organized land use, resilient infrastructure systems, and equitable access to urban services. Studies indicate that integrated urban planning improves housing quality, environmental sustainability, and socio-economic stability within rapidly growing cities (Sharifi, 2019). Community participation and inclusive governance are also important for implementing sustainable shelter policies and improving living conditions among vulnerable populations (Patel et al., 2021). Therefore, Ekistics-based approaches remain essential for developing resilient, sustainable, and well-planned human settlements capable of addressing future urban challenges (IPCC, 2022).

5. RESEARCH GAPS IN EXISTING SHELTER AND SETTLEMENT STUDIES

Existing studies have widely discussed shelter-related issues such as housing shortages, overcrowding, informal settlements, inadequate infrastructure, environmental degradation, and socio-economic inequalities. Researchers have also examined sustainable urban planning, resilient infrastructure, governance, and community participation in improving human settlements. However, limited studies have systematically analyzed these issues through the principles of Ekistics to develop integrated and sustainable shelter solutions. Most research focuses on separate dimensions of housing and urban development rather than understanding the interconnected relationship between humans, society, nature, networks, and the built environment.

Key Research Gaps

- ❖ Limited systematic review studies on shelter issues through the principles of Ekistics.
- ❖ Insufficient integration of social, environmental, economic, and infrastructural factors in shelter planning research.
- ❖ Lack of comprehensive studies linking Ekistics principles with modern urban challenges such as climate change and rapid urbanization.
- ❖ Limited research on the practical application of Ekistics in resolving informal settlements and housing shortages.
- ❖ Inadequate focus on resilient infrastructure and sustainable resource management within Ekistics-based planning.
- ❖ Limited attention to the role of governance and community participation in Ekistics-oriented shelter development.
- ❖ Lack of integrated frameworks for developing resilient, inclusive, and sustainable human settlements.
- ❖ Insufficient contemporary literature synthesizing shelter development strategies based on Ekistics principles between 2018 and 2026.

6. FINDINGS

The systematic review revealed that shelter-related issues are strongly influenced by rapid urbanization, population growth, socio-economic inequality, environmental degradation, and inadequate urban planning systems. The literature indicates that housing shortages, overcrowding, informal settlements, poor infrastructure, and lack of access to basic services remain major challenges affecting the sustainability and quality of human settlements worldwide. These problems are particularly severe in rapidly urbanizing and developing regions where planning systems are unable to meet increasing housing demands. The review further identified that the principles of Ekistics provide a comprehensive and integrated framework for understanding and resolving shelter issues. Ekistics emphasizes the balanced relationship between humans, society, nature, networks, and built environments, which is essential for sustainable settlement development. Studies showed that fragmented urban planning and weak governance structures often contribute to environmental vulnerability, social exclusion, and infrastructure deficiencies within settlements.

Key Findings

- ❖ Housing shortages and overcrowding are major shelter challenges caused by rapid urbanization and population growth.
- ❖ Informal settlements and slum development are increasing due to poverty, inadequate housing policies, and weak urban governance.
- ❖ Inadequate infrastructure and limited access to basic services negatively affect public health, environmental quality, and living standards.
- ❖ Environmental factors such as climate change, flooding, pollution, and resource depletion significantly influence shelter sustainability.
- ❖ Socio-economic inequalities limit access to affordable housing and essential urban services among vulnerable populations.
- ❖ Ekistics principles support integrated settlement planning by balancing human, social, environmental, and infrastructural needs.
- ❖ Sustainable urban and regional planning approaches improve resilience, environmental sustainability, and settlement functionality.
- ❖ Governance and community participation are essential for effective shelter planning and inclusive urban development.
- ❖ Resilient infrastructure and sustainable resource management enhance settlement stability and disaster preparedness.
- ❖ Ekistics-based planning approaches contribute to the development of resilient, inclusive, and sustainable human settlements.

7. NEED FOR INCLUSIVE AND SUSTAINABLE HUMAN SETTLEMENTS

Inclusive and sustainable human settlements are essential for improving the quality of life, ensuring social equity, and promoting long-term environmental sustainability. Rapid urbanization, population growth, housing shortages, environmental degradation, and socio-economic inequalities have increased the pressure on urban and regional settlement systems worldwide. Many communities continue to experience inadequate housing, overcrowding, poor infrastructure, limited access to clean water and sanitation, and environmental vulnerabilities, particularly in low-income and informal settlements. These challenges highlight the urgent need for integrated and sustainable approaches to settlement planning and development. The principles of Ekistics emphasize the balanced relationship between humans, society, nature, networks, and built environments in creating functional and sustainable settlements. Inclusive human settlements ensure equal access to housing, infrastructure, public services, economic opportunities, and social participation for all groups within society, including vulnerable and marginalized populations. Sustainable settlements also promote efficient land use, environmental conservation, resilient infrastructure, renewable resource management, and climate adaptation strategies to support long-term urban resilience.

Furthermore, inclusive and sustainable settlement development contributes to improved public health, economic productivity, environmental protection, and social stability. Community participation, effective governance, and integrated urban planning are important for addressing shelter-related challenges and reducing inequalities within human settlements. Sustainable settlement planning also strengthens disaster preparedness and resilience against environmental risks such as flooding, pollution, and climate change impacts. Therefore, the development of inclusive and sustainable human settlements is necessary for achieving balanced urban growth, improving living standards, and ensuring the well-being of present and future generations through Ekistics-based planning approaches.

8. CONCLUSION

This systematic review examined major shelter-related issues and explored sustainable solutions through the principles of Ekistics. The study revealed that rapid urbanization, population growth, socio-economic inequality, environmental degradation, inadequate infrastructure, and weak governance systems are among the primary factors contributing to contemporary shelter challenges. Housing shortages, overcrowding, informal settlements, limited access to basic services, and environmental vulnerabilities continue to affect the quality of life and sustainability of human settlements across the world, particularly in rapidly urbanizing and developing regions. The review further demonstrated that Ekistics provides a comprehensive and integrated framework for understanding the relationship between humans, society, nature, networks, and built environments in settlement planning. Unlike fragmented planning approaches, Ekistics emphasizes balanced and coordinated development that integrates social, environmental, economic, and infrastructural dimensions within human settlements. The findings indicate that

sustainable urban and regional planning, resilient infrastructure development, efficient resource management, and inclusive governance are essential for resolving shelter-related problems and improving settlement sustainability.

Additionally, the study highlighted the importance of community participation, environmental management, and climate-resilient planning in developing inclusive and sustainable human settlements. Ekistics-based approaches support efficient land use, equitable access to housing and urban services, disaster preparedness, and environmental conservation, thereby contributing to long-term urban resilience and social well-being. The review also identified significant research gaps related to the practical application of Ekistics principles in modern urban planning and shelter development. In conclusion, the study emphasizes that addressing shelter issues requires integrated and multidisciplinary planning approaches that consider the interconnected relationship between human, social, environmental, and infrastructural systems. The adoption of Ekistics principles can contribute significantly to the development of resilient, inclusive, and sustainable human settlements capable of meeting present and future housing needs while promoting balanced urban growth and improved living conditions for all sections of society.

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