CHAPTER 142

Thematic Literature Review of Unplanned Settlement around Integrated Townships

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ABSTRACT

Rapid urbanisation in India has manifested in two extremes: "Planned integrated townships on the one end and Unplanned settlements on the other". This poses several challenges, such as infrastructure, economics, and socio-cultural factors. Integrated townships showcase sustainable urban development with housing and job opportunities. However, the success of such IT lures migration, which has led to further unplanned growth around such townships. These areas attract low-income workers from the unorganised sector who work in IT because of the low rent. These settlements, which may be called "underdeveloped settlements," appear to have issues with basic physical & social infrastructure, thus damaging the urban systems and adding to the existing socio-economic differences in the metropolitan area. A thematic analysis of existing literature supports this research by identifying key concepts related to urban planning and unplanned settlement. These insights will form the basis for bridging the divide between the plans and the realities in which such unplanned settlements sit, surrounding integrated townships.

Keywords: Integrated townships; Unplanned settlement; Sustainable urban development; Socio-economic differences; Urban planning.

1.0 Introduction

The proportion of urban population of India, according to the 2001 Census, reportedly rose from 27.7% to a ratio of 31.1% (377.1 million) according to the 2011 Census, at an annual growth rate of 2.76 percent (Kapur & Anees, 2024). Increasingly, urbanisation transforms cities and metropolitan areas, determining land use, housing patterns, and socio-economic structures. The 'Housing for All Mission 2022' represents a challenge that must be met by all while addressing the entire matrix of complex issues that beset the real estate industry in India (Nandu, 2023). Among the various urban planning models, integrated townships have emerged as a catalyst for urban growth management.

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Integrated Townships are planned, self-sufficient living environments that offer choice in various housing types, good infrastructure, safety, amenities, and community spaces, which provide comfort and sustainability with a good quality of life (Kumar & Katyal, 2023). Integrated Township is a mixture of residential, commercial, educational, institutional, healthcare and physical infrastructure with road connectivity. An Integrated Township is a 'city within a city' (Nandu, 2023). Perfectly suited integrated townships for 'walk-to-work' lifestyle, shopping complexes, leisure, and entertainment facilities typically have all the elements a customer desires (Ahire *et al.*, 2020).

1.1 Concept of settlements

Settlements are categorized into 2 categories, mainly planned and unplanned settlements. Planned settlements are a human-made work that governs human lives in small areas and also govern human interactions and relationships with nature. Thus, planned settlements are a bid for modernism in their lives (Novitasari *et al.*, 2021). On the other hand, unplanned settlements in their punitive conditions of existence, depending on the character of housing and limited access to infrastructure, may also pose a threat to the quality of life in the long run (Hitayezu *et al.*, 2018). Both permanent or semi-permanent and temporary structures line the city drains, railway tracks, low-lying flood-prone areas, agricultural land, and green belts in and around the city(Kapur & Anees, 2024). As integrated townships grow, they create a demand for labour in construction, domestic work, retail and services, attracting low-income workers who cannot afford to live within the planned township limits.

This results in the spontaneous development of settlements on the periphery, vulnerable infrastructure, restricted access to basic services and uncertain land tenure, among others. There are many aspects composed of lack of proper infrastructure, limited access to basic services, as well as uncertainty in land tenure. Despite the increasing prevalence of this issue, research on the relationship between integrated townships and adjacent unplanned settlements remains Fragmented. The adverse impacts, challenges, and repercussions of the expansion itself become apparent and the insidious fallouts of such a stateless development, thus making the unpremeditated coverage of this area a serious one (Rai, 2012). Understanding how integrated townships contribute to the growth of unplanned settlements and the socio-spatial dynamics that emerge from their coexistence is crucial for developing inclusive urban policies.

1.2 Methodology for literature selection

The systematic literature search is conducted through two online databases (Scopus & Google Scholar). The following keywords have been used to search the datasets:
Filters were set to search only for:

- Peer-reviewed journal articles on urban planning, informal housing, and real estate development.
- Case studies of integrated townships and their surrounding settlements in India and globally.
- Conference proceedings discussing informal urbanization trends.

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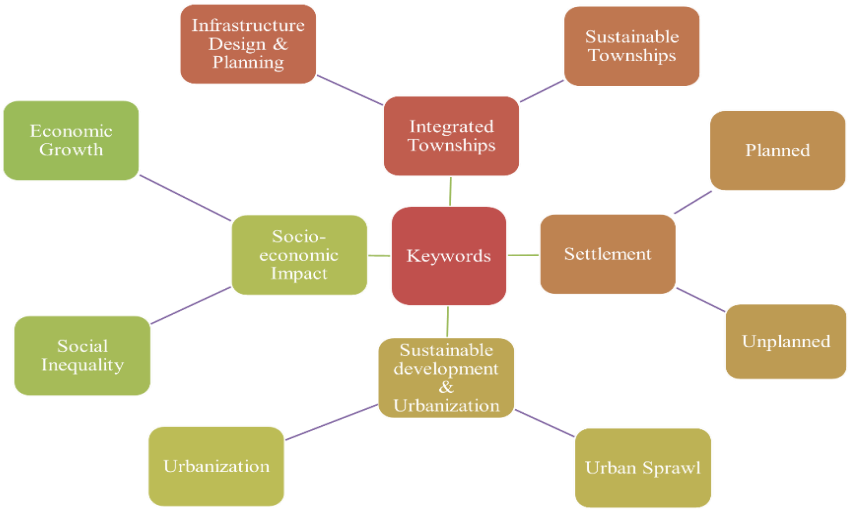
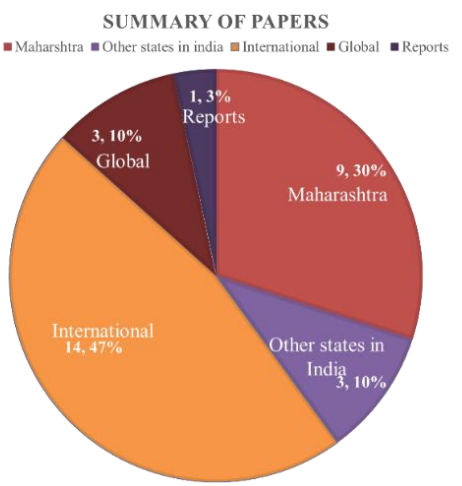
Figure 1: Keywords used to Extract the Datasets



Source: Compiled by authors

From 2005 to 2024. This time frame was selected because the special township policy was historically introduced in 2005. A literature review on unplanned settlements around integrated townships forms the basis for this research work, considering important factors that fuel their growth and the socio-economic, spatial and governance problems that emerge. 159 papers were extracted from Scopus and Google Scholar, out of which 30 literature papers have been used for this thematic analysis. The categorization of papers according to their location is as follows:

Figure 2: Summary of Literature Papers



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Such themes considered include Urban Void Management and Settlement Monitoring, Urban Planning and policy frameworks, Integrated Townships and Sustainable Urban Development, Slum Upgrading and Informal Settlement Solutions. Through peer-reviewed articles, case studies, government reports, and policy documents, this research seeks to fill knowledge gaps and propose knowledge for urban policies, governance frameworks and sustainable development strategies to everyone. The findings are important to policymakers, urban planners and developers for balancing urban growth within diverse urban settings.

2.0 Thematic Review of Literature

Urbanization triggers and creates mixed use communities in townships, the planned settlements-to-absorb population growth and stem economic activities-today end up creating unplanned settlements at the edge by affordability constraints, migration patterns, and poor urban governance. This literature review pursues a thematic agenda to bring together existing studies to examine the major drivers, hindrances, and policy gaps regarding unplanned settlements into the realm of integrated townships.

2.1 Urban Void management and settlement monitoring

Unplanned and underused spaces, also called urban voids, are magnets for the disorganised growth of informal settlements. Monitoring such organic growth increasingly relies on advanced technologies like spatial metrics, remote sensing, and the Urban Void Assessment Index (UVAI). Their effectiveness in tracking changes from land use to morphologies of cities from the onset of development has been proved through various studies. Case Study examples include Akurdi (PCMC), Dar es Salaam, and New Delhi, illustrating how we apply spatial analysis techniques to identify areas vulnerable to informal occupation. Remote sensing and GIS mapping have been particularly effective for monitoring the urban voids and recording the trajectory of settlement patterns.

According to (Raisoni *et al.*, 2024), a Special Purpose Vehicle (SPV) is needed to coordinate urban void management, a Land Bank should be created, and leases should be revised according to UVAI rankings. This new quantitative-qualitative framework will enhance decision-making by enabling the best possible distribution of resources and flexible policy recommendations for urban regeneration. Further to the (Omar & Saeed, 2019) The relevant research finally develops a framework pertaining to the reuse and development of voids within a system to upgrade the operation of a city and help planners and designers improve on existing mechanisms for maximizing efficiency in urban void reuse. The study of (Kuffer & Joana, 2011)develops a spatial metric-based tool that aids in identifying unplanned settlements through VHR images of Dar es Salaam and New Delhi. Metabolically, this includes correlated extensive morphological differences, i.e., size, density and layout between planned and unplanned areas, thus producing an Unplanned Settlement Index for making settlement monitoring and land-use

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analysis better. Such three papers fall into the category of Urban Void Management and Settlement Monitoring, which is rightly complementary as to the research title, to how unplanned settlements evolve around integrated townships.

2.2 Urban planning and policy frameworks

The debate surrounding the governance of unregulated settlements is that of jurisdictional overlaps among township developers, municipalities, and state authorities. Then, the policy to officialise unregulated settlements, such as Singapore's Special Township Policy, creates a question mark regarding the impact on unplanned settlements. How the last cities compare concerning India and the little extent of adoption of global best practices is so little unlike many cities taking strides with inclusive urbanization.

Indeed, the analysis of (Moghayedi *et al.*, 2023) is to demonstrate the considerable impact of household socioeconomic status, housing conditions and neighbourhood safety on the wellbeing and resilience of people living in South African townships. The study also points to the necessity for data-driven and localised strategies for improvement in the micro (housing) and macro (neighborhood) contexts towards sustainable development. According to (Patel & Padhya, 2021), Magarpatta City is perhaps the best example of the neighbourhood concept as most defined in urban planning. It has several governing principles of being self-sufficient, mixed-use, and accessible, meaning that the resident should be able to achieve an activity without the effort of going beyond his doorstep for all.

Some Characteristics that Magarpatta has as a Neighbourhood:

- *Mixed-use development:* A blend of residential, commercial, educational, and recreational spaces.
- *Walkability:* Promotes walk-to-work and walk-to-school lifestyle, thus reducing dependence on private vehicles.
- *Green and sustainable planning:* Consists of public parks, boulevards, and waste management programs.
- *Social and economic inclusivity:* Different income groups are provided housing, jobs within the township itself.
- *Infrastructure and services:* A great urban living facility, with well-made roads, public transport access, hospitals, and malls.

The case brief named as (Can peri-urban development choose partnerships over displacement?, 2016) Examines whether communities can engage in urban development without displacing populations already there. The Magar community group of farmers in Maharashtra together changed their land into a new town, Magarpatta City in Pune. Rather than sell their land to an outsider developer, the Magars got together to develop the area, ensuring their participation in the process of urbanization. This establishes an alternative to the practice of displacing local communities and demolishing their houses for the sake of urban development. By tapping into their social and political networks, the Magars held on to their land and

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livelihood, demonstrating a model in which development is beneficial for the original inhabitants. This research of (Prakash *et al.*, 2022) Focuses on land pooling as an alternative for sustainable urbanization and includes case studies to understand alternative urban development practices in India.

- Land Pooling/Readjustment (LP/R): Hence, this is the arrangement under which landowners pool their lands to urbanize them. It is not that the government compulsorily acquires land; the landowners voluntarily pooled their land and would develop that to return parts of that developed land to them. Such an approach to riverbanks development needs, along with that protection of the landowners.
- Amaravati, Andhra Pradesh: Andhra Pradesh government devised a pooling scheme to develop the new capital city. The voluntary nature of pooling involved persuading around 25,000 farmers to pool around 30,000 acres of farmland in 60 days. This voluntary approach minimized disputes and ensured that landowners became stakeholders in the process of urban development.

This paper indicates how pooling land could be an approach that would be fair and justly inclusive from the urban policies. Direct involvement of landowners with proper consent may create this kind of urbanization that can go well together with the sustainable protection of the rights and livelihoods for the original landholders.

This study of (Hayek *et al.*, 2010) Regulates the question of urban sprawl in Switzerland and examines potential future settlement developments for the year 2030. A series of parameters are adopted to measure sprawl, while different growth scenarios are evaluated considering economic and social factors. The study emphasizes the importance of planning policy in curbing urban growth and protecting landscapes. The research underlines the importance of boundaries on growth, regionally, but specifies none. Different scenarios show that Economic growth does not inherently mean densification; balanced regional development can also limit consumption of land. 3D visualization and additional indicators are recommended for developing understanding and future landscapes' planning.

According to (Novitasari *et al.*, 2021) The domains of ekistics are found in both planned and unplanned settlements, though the two differ in many respects such as governance, infrastructure, and social structure. Planned settlements have their infrastructure built in advance; the topography of the land is followed; rules and regulations dictate the planning policies; such settlements often house the elites. The unplanned settlements develop spontaneously, whether inward-oriented to nature or outward-oriented for economic opportunities, trade being the main one. In planned areas, culture is imported by elites, whereas the unplanned settlements have tremendous diversity in socio-cultural dynamics.

Based on (Sharma *et al.*, 2015) Study, the attempt must be taken to generate self-sustained employment, generating economic centres and direct their connection towards townships to assist in guiding such strategic suburban growth. It ensures the affordable housing of EWS/LIG along with planned infrastructure and does not provide purely profit-oriented

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flexibility to private developers. EWS/LIG housing and economically active development must be mandated from policies, and incentives should be made available for attracting private investment into the housing sector.

2.3 Integrated townships and sustainable urban development

Integrated townships have emerged on the scene in Pune and Uttar Pradesh; while self-sufficient, they also lead to peri-urban growth and displacement. Although mixed land-use planning is inclusive, some townships worsen the economic situation of others. Studies must advance toward governance and sustainability aspects of township-led urbanization concerning balanced development. The authors (Ahire *et al.*, 2020) Research is on comparing the Mahalunge-Man integrated township to the other townships in Pune regarding their sustainability and effectiveness. The paper identified integrated townships as self-sustaining communities which to some extent exert less pressure on the urban environment, promote the well-known "walk to work" lifestyle, and improve quality of life. The comparative studies are in line with the concept of sustainable development, since they emphasize the proper planned growth of an urban area, efficient infrastructure provision, and reduced congestion.

Moreover, (Rai, 2012) The author explores the challenges posed by rapid urbanization in developing nations and offers integrated townships as an avenue towards sustainable urban development. Self-sufficient townships are being built that contain residential, commercial, retail, and recreational areas of the same land, in addition to their own infrastructures and resource management systems. The "walk to work" concept, along with public-private partnerships, would therefore decrease pressure on urban centers, reduce environmental impact, and enhance the quality of life for its residents. The article speculates that some Indian states, like Maharashtra, Gujarat, Karnataka, and Rajasthan, have put in a Special Township Policy to promote the development of these sustainable communities.

From the point of view of (Nayak, 2017) The causes, effects, features and contributions towards the sustainable development are as follows

- *Causes:* Migration from rural areas to urban centers for better employment and living conditions. Industrialization encourages labour movement to urban areas.
- *Effects:* Overcrowding in the city, leading to the possibility of infrastructure collapse. Environmental degradation occurring in cities due to pollution and waste.
- *Satellite townships:* A self-sufficient township consists of various residential, commercial, and recreational areas. All urban infrastructure encompasses transportation, water supply, and waste disposal. Environmental policies embody environmental sustainability through green area creation and eco-friendly practices.
- *Contributions towards sustainable development:* Alleviates urban congestion by decentralizing population and economic activities. Promotes balanced regional growth, preventing heavy reliance on major cities. Enhances the quality of life through planned urbanization and efficient resource use.

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In short, the study reinforces the point that satellite townships are a major remedy for the problems brought forth by urbanization and hence contribute to sustainable urban development. According to (Bello *et al.*, 2016) A study has been carried out to identify the challenges related to rapid urbanization in Ogun State, proposing integrated township development as a sustainable remedy. According to the authors, most developing countries such as Nigeria experience heavy-population influxes towards urban centers because of concentration in materials and opportunities, causing overcrowding and haggling among existing infrastructure. Evolving this kind of problem, Ogun State Government undertakes transformations of rural places into urban locations by making them statewide infrastructurally dotted. The paper addresses the issues of citizens' involvement to ensure acceptance and sustainability in development initiatives. Housing and social amenities provision will be an important element in successfully developing integrated townships, in this regard to the sustainable urbanization goals.

As stated by (Haspe & Deshmukh, 2016) The integrated townships conceptualized as self-sustaining communities that provide a mix of residential, commercial, recreational, and other public amenities all within one development. These townships create a platform for balanced and sustainable urbanism via the provision of ample housing and facilities. This allows the authors to hold forth about a collaboration between the public and private sectors in developing affordable housing within these townships, highlighting that partnership among the parties is central to achieving sustainable urban development. In a nutshell, the paper argues in favour of integrated townships and sustainable development by promoting planned and self-sufficient communities as a means of addressing the challenges of urban existence via proper infrastructure and amenities; thus, making for more sustainable and liveable cities. The paper by (Kumar & Katyal, 2023), discusses the integrated townships' influence on urban developments in Uttar Pradesh. Some of the featured integrated township projects of the state include

- Wave City in Ghaziabad,
- Eldeco City in Lucknow,
- Gaur City in Greater Noida,

The paper also provides an in-depth critical analysis of the challenges posed by integrated townships in terms of the possibility of socio-economic disparity in development and the need for engaging policies that would allow equitable development. The authors argue that while integrated townships offer an effective tool for urban development through provision of orderly as well as sustainable living environments, issues regarding proper planning and implementation of policies would need to be tackled before establishing mutual benefit for wider populations. The paper of (Patel & Gandhi, 2019) Discusses the concept of self-sustaining integrated townships as solutions to various challenges that arise due to urbanization. It states the most natural practice in building such entities: waste management, Revenue Collection, water conservation, renewable energy consumption, among all components partaking in the process of a sustainable environment. Further, those characteristics tend to improve the quality

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of life of township residents while reducing the ecological footprint is at par with developments made in the principles of sustainable development. The (Kumar, 2019) Article on integrated townships considers 'Club hood,' as applicable in the case of Lavasa and Magarpatta. Detailed in the study are how integrated townships serve as exclusive communities upholding club goods by providing shared amenities to a select group of participants. Notable Observations of these Integrated Townships as Club Goods:

- Integrated Townships as a Club Good: The amenities provided here are exclusively for residents, thus enhancing community and exclusion.
- Lavasa conceived as a private city and burdened with several drawbacks, such as environmental issues and financial problems, now suffers from development stalling.
- Magarpatta, on the other hand, was built by pooling agricultural land from local farmers. The township has emerged as a successful model of sustainable urban development, integrating residential, commercial, and recreational uses.

Overall, the paper indicates that integrated townships would assure a very high-potential service and infrastructure supply but accept some complexity regarding social divides and governing these townships. As per (Nallathiga *et al.*, 2021) Examines the progression of township development in Pune, highlighting a shift from traditional satellite townships to modern smart townships.

2.4 Key points

- *Satellite townships:* Initially developed as peripheral settlements to alleviate urban congestion, these townships functioned as 'counter magnet settlements' to the main city.
- *Integrated townships:* Over time, the focus shifted toward self-sustaining communities that incorporate residential, commercial, and recreational facilities, embodying the concept of sustainable development.
- *Smart townships:* The latest phase involves the adoption of smart technologies and principles of new urbanism, emphasizing efficient resource management, environmental conservation, and enhanced quality of life.

This progression underscores the importance of integrating sustainability into urban planning, aligning with the broader theme of sustainable development. The paper of (Khare & Thakur, 2020) examines the growing integrated townships across Pune with the aid of remote sensing and GIS technologies. Further, it reveals a major suffrage in the urbanscape especially as fringed by township development. This research has discovered the conversion from agricultural use to residential and commercial use, necessitating an immediate call for formulation strategies for sustainable urbanization-integration of development and environmental conservation. The article of (Yu *et al.*, 2021) Presents a framework for constructing an information management service platform for township administrations. The platform aims to improve administrative efficiency and service delivery by integrating multiple information systems and resources. The key elements are as follows:

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- Integrated Data Management: The system supports combining different data sources under one umbrella for easier management and sharing across different departments.
- Modular Design: Functions can be added or modified in accordance with changing administrative requirements, allowing for the necessary level of flexibility and scalability around which the system will be built.
- User-Focused Services: The platform intends to deliver user-friendly and efficient public services for township residents to improve citizen satisfaction.
- Use of Advanced Technology: The application of GIS and similar technologies assisted in analyzing spatial data and making decisions.

This framework seeks to achieve the general goal of incorporating sustainable development principles into township-level planning and management. Information technology is used in the platform to conserve resources, enhance service efficiency, and ensure transparent governance, which are vital for the sustainable urban development agenda.

2.5 Slum upgrading and informal settlement solution

According to research done in Zanzibar, Egypt, and Kigali, unplanned settlements are linked with land tenure security, migration, and unaffordable housing. The example of Jakarta emphasizes self-evident governance in informal settlements, notwithstanding weak controls. The sustainable upgrade into improved living conditions can thus be facilitated by integrating urban planning with community participation with concurrent tenure formalization. The project (Africa) Takes an integrative approach to upgrading informal settlements and focuses on the equity distribution of public space, the safety of that space, as well as the public provisioning for basic services such as water, sanitation, and waste management. The SDGs focused on are 6 and 11: about sustainable urban development and good living conditions. It hence aligns with the commitment of the New Urban Agenda in social inclusion, poverty alleviation, and inclusive urban prosperity through the housing upgrade into economic and social opportunities that make informal settlements resilient and liveable. The study entitled "The Dynamics of Unplanned Settlements in the City of Kigali" by (Hitayezu *et al.*, 2018) Goes deep into the informal settlements of Kigali and puts forward critical notes for slum upgrading and informal settlement approaches. The study notes that about 79% of the population in Kigali has been settled in the unplanned pockets due to rapid growth of urbanization, which is beyond the pace of infrastructure and housing development. Some of the key findings of the study included:

- Migration Patterns: An estimated 65% of adult inhabitants in these settlements are internal migrants in search of employment opportunities.
- Employment and Mobility: Limited by the high costs of commuting, low-income families are forced to live close to their workplaces.
- Housing and Services: Residents often face challenges to housing quality and basic services.

The study recommends a gradual and integrated redevelopment focusing on attracting economic activities and enhanced public transport to ameliorate living conditions. This supports

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sustainable urban development goals through the recognition of informal settlement upgrading as being unique and case specific. This report of (Mahabir *et al.*, 2016) Investigates slums as a social and physical construct, drawing attention to hindrances such as insufficient data and informal economies, while also finding gateways, for instance, geospatial technologies and participatory mapping. In conjunction with slum upgrading, it promotes an interdisciplinary approach to understand and improve informal settlements. The present study (Charman & Petersen, 2015) Investigated the spatial distribution of informal enterprises in the Cape Town townships and found that 75% operate within residential areas rather than commercial concentrations, suggesting the need for policies that support such embedded businesses and to facilitate strategies directed at integrating informal economies into urban planning.

The study of (Ali & Sulaiman, 2006) Evaluates the informal settlements in Zanzibar resulting from rapid urbanization, weak land policies, and poverty, with more than 70% of the urban population represented. These impacts manifest themselves in terms of environmental degradation and limitation of access to basic services, calling for improvement in urban planning and policy reforms. This paper of (Nurgandarum *et al.*, 2019) Examines how self-organizing processes shape unplanned neighbourhoods in Jakarta, stressing their organic processes of development. In this regard, it has been argued that the processes of understanding the formation and transformation of settlements will rather be the basis for more context-sensitive interventions in slum upgrading.

The paper titled "Unplanned Settlements in Saudi Arabia: The Case of Al-Sabeel District, Jeddah," written by (EL-SHORBAGY, 2020), investigates Al-Sabeel's characteristics and challenges, an unplanned settlement in Jeddah. The research makes clear that Jeddah has more than 54 unplanned settlements that together house more than a million residents, accounting for about one-quarter of the city. Al-Sabeel District, located near the city centre, is characterized by narrow streets crowded with buildings, many of which are in deteriorated condition. On this basis, there is a need for community participation and government intervention to make such districts liveable.

(Foster, 2009) is looking at informal housing settlements in developing countries through the eyes of the "commons" framework in her essay "Urban Informality as a Commons Dilemma." She believes that these settlements display characteristics of common-pool resources. The actions of individual users lead to challenges at the collective level, including overcrowding and insufficient infrastructure. Foster argues that some form of collaborative governance and empowerment of stakeholders to manage their communities is essential if these problems are to be managed for sustainable urban development.

3.0 Key Findings and Research Gaps

The below discussion highlights significant insights categorized into four themes, which are Urban Void Management, Slum Upgrading, Urban Planning Policies, and Integrated

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Townships. Each theme presents a different viewpoint regarding urbanization and settlement pattern combinations.

Table 1: Key Findings, Research Gaps, and Contradictions in Urban Planning and Settlement Studies

Theme	Key Findings	Research Gaps	Contradictions
Urban Void Management & Settlement Monitoring	• Urban voids attract informal settlements (Akurdi, Dar es Salaam, New Delhi). • UVAI & remote sensing help track growth. • SPVs & land banks can reclaim urban voids.	• Lack of policy-driven urban void repurposing. • Need real-time monitoring integrating land-use policies.	Some studies claim urban voids lead to slums, others argue they can be reclaimed for public use.
Slum Upgrading & Informal Settlement Solutions	• Participatory slum upgrading improves outcomes (Dharavi, Amanora models). • Land tenure security encourages housing investment.	• Insufficient studies on integrated townships driving slum formation. Need comparative studies across economic zones.	Some research sees slum upgrading as effective, others highlight its limited long-term impact without economic inclusion.
Urban Planning & Policy Frameworks	• Magarpatta & Amaravati demonstrate successful land pooling. • Weak regulatory enforcement fosters unplanned settlements.	• Limited long-term studies on land pooling's impact on sustainability.	Debate on whether land pooling is scalable beyond specific socio-political contexts.
Integrated Townships & Sustainable Development	• Townships shape urbanization but displace low-income groups. • Mixed-use policies mitigate urban sprawl.	• Unclear impact of integrated townships on regional economic disparities. • Need research on governance structures ensuring inclusivity.	Some claim integrated townships promote economic growth, others argue they worsen affordability & exclusion.

Source: Compiled by authors

While major findings disclose that planning instruments, governance, and spatial monitoring would be the main tools within reach, research gaps indicate the absence of longitudinal studies and policy-led interventions. Conflicting arguments existed among proponents regarding the effectiveness of land pooling, the sustainability of slum upgrading, and integrated townships' impact on affordability and exclusion.

4.0 Conceptual Framework for Future Research

A coherent approach will provide direction in urban void management, slum upgrading, planning policies, and integrated townships. This framework incorporates aspects of spatial

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analyses, governance models, socio-economic impacts, and sustainability matters.

Urban Void Management & Settlement Monitoring

- Real-time GIS-based spatial tracking for informal growth monitoring.
- Draft policy frameworks for urban voids repurposing through Special Purpose Vehicles (SPVs) or community land trusts.

Solutions for Slum Upgrading & Informal Settlements

- Investigate participatory governance models for sustainability in upgrading.
- Research economic mobility after upgrading with a further focus on employment and tenure security.

Urban Planning & Policy Frameworks

- Examine the scalability of the pooling of land beyond cases that have worked.
- Assess the role of enforcement through regulation in curbing urban sprawl and informal settlements.

Integrated Townships & Sustainable Development

- Study the economic spillover effects of these integrated townships on regional disparities.
- Evolving inclusive planning models that are affordable to lower-income groups.

This is a framework that brings existing research gaps closer, new technological innovations, and policy reforms complemented by socio-economic assessments contribute to sustainability in the urbanization process as well as inclusiveness.

5.0 Conclusion

The study of unplanned settlements around integrated townships has revealed some big urban challenges such as poor land utilization, poor governance, and inequalities among the populace. Findings include that urban voids always attract informal settlements; slum upgrading will help in stabilizing housing; integrated townships draw the affordability issue closer but also pattern urbanization; and land-pooling models like Magarpatta bring forth new forms of urbanization with not too much study in their long-term sustainability.

This is, therefore, a matter of extreme relevance to future urban planning because as cities expand, in future they will be called upon to strike a balance between planned versus unplanned development and inclusive growth. Without attention to unplanned settlements, then these will continue to grow and grow, including urban sprawl, hence unsustainable infrastructures, and the poor are excluded socioeconomically. They will jeopardize the goal of sustainable development. The need for governance mechanisms regulating informal growth but integrating at-risk communities under urban planning is a significant takeaway from the findings for policymakers, Planners should also embrace real-time monitoring tools (e.g., remote sensing, UVAI) for the planned establishment of affordable military mixed use. The accountability of the developer extends to guiding the planned development and infrastructure measures within the township, taking cognizance of compliance with relevant regulations, as well as to mitigate

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probable negative externalities. In addition, where an integrated township is sanctioned, the environment should also be developed in a systematic manner to avoid sporadic settlements and facilitate uniform urban development. Researchers have more work to do in establishing the causal linkages about integrated townships and informal settlements, taking the long-term impact assessments of land pooling, and looking at scalable models towards inclusive urbanization. Mitigation of unplanned settlement growth and resilient, equitable urban futures requires a multi-stakeholder approach-combining innovative governance, planning, and empirically grounded research.

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