

The Necessity of Enhancing Resilience and Employing A Multi-Scale Approach in Urban Master Plans



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Abstract

In recent decades, with the increase in Tehran's population due to high migration from other cities and housing affordability challenges, the construction of densely populated satellite towns in suburban areas has gained popularity in urban projects. However, research and empirical evidence suggest that in such mass development projects, primarily aimed at addressing the population crisis and driven by an economic efficiency approach, the community, which is the fundamental factor for social stability, receives minimal attention. This ultimately leads to a weakening of resilience and severe social instability at various urban scales. On one hand, master plans with a governance approach in mass development projects eliminate the neighbourhood system. On the other hand, designers, by neglecting social sustainability concepts as the main guarantee of urban project success, focus solely on economic issues, viewing these urban spaces as mere turbulent settlements. These settlements, formed by migrants from different cities with different cultural perspectives living together, impose a complex social layer on the region. The social challenges created, often alongside economic challenges, financial instability, environmental issues, and urban infrastructure weaknesses, exert significant pressure on the urban fabric as a dynamic socio-ecological system. This research aims to highlight the importance of using a multi-scale approach in top-down plans, emphasizing the role of the neighbourhood scale as the main shaper of urban structure and the soul of the city for daily life and urban social interactions. Therefore, it is expected that master plans examine urban development projects at various scales, from neighbourhoods to satellite towns, districts, regions, and cities, overlapping complex social layers with environmental layers for analysis and understanding.

Keywords: master plan, satellite towns, social resilience, multi-scale approach, neighbourhood

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Extended Abstract

The article examines Iran's decentralization policy of building satellite towns around Tehran to reduce urban pressures. Despite intentions to redistribute population and resources, many remain underdeveloped, sparsely inhabited, or socially stagnant. While economic constraints, limited job opportunities, and poor accessibility are acknowledged, the study focuses on the overlooked need for multi-scale planning, especially the neighbourhood scale, as a foundation for urban resilience. Urban resilience—defined by Cutter et al. (2014), Elahi et al. (2022), and Anger et al. (2021)—is the dynamic capacity of a city to absorb shocks, adapt, and maintain functionality under environmental, economic, or social stress. Resilience emerges from the integration of infrastructure, social networks, economic systems, and environmental conditions. The creation of dense satellite towns, while intended for growth, can also generate ecological and social disruption, revealing the interdependence between social cohesion and spatial planning.

The dominant master plan approach is criticised for prioritising macro-scale, quantitative targets such as housing density and land-use efficiency, while neglecting socio-cultural needs. Neighbourhoods—the smallest urban unit—are key arenas for daily interactions, cultural identity, and participation, all central to social resilience. Ignoring this scale risks producing fragmented, unstable communities. The study proposes a multi-scale framework linking neighbourhood, city, and regional levels into an interconnected system. Resilient neighbourhoods reinforce city-wide stability, while vulnerabilities at one scale can cascade through the urban fabric. This is crucial in migrant-driven satellite towns, where integration between local strategies and higher-level policies ensures adaptability. To operationalise this framework, neighbourhood-level actions—strengthening identity, participation, and tailored services—must align with city- and region-wide governance, economic diversification, and sustainable resource management. The article concludes that correcting the macro-scale bias in Iranian planning by embedding neighbourhood vitality within broader structures is essential for adaptive, socially cohesive, and sustainable urban systems, offering lessons for metropolitan governance globally.

A multi-scale approach to urban resilience can serve as a tool for sustainable development in the complex fabric of suburban settlements. The neighbourhood scale, considering its key role in shaping the initial structure of urban society, is the primary focus of this approach.

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