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HORIZONTAL ARCHITECTURE POLICY RECOMMENDATIONS

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KAPGEM

KAMU POLİTİKALARI ARAŞTIRMA VE GELİŞTİRME MERKEZİ

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Horizontal Architecture Policy Recommendations

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FOREWORD

In developed countries, the urbanization model is fundamentally based on horizontal architecture. Horizontal architecture offers a lifestyle that remains connected to the land, trees, urban agriculture, and neighborhood culture. In this sense, horizontal architecture is the design of detached houses with gardens.

Following the instructions of our President, horizontal architecture has been adopted as a state policy in Turkey. This important policy innovation regarding the transition to horizontal architecture is a significant indicator that our country has entered a new, human-centered phase in architecture.

This study proposes horizontal architecture as an alternative to vertical architecture, which leads to extremely negative consequences such as traffic congestion, noise, parking problems, earthquake-prone architecture, cities vulnerable to disasters, social alienation, introversion, unsuitability for the healthy growth of children and young people, increased crime and addiction rates, and lack of respect for privacy. In Turkey, there is a need for horizontal architecture, and as the book clearly demonstrates with striking data, the possibility of adopting it also exists. In developed countries around the world, the average for horizontal architecture is approximately 60 percent. If 60 percent of Türkiye were to switch to horizontal architecture in the form of detached houses with gardens (including common areas), an area the size of Kırşehir province, which is 0.8% of Turkey's total area, would be sufficient. Contrary to popular belief, horizontal architecture occupies a very small area.

Horizontal architecture is considered to offer significant benefits to Turkey in many areas, including providing a healthy and tranquil living environment, contributing to the development of neighborly relations and the preservation of neighborhood culture, enabling the community, especially children, to live in detached houses with gardens, in close contact with the land and its bounty, without being confined to apartment buildings, and creating safe and resilient cities. I would like to express my gratitude to all the authors who contributed to this book, prepared by the Urbanization Policies Desk of the Center of Public Policy Research and Development (KAPGEM).

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INTRODUCTION

In the literature, the 21st century is described as the "urban age" because urbanization is taking place at an unprecedented speed and scale in history. (Gürboğa, 2024). The numerical data that substantiates this characterization shows that, according to the World Bank (2024), as of 2022, 56.8% of the world's population lived in cities, meaning that approximately 4.54 billion people resided in urban areas. It is estimated that by 2050, two-thirds of the world's population will live in cities, highlighting that the nearly 6,000-year-long process of urbanization has reached an unprecedented intensity. This trend suggests that humanity will become almost entirely an "urbanized species" by the end of the century (Wilson, 2024).

Turkey's urban population increased from 44.2 million in 2002 to 65.4 million in 2022. During the same period, the urban population ratio rose from 66% to 77% in 2023. As of 2023, the population residing in provincial and district centers was recorded as 80,007,258 (Turkish Statistical Institute, 2025a). According to the Address-Based Population Registration System results for 2024, 93.4% of the population lives in provincial and district centers. This increase indicates that the country's demographic structure has become significantly more urban-oriented. Furthermore, the rise in the share of people living in urban agglomerations of over one million from 29.6% to 38.1% during this period reveals that urbanization has not only increased quantitatively but has also become spatially concentrated in the centers of large cities. Therefore, the urbanization process in Turkey is increasingly shaped around growing metropolises, and the population is more densely concentrated in large-scale urban centers. Estimates for 2050 show that approximately 95% of the population in Turkey will reside in urban areas (ÇŞİDB, 2024). For this reason, urbanization and city management should be among the priority areas of study in policy making and future planning.

In developed countries, detached houses with gardens are common and considered an indicator of development. In Turkey, shifting from the prevalent multi-story apartment buildings to horizontal architecture with detached houses with gardens is a crucial necessity, both for human well-being and for addressing other problems arising from urbanization. (Kırışık ve Öztürk, 2021).

In large cities, living spaces are becoming increasingly limited and concentrated in certain areas. These limited areas, which serve as centers for work, social, and cultural life, are in higher demand. While it is more difficult to make changes to a building in a vertical

architectural model, it is easier to implement participatory, ecological, and sustainable changes with a more flexible approach in horizontal architecture. In vertical architectural models, the increased number of floors necessitates elevators, leading to higher energy consumption. Horizontal architecture, on the other hand, can reduce damage from natural disasters. While vertical architecture utilizes advanced technologies for disaster mitigation, it increases construction costs. However, this reduces land costs and lowers labor costs. However, accommodating the maximum number of people in confined spaces leads to urban density. Opening new roads in central areas becomes more difficult, resulting in traffic and parking problems, and an increase in traffic accidents. Traffic problems also lead to losses in labor, workforce, and time. Furthermore, due to all this congestion, the built environment becomes dominant, and the city skyline is distorted. The green space within the city decreases in the face of the increasing building stock. Moreover, the increase in vertical construction reduces opportunities to benefit from sunlight and wind. Noise levels exceed psychological thresholds. Crime and violence rates increase. It leads to a consumer society. Building, life, and property safety cannot be ensured during earthquakes. Deaths and injuries due to fires are increasing. Difficulties are experienced in meeting basic needs such as water, electricity, and natural gas. Security problems are increasing. Psychological disorders and suicides are on the rise. It becomes more difficult to transmit culture to children and young people. The lives of various groups, including children, young people, the elderly, people with disabilities, women, and men, are becoming increasingly difficult. The culture of mutual support is disappearing, and respect for others is diminishing. Social ceremonies and gatherings such as engagements, weddings, funerals, holidays, and visits are vanishing. Neighborhood relations are weakening, people are becoming individualistic and isolated, and a societal model detached from the land and nature is emerging. Therefore, it is important to spread the population and workplaces over a wider area and to implement a horizontal architectural model instead of a vertical one.

In the early 20th century, E. Howard and F.L. Wright were important urban planners and architects who embraced the garden city and horizontal architecture model. Horizontal architecture refers to low-rise buildings where each family has its own healthy living space. Horizontal architecture is not just a housing model but also offers a positive lifestyle. In the horizontal architecture model, planning according to the needs of each individuals becomes easier. In a multi-story vertical architectural model, the likelihood of conflict and problems among co-owners within a building increase, while in a horizontal architectural model, this likelihood decreases, and individuals' sense of belonging to space increases. With horizontal

architecture, neighborhood culture can be rebuilt, and neighborly relations can be improved. In this way, mutual assistance and solidarity among individuals can increase.

CONCEPTUAL FRAMEWORK

In Turkey, the idea that cities with cultural heritage value are not adequately protected has long been a widely expressed view in society. Many of our cities, particularly Istanbul, have significantly deviated from their original and memorable appearances of the past. The central government has acknowledged this negative change in cities and announced the development of a new urbanization policy. This new approach has been defined as "horizontal architecture." Although this concept is reminiscent of the "horizontal urbanism" approach adopted by architect Turgut Cansever, it differs from it in terms of its application. In Cansever's perspective, horizontal urbanism is a concept based on each family living in their own living space in 1-2 story detached houses, close to the land. This model is considered not only a physical form of settlement but also a natural reflection of a particular lifestyle.

Vertical architecture refers to a type of building development where multiple independent properties are located within a single structure, regardless of building height or number of floors (Akın, 2017). In contrast, horizontal architecture can be defined as a settlement pattern consisting of one or two-story houses with gardens, spread over large areas in urban planning, where only one family lives on a plot of land (Düzenli, 2016). Without a clear understanding of these concepts, discussions about whether cities should be vertical or horizontal will become vague, undefined, and therefore unproductive. Although horizontal architecture has gained more prominence in our country recently, debates about how cities should be structured date back quite a long time. 19th and 20th-century urban planners, seeking solutions to the chaotic and unhealthy urban conditions resulting from rapid population growth, put forward various ideas around the question of "how should the ideal city be built?". One of the important issues discussed within this framework was whether cities should be shaped by vertical structures or horizontal settlements.

Le Corbusier, a pioneering figure in modern architecture, frequently used tall buildings in his projects and argued that cities were not dense enough. According to him, old buildings should be demolished and replaced with glass and steel skyscrapers geometrically arranged amidst parks and wide avenues (Corbusier, 1999). From Le Corbusier's perspective, vertical development both saves land and increases the population density per square meter in a healthy way. It also reduces commute times to work and home while allowing for more green spaces. In contrast to Le Corbusier's view, figures like Howard, Wright, and Bauer favored horizontal urban development. Ebenezer Howard, a 19th-century urban planner, proposed a model of two-story houses connected by wide avenues in his "Garden Cities of Tomorrow," thus advocating horizontal development (Howard, 2019). This "Garden City"

vision aimed to combine the amenities of city life with the natural and health benefits of rural living. According to Howard, just as people voluntarily migrated from villages to cities, they will also voluntarily move away from unhealthy, unplanned, and multi-story urban life (Fishman, 2016). Frank Lloyd Wright, one of the founders of organic architecture, opposed high-rise buildings, arguing that "putting everyone in the same container" was a flawed approach. According to Wright, since everyone has different needs, tastes, and problems, housing should also be personalized. Therefore, his ideal city vision is based on detached houses spread over a large area, built in harmony with nature. Wright developed a model of a city where each individual owned a plot of land no smaller than four acres and worked as a farmer part-time (Fishman, 2016). Turgut Cansever, considered a pioneer of horizontal architecture in Turkey, also supported Wright's approach. Cansever's understanding of urban planning prioritizes the creation of living spaces by the people themselves, based on their knowledge and wisdom, rather than regulations imposed against their will. The role of the state is to guide and supervise this process within certain standards.

According to Bauer (2020), the ideal dwelling is a small house model where each household has its own garden; other forms of housing are, in his view, nothing more than misfortunes. Bauer's views largely coincide with the principles emphasized by Cansever regarding Ottoman-Islamic architecture and neighborhood structure. This study posits that Cansever's concept of horizontal development, which he calls "horizontal architecture," constitutes an ideal type of horizontal urbanization. However, it is argued that approaches that merely limit the number of floors while increasing the area occupied by buildings on the site cannot fully realize the benefits attributed to horizontal architecture.

According to Turgut Cansever, "Horizontal Architecture"

Turgut Cansever, an architect and thinker considered a pioneer of horizontal architecture in Türkiye, did not directly use the terms "horizontal architecture" or "horizontal construction," but instead preferred the concepts of "horizontal condominium ownership" or "horizontal building ownership." According to Cansever, buildings should expand horizontally rather than rising vertically. According to her, existence is in a constant state of transformation and movement; therefore, reinforced concrete, multi-story, and long-lasting permanent structures hinder this dynamism. To address this problem, Cansever proposes the construction of flexible housing units—two or at most three stories high, with gardens and courtyards, built with natural and local materials (wood, stone, etc.) -- that can be easily expanded according to needs.

Cansever (2014) called this approach "horizontal dense settlement" and argued that this model offers a sustainable, livable, ecologically, economically and socially participatory living environment (Düzenli, 2016). According to him, horizontal settlement is not only a model of urban planning; it is also a way of life and a worldview. It is argued that with this understanding, people can become more sensitive to their environment, appreciate architectural values, and escape from being passive spectators (Cansever, 2016).

Cansever (2014) argues that placing a family in a thirty-story building means imposing on them where they should live, and that this deprives the individual of the right to perceive and evaluate their environment. Living in high-rise buildings weakens people's connections with each other and with nature. Neighborhood relations in such structures are reduced to shallow relationships shaped by superficial and technocratic interventions. Cansever also stated that children growing up among tall concrete blocks lose their connection with nature, and the elderly spend the final years of their lives deprived of aesthetic beauty (Ayvazoğlu, 2019). Therefore, it is believed that the horizontal settlement model will strengthen neighborhood ties, encourage solidarity and mutual assistance, and save people from being lost amidst massive concrete structures.

Cansever opposed the idea of high-rise buildings even when necessary. For example, he harshly criticized the "frugal city" project developed by Italian architect Paolo Soleri, which included 100-story buildings and argued that structures should rise vertically due to the limited land available in cities. According to Cansever, cramming people together to solve the population problem is sacrificing humanity to technology (Ayvazoğlu, 2019). According to Cansever, it is not enough for a city to be merely economically viable; it must also be aesthetically pleasing and reflect the thoughts and needs of its inhabitants. However, high-rise apartment buildings present a significant obstacle in this regard. Because even if those living in these buildings want to change the shape of their homes, they have no opportunity to do so; they can only change their furniture, and often they are not even aware that they have to settle for this (Cansever, 2014). According to Cansever, if cities were built with a higher horizontal density, the unhealthy air from elevators used in vertical buildings would not be breathed, energy would be saved to operate these systems, and healthcare costs would decrease because people would walk to work and not be exposed to exhaust fumes (Ayvazoğlu, 2019). Therefore, according to Cansever, vertical development is a system that forces people to go to gyms and hospitals to stay healthy, steals time that could be spent on enjoyable experiences, and increases the cost of living. Under these conditions, calling a city "frugal" loses its meaning. According to him, a frugal city is a participatory, sustainable, and equitable settlement that contains all the amenities to meet the needs of social life. Therefore,

in Cansever's vision of the city, the issue is not the height of the buildings but creating an integrated living space where individuals can meet their needs from their own environment, just like in Ottoman neighborhoods.

Furthermore, Cansever's perspective on housing is family-centered, not individual-centered. For this reason, instead of the word "housing," which evokes individual and modern life, he preferred the concept of "home," which expresses collective living. According to Cansever, a home should be non-commercialized, in harmony with nature, protect family privacy, and be flexible enough to respond to changing needs over time. Therefore, his support for horizontal development is not an unconditional and abstract approach; it is based on specific criteria and contexts. For example, buildings that are low-rise but inhabited by multiple families, lack sufficient green space, and do not allow individuals free use are not compatible with Cansever's concept of a home.

Arguments Supporting Horizontal Architecture

Increased Contact with the Land: One of the prominent justifications for advocating horizontal development is the increased contact individuals have with the land. Instead of being limited to balconies, a lifestyle where users can directly interact with the garden has been influential in the spread of suburban living, particularly in countries like America (Ayvazoğlu, 2019; Cansever, 2014). However, this advantage does not automatically arise in every horizontal building model. In areas with inadequate urban planning, single-story buildings constructed on small plots sometimes lead to even gardens being covered with concrete, eliminating the possibility of contact with the soil. Therefore, while the physical low height of a building does not in itself mean that garden culture flourishes or that a lifestyle close to the land is offered, residential areas with gardens, supported by urban planning, provide households with opportunities for urban farming, orchards, children's playgrounds, or areas where landscape planning and design can be done according to the lifestyle and usage preferences of the owners.

A Calmer and More Peaceful Environment: It is a common view that vertical architecture creates feelings of loneliness and isolation in individuals. In contrast, horizontal architecture, by providing direct contact with nature, can offer individuals a more peaceful living environment (Ökten, 2019). However, this argument assumes that horizontal structures automatically eliminate social isolation. However, the source of an isolated lifestyle is not solely the height of the buildings; the increasing individualism, pragmatism, and emotional distance of individuals in modern life also influence this process. Indeed,

Simmel's observations in Berlin in the early 20th century revealed that metropolitan people had developed a rational and indifferent attitude (Simmel, 1970). Therefore, the issue is not only spatial but also cultural, and since spatial planning and designs significantly influence the lifestyle and space usage habits of society, detached houses with gardens, where horizontal architectural designs are common, offer a calm and peaceful environment.

Strengthening Neighborhood Relations: One of the strongest arguments in favor of horizontal settlement patterns is that they allow for the development of neighborhood relations. Horizontal structures with a small number of households can revive neighborhood culture by making it easier for people to get to know each other (Düzenli, 2016). However, it should also be noted that the freedoms and demands for privacy offered by city life make apartment living more attractive for some individuals. Especially in Western societies, the demand for detached houses is more related to a desire to avoid excessive social contact than to strengthen neighborly relations. Cansever, however, took a different approach, arguing that the values of Islamic neighborhood culture – mutual assistance, solidarity, neighborliness – should be revived, and she saw horizontal architecture as a carrier of these values (Şentürk, 2018). In historical urban fabrics where houses representing traditional architecture are located, the values carried by neighborhood culture still live on.

Potential for Mitigating Earthquake Impacts: Another important area where horizontal architecture is advocated is the safety advantage it offers against geological disasters. Making high-rise buildings earthquake-resistant requires advanced engineering techniques and high costs. In contrast, lower-rise structures, especially when constructed with appropriate materials and design, carry less risk from tremors (Ayvazoğlu, 2019; Cansever, 2014). Low-rise buildings are naturally more resilient during seismic activity due to their height and balanced weight distribution. Constructing earthquake-resistant buildings using a horizontal model significantly reduces the risk of collapse or serious damage. These factors highlight horizontal architecture as a crucial feature in earthquake-resistant buildings. Whether it's a low-rise apartment building or a detached house, elements such as energy-absorbing materials and advanced foundation isolation systems are vital for the construction of earthquake-resistant buildings. In countries located in earthquake zones like Turkey, the risks posed by high-rise buildings are well-established by experience. Based on this reality, Cansever advocated for a return to the lightweight and low-rise building models used in Ottoman cities, stating that structures built with flexible materials such as wood and steel would increase urban resilience (Cansever, 2002).

Individual and Needs-Oriented Design: One of the most important advantages of horizontal architecture is that residences can be designed according to individual needs. This

type of design allows for the creation of living spaces more suited to the needs of homeowners, especially by offering personalized solutions (Ayvazoğlu, 2019; Cansever, 2010; Düzenli, 2016). However, for this advantage to truly be valid, instead of a uniform site, unique, characterful structures should be built, as Cansever suggests. Furthermore, to allow homeowners to choose according to their needs, the structures should be placed in harmony with their surroundings; factors such as aesthetics, privacy, ventilation, and natural light should be taken into consideration. As Cansever also emphasizes, current zoning regulations force people into similarly arranged housing, which leads to both a violation of views and privacy (Cansever, 2010). Furthermore, owning a detached house within the city requires a significant economic burden. This is another factor that makes the feasibility of horizontal architecture difficult. Cansever argued that cities should be planned not only for generating profit but also with a human-centered approach, referring to the reintegration of revenues obtained through foundations during the Ottoman period into the city (Can and Doğan, 2019).

Preservation of the Historical Silhouette: One of the most significant advantages of horizontal architecture is the preservation of the historical silhouette. When tall buildings are placed intertwined with historical structures, they disrupt the visual harmony between these structures and overshadow the historical fabric (Can and Doğan, 2019). Tall buildings in historical areas negatively impact on the city's unique character and overall appearance. Cities like Istanbul, Bursa, and Edirne have lost their Ottoman urban identity due to such haphazard construction. For this reason, Cansever (2010) argued that the preservation of these areas should be limited to restorations in accordance with the original and the reconstruction of lost artifacts, and that new structures should be built in different areas. His findings, especially for Bursa, are important (Cansever, 2010).

Privacy: Detached houses with gardens generally provide better privacy compared to multi-story buildings (Ayvazoğlu, 2019; Can and Doğan, 2019; Cansever, 2010; Düzenli, 2016). However, this is only true for houses with large gardens. In Türkiye, in gated communities, semi-detached or detached houses are usually built very close together, limiting personal space. However, detached houses built on larger plots of land can offer superior privacy. Apart from detached houses with large gardens in rural areas, in urban areas such houses are generally preferred by people in higher income brackets.

Adequate Natural Lighting: High-rise buildings can darken living spaces and hinder air circulation due to their shadows (Ayvazoğlu, 2019). This can create shaded areas, especially on lower floors. However, in detached houses, even if the houses are located close

together, arrangements can be made to allow for better natural lighting. The horizontal expansion of buildings also allows architects to take advantage of natural light, improve ventilation, and create green spaces such as rooftop gardens and communal courtyards.

The Reflection of Horizontal Architecture on Urban Legislation

The first legal regulation paving the way for horizontal architecture was the Planned Areas Zoning Regulation, which came into effect on July 3, 2017. Subsequently, the 11th Development Plan, published on July 23, 2019, stated that horizontal architecture would be the guiding principle in urbanization and urban transformation processes. Although the development plan is not directly applicable legal regulation, it is a powerful guide for policymakers.

Planned Areas Zoning Regulation: The Planned Areas Zoning Regulation, which came into force on July 3, 2017, repealed the previous regulation and introduced regulations encouraging horizontal architecture. This regulation changed the rules regarding the size of the area occupied by buildings and encouraged horizontal growth. For example, with a floor area ratio (FAR) of 40%, a 160 square meter dwelling can be built on a 400 square meter plot, while with a FAR of 60%, a 240 square meter dwelling can be built on the same area. This regulation has legally supported horizontal architecture and allowed for the construction of buildings on larger areas. However, this regulation may also have negative consequences, such as increased construction and a decrease in open spaces like green areas and parking lots.

Development Plan: The Eleventh Development Plan entered into force on July 23, 2019, and covers the years 2019-2023. Unlike the previous 10 development plans, this plan was prepared by the Presidency of Strategy and Budget (CSBB) and the Ministry of Treasury and Finance. Under the heading "Livable Cities, Sustainable Environment," the plan presents important perspectives on urbanization and the environment. Articles 679 and 679.1 of the Development Plan directly address horizontal architecture: "679. Horizontal architecture will be the basis of urbanization; strategies and practices that strengthen urban co-existence, sense of belonging, neighborhood culture and urban awareness will be widespread. 679.1. Examples of human-centered horizontal architecture will be identified, and an evaluation report will be prepared on them." (CSBB, 2019). Furthermore, the "Urban Transformation" section of the plan emphasizes that the transformation processes will be carried out according to the principle of horizontal architecture: "690. Urban transformation will be carried out based on the principle of horizontal architecture, with strategies aimed at improving the quality of life and strengthening civic awareness and including the renewal of historical centers." (CSBB, 2019).

It has been stated that horizontal architecture will be prioritized in urban transformation projects to be carried out in city centers. This approach shows that the criticisms made against multi-story projects that do not conform to the historical fabric of the city, especially in the example of Bursa Doğan Bey Neighborhood, are taken into consideration. Since city centers are areas identified with historical structures and, consequently, with the city's identity, it is extremely important that these areas are not occupied by new, incompatible buildings. In line with Cansever's (2010) suggestion, new construction should not be permitted in historical city centers, and these areas should be preserved as much as possible in their original state, like open-air museums. In this way, these areas should be protected as a common heritage of human history.

CURRENT SITUATION REGARDING HOUSING STOCK IN TURKEY AND AROUND THE WORLD

Urbanization Dynamics, Spatial Density Structure, and Horizontal Architecture Needs in Turkey

Turkey's population structure has evolved from a predominantly rural society to an almost entirely urban one over the last century. According to Turkish Statistical Institute (TÜİK) data from the Address-Based Population Registration System (ABPRS) and the general population census, the share of the total population living in provincial and district centers was 24.2% in 1927, while this rate increased to 93.4% in 2024 (TÜİK, 2025a). As of 2024, out of a total population of 85.6 million, 80,007,258 reside in urban areas, while the population of rural settlements is 5.6 million, constituting only 6.6% of the total population (TÜİK, 2025a). Furthermore, according to 2024 data, the population density across the country has reached an average of 111 people per km² (TÜİK, 2025b). This indicator shows that demographic pressure is primarily concentrated in urban areas. In addition to this general trend, data for the 2023–2024 period show that the urbanization process continues; while the share of the total population living in city and district centers was 93.0% in 2023, this rate increased to 93.4% in 2024 (TÜİK, 2025a). The rural population, meanwhile, decreased from 5,973,000 to 5,657,000, continuing its decline in absolute terms as well. These data show that population growth in Turkey is largely concentrated in urban areas, while rural areas are declining due to both migration and natural population growth.

The transition to the "dense urban - moderately dense urban - rural" classification based on the Spatial Address Registration System (SARS) in 2022 has made the actual settlement and spatial density structure of Turkey much more accurate than administrative classifications. According to this new classification, 67.9% of the country's population lives in settlements classified as densely urban. These densely populated urban areas, which constitute only 1.6% of Turkey's total surface area, house 57,934,583 people as of December 31, 2022; this shows that approximately two-thirds of the population is concentrated in an extremely limited spatial area (TÜİK, 2023). In contrast, settlements classified as rural areas cover 93.5% of the country's surface area but are home to only 17.3% of the total population. In the medium-density urban category, 14.8% of the population lives in areas corresponding to 4.9% of the country's surface area (TÜİK, 2023). These data clearly show that Turkey is not only a country with a high urbanization rate, but also that the vast majority of the population is concentrated in a small part of the country's surface area, and that cities themselves have high-density settlement patterns.

These data show that, going beyond the proportion of those living in city and district centers which reaches 93%, 67.9% of the population in Turkey is concentrated in densely populated urban areas that constitute only 1.6% of the country's surface area. This clearly reveals that urban settlements are concentrated in an extremely limited part of the country's surface area and have a spatially very high-density structure.

In Turkey, the concentration of the population in such limited urban areas necessitates an assessment of the quality of the settlement pattern and the characteristics of the existing housing stock. This is because, in a country with such a high concentration of urban population, trends in housing production – particularly the preferences for vertical and horizontal construction and the distribution of building ages – have critical implications for numerous aspects, including sustainability, quality of life, and disaster risk. Therefore, Turkey's urbanization patterns and the structural characteristics of its housing stock should be considered together, and the extent to which the existing housing structure exhibits a horizontal or vertical development pattern should be evaluated based on concrete data. In this context, the Turkish Statistical Institute's (TÜİK) 2021 data on household and building characteristics provides an important starting point for examining the housing stock structure in detail and discussing construction trends in Turkey on a more concrete basis (Figure 1).

Figure 1. The urbanization dynamics of Turkey.

		İSTANBUL	ANKARA	TOTAL
Number of households		4.755.086	1.874.093	**25.329.833**
Average number of floors		6,9	7,1	**5,0**
Number of floors in the building (%)	2,1	5,8	3,1	**11,7**
	3,7	24,8	4,0	**17,3**
	6,2	12,3	3,4	**11,3**
	10,2	11,5	6,4	**10,7**
	22,9	20,4	24,2	**14,4**
	54,9	25,3	59,0	**34,4**

Table 1. Household size and ratio according to the number of floors in the building in Istanbul, Ankara and Turkey. (TÜİK, 2021d; TÜİK, 2021e).

According to 2021 Turkish Statistical Institute (TÜİK) data, 11.7% of households reside in single-story buildings, 17.3% in two-story buildings, and 11.3% in three-story buildings (Table 1). Therefore, a total of 40.3% of the population lives in buildings with three or fewer floors, which can be considered within the scope of horizontal architecture. In contrast, the proportion of households living in buildings with 4 or more floors reaches 59.7%, indicating that vertical construction is gaining prominence in Turkey. The high percentages of households living in buildings with 5, 6, and 10 floors or more reveal that the building stock is increasingly composed of multi-story residential buildings. This distribution indicates that the urbanization model in Turkey, particularly in metropolitan areas, is shifting towards vertical architecture due to increased density and land costs.

The fact that buildings with three or fewer floors still constitute over 40% of horizontal architecture shows that this building form has not completely disappeared and offers a space open to replanning. Horizontal architecture provides an important model for livable cities not only in terms of aesthetic and cultural values but also in many aspects such as disaster risk, social interaction, neighborhood culture, and age- and child-friendly environments. In a country like Turkey, with a high risk of earthquakes, urban policies regarding construction need to be rethought, considering the physical and social vulnerabilities created by vertical construction. Especially in small and medium-sized cities, encouraging horizontal construction in new development areas should be considered a strategic priority for sustainable urbanization.

The increase in the urban population, both numerically and primarily concentrated in city centers, necessitates that housing policies move beyond an approach focused solely on

supply quantity; they require a redesign based on qualitative criteria such as livability, resilience, sustainability, and vulnerability to disaster risk (Figure 2). In this context, problems such as the infrastructure burden, transportation pressure, loss of green spaces, and disaster vulnerability created by the high-rise, dense, and vertical growth model have become even more visible for Turkey, where a large portion of the population resides around densely populated cities. Therefore, when existing urbanization data, urbanization trends, and spatial density classifications are evaluated together, the necessity of shifting towards horizontal architecture in housing policies emerges as a fundamental transformation need in terms of urban and environmental sustainability. Settlement models with fewer floors, greener infrastructure, high disaster resilience, and shaped by human-scale urban design principles constitute a fundamental requirement for Turkey.

Figure 2. Building stock in Turkey

According to Turkish Statistical Institute (TÜİK) data, the number of households in 2024 was 26,599,261, while the country's population, according to Address-Based Population Registration results, was 85,664,944. The per capita housing area is considered to be 35-40 m2, and the housing area per family is considered to be 100-150 m2. Based on this, considering both the number of households and the country's population, the total housing area, assuming only single-story houses, is found to be 2,660-3,990 km2. This indicates that the entire country's housing needs would cover an area equivalent to that of Iğdır province, which has a surface area of 3,664 km2 (Figure 3). Iğdır province covers approximately 0.46% of Turkey's total surface area.
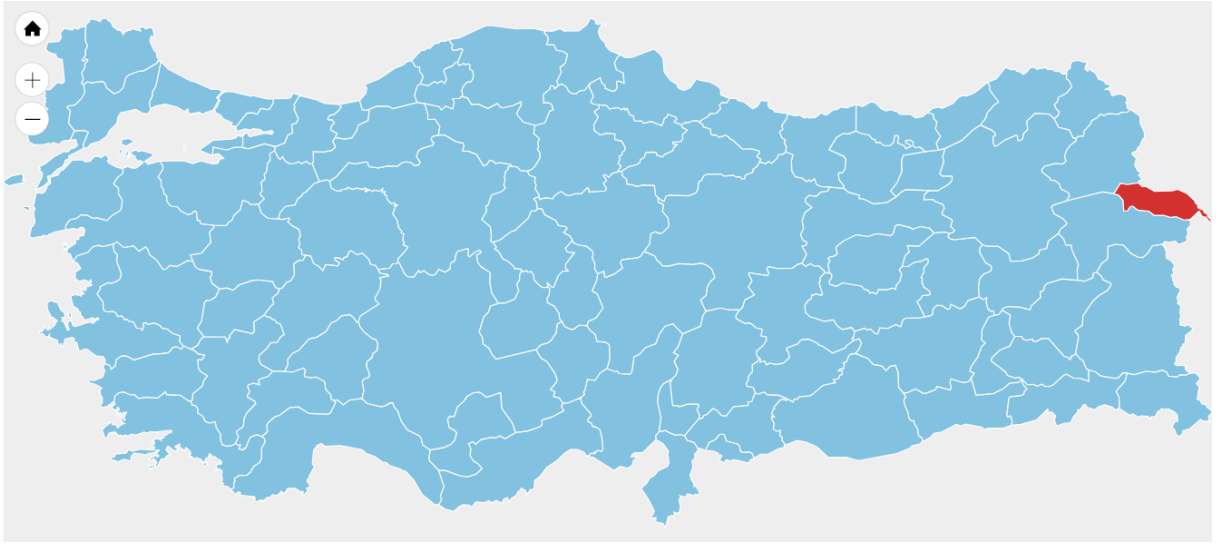
Figure 3. Iğdır province in Türkiye (Harita Genel Müdürlüğü, 2025).

According to Turkish Statistical Institute (TÜİK) data, the average household size in 2024 was determined to be 3.11. Based on 27,544,998 households and an assumption of 300 m2 of garden area per household (100 m2 house + 200 m2 garden), the total area covered by these houses would be 8,263,499,421 m2. If the entire population lives in two-story houses with gardens, the total area of houses with gardens would be 8,263.5 km2. This shows that it would cover an area slightly larger than Muş province, which has an area of 8,196 km2 (Figure 4). Muş province covers 1.1% of Türkiye's total area.

Figure 4. Muş province in Türkiye (Harita Genel Müdürlüğü, 2025).

Turkey has a land area of 783,562 km². If the entire population lived in detached houses, the examples of Iğdır and Muş demonstrate that the land resources in our country can undoubtedly be planned in a way that facilitates the widespread adoption of human-friendly, ecological, ergonomic, and earthquake-resistant horizontal architectural designs, considering the area these houses and their gardens would occupy.

The Horizontal Architecture Trend Worldwide

Table 2 presents current data on the distribution of different housing types within the total occupied housing stock in OECD and EU countries. This table includes four housing types: detached houses, semi-detached houses, apartments, and others.

• Detached houses refer to residences that do not share a wall with another unit. Typically, this is a single-family dwelling unit with open space on all sides.

• Semi-detached houses refer to a row of adjacent dwellings (more than two) that share at least one wall. These can be duplexes, terraced houses, apartments, townhouses, or city houses, and generally each dwelling unit has its own separate entrance.

• Flats/Apartments refer to residential units within a building that share some interior spaces or maintenance and other services with other units in the building. In these buildings, hallways, entrance halls, stairwells, and other common areas are often shared. This category is better known as "apartment flats" in some countries.

• Others refers to all other types of housing not included in the categories above. Most commonly, these are mobile homes such as caravans, prefabricated houses, and floating houses, but sometimes include nurseries and sheds as well.
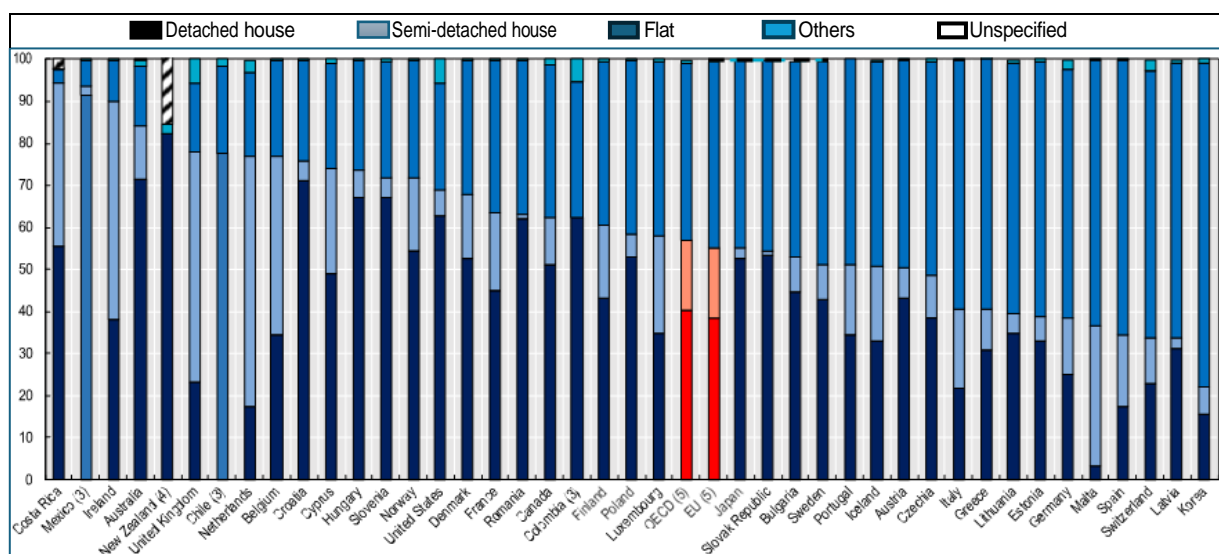

Table 2. Residential dwelling stock by dwelling type in OECD and EU countries (OECD, 2024).

The dwelling stock data presented in Table 2 are for the year 2024; data for Japan and the United States are for the year 2023; data for Australia, Latvia, Luxembourg, Malta, Portugal, Switzerland and the United Kingdom are for the year 2021; data for Mexico and Norway are for the year 2020; and data for Iceland are for the year 2018 (OECD, 2024).

There are significant differences in dwelling types across the OECD and the EU (Table 2). Detached or semi-detached houses are the most common type of housing in 30 countries, while apartments make up the majority of housing in 10 countries. Detached houses are most prevalent in Chile, Costa Rica, Ireland, New Zealand, and Mexico, representing over 90% of all housing. In contrast, in Korea, apartments account for over 75% of housing, with detached houses representing only 22% of the total stock (OECD, 2024).

Detached houses (e.g., single-family homes) are the dominant dwelling type in 20 countries. New Zealand has the largest share with 83% of the total housing stock, followed by Australia, Chile, Croatia, Hungary, and Slovenia, where at least two-thirds of the total stock consists of detached houses. In Colombia, Romania, and the United States, detached houses make up approximately two-thirds of the total dwelling stock. In contrast, detached houses are much less common in Estonia, Germany, Greece, Iceland, Italy, Latvia, Luxembourg, Switzerland, and the United Kingdom, comprising between one-fifth and one-third of the stock. Meanwhile, detached houses are even less common in the Netherlands (17%), Spain (18%), Korea (15%), and Malta (3%) (OECD, 2024).

Semi-detached houses (sometimes also known as terraced houses) are common in Ireland, the Netherlands, and the United Kingdom, accounting for at least half of all housing. They are far less common in Austria, Bulgaria, Croatia, Czech Republic, Estonia, Greece, Hungary, Japan, Korea, Latvia, Lithuania, Mexico, Poland, Romania, Slovakia, Slovenia, Sweden, Switzerland, and the United States, where they comprise less than 10% of the housing stock (OECD, 2024).

URBAN PLANNING AND DESIGN PROPOSALS RELATED TO HORIZONTAL ARCHITECTURE

Decisions about how cities, towns, and settlements of all sizes will develop and what kind of built environment will be formed are made in planning processes. City planners should strive more than anyone else to improve the human environment and ensure harmony between architecture and nature (Posokhin, 1974). City planning, first and foremost, means planning for the intelligent use of natural resources and the control and prevention of soil erosion, noise, water and air pollution. The conflict between urban development and nature can be eliminated through planning principles that are human and nature oriented.

In a broad sense, the environment encompasses both nature and architecture. There must be unity and harmony between the two. Beautiful and intelligently planned cities mean the rational placement of residential, industrial, educational, health, and cultural buildings, as well as natural landscapes. The fact that living environments in urban settings have reached levels that threaten human health has brought ecological practices in the fields of planning and architecture to the forefront. For a livable environment, it is inevitable that urban planning and design processes at all scales must acquire an ecological dimension.

The basic objectives for livable settlements are as follows:

• Creating healthy living environments,

• Creating livable settlements for both today and the future (sustainability)

• The protection, preservation, development, and transmission of natural, historical, and cultural values to future generations,

• To produce sustainable urban development policies in urban and rural areas using holistic planning principles,

• Developing innovative approaches and creating livable and human-centered urban spaces that prioritize public benefit.

Just as the family is the basic unit of society, housing is the basic unit of the city, a point where the common good and the lives of individuals interact. A home is the first building block of a city and, besides fulfilling the human need for shelter, it is also the first stage in the formation of relationships between individuals and families. In other words, a home is not simply a shelter, but a vital structure that affects human life in its entirety (URL-1). The way the housing problem is addressed changes throughout history. The defining elements of this process are social needs, technical capabilities, societal traditions, and also

urban policies. Today, the foundation of urban policy should be the goal of planning, designing, and realizing livable cities composed of buildings that are in harmony with human ecology.

Principles of Urban Planning

Spatial plans are documents that determine land use and construction decisions, prepared to protect and enhance physical, natural, historical, and cultural values, ensure a balance between conservation and utilization, support sustainable development at the national, regional, and city levels, and create healthy and safe environments with a high quality of life (Regulation on the Preparation of Spatial Plans).

The planning process consists of three stages: an analysis phase involving research, identification of problems, and collection of data and information; a synthesis phase involving gathering, combining, and evaluating the results of the information; and a final decision-making phase (Regulation on the Preparation of Spatial Plans).

In the preparation and review of spatial plans of all types and scales, as well as revisions, additions, and changes to these plans, the provisions of the "Regulation on the Preparation of Spatial Plans," published in the Official Gazette dated June 14, 2014, and numbered 29030, must be complied with.

All spatial plans of all types and scales (environmental planning, master zoning plan, implementation zoning plan) to be prepared in accordance with this Regulation must be made in accordance with the relevant planning principles and guidelines (Regulation on the Preparation of Spatial Plans).

The main principles and guidelines regarding spatial planning are as follows:

• Plans are made for public welfare.

• Maintaining a balance between the preservation and utilization of natural, historical, and cultural values is essential.

• Plans include provisions for necessary improvements to enhance the quality of buildings and the environment.

• The plans are based on disaster, geological, and natural data.

• In the plans, preserving the existing traditional fabric, if any, is essential.

Urban planning is a process of action that structures the individual-environment relationship, organizes urban space for the well-being of society in this context, and takes into account the economy-ecology relationship in all decisions regarding land use (Çelikyay,

2005). In the planning of developing residential areas outside of existing residential areas, threshold analyses should also be carried out as defined in the Spatial Planning Regulations. In threshold analysis, topographic, geological-geotechnical, and hydrogeological characteristics are evaluated together with land use, agricultural and forest areas, drinking water basins, protected areas, sensitive areas, coastal areas, infrastructure, natural and physical data, and disaster risks. Site selection should be made considering natural data such as disaster risk, vegetation, geological characteristics, soil structure and agricultural land use, topography, slope, etc., and ecological structure (ecosystem types, flora and fauna presence).

In the master and implementation zoning plans to be prepared, it is important that building regulations for residential development areas outside the city center are defined as detached (with gardens), the number of floors is limited to 2 or 3 floors, and the floor area ratio (FAR) determining the building footprint on the plot is limited to between 30% and 40%.

Architectural Design Principles

In the planning processes for developing residential areas, the following aspects, which are fundamental from a building ecology perspective, should be targeted in the design of buildings to be constructed on development plots where horizontal architectural conditions, building layouts, number of floors, and floor area ratios have been specified:

Human ecology-compatible building design

Accessibility

Sunlight and light orientation

Energy-efficient building design - Utilizing renewable energy

Use of local and ecologically recycled materials.

Waste disposal

Urban farming opportunities in the garden

Human ecology-compatible building design: Human ecology can be considered as an adaptation of ecological theory to human communities. This field aims to explain the interactions that people have with each other and with their environment by relating the

biophysical and social components of ecology to the disciplines of sociology and anthropology (Machlis et al., 1997). In this context, human ecology, based on the reciprocal relationships between individuals and their social and physical environments, requires a holistic approach to environmental, cultural, and social factors in architectural design (Bayraktaroğlu, 2013). In this context, building design compatible with human ecology adopts an approach that considers not only energy efficiency or environmental sustainability but also the psychological, social, and cultural needs of users. The selection of materials sensitive to the ecosystem in which the building is located, and the use of biophysical elements such as natural lighting and ventilation, improve human health and quality of life while reducing the environmental burden. Furthermore, integrating local climatic conditions and socio-cultural dynamics into the design allows for a balanced interaction between the users of the architectural structure and its environment. Thus, design compatible with human ecology redefines the human-environment relationship along the lines of a sustainable lifestyle.

Human ecology, as an approach that centers on the reciprocal interactions between humans and their environment, requires architectural design to be conceived in harmony with the natural, social, and cultural environment. In this context, horizontal architecture can be considered a form of construction compatible with human ecology. With its scale integrated with nature, its planning approach adapted to local climatic conditions, and its spatial structure that prioritizes the human scale, horizontal architecture creates a sustainable living environment. This type of design approach, in contrast to high-density construction, allows individuals to establish healthier relationships with nature and with each other. Furthermore, by prioritizing biophysical elements such as natural light, air circulation, and the continuity of green spaces, it both preserves environmental balance and supports the physical and mental well-being of users. Therefore, horizontal architecture, in line with the fundamental principles of human ecology, embodies sustainable harmony between humans, society, and the environment on a spatial scale.

Accessibility: The horizontal architectural approach, which prioritizes human scale and spatial accessibility, has gained a significant place in contemporary architecture. In this approach, the horizontal spread of buildings is prioritized over their height; thus, the aim is to enable individuals to interact directly and seamlessly with the physical environment. In horizontal architecture, building design is based not only on aesthetic and functional requirements but also on social inclusion and accessibility principles. Low-density development, continuity of open spaces, pedestrian-prioritized transportation, and arrangements that facilitate equal participation of disabled individuals in the space are

fundamental components of this approach. In this context, horizontal architecture creates livable environments by considering the physical, psychological, and social needs of users. Thus, the horizontal orientation in architecture becomes not merely a formal preference, but an expression of a human-centered, accessible, and environmentally balanced design paradigm. Buildings designed with a horizontal architectural approach offer human-scale spaces that enhance accessibility. In such structures, the plan layout that establishes a direct relationship with the ground, along with ramps, wide circulation areas, and barrier-free passages, ensures equal participation of all user groups in the space. The limited floor heights facilitate access by reducing the need for vertical transportation such as elevators (Çoruh and Aydemir, 2019). Thus, horizontal architecture creates inclusive, user-friendly, and accessible living environments for everyone by minimizing physical barriers.

Sunlight and light orientation: In buildings designed with a horizontal architectural approach, the direction of sunlight and natural light is a decisive design criterion in terms of both energy efficiency and user comfort. In this approach, the horizontal positioning of the structures allows the facades to benefit from daylight to the maximum extent. Wide openings, appropriately oriented facade designs, and permeable facade elements ensure balanced natural lighting in interior spaces. Furthermore, keeping building density low reduces shadowing, preventing surrounding buildings from obstructing each other's light access. Thus, horizontal architecture presents a design approach that optimizes sunlight exposure, reduces energy consumption, and enhances spatial comfort. In this respect, horizontal architecture represents a sustainable architectural approach where natural light is considered a fundamental element determining the quality of space.

Energy-efficient building design - Utilizing renewable energy: Horizontal architectural planning offers significant opportunities in energy-efficient building designs. By using the roof as a "fifth facade," investments can be made to maximize efficiency. Solar energy can be harnessed through photovoltaic panel solutions and converted into electricity and heat energy, while solutions such as green roofs create thermal mass that contributes to insulation and facilitates rainwater management. Furthermore, horizontal structures are, by their very nature, much more suitable for passive strategies. Natural ventilation can be achieved by analyzing the prevailing wind direction and placing windows of the correct size on the right facade within the plot. Maximizing the use of natural lighting is also possible by arranging spaces within the buildings according to their climate and geographical characteristics, taking natural factors into account. The south-facing orientation of main living areas and large glass surfaces is one of the best examples of passive heat gain.

Furthermore, horizontal architectural planning, when considered alongside appropriate urban design decisions, can function as a design principle that reduces energy consumption, improves the microclimate, and limits the urban heat island effect.

Use of local and ecologically recyclable materials: When selecting building materials, not only aesthetic, durability, and economic aspects should be considered, but also environmental impacts, energy efficiency, and sustainability criteria. In this context, the use of ecologically sound local materials reduces carbon emissions by saving energy in both the production and transportation processes. Sourcing materials from areas close to the production site minimizes environmental burdens caused by transportation and contributes to the local economy. Furthermore, local materials naturally adapt to the climatic conditions of their location, reducing energy consumption and strengthening the building's relationship with its environment. In this respect, the concept of "harmony with the place," one of the fundamental principles of ecological architecture, is embodied not only in form but also in materials. Ecological and recyclable materials possess qualities that minimize environmental damage from their production to their use and throughout their life cycle. Wood, stone, and adobe stand out with their low embodied energy values, as well as their ease of repair and recycling. These also facilitate the building's breathability and provide heat and sound insulation. Wood is one of the least energy-intensive materials, and compared to wood, this energy is four times higher in brick, five times higher in concrete, and 24 times higher in steel (Ryn and Cowan, 1996). These data show that energy efficiency in the construction sector begins with the selection of materials. Ecological building materials are also materials with high potential for reuse and recycling, that respect nature in the production process, and that are harmless to human health. The preference for local and natural materials in horizontal architecture will contribute not only to environmental sustainability but also to the preservation of cultural identity.

Waste disposal: Horizontal architectural planning offers an excellent opportunity to shift from the "collect-and-dispose" model to a "reduce, separate at source, and recycle on-site" model in waste management. 50-60% of urban waste is organic waste. When each residence has its own garden, the use of compost pits can prevent organic waste from leaving the area as 'garbage'. Collecting waste individually from each house doorstep will dramatically increase the distance garbage trucks need to travel, the fuel they consume, and their emissions, significantly raising operational costs. To address this, "centralized waste collection islands" or "underground container systems" should be designed during the planning phase. Individuals dropping off their waste at these central points within walking distance will ensure that trucks only stop at those locations, optimizing logistics.

Urban farming opportunities in gardens: Urban farming is an important component of sustainable living in modern cities. These agricultural activities are carried out in residential gardens, on walls, roofs, terraces or balconies, along roadsides, in parks, greenhouses, and in areas designated by the authorities (Efe, 2003; Kanbak, 2018). Especially in residential areas designed with horizontal architecture, utilizing gardens as production areas will offer significant contributions from both ecological and social perspectives. Growing vegetables, fruits, and aromatic herbs in such gardens supports the urban food cycle while also allowing individuals to reconnect with nature. Beyond their aesthetic and recreational functions, gardens improve air quality, provide protection from rain and sun, regulate humidity balance, and promote biodiversity. Selecting local species suitable for the soil structure will also increase productivity. Reusing treated rainwater and greywater in irrigation systems contributes to both the conservation of water resources and increased environmental awareness. Gardens can also be considered as spaces that strengthen social interaction at the neighborhood level. By breaking the anonymity of urban life, they support the development of a shared and productive culture of living. These systems, which provide food security, especially for low-income groups, also contribute to economic sustainability by increasing women's employment. In this respect, gardens are areas that nourish not only the green infrastructure of the physical environment but also the continuity of the social fabric. Therefore, by creating large gardens between and around buildings in horizontal architecture, these areas should be considered as one of the fundamental tools of sustainable environmental policies as well as cultural and social sustainability.

CONCLUSION

In today's cities, both in Turkey and globally, the rapidly increasing population and the parallel, constantly rising urban density are creating increasing pressure on many elements such as infrastructure systems, transportation networks, public spaces, and environmental carrying capacity, which are not compatible with the concept of sustainable architecture. The current urban form, dominated by dense and vertical construction, leads to various problems such as air quality, the heat island effect, social segregation, and quality of life. Some of these problems are further exacerbated by the obstruction of natural light and airflow, the disruption of green space continuity, and reduced accessibility. This situation transforms questions such as "what kind of city should we live in?" or "what kind of urbanization or housing policy should be implemented in a country?" from a purely technical planning issue into an existential inquiry into the future of humanity on Earth. Data shows that both in Turkey and globally, beyond urban population growth, cities are physically expanding disproportionately, creating spatial areas that envelop nature with concrete instead of producing a true "city." This expansion points to a contradictory form of urbanization where people, while building living spaces, simultaneously deplete their own ecological foundations.

Today, as cities become the primary spaces of modern life, they weaken their own conditions of existence by destroying the ecosystems that make them possible. Therefore, cities are more than just economic or spatial units; they are the most visible stage of humanity's relationship with nature. The reduction of wetlands, forests, and agricultural lands due to urbanization demonstrates that while expanding human living space, humans are simultaneously eroding the fundamental ecological conditions for life. In this process, the abandonment of local materials, the widespread use of building materials with high embodied energy, and the increase in waste production are also accelerating ecological destruction. Therefore, urban planning literature in many countries emphasizes that more human-scale, low-density, and mixed-use settlements offer critical advantages in terms of sustainability. In this context, the horizontal architecture model, considered as a housing policy, stands out not merely as a preference regarding building height, but as a strategic planning approach or model in terms of environmental and urban sustainability and the quality of urban life. In Turkey, the increasing population pressure, the urban problems caused by vertical construction, and the changing lifestyle preferences are strengthening the trend towards lower-density and ecological lifestyles, making it necessary to reconsider housing policies. This trend is also consistent with the architectural advantages offered by

horizontal architecture, such as natural ventilation, sufficient sunlight, lower energy consumption, and accessibility.

Although horizontal architecture is often considered merely a form of construction, studies in the literature show that low-rise residential models are addressed not only as a physical preference but also as part of a more sustainable urbanization approach, within the framework of studies related to human scale, spatial justice, and sustainable urban forms. Accordingly, it is believed that the horizontal architecture approach or model has strong connections with fundamental urban and environmental impact areas such as climate change, biodiversity, disaster risk, and social cohesion. For example, low-density, well-ventilated settlements integrated with green spaces can reduce the urban heat island effect, lower energy consumption by increasing the use of natural light and air circulation and facilitate designs compatible with green infrastructure. Similarly, the urban farming opportunities offered by garden living, such as composting organic waste, neighborhood-scale social interaction, and supporting local biodiversity, further strengthen the sustainability impact of horizontal architecture. From a disaster risk perspective, the "sloping effect" created by dense and high-rise construction can be limited by horizontal architecture.

In our country, especially in large cities, the increasing population and the resulting overcrowding are causing a growing cost and increasing problems. Consequently, both a portion of the elderly population who have completed their working lives and a portion of the young married population are moving to rural areas, changing their lifestyles by constructing single-story or low-rise buildings with gardens. The main goal behind this change in settlement preferences is the search for a slow, calm, peaceful, and ecological life. In recent years, a solution to this demand in urban environments has been the preference for low-rise, detached housing complexes located in areas far from dense and crowded city centers. Unlike densely packed high-rise buildings, low-rise building designs prioritize comfort, privacy, and connection to the outdoors. Those living in such settlements benefit from indoor comforts such as more natural light, better airflow, and less noise pollution, which are highly valued in today's urban housing market. Horizontal architecture offers safe, comfortable, durable, ecological, and sustainable buildings that provide quality living opportunities in harmony with human ecology. In contrast to the individualistic living prevalent in multi-story buildings, the human-scale built environment consisting of low-rise buildings fosters neighborhood relationships and creates positive opportunities for social life.

In addition to large cities, the increasingly dense and expanding built environment in medium and small-sized cities requires the development of urban planning and design strategies aimed at creating human-centered, livable cities to mitigate its overwhelming impact on people. Residential areas where horizontal architectural design is prevalent create an urban environment on a human scale. It is crucial that horizontal architecture is adopted primarily by central and local governments, as well as urban planners. In this context, policies that prioritize horizontal architecture should be adopted in urban planning, aiming to create livable and sustainable living environments that consider the needs of humans as well as other living beings. Adopting horizontal architecture is the most strategic goal that should be included in urban policy for creating earthquake-resistant, safe, and resilient cities.

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KAPGEM

KAMU POLİTİKALARI ARAŞTIRMA VE GELİŞTİRME MERKEZİ

In most cities, rapid population growth has led to a concentration of people in central areas, and even multi-story buildings are proving insufficient to accommodate them, resulting in a continuous increase in building heights and the number of floors. In this built environment, characterized by vertical architecture, the human scale is lost, the city skyline is constantly changing, and many cities, particularly Istanbul, are moving significantly away from their original and memorable appearances. It has been announced that the central government, aware of these negative changes occurring in cities, has developed a new urbanization policy defined as "horizontal architecture." Horizontal architecture can be defined as a settlement pattern in urban planning where each family lives in its own living space in one or two-story detached houses, close to the ground, and spreads over large areas. The chaotic and unhealthy urban conditions that arise with rapid population growth also have negative effects on human health. As Howard argues, just as people voluntarily migrated from villages to cities, they will also voluntarily move away from unhealthy, unplanned, and multi-story urban life. Instead of buildings continuously rising vertically in growing and developing cities, expanding horizontally, constructing flexible housing units—two or at most three stories high, with gardens and courtyards, built with natural and local materials (wood, stone, etc.), and easily expandable according to needs—will offer a sustainable, livable, ecologically, economically, and socially participatory living environment. This chapter provides a comprehensive explanation of the concept of horizontal architecture, presents the current state of housing development in Turkey, and proposes that central and local governments adopt urban policies based on horizontal architecture, aiming for urban planning and design processes based on horizontal architecture in residential development areas outside city centers.