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RESEARCH ARTICLE

Some Thoughts on Urban Renewal and Natural Disasters

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ABSTRACT
This study aims to shed some thoughts relating to the housing and earthquake issue in Istanbul, Türkiye. The study will examine decision-makers' and housing policy designers' approaches, tools, and strategies toward disaster risk in order to highlight and discuss the questions regarding disaster risk in megacities. The dynamics and nature of urban transformation and urban renewal with regard to disaster risk can be advantageous or not, depending on the interpretation and implementation of the relevant regulatory framework. The intention of the policies could be a good guide to follow throughout. The text is structured in three parts: (1) the urban renewal activities that have taken place for almost two decades, (2) the density issue generated by intense construction activities, and (3) the disaster policies and legal framework that requires revision into a workable plan. The three-part discussion will be made by primarily referencing the Zeytinburnu sub-municipal region in Istanbul and other regions secondarily as needed.

Keywords: Housing policy, urban renewal, disaster policies

1. On Urban Renewal

In many developing countries, urban renewal and rehabilitation projects have been used as a means of regulating the urban transformation phenomenon. With the enactment of urban renewal, researchers and professionals involved in the design of large-scale urban transformation projects have changed the nature of urban society: These cities are both developing while at the same time competing with other international cities to become a global city. Societal values have also changed. Accordingly, cultural industries and information technologies are replacing factories and industry.

Unlike the major actors in gentrification such as the elite, administrators, and professionals, urban transformation activities in the Zeytinburnu municipality of Istanbul have been initiated by local authorities and supported by various public and private agencies and sponsors (i.e., revenue-share firms) (Alkışer et al., 2009). As the first gecekondu [squatter] town in Istanbul, Zeytinburnu is expected to present an exemplary transformation for Türkiye, with similar implementations planned in 10 other Istanbul municipalities. Just like in Zeytinburnu, Galata and Haydarpasa are both areas by the sea with cultural landmarks that are planned for being renovated into large-scale port projects. However, Zeytinburnu was picked first among them because it was thought to be one of the riskiest parts of the urban fabric with its irregular settlement pattern characterized by dilapidated housing and very little greenery. The area over time was over built and overpopulated. This is no surprise, as it was the first squatter housing area in Istanbul and later expanded to become a squatter town within the city of Istanbul. The final transformation processes have aimed at changing the area into a contemporary settlement. Its proximity to the sea has been used as an advantage for filling it up with global spaces (e.g., hotels, commercial areas).

The idea was to create planned sustainable urban designs for Zeytinburnu in particular and for Istanbul in general. Urban renewal and resident removal should not be applied only to *gecekondu* [squatter] housing spaces; dilapidated housing elsewhere in the city and houses built on at-risk soils are also candidates for removal from the urban fabric. Each spatial intervention has undesirable sociocultural consequences, as spatial transformation into a rehabilitated residential area or any other type of zoning also breaks that community's cultural networks and economic structures in urban renewal areas.

About 15% of houses are expected to be demolished according to the Zeytinburnu Pilot Project Report. Meanwhile, the residents lacked information about the pilot transformation project that is intended to be implemented on their site. A recently formed association in Cirpici, a Zeytinburnu *mahalle* [neighborhood], pointed out the fact that the citizens are uncertain, have doubts about the urban renewal activities planned for their mahalles, and don't trust the officials. Because they were not properly

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informed about the renewal plans for their housing, they either want to sell their houses and leave their neighborhoods or react against it through protests. After all, the changes implemented in the area have affected their lives directly, as well as their use of urban space.

Capacity, quality, and participation could be a good guide to follow for appraising existing urban transformation projects. Accordingly, the evaluation of transformation projects has indicated that the national housing policy and local strategies need to be re-considered in order to generate more flexible alternatives and to meet diverse and complex urban issues. This puts the principles of socioeconomic and spatial sustainability into the focus of urban transformation project evaluations before they become generalized (Alkışer et al., 2009).

The case of Zeytinburnu is on the national and international agenda, whereby the urban transformation aims to improve its social, economic, and spatial quality. Therefore, the components of a sustainable urban transformation can be identified as follows: The social components (i.e., improved quality of the social infrastructure, social interaction, and educational level), the economic components (i.e., improved quality of existing economic activities and their types), and the physical components (i.e., increasing cultural and natural areas, rehabilitating the housing stock, and generating green areas and life corridors).

As proposed, the Zeytinburnu Transformation Project is characterized as follows:

- Will occur in phases,
- Involves a neighborhood-based urban renewal,
- Prioritizes risky buildings for demolition,
- Increases low-density areas by decreasing high-density areas,
- Residents are not relocated during the urban renewal process but during the on-site urban renewal,
- Increases newly built areas (which will almost double the urban real estate values).

Disaster volunteer groups have been formed in four *mahalles* of Zeytinburnu on the European side of Istanbul and in Uskudar on the Anatolian side. When selecting exit routes, the criteria involve accessibility to gathering areas, as well as to the transportation network. Buildings blocking exit routes are subjected to demolition. Risky buildings are also to be demolished, as well as buildings on risky grounds. The gathering areas include schools, mosques, sports facilities, and parks. Public spaces are mostly considered as they can hold many people in the case of an emergency or disaster. These areas can also serve as field hospitals before residents move to temporary shelters. These areas can also serve as emergency accommodation areas in order to meet any urgent housing needs for disaster victims. Furthermore, community residents have been educated on how to prepare for disaster mitigation (Istanbul Greater Municipality & Zeytinburnu Urban Transformation Atelier, 2003; Istanbul Kentsel Donusum Kanunu Tasarı Taslagi, 2006).

Three time periods (stages) are involved for planning mitigation measures and facing the challenge of an earthquake:

1. Pre-disaster period.
2. During the disaster.
3. Post-disaster period.

The first stage is the main preparation stage for future disasters and is comprised of planning settlements, their layouts, and the height and structures of buildings and deciding on whether to rehabilitate rundown houses and on the proper layout for future infrastructure. A resilient city is one that has renovated and repaired its old housing stock within the required time periods, preserved its historical buildings, and planned new housing on developable land.

In short, location decisions for housing settlements, land development plans, and land use zoning are among the major preparatory work of the first stage. Furthermore, plans for organizing formal and informal networks before a disaster occurs and for how tasks are shared and identifying the responsibilities among the public, private, and community sectors for emergency cases are crucial components of this pre-disaster stage. Only then, can human resources be coordinated and lives saved. Skipping this stage is very dangerous for the city and threatens lives.

The second stage involves providing temporary shelter on reserved lands for disaster victims. Providing *temporary housing* to earthquake victims is an important goal immediately following a disaster. Such accommodations require taking action and preparation before the disaster takes place. This is the duty of the national government at the political level, as individuals on their own is not enough. The third and last stage involves providing the *permanent housing* required for those whose houses have become uninhabitable after a disaster. In extraordinary cases, however, the short-term accommodations can last for a long time, and moving into new and more resilient house may be seriously delayed. These long-term residences may become an issue, as often is the case in the world when any short-term accommodations last longer than expected. Each stage has different responsibilities on the parts of the government, the people, and non-governmental organizations (NGOs).

Prior to the earthquakes in the early stages of Zeytinburnu's development, the Zeytinburnu Community proved its ability to improve its houses and its settlement gradually and informally in the 1950 and 1960; they obtained rights to infrastructure and access to urban amenities. The major strength of the community was its grassroots and volunteer associations. During this period, the first transportation network had been locally created to connect the settlement to the city center. By the end of the 1980s, most houses were on the path to receiving titles and deeds. However, in the first two decades of the new millennium, the legalized housing stock totally shifted into new housing for new residents, with some urban land for housing having been replaced with commercial buildings.

The former squatter town of Zeytinburnu has a population of 247,669 in 16,030 buildings over 13 *mahalles* on 1,200 hectares of land. The reports from the Zeytinburnu Pilot Project indicate 2,295 high risk buildings, 15,019 of which are housing, 2,893 are commercial, and 791 are industrial. The urban transformation is estimated to affect 72,388 individuals. The area has been intensely built up and lacks the greenery for the parks and playgrounds that are also to be used as gathering areas during a disaster. The demolition and rebuilding activities are expected to be completed within 3 years (www.ibb.gov.tr). The Quarter-Renewing Action Program depends on a rebuilding approach to help with the physical and social development of the settlement.

The residents in Zeytinburnu were offered to select one of two alternatives: (1) stay within the settlement by paying extra for the new housing, or (2) move to a new but not near place where mass housing is being built by the Mass Housing Authority. (www.ibb.gov.tr). The total cost of the entire project is $950 million USD, and the Mayor started planning the Zeytinburnu Transformation Project in 2004. He formed a Disaster Preparedness Group for the big Marmara earthquake that is expected to occur. After the 1999 Izmit Earthquake in Türkiye, an Earthquake Master Plan was made, and the existing building stock was found require careful reassessment. In 2010, Istanbul was selected by the European Cultural Union as the Cultural Capital of Europe along its path to join the European Union. In coordination with the Earthquake Master Plan for Istanbul, Zeytinburnu was chosen as a pilot project zone for earthquake resistance due to its deteriorated building stock and limited urban public spaces.

The earlier pilot project for Zeytinburnu's urban transformation had been based on a principle that not more than 20%of the dwellings would be demolished to open up the space required for the life routes/corridors, gathering places, and green belts. However, the series of urban transformation processes in the area proved the fact that by now, the whole area has been gentrified. The commercial and tourism sector has ruled to build high class dwellings (mostly multi-story apartment houses) for the higher income urban classes. The evicted dwellers could stay there if they consented to buying one of the new flats. Gentrification and over-population became the major issues there, as the local people were forced to leave. This way, another Urban renewal had taken its toll, because the location of Zeytinburnu had been such a part of the center of the city, and land values were so high. With the 2012 Law on Disaster, gentrification and post-Fordism have seen the removal of factories and the surrounding informal housing out of town; on these valuable lands have been built prestigious offices, expensive leather shops, touristic hotels, and expensive housing, with the local settlers having been moved to the southwest of Istanbul.

Major changes in building regulations and development plans took place after the 2000s. The earlier assumption and promise of removing 20% of the dwellings in the pilot urban renewal process had not been held, with more houses having been demolished. Most residents had to leave their homes and mahalles because they could not afford the new housing. The whole area was treated as if life had not existed there before. The existing social as well as physical culture had been damaged in order to obtain more profit for Istanbul during the era of globalization. The question remains, had the mostly flat lands of Zeytinburnu really been at risk? If that were the case, why had multi-story buildings (i.e., the notorious 9X16 building) been built during the final Urban Transformation construction there?

Squatter housing in a large city has been associated with disaster over the last two decades. Wherever this type of housing is located is considered an at-risk earthquake zone. This has been the approach of the government officials and bureaucrats. With this changing perspective and perception, urban transformation processes and implementation have aimed at demolishing squatter housing areas in the city. This has had much to do with the sharply changing perception toward *gecekondu* dwellers, from that of useful citizens contributing to industrialization into illegal occupiers of precious valuable central urban land made worthless with its substandard urban housing. Yet they are the very same people. They have proven themselves capable of developing and rehabilitating affordable housing and becoming good urban citizens. Furthermore, social housing was not constructed to compensate migrants with affordable housing. The construction sector is considered to be pumping the economic sector.

Formal and legal urban housing is built according to master development plans and in accordance with building regulations. Squatter housing by definition is considered to be informal and situated on uncontrolled urban land. The main arguments for selecting the squatter housing areas for urban renewal is that they are located in areas at risk of disaster. Razing *gecekondus* should not be the solution for achieving the renewal of the housing stock. In Türkiye and particularly in Istanbul, urban renewal and transformation were conceived as urban development occurring on cleared land. Such an approach has caused unanticipated side effects that can be avoided by reconceptualizing urban renewal in another way. Europe has successful cases of urban renewal, which

indicate that other means exist for renewing urban housing stock (Mathey, 2015), the major ones being rehabilitating buildings by strengthening individual urban blocks and redesigning streets by providing new community facilities, public areas, and greenery.

In fact, rehabilitation in areas requiring resilience is already a better strategy because:

1. The construction density in the mahalles will remain the same, leaving room for gathering spaces and future expansion,
2. Relocating people becomes unnecessary, which will prevent poverty areas from forming elsewhere in other parts of the city due to the dislocated residents,
3. Sociocultural networks within the neighborhoods will be protected and remain unbroken with in situ rehabilitation. This also means place attachment will continue in the locale, and
4. Maintaining the sociospatial balance in urban neighborhoods will raise citizen's quality of life and well-being.

2. On Over Density

Housing is a major issue in Türkiye. For urban settlements in particular, the housing issue is more pressing in megacities. These cities face excessive construction activity, which in turn will intensify and overpopulate urban settlements. The topography of built environments is shifting drastically from low-rise to high-rise and skyscrapers through vertical growth. This situation is true not only for the major cities of European countries, but also for the megacity of Istanbul. These cities that compete with one another for moving into the first ranks on the globalization list are building high-tech, prestigious high-rise buildings with luxurious construction materials and differentiated building facades, with the belief that this will pave the way to getting many international firms to invest in the native country and improve their economical wealth. However, if not planned and supported through careful and locally sensitive housing and disaster policies, such a growth goal cannot be sustainable in the long run. Globalization theory, which was initially expected to provide jobs and affordable housing for developing economies in the 1980s, has failed in the new millennium.

Building activity may be a useful tool for overcoming economic crises in the short-run, but when this activity is abrupt and causes radically unplanned or grand scale changes in the spatial character of a historical and layered city such as Istanbul, the results can be highly disastrous. Over density is an undesirable result from the perspective of a city pampered by the appetite of contractors and developers who build unchecked by governmental power structure and may have too high a cost when the country, and especially its largest cities, are located in disaster-prone areas. Not only would historical multi-layered cities such as Istanbul lose their architectural heritage from the undesirable side-effects of globalization, but lower-middle income dwellers would also suffer from high rents and lack of decent homes in the city. The most recent disaster experienced in this century so far took place in the southeastern Anatolia and dramatically taught planners that the so-called "residences" built for the high-income elite national and international investors have become subject to demolition by natural disasters and killed most of their residents in Antakya. The wreckage was unable to be cleared away to help save many lives because of road closures due to being divided by the fault line. Vehicles were unable to bring help for the first two to three of the most critical days following the earthquake.

The earliest attempts at reorganizing Istanbul through an urban transformation workshop was founded on site, with Zeytinburnu being selected as the pilot area for urban transformation studies. The redesign principles involved opening up gathering areas, escape routes or corridors, and green areas or belts. The required space for this was to be acquired by the limited proportion of demolished houses. As the disaster-prone areas were defined mainly as squatter settlements, these became the houses to be deliberately demolished, as by definition they are located in areas not planned for urban development (overly steep areas prone to erosion, swampy land, creek beds, land prone to liquification); houses lacking construction materials of appropriate strength and contemporary techniques were also identified by law as unfit for urban development (Gokmen-Pulat et al., 2005).

Residential density promotes greater density and more built spaces to bring forth more profit, with the construction of new housing as its instrument. On the other hand, planning for lower density housing ironically brings quality housing spaces, more greenery, and more public space for the comfort of residents and more social activities in the city.

Zeytinburnu has gone through several urban transformations: the very first one was the change from agricultural land, as it used to be on the periphery of Istanbul, into an industrial zone. This marked Türkiye's landmark shift to planned industrial development in 1947. The area had belonged to the public as a Waqf [Foundation], and Treasury, and Zeytinburnu had for many years contributed to the national economy through the food and textile factories and leather workshops after the 1950s. The occupants who worked in these factories built their houses on public land in order to be close to their workplaces. In the absence of affordable formal housing, this was a good solution for minimizing transportation and house rental/ownership costs. With the continued in-flow of migration flow, these houses (*gecekondus*) increased in the area. According to Thorns (2002), the first transformation had already taken place because rural areas were being separated from urban areas. The rate of urbanization increased with the industrialization of major urban areas. This reversed trends that had been going on since the establishment of the Turkish Republic, going from being an agricultural to an industrializing nation.

Through the rapid spillover and expansion of squatter homes in neighborhoods, congested areas were formed. Nevertheless, these houses are only 4-5 floors high and made of reinforced concrete, while the newly built houses during the urban renewal on the new Millenium are many stories taller, 20 stories or more. This means more people and denser construction on the same piece of land and that crowding is taking place without have made the necessary infrastructural improvements. This is an example of unplanned and imbalanced urban growth.

Urban transformation in these earlier stages was focused on rehabilitation, supported by both by the builder-occupants as well as the local government through the Squatter Housing Law of 1966, which grandfather-claused and rehabilitated most squatter housing. The amendments to this fundamental law that followed continued this trend and accepted the existence of *gecekondus* in the city for many years. Thus, the informal housing stock had both grown and aged within neighborhoods during the last half of the 20th century in Istanbul. This started to increase the construction density and rapid transformation of Zeytinburnu, resulting in legalization and rehabilitation. Overcrowding in the renewal zones of the 21st century has been caused by the aging housing structures that later became occupied by the lower- and lowest income groups in informal urban areas. Occupants could not repair their houses, and over time the families grew and new tenants came and demanded more housing space. The existing houses were extended horizontally (by adding rooms) and vertically (by adding floors), thus increasing the density of the same plot of land. These neighborhoods became crowded, and such buildings have been in need of modernization.

Density means "quantity" in view of the major decision makers. Policy designers are the national decision makers who aim to provide accommodations for the maximum number of people. From contractors' perspective, dense construction means more housing units on the same site and more profit (e.g., rent) per square meter of built area on a site. All of this means more total floor area usage and indexing per site. In other words, a contractor would not take the risk of constructing by demolishing an old building unless a commercial gain is foreseen. The total constructable/usable area index is determined based on location in the urban zone, and its policies and laws.

Densification or overspill of renewed areas is an expected result of the usual implementation of urban transformation. In most cases, however, over-densification has occurred in Istanbul. In Kağıthane municipality, a large scale mass-housing project that had been built on a green area was totally changed by changing its zoning from a green space into housing estates. This will lower residents' air quality and cultural, leisure, and athletic space requirements. The environmental quality of the neighborhood and other existing houses will also be lowered as a result. These over-densities are achieved at the expense of residents' needs for and constitutional rights to qualitative open spaces, public spaces, parks, playgrounds, and emergency gathering areas, as well as equal access to urban facilities, ramps and other required support systems for handicapped citizens and residents, both in their home environments and in the city overall. Having these will enable a sustainable socio-spatial urban growth. Otherwise, the city will grow in an uncontrollable fashion under the pressure of housing market forces, with urban life quality deteriorating as a result.

Global spaces are generated on local spaces where existing social networks are replaced by global and international ones. This shift is caused by urban transformation. Dense mass-housing has replaced low-rise social housing in Tozkoparan, Istanbul. Furthermore, the urban texture will serve middle-class residents. The green areas have been concretized. The trees have been torn out and replaced by tall buildings, much taller than the 4-5 story former social housing with lots of green spaces and parks. Relocating residents as a result of urban development is not sustainable in the sense of disaster resilience, because these residents go to even poorer areas of the city to survive and start their new lives from zero.

So far, the experience has shown that the government has not provided or guaranteed any favorable conditions such as providing new housing for those evicted from their houses in urban renewal and transformation areas. Squatter housing had been planned for demolishing when they first appeared in the early 1950-1960s, when they were comparatively fewer in number in major urban areas and their surroundings. Yet, not enough alternative affordable housing (i.e., social housing and core housing) had been built to matching the number of families in need. After 70 years, squatter housing have increased to contribute more than half of the population of the major urban areas in Türkiye, as well as in other developing countries, with all previous development and housing plans having failed.

3. On Disaster Law

The Disaster Law was first applied to Zeytinburnu. It was called the *Emergency Action Plan* and appeared in Istanbul immediately after the 1999 Izmir earthquake. This plan was carried out by the Zeytinburnu Urban Transformation Atelier under Istanbul Greater Metropolitan Municipality. Accordingly, Zeytinburnu was selected as a pilot project area to be prepared for the next big earthquake awaiting Istanbul in the future. It had been the largest squatter settlement in Istanbul. Based on the criteria of fast population growth, intense construction activity and densification of buildings had occurred, causing the crowding of neighborhoods on the same street. The area was assumed to not be a well-rehabilitated squatter settlement. The urban transformation processes started there because in the decision-makers' and policy-designers' eyes, the area was considered to be quit at-risk. The goal was three-fold:

(1) generate life corridors for all the mahalles' residents to escape from the area in an emergency (disaster) situation, (2) create gathering spaces for mahalle residents to come together safely, and (3) generate a green-belt so that the zone can have parks and green space to meet the need for open spaces.

The most recent disaster law, originally called the Urban Transformation of Disaster-Prone Zones, was a major guide for re-orienting the mega-cities of Türkiye and their communities. The urban transformation aimed for a more sustainable growth that kept earthquakes in mind and for the safety and security of the families with the claim of having children live and raised in healthy environments with equal access to urban amenities. To carry out this aim, different scales (i.e., building scale, urban block scale, and urban settlement scale) were considered as a whole. The Law was a response to the major earthquake in the last year of the 20th century and changed all regulations and building materials, as well as the quality of concrete and type of construction iron (ribbed iron rods replacing smooth iron rods). The new regulations set the highest standards for building materials using existing technology.

A resilient city means a sustainable city. For a city to be resilient, safety and security needs should be met. Safety includes and means such things as sturdy buildings, durable permanent houses, strong and new infrastructure, well-designed and resilient public spaces. Security means a harmonious society; multi-cultural and multi-ethnic communities; walkability; and equal access to urban amenities. Safety and security go hand in hand, but for this topic, the current article is more interested in the safety aspect for its emphasis on space. Although erosion, landslides, floods, and hurricanes are significant threats, earthquakes are the greatest disaster threat for Istanbul. On the small scale with houses as buildings, their (1) design, (2) construction materials, and (3) construction/structural system are seen to play a dominant role in providing resistance. These involve the design of buildings and urban areas and the location of urban settlements with respect to the natural environment (e.g., the sea, mountains, plains, proximity to other urban areas). Such reasoning falls within the expertise of the architect, urban planner, and civil engineer, while the other stakeholders in this are contractors and developers in the housing markets. Housing policies must provide and guide the planning and design of resilient buildings and cities; the Disaster Law issued in 2012 had the role of supporting the execution of plans, with residents needing to be well aware of (1) the risks of the house they are living and (2) awareness of the laws, following and updating things based on site-knowledge.

The Disaster Law dictates the criteria for urban transformation. Firstly, squatter housing and informal settlements are theoretically located on unfavorable weak grounds. The assumption here is that all squatter housing and settlements are earthquake risks. Secondly, redevelopment of central areas is feasible. Accordingly, the focus is not on strengthening the load-bearing structures of existing buildings but on their demolition and the construction of new housing. Thirdly, the spatial quality for families and households must be increased, but families that were evicted from their informal housing are moved elsewhere. A higher social class sits on top of the new housing on valuable urban land. For decision-makers, primary assets involve learning from past experiences and other international experiences on how to design disaster resistant urban settlements; integrating housing and education with disaster in mind; using locally adaptable technology and planning its finance locally; improving existing housing structures; and creating new home designs that are less risky in cities. The local people, bureaucrats, stakeholders in the housing market, officials, and decision makers must work together to challenge how existing urban housing stock is strengthened and resilient new cities constructed. For a knowledgeable earthquake-resistant design, the public, private, and the popular sectors must pool all resources. In this way, a sustainable urban renewal becomes possible with their participation.

Not only is knowledgeability required from the designer but also from government officials. Furthermore, each locality and *mahalle* is unique. Therefore, field-based feedback on local knowledge could be very helpful for policy design. The priorities must change, and policy designers must start with people's health when providing affordable accommodations and housing. The priority that has been given to high-rise elite housing for generating global spaces in local geographies must be re-oriented toward generating locales for the local people. Here, locale refers to the vernacular local geography, land structure, strength of the soil, development potential for housing, and community capacity to form formal and informal networks for emergency conditions. If strengthening and reinforcing a building is more feasible than rebuilding from the ground up, then reinforcing should be the chosen alternative to implement. However, the Disaster Law prefers Urban Transformation to be a redevelopment because demolishing and building anew on cleared land are easier. This alternative also mitigates such problems as ownership on shared-title lands and provides extra rent for commercially oriented contractors and developers.

Large-scale housing estates could be looked into for how human they are. More people means more strangers and less likelihood to develop neighborly relationships. Maybe the time has come to return to small-scale housing units that are managed formally by the occupants. The existing housing stock, if updated and upgraded continuously, can be preserved sustainably. Maybe the simplicity of homes where the ordinary people live has mostly been forgotten. In modern times, this style can be reconsidered and adapted to contemporary living conditions. In accordance with complex designs and symbolic housing (as a building), these forms challenge the natural horizontal forces (e.g., earthquakes, hurricanes) with extra-long cantilevers and may be possible through the use of advanced technology. However, their cost may be a critical issue. House forms with global appeal and flashy facades for the elite are mostly for the international investors who dwell in these areas. Simple-looking, locally adaptable, and accessible housing

spaces might require small-scale *mahalles* where the dwellers become neighbors to each other and benefit from the *mahalle* solidarity and community identity these building are situated in. Perhaps this means the revival of the more traditional and rather vernacular housing spaces and settlements. Furthermore, reserve areas should be planned and preserved for building permanent housing to replace disaster victims' heavily damaged or demolished dwellings.

Reserve areas need to be planned ahead of time before a disaster occurs. Their location crucially must be nearby existing earthquake areas yet removed from the fault lines. Otherwise, migration to faraway distances would have dramatic consequences on victims' health. People's place attachment and social bonds with their neighbors need to be preserved in the new place or settlement. Designing appropriate spaces requires scrutinization and on-going research. Such research would be better if it were interdisciplinary and multi-disciplinary. This would involve NGOs and grassroots organizations on the informal side, experts on the professional side (i.e., engineers, architects, urban planners), and stakeholders in the housing market as the pressure groups, with the formal groups being local and central agencies, government institutions, and decision makers. Regarding the legal framework, laws must be consistent and sensitive to the community and its settlements. The existing cultural fabric must be revitalized; settlement spaces must be reduced to the *mahalle* scale, and houses must be simplified in terms of plan and form, with more social space left to the common usage of the *mahalle*'s residents. In the reserve areas, new communities could be created through the original community core of the resituated *mahalle*. With regard to post-earthquake housing, the parameter of design flexibility is crucial, particularly for permanent housing. This is even important for temporary housing, especially if and when the temporary house turns into permanent housing with the delayed delivery of completed permanent new houses. Different types of housing are needed during the different stages of disaster.

Top-down or centrally decided urban transformation started appearing on the agenda before the Disaster Law was issued in 2012. The legal infrastructure had not existed in the 1st period (prior to the year 2005) until 2000. During the 2nd period (2005-2010), the legal frameworks for local administration and urban transformation implementation had been set, with authority shifted from the central to local administration. In the 3rd period (2010-present), urban transformation implementations have sped up, and laws have given central authority all the rights to enact urban transformation. The Ministry of Environment and Urbanism has been in charge, and the municipalities have gained power over implementation rights (Dulgeroglu-Yuksel et al.,2014).

Law No. 6306: On Urban Transformation was issued in 2012. The Disaster Law involves the Transformation of the Areas under the Risk and aims to improve, remove, and renovate buildings on at-risk lands. The Ministry, municipalities, and the people decide on where these transformations are to be applied. At the time, 10 cities and 24 districts had been selected in Türkiye for urban transformation, with 6.5 million at-risk buildings set to be demolished and re-built within 20 years. This goal has not yet been reached. With this Law of Disaster, geologically unsuitable grounds, areas that have experienced previous disasters, decaying buildings, and buildings on unplanned areas without sufficient facilities or technical infrastructure became candidates for urban transformation.

However, the Law has also set the conditions for how urban transformations are to be implemented:

1. Demolition of houses is to be implemented with the agreement of the owner(s),
2. Tenants/occupiers will be subsidized,
3. Loans will be provided for building reinforcement
4. Squatter homes can be demolished only if residents are assigned suitable houses.

The first condition has been met most of the time, however, the second condition has not been considered, the third condition has been minimally applied, and the fourth condition has been mostly neglected, as residents of squatter homes have only been given some demolition compensation fee for being evicted from their houses (*gecekondus*).

The major point of the Law directs decision-making and control mechanisms as follows:

(1) The Ministry of Climate, Environment and Planning at the central level, with (2) municipalities at the local level. However, because the Law does not equip local authorities with the necessary knowledge tools for implementing the regulations on urban transformation, the municipalities have found their own ways of implementing it in their zones by groping in the dark. Without a holistic plan for the overall implementation of urban transformation processes, conflicts have occurred between local and central authorities, between home owners and authorities, and between residents and commercially oriented urban stakeholders.

Most of the time, technical information is not shared with residents, and resident participation is not sought for discussing the advantages and disadvantages of urban transformation, how it will be carried out, or which lands are hazardous or not. Various studies have shown that approximately 33% of residents in urban transformation zones have no idea about whether their buildings are at risk or not. This is because authorities have not provided residents with the necessary tools. What urban transformation means to residents is strengthening buildings (mainly homes), restructuring and renovating them to have better quality in the housing environment. Almost half the population has no information about urban transformation.

Urban transformation activities have doubled prices on the housing market, as more demand has come from investors. Residents' hesitancy in approaching the Law might be explained by their fear of experiencing large-scale urban transformations through such institution as TOKİ (Mass Housing Authority) and its revenue share firms. They may also fear that the population will increase, as occurred in the Kağıthane neighborhoods, and that traffic and parking issues will worsen, with environmental pollution eventually occurring and location problems arising. Through urban transformation, the law wants to stop unplanned construction activity in the three major cities of Türkiye (i.e., Istanbul, Ankara, İzmir) to achieve healthy housing stock with good standards and safe living conditions for urban citizens. What has been interpreted as urban renewal is demolition and rehabilitation. Urban renewal provides design principles that aim to allow everyone to live in decent quality housing as afforded by the Constitution (Yıldız et al., 2016). However, the razing of houses and relocation of residents have been the major strategy preferred for implementing this.

Conclusion

Mindsets must change, and a shift from the post-disaster stage into pre-disaster stage interventions and preparations is essential. Only then will people be able to prepare for disasters and take precautions before the next big earthquake happens. This change in mentality will enable planning and orderliness throughout the whole dramatic process from start to finish. The three-section structure of the text cover over-density, urban renewal, and disaster law in an attempt to connect them all together. Ideally, an urban renewal that adheres to its design principles and disaster law would be good and beneficial for urban settlements. Yet when implemented inappropriately on site or applied generally as an urban development, the renewal processes fail to contribute to quality housing and city spaces. Nor do houses transform to meet the qualifications set for resisting earthquakes. One major issue this article has dealt with is overpopulation following intense construction activity in the city. The design clue or implication for designers is a lower building density results in better lives for the residents. The gap between the implementation goals and those of the disaster law is that the former is rent-oriented while the latter is life quality-oriented.

Housing policies in particular must focus on the three stages of generating disaster-resistant housing in cities:

1. Pre-disaster stage: prevention strategies, strengthening houses, renovating houses partially or in full.
2. During the disaster stage: providing emergency shelter and accommodations, vacant rooms at hotels, using secondary homes/holiday homes with owners' consent; having tents and containers; having covered sports halls, schools, and public spaces.
3. Post-disaster stage: completing permanent housing for victims; constructing houses in reserve areas under Law No: 6306. (e.g., TOKİ houses).

Types of Housing Plans: Usually, one or two types of highly restrictive house plans are produced for disaster victims. However, disaster victims are as diversified as any other group of citizens. They differ in terms of family demographics, economic capacities, and psychological resistance for facing the experienced trauma.

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