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RECONQUEST THE SPACE OF NATURE:
RETHINKING THE MASLAK DEVELOPMENT

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SUMMARY

This thesis examines the situation of Maslak within Istanbul's development process towards the north, the changes it has undergone, and the effects of these changes on ecology. Istanbul's transformation and development over the last fifty years has increased urbanization, particularly in the northern regions, transforming natural threshold areas in these regions into urban fabrics. Maslak is one of the best examples of this situation. In the first phase of the study, analyses were conducted across Istanbul, investigating land use and the amount of green space per capita. These analyses revealed that the city's green space problem is not only related to a lack of quantity but also to spatial fragmentation. Green spaces have not completely disappeared, but their numbers have decreased, their continuity has been lost, and they no longer form a functional system. Subsequently, Istanbul's historical development was researched, and it was identified in which periods the city developed in which directions. Particularly since the second half of the 20th century, industrialization and transportation investments have led to a shift towards the north, which has become a threat to the northern forests. The opening of the Bosphorus and Fatih Sultan Mehmet bridges accelerated this situation and transformed the Büyükdere–Maslak line into an important development area. As a result, Maslak began to develop into a high-density business center. Research conducted specifically in Maslak shows the transition of this area from industrial zones to office towers and mixed-use projects. Increased floor counts, more concrete surfaces, and reduced green space ratios have led to the fragmentation of existing green areas. However, due to its critical location between Belgrade Forest and the urban fabric, Maslak is considered an important threshold point where ecological connections can be reestablished. In this context, a Green Corridor Strategy has been developed in the thesis. This strategy aims to connect the green areas within Maslak with the large green areas outside Maslak. While connecting these green areas, wildlife crossing solutions have been designed for the interruptions created by roads, and these designs have been scaled taking into account the high number of street cats in Istanbul. Additionally, insect hotel applications have been implemented on walls to support habitat diversity at a micro-scale. Ultimately, the study demonstrates that ecological continuity can be reestablished even in high-density business centers, using Maslak as an example. It shows that urban growth has the potential to integrate with nature.

ABSTRACT

This thesis examines the ecological and spatial transformation of the Maslak district towards the north of Istanbul and re-evaluates the relationship between the dense urbanization in Maslak and the fragmented nature. Over the past 50 years, Maslak has transformed from its former identity as a rural area adjacent to Belgrade into a high-density Central Business District developing along the Büyükdere Avenue axis. With this transformation, Maslak evolved from an industrial area to office towers, mixed-use buildings, and residences. This transformation has been accelerated by government planning decisions and transportation investments, causing severe damage to the continuity of green spaces and the microclimatic balance in this area. The study provides macro-scale analysis , green space per capita, and historical urban development layers at the city-wide scale. Maps, data, and spatial analyses have shown that the loss of green spaces in Istanbul is a structural and significant problem. The region is not entirely devoid of greenery, but the existing green areas are fragmented, discontinuous, and dysfunctional. These findings indicate that Maslak, located between Belgrade Forest and the urban fabric, is a critical area for re-establishing ecological connectivity.

TABLE OF CONTENTS

CHAPTER I

1.1. INTRODUCTION

Istanbul is a city shaped historically by its natural thresholds, forest systems, water basins, and topography. However, since the second half of the 20th century, increased migration to Istanbul, industrialization, and transportation investments have significantly altered the relationship between the city's spatial development and nature. In particular, expansion towards the north has increasingly blurred the boundary between Istanbul's most critical natural areas, the northern forests, and urban development. This process has led not only to distorted urbanization but also to the weakening of ecological continuity, the fragmentation of green spaces, and the disruption of microclimatic balance. One of the most prominent examples of this transformation is Maslak. Historically a rural threshold area associated with the Belgrad and Fatih Forests, Maslak began to transform in the 1950s with industrialization decisions. With the permission of high-rise construction in this area starting in the 1960s and the construction of the Bosphorus (1973) and Fatih Sultan Mehmet (1988) bridges, development, which was already oriented towards the north, gained considerable momentum. A new transportation backbone formed along the Büyükdere axis, transforming Maslak into a strategic connection point between the two shores (Asia-Europe) due to its location. This increased investment and turned Maslak into a central business district. Subsequently, industrial areas gradually gave way to office towers, mixed-use projects, and high-density residential areas. This process has reduced the continuity of green spaces in Maslak and fragmented them. This thesis analyzes land use changes, per person green space, and the distribution of green spaces across Istanbul, revealing the tension between urban growth and ecological continuity. Macro-scale analyses have shown that the green space problem is not only quantitative but also structural. In this context, Maslak has been considered a critical threshold area between the city and the forest. In the second phase of the study, Maslak's historical and spatial transformation was examined in detail through maps and research. It was determined that green spaces in this area had not completely disappeared but had fragmented and could not form a unity. This finding formed the basis of the design process. Rather than creating new green spaces, the thesis aimed to establish continuity by organizing existing green spaces and adding supporting green areas. The resulting Green Corridor Strategy connects existing green spaces within Maslak into a network system. This aims to reposition nature within the urban area by creating uninterrupted connections within the densely built fabric. The main purpose of this proposal, developed through maps, plans, and sections, is to show that ecological continuity is not only something that needs to be preserved, but also an urban infrastructure that can be reproduced.

This thesis demonstrates that even rapidly urbanizing areas like Maslak can integrate with nature, and that urban growth can be reconfigured with environmental continuity.

1.2. THE SCOPE OF RESEARCH: The Case of Maslak, Istanbul.

The selection of Maslak as the subject of this thesis is based on both spatial reasons and experience.

Spatially, Maslak is a critical area situated between Istanbul's urban fabric and the northern forests. Urban development along the Büyükdere Avenue axis has gained momentum and accelerated northward after the construction of the Bosporus Bridge (1973) and the Fatih Sultan Mehmet Bridge (1988). This has given Maslak a strategic location between the two shores and made it a focus for investment. All these transportation investments and urban development have quickly transformed Maslak into a high-density business center.

Maslak's transformation from a rural and low-density threshold area into an area of office towers, mixed-use projects, and large-scale settlements has led to a reduction in green spaces in this area and their fragmentation. This situation has highlighted the tension between economic growth and ecological sustainability in Maslak, making it a representative area for this research.

The choice of Maslak is also based on personal observation. As someone who lives in Istanbul and has resided in Maslak for a certain period of time, I have directly experienced the building density, the lack of green spaces, and the lack of environmental comfort in the area. The dissatisfaction created by these conditions led to questioning the environmental and urban situation here. As a result, this experience became an academic research question and the starting point for the study. Therefore, Maslak is considered not only as a geographical example but also as a spatial situation representing the contemporary transformation of Istanbul.

1.3. RESEARCH AIM AND METHODOLOGY

The primary objective of this research is to analyze the ecological consequences of high-density urban development in Maslak and to develop a strategy for re-establishing ecological continuity in this area. This study approaches green space not only as a design element but also as an infrastructure that shapes the urban area. The research method is based on a multi-scale approach. In the first phase, land use changes, the amount of green space per capita, and the spatial distribution of green spaces were analyzed at the Istanbul scale, and Maslak's situation and location were evaluated on these maps. This analysis revealed that the green space problem is not only related to continuity but also structural. Subsequently, the historical development of Istanbul was examined chronologically, looking at the directions of the city's growth, which areas developed in different periods, and the impact of northward growth on green spaces since the second half of the 20th century. In the second stage, the construction process along the Büyükdere Avenue axis towards Maslak was analyzed. The transformation of this area from an industrial area to a high-density office, mixed-use building, and luxury multi-story residential area was investigated. The increase in concrete surface area and multi-story construction was examined in terms of its reduction of green spaces in this area and its fragmentation of existing green spaces. In the final stage, the Green Corridor Strategy was developed. The aim was to connect existing green areas like a network and link them to the large green areas around Maslak. Wildlife crossing solutions were designed to reduce the fragmentation caused by roads, and during this design process, the street cat population in Istanbul was taken into account, and the dimensions were adjusted accordingly. Additionally, insect hotel applications were designed on wall surfaces to support micro-scale habitat diversity. This method began with macro-scale analyses, followed by historical studies and site assessments, leading to the design phase. For this area, theoretical knowledge, analyses, sections, maps, and plans were brought together to form a comprehensive solution.

CHAPTER II LAND USE AND GREEN SPACE DYNAMICS IN ISTANBUL

2.1. GREEN SPACES (POLS) IN ISTANBUL

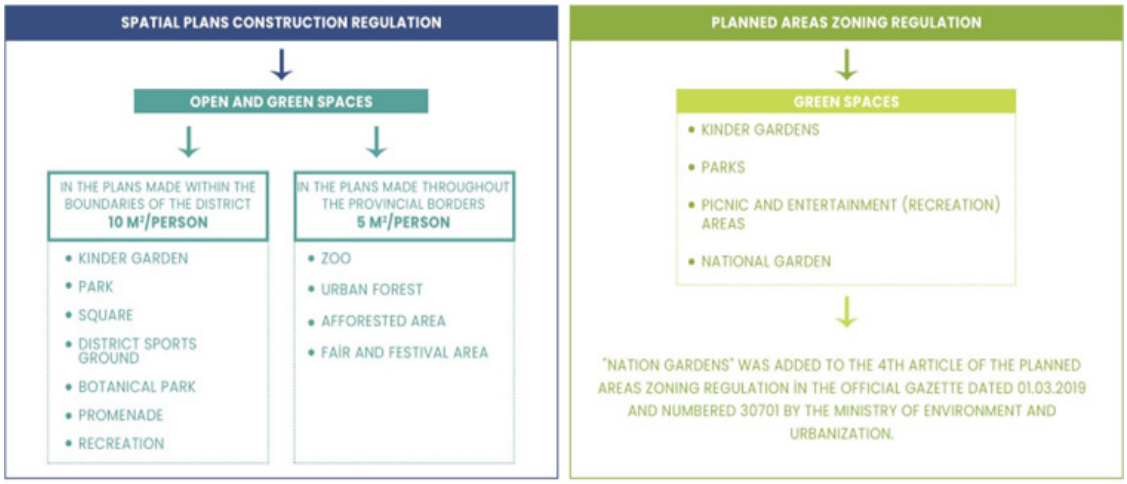


Fig.1
Green Area Regulations

There are various national and international standards for the planning of open and green areas in Istanbul, these areas were built in Istanbul in accordance with the standards in the national legislation. There are two main regulations for the planning of open and green areas in Istanbul; Spatial Plans Construction Regulation and Planned Areas Zoning Regulation.

PREVIOUS SUDIES :

According to Istanbul's 1/100,000 Environmental Master Plan and the project titled Increasing the Urban Resilience and Coping Capacity of Istanbul Against Potential Acute Shocks and Chronic Stresses, the city's approach to planning open and green areas has become more integrated and sustainability-oriented in recent years. The strategies proposed within these frameworks recognize green spaces not only as recreational elements but also as essential components of climate regulation, ecological connectivity, and social well-being. One of the core findings emphasizes that Istanbul significantly lags behind major European cities in terms of green space per capita. While cities such as Paris, London, and Zurich provide 14, 27, and 41 square meters per person respectively, Istanbul offers a considerably lower ratio. This discrepancy has prompted planners to propose long-term, multi-scalar green infrastructure strategies aimed at enhancing urban resilience and environmental equity across the metropolitan region (Istanbul Planning Agency 2023).

Fig.2 Ecological Corridors in Istanbul

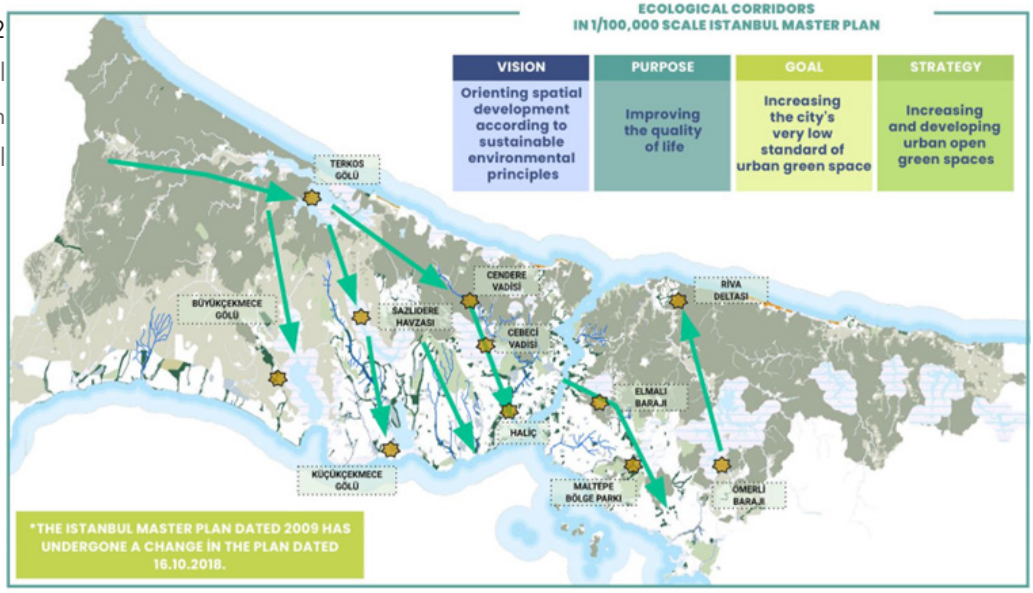


Fig.3 Urban and Regional Green and Sports Areas in Istanbul

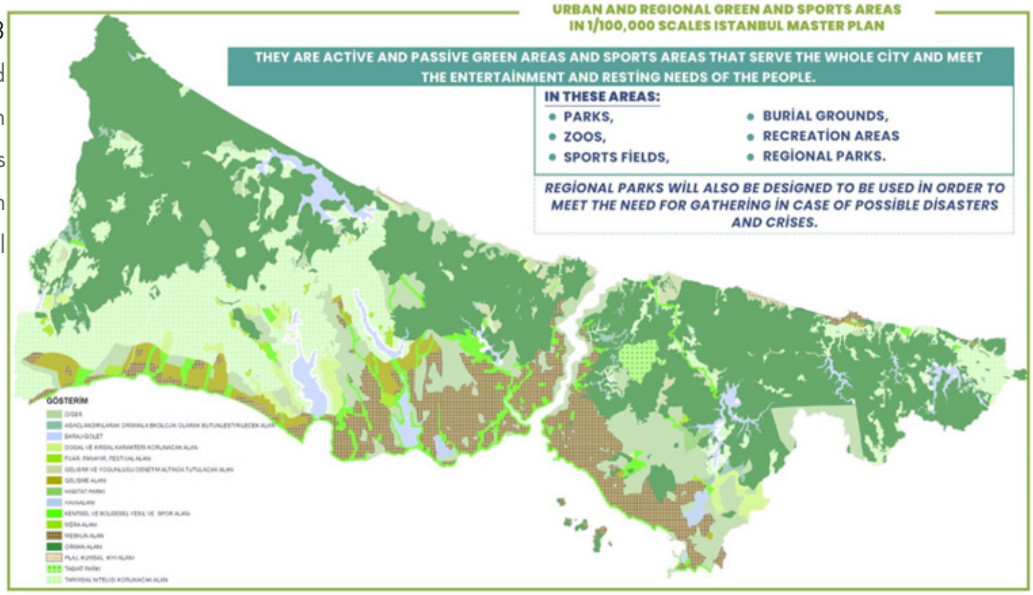
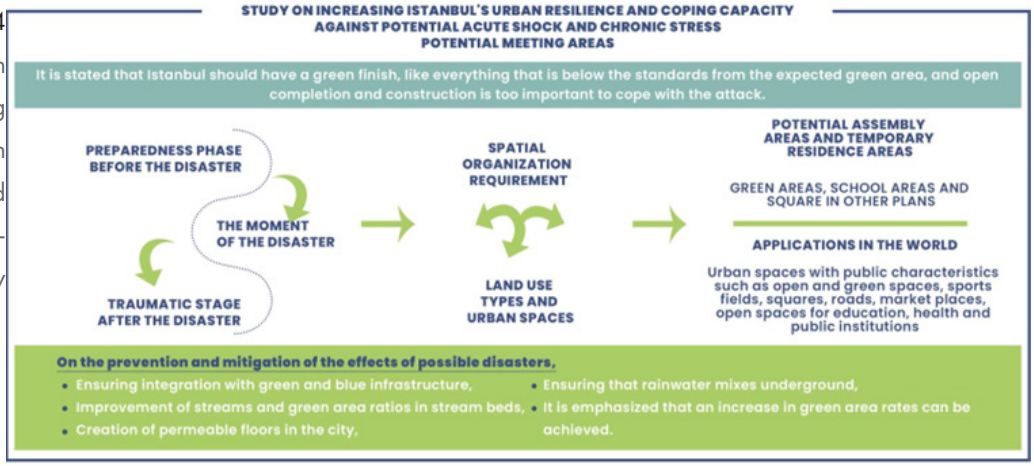


Fig.4 A Study on Enhancing Istanbul's Urban Resilience and Coping Capacity



2.1.1. GLOBAL COMPARISON OF GREEN AREA PER CAPITA

Global Comparison of Green Area per Capita

The continuity of the ecological system, biological diversity, air quality, and green spaces are considered fundamental components for the health of people and cities. In other words, these areas are important not just for life, but for life within cities. Green spaces create carbon sinks and directly affect the quality of life in the cities we live in. These areas reduce the greenhouse effect, regulate rainfall, balance temperature differences, reduce the heat island effect, and connect species' habitats through ecological corridors, wooded areas, parks, and gardens. (Food and Agriculture Organization of the United Nations, 2020). Looking at the historical process of green spaces around the world, these areas began to decline rapidly after the mid-19th century. The main reason for this effect is urbanization, which increased particularly in Europe and North America with the industrial revolution. Along with increasing urbanization, the expansion of agricultural areas, industrial production, infrastructure investments, transportation, highways, dams, and energy projects also contributed to this situation. Satellite observations since the 1990s have revealed that forests, particularly in tropical regions, have begun to disappear due to activities such as agriculture and mining. (United Nations Environment Programme, 2019). The main causes of the decline in green areas are uncontrolled urbanization, agricultural expansion, mining and energy infrastructure, tourism pressure, climate change, pollution, and lack of planning. Urbanization, especially when not controlled and planned, has led to large-scale land conversion and concretization in developing countries.

Fig.5
Global Comparison of Green Area per Capita

While working for agricultural development, many forests and pasture areas have been destroyed or eliminated. Mining and infrastructure projects have damaged ecosystems and reduced biodiversity, while climate change has caused extreme heat, drought, and forest fires, reducing the number and quality of green spaces (United Nations Environment Programme, 2022; European Environment Agency, 2023). All of these factors have reduced the amount of green space globally, decreased its productivity, and caused its spatial fragmentation. A serious loss of green space has begun worldwide. European countries have been less affected by this situation than many countries, such as Turkey. The main reason for this is the existence of strong environmental policies, land planning tools, highly protected areas, and sustainability goals. Green-friendly practices such as the Natura 2000 network developed by the European Union and the goal of zero net land consumption by 2050 have been effective in protecting green areas in Europe. Furthermore, the abandonment of agriculture in rural Europe has been a major factor in the re-expansion of forests and pastures in these areas. As a result, green space deficits in Europe are lower than in other countries. (European Environment Agency, 2023).

2.1.2. GREEN SPACE LOSS IN ISTANBUL IN COMPARISON WITH EUROPEAN CITIES

Istanbul is one of the cities in the very high density category. Its population is 14,105,029 and the city has an area of 1223.92 km2 , 28% of the total green area, while only 18% is covered by trees. Only 3.1% of European cities rank lower than Istanbul.

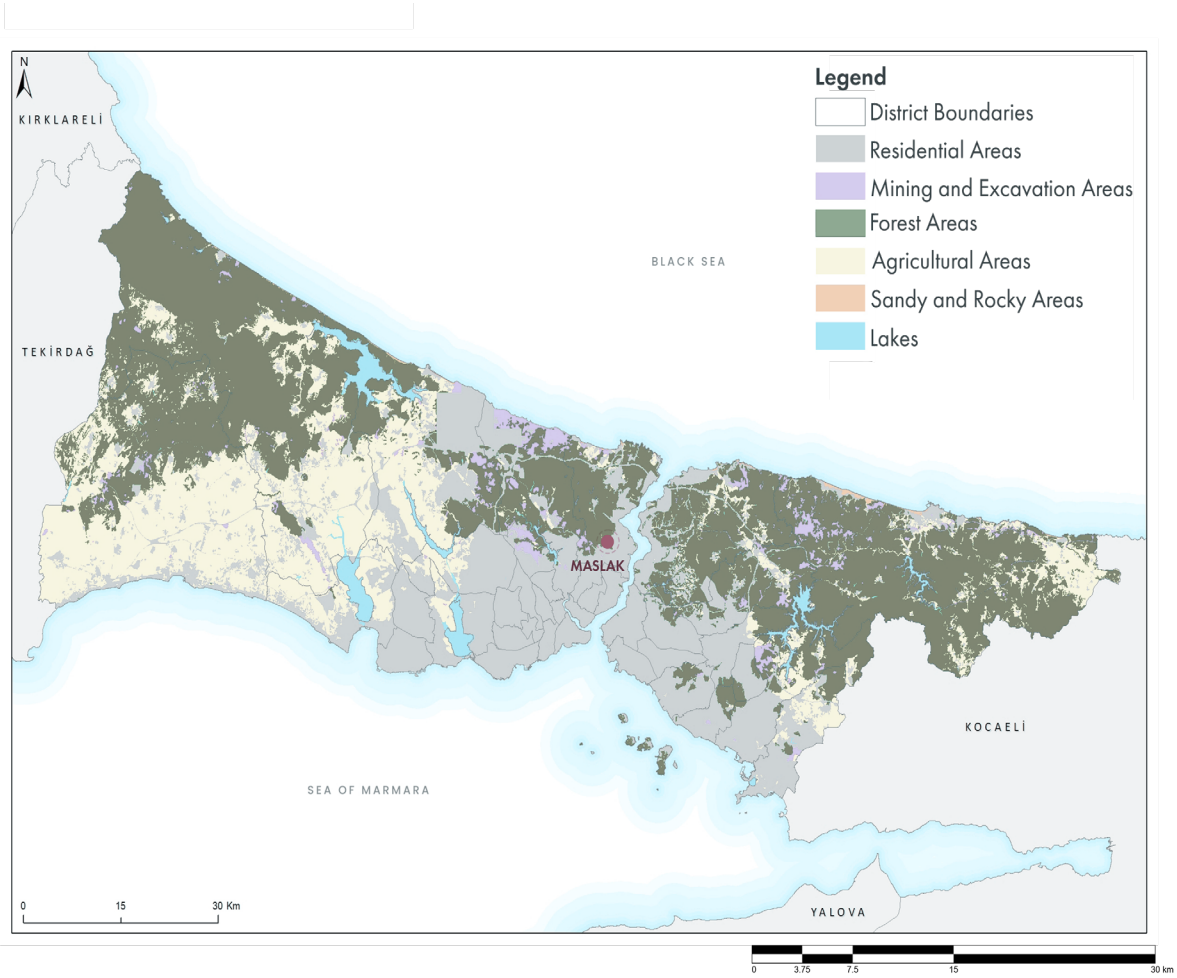
In Turkey, however, the situation is more fragile. Large-scale infrastructure projects, mega projects, rapid unplanned urbanization, the climate crisis, and tourism pressure have led to a rapid decline in green spaces, particularly over the last 40 years. The distorted urbanization experienced in Istanbul, the beginning of the loss of green areas, large projects carried out in the name of modernism, and the increase in concrete areas are among the most distorted examples of this. Projects such as the 3rd Bridge, 3rd Airport, and Canal Istanbul have seriously damaged Istanbul's northern forests, water basins, and coastal ecosystems. These projects, along with the increase in high-rise, large-scale projects, have weakened the city's air corridors, disrupted the climatic balance by reducing green spaces, and started to create an urban heat island effect. (TEMA Foundation, 2014). Furthermore, the lack of strict and binding policies to protect green spaces in Turkey has been one of the main factors accelerating this loss compared to Europe.

Climate change is accelerating this process, threatening the sustainability of Turkey's green spaces in the Mediterranean climate zone by progressively reducing their quality. This situation, like in Europe, not only affects ecological aspects but also challenges and deteriorates urban living standards, human health, and biological diversity. Therefore, the reduction and damage to green areas is no longer just an environmental problem; it has also become an economic, social, and spatial problem, creating a multi-layered crisis.

2.1.3. LAND USE STRUCTURE IN ISTANBUL

Istanbul has an area of 546,242.30 hectares, including forests in the north, agricultural areas in the west, residential areas and water surface in the south. In terms of land use, 43.10% is forests, 27.35% is residential areas, 24.27% is agricultural areas, 2.57% is mining and excavation areas, 2.49% is lakes, 0.21% is sandy and rocky areas.

Land Use Structure in Istanbul



2.1.4. TRANSFORMATION OF LAND USE PATTERNS (2009–2022).

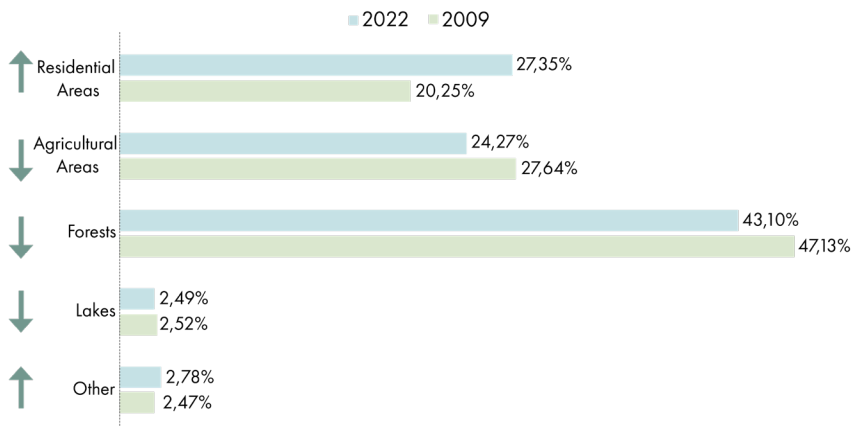
In this 13-year period, housing areas in Istanbul increased by 7.10 percent, forest areas decreased by 4.03 percent and agricultural areas decreased by 3.37 percent.

Fig.6
Land Use Structure in Istanbul

Changes In Active Green Areas Between 2009 And 2022

	AMOUNT OF ACTIVE GREEN AREA (m^2)	AMOUNT OF ACTIVE GREEN AREA PER PERSON (m^2/person)
Total	114.075.730,27	7.20 m^2
City Scale	93.526 729,78	**5.90**
Neighbor-hood Scale	20.549.000,48	**1.30**

Istanbul Population: 15.840.900



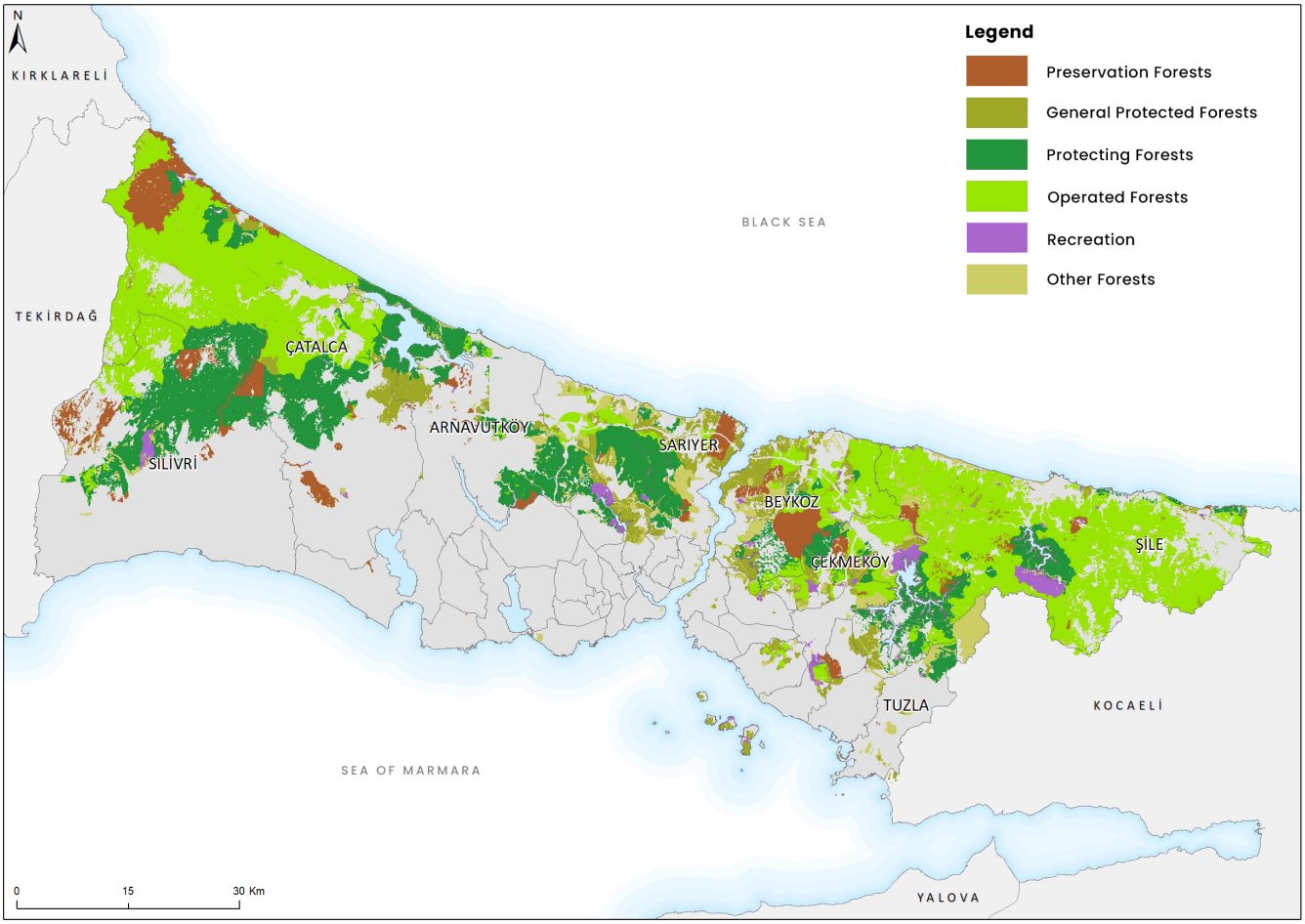
2.1.5. FOREST ECOSYSTEMS AND FUNCTIONAL TYPOLOGIES.

Fig.7
Changes In Active Green Areas Between 2009 And 2022
Source: table illustrated by Author

According to the 2012 forest area map, the total forest area is 257,497.10 hectares, excluding the areas that lost their forest characteristics due to the construction of the 3rd Airport and the North Marmara Motorway. Of these forest areas, 55.38% are located on the European side and 44.62% on the Anatolian side. In these Protected forest areas account for 26%, managed forest areas 45%, recreational forest areas 2% and other forest areas 9%.

Fig.8
Istanbul's Forest Functional Typologies

Istanbul's Forest Functional Typologies



2.1.6. SPATIAL DISTRIBUTION OF AGRICULTURE AREAS

Of these areas, 29% is fields suitable for pasture, 0.15% is greenhouse production area, 4% is pasture area and 66% is planted areas.

Spatial Distribution of Agricultural Land Uses in Istanbul

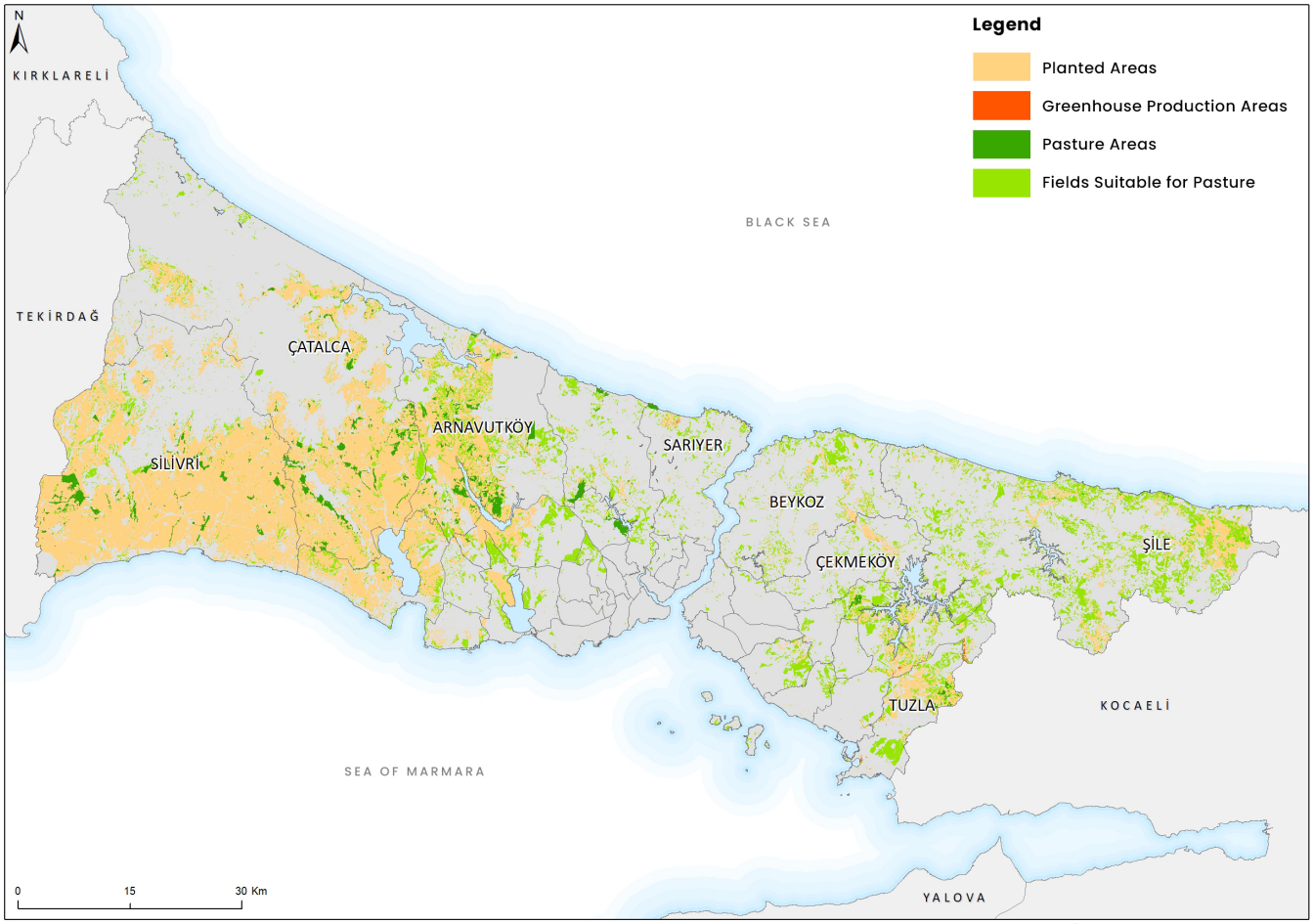


Fig.9
Spatial Distribution of Agricultural Land Uses in Istanbul

2.1.7. URBAN OPEN AND GREEN SPACE SYSTEMS

In the open and green area inventory, urban open and green areas are evaluated in 3 levels covering the urban settlement area of Istanbul. the ratio of open and green areas to the total area is also given according to the classification in the Table. Accordingly, recreational forest areas and active green areas, which are taken into account when calculating the amount of green space per capita, account for 46.47% and 19.2%, respectively. The ratio of parks in the city is 11.58%, the ratio of nature parks is 27.60% and the ratio of urban forests is 9.90%.

Hierarchical Classification and Percentage Distribution of Urban Open and Green Areas

Level 1	Level 2	Ratio (%)	Level 3	Ratio (%)
Urban Open and Green Areas	Urban Public Open Spaces	1,34	Urban Square	0,68
			Pedestrian Zone	0,66
	Active Green Areas	19,20	Children's Playground	0,25
			Park	11,58
			City Park	5,41
			Grove	1,60
			Fair – Festival Area	0,11
			Botanical Garden	0,26
	Passive Green Areas	26,13	Refuge	11,96
			Slope	1,39
			Woodland	3,52
			Undeveloped Urban Open Space	0,71
			Graveyard	7,88
			Grass - Meadow	0,46
			Urban Farmland	0,21
Social Infrastructure Areas	Sports Grounds	5,12	Open Sports Area	1,62
			Indoor Sports Area	0,25
			Mixed Sports Facility	0,58
			Urban - Regional Sports Area	2,23
			Private Sports Facility	0,44
Natural/Rural Areas	Sandy/Rocky Areas	1,74	Beach Area	0,05
			Rocky Area	1,69
	Recreational Forest Areas	46,47	Urban Forest	9,90
			Nature Park	27,60
			Promenade	8,60
			Arboretum	0,37
	Forest Areas*			
	Agricultural Areas*			

** Forest areas not used for recreational purposes and agricultural areas outside the urban area were not included in the open green areas inventory, but were also analyzed in detail.*

2.1.8. ACCESSIBILITY AND USER DENSITY OF GREEN SPACES

Fig.10
Hierarchical Classification and Percentage Distribution of Urban Open and Green Areas

Fig.11
Hierarchical Classification and Percentage Distribution of Urban Open and Green Areas

In 2023, the amount of green space per person in Istanbul is 7.20 m². The open and green space standards in the Spatial Planning Regulations are shown in the table below, with the amount of green space per person varying by scale. The second acceptance (active green spaces and recreational forest areas) was used to calculate the amount of green space per person at the district and neighborhood levels. According to the adequacy analysis conducted at the city and district levels, urban green areas exceed the standard in Istanbul with 5.90 m²/person. However, active green areas at the district level are well below the standard with 1.30 m²/person. Based on this finding, we can conclude that priority should be given to the district level for active green areas in Istanbul.

Hierarchical Classification and Percentage Distribution of Urban Open and Green Areas

OPEN AND GREEN AREA STANDARDS IN SPATIAL PLANS BUILDING REGULATION

	Open and Green Areas	Farklı Nüfus Gruplarına İlişkin Standartlar (m²/kişi)
In the Plans Made within District Boundaries	Children's Playground Park Urban Square Neighborhood Sports Area Botanical Park Promenade Recreation	10,00
In the Plans Made throughout the City Boundaries	Zoo Urban Forest Area to be afforested Fair – Festival Area Hipodrom	5,00

ACCEPTANCES USED IN THE CALCULATION OF THE AMOUNT OF GREEN AREAS PER PERSON

1. Acceptance	2. Acceptance	Open and Green Areas
District and Neighborhood Level	City, District and Neighborhood Level	Children's Playground Park
City Level		City Park Grove Fair – Festival Area Botanical Garden Urban Forest Nature Park Promenade Arboretum

	AMOUNT OF ACTIVE GREEN AREA (m²)	AMOUNT OF ACTIVE GREEN AREAS PER PERSON (m²/person)
TOTAL *All Active Green Areas and Recreational Forest Areas*	114.075.730,27	7,20 m²
City Scale *Urban Forest, Nature Park, Arboretum, Grove, City Park, Promenade, Fair – Festival Area, Botanical Garden*	93.526.729,78	5,90
Neighborhood Scale *Children's Playground, Park*	20.549.000,48	1,30

**İstanbul Population: 15.840.900*

On the Anatolian side, Şile and Beykoz districts have the highest green area per capita. This is because the resident population in these areas is much smaller than in other areas and open and green areas such as recreational areas, nature parks and urban parks are dense in these areas. In these districts, the size of open and green areas per capita is over 100 square meters. Adalar, Silivri, Eyüpsultan, Çatalca, Sarıyer, Arnavutköy and Çekmeköy are the districts with the highest per capita green areas after Şile and Beykoz. The districts with the lowest number of green areas are Bağcılar, Güngören, Bahçelievler, Gaziosmanpaşa, Esenyurt, Esenler and Şişli. Because there is intense urbanization in these areas. The amount of open and green areas per capita is below 1 square meter. These areas represent less decent parts of Istanbul compared to other areas. Both building density and population are high in this area.

District-Level Distribution of Green Area per Capita in Istanbul

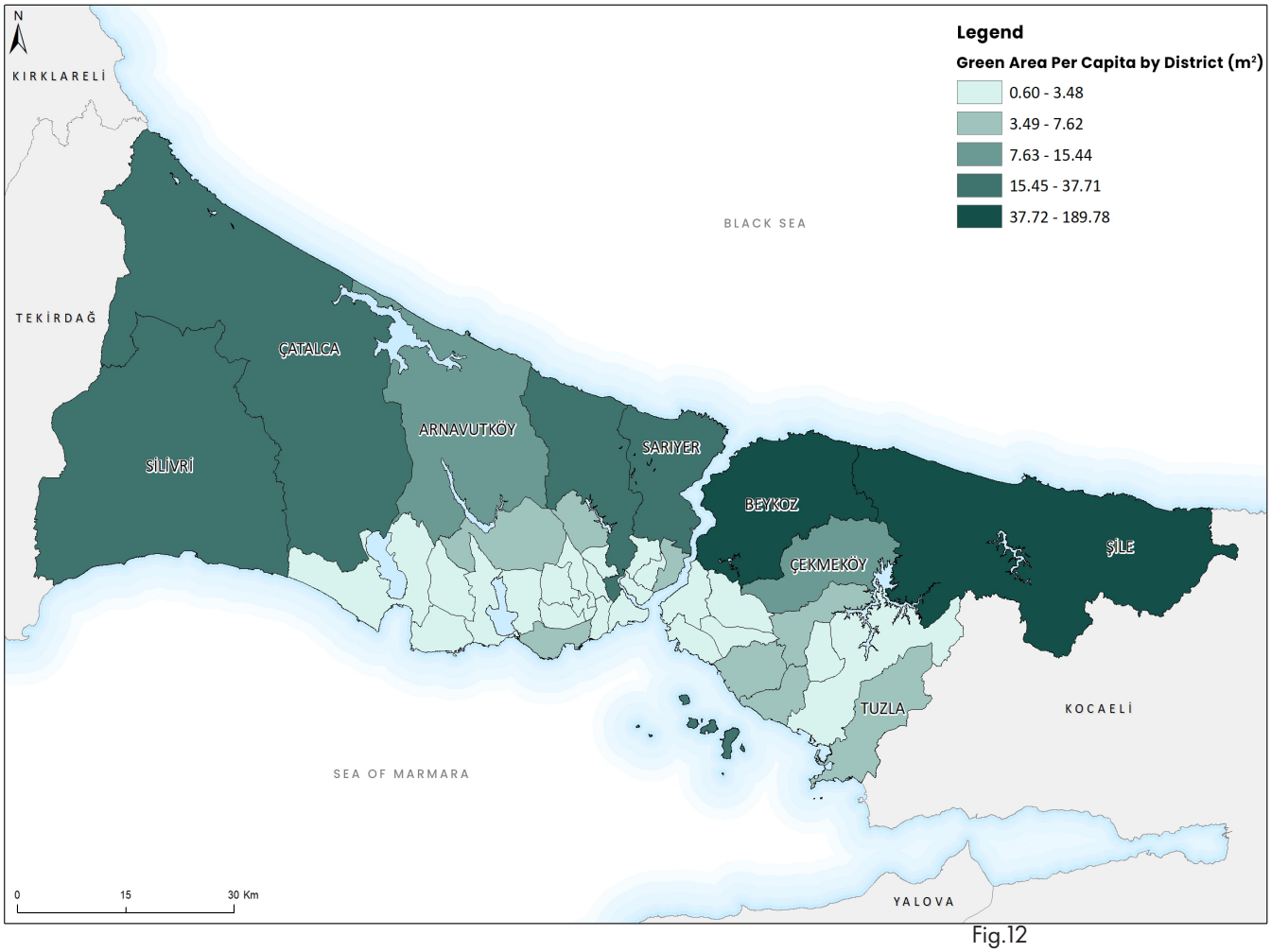


Fig.12
District-Level Distribution of Green Area per Capita in Istanbul

Although Istanbul covers a very large area, there are 978 neighborhoods within the provincial borders. 15 of these neighborhoods have no population due to forest and military areas. According to the adequacy surveys conducted at the neighborhood level, there are 107 neighborhoods without playgrounds and 79 neighborhoods without active green areas and recreational forest areas.

According to the standards of the Spatial Plans Zoning Regulation, there are only 54 neighborhoods that meet the standards for playgrounds and parks (1st Acceptance). According to the second assumption, 75.4% of the neighborhoods in Istanbul have less than 10.75 m2 of green space per capita.

Neighborhood-Level Distribution of Green Area per Capita in Istanbul

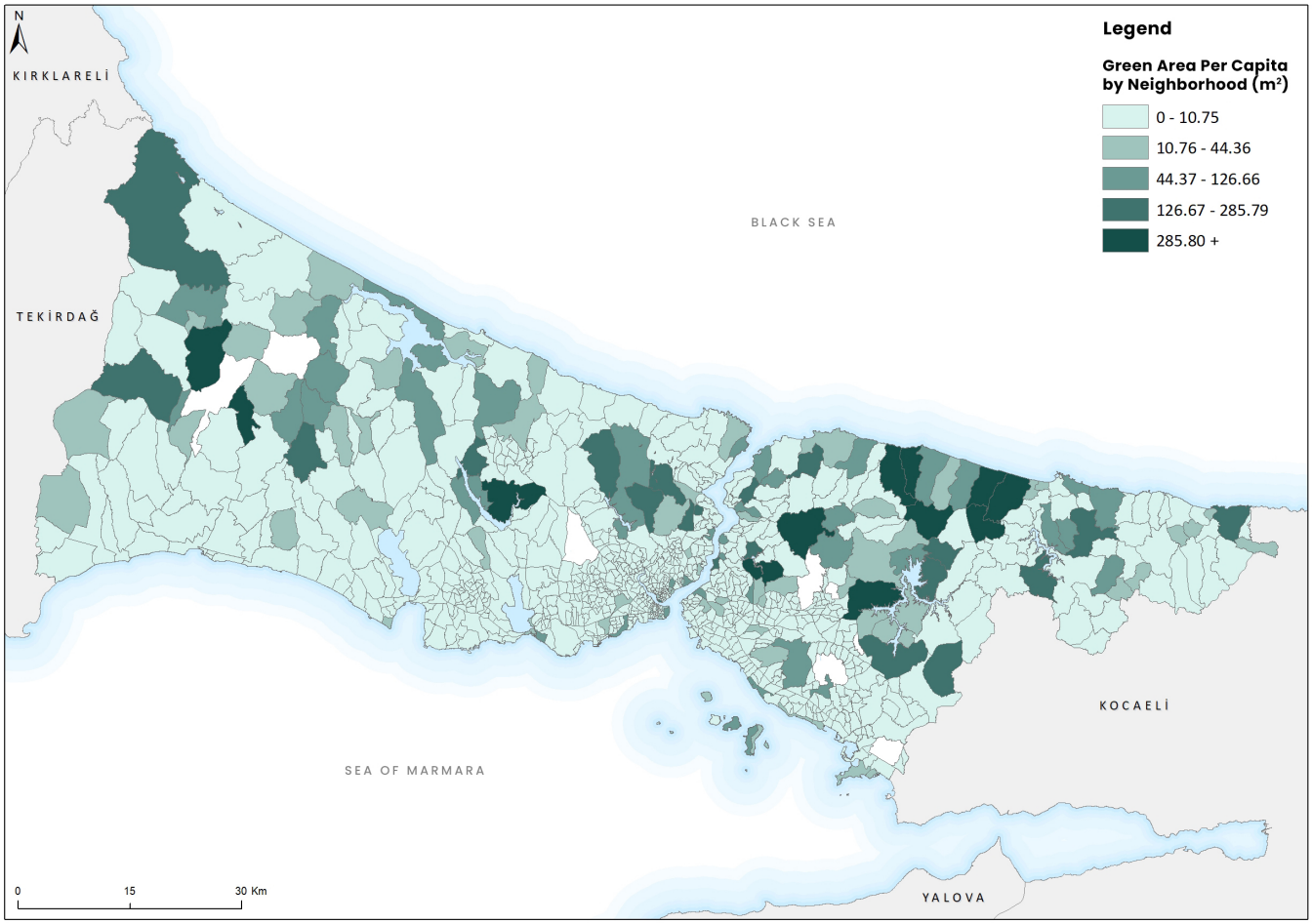


Fig.13
Neighborhood-Level Distribution of Green Area per Capita in Istanbul

The analysis was made by determining the closest accessible open and green area to the population. Assuming that the population uses the nearest open space at the same time, the analysis was made by calculating the area per person in this area. With the analysis, it was determined that 26% of the open and green areas have 1-5 m² of green space, while 16% have an area between 0.5 and 1 m². When we look at Istanbul in general, 55% of the open and green areas per capita are below 1 m². The rate of parks that meet the 10 m² standard of the Zoning Plans Construction Regulation is 12%..

2.2. URBANIZATION DYNAMICS AND ENVIRONMENTAL PRESSURES

Istanbul is a city covering the Asian and European sides. Istanbul is bordered by the Sea of Marmara to the south and the Black Sea to the north. The Bosphorus connects these two seas and separates the continents of Asia and Europe. Istanbul's coastline and forested areas can be seen in satellite images.

2.3. URBANIZATION DYNAMICS OF ISTANBUL

Progressive Loss of Green Spaces in Istanbul (1986–2025)

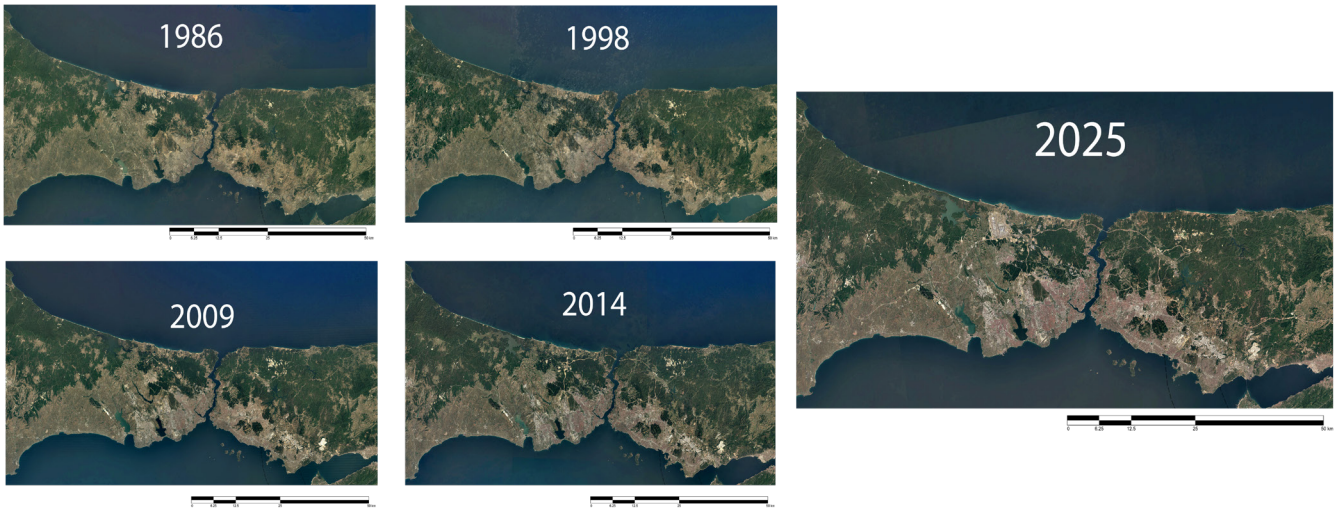


Fig.14
Progressive Loss of Green Spaces in Istanbul (1986–2025)

Urbanization is clearly expanding both on the European side and south of the Asian side. This puts intense pressure on the city's natural resources. Satellite imagery from 1977-2009 clearly shows the rapid urbanization of Istanbul and the need to develop and implement a strictly planned, environmentally friendly and sustainable urban plan. Green areas have been continuously shrinking for more than 30 years. The main reason for this is that economic development in the region has led to population growth. Since the mid-1990s, Istanbul's economy has been one of the fastest growing among OECD metro-regions (1). At the same time, Istanbul is responsible for 27% of the country's GDP (OECD, 2008). The population graph of Istanbul shows that between 1980 and 2013, according to Tüik (Turkish Statistical Institute) data, there has been more than a five-fold population increase. The population of 2772000 in 1980 became 14160467 in 2013 (Tüik, 2014). The population that was 2772000 in 1980 became 14160467 in 2013 (Tüik, 2014). Although Istanbul had a dense structure until the 1980s, there was a major fragmentation with the opening of the Bosphorus Bridges in the 1970s and 1980s respectively, and the creation of the connecting highways, the E-5 and the Trans-European Highway. The surrounding highways began to be surrounded by industrial developments and illegal slum settlements. This fragmentation came with some major changes. These changes include uncontrolled development outside the boundaries of the municipal area, the proliferation and increase of slums, high-rise and high-density housing projects developed by the Housing Development Administration and initiated by the state to serve the upper middle class and higher income groups, a new financial center to the north (towards the forested areas), gated housing developments close to both the Trans-European Motorway and the northern financial center. These changes have accelerated uncontrolled urban expansion. The urbanization in Istanbul and the environmental pressure of this urbanization shows the necessity of a sustainable environmentally friendly development.

2.3. SUSTAINABLE DEVELOPMENT STRATEGIES

Istanbul's construction and real estate market is subject to regulations, by-laws and other legal acts enacted by the Republic of Turkey. Unlike many European countries, significant steps towards sustainable development were taken in Turkey after 2000. The energy deficit problems of the last decade; the increase in energy prices and the international momentum have caused sustainable development to be an overdue action. While Western countries experienced an energy crisis in the late 70s, Turkey, as a developing country, has recently started to experience an energy deficit. With the current account deficit caused by the country's energy imports, the government has started to change the regulations on energy and take some measures. In Turkey, the energy consumption of the built environment is measured as 40% and it is stated in the report of the Union of Chambers of Turkish Engineers and Architects that 70%-90% of this 40% is consumed by heating or cooling systems and the rest is consumed by the lighting in the building (TMMOB, 2013). This is a statistic that shows very clearly why the government is focusing on the built environment as a way out. If the government or the industry can find a way to reduce energy consumption in buildings, then technically the energy deficit is basically reduced. We can see the first example of a green building in history at METU (Middle East Technical University) in 1975. This first green building used various systems such as direct heated ventilation, solar flat plate collectors, photo-voltaic cells and passive solar heating systems (Korkmaz, 2009). Some technical universities, such as Istanbul Technical University, Middle East Technical University, Yildiz Technical University, carry out studies on issues such as sustainable development and carry out projects in cooperation with the private sector. Istanbul Technical University, which conducts research on energy efficiency and passive air conditioning, also works with corporate partners such as Kanyon AVM-Istanbul to research building technology research laboratories and energy modeling techniques (Korkmaz, 2009). The development of green projects in commercial and residential is directly linked to international progress and globalization of the construction industry. Turkish construction companies do not only work in Turkey but also have a voice in Eastern Europe, Central Asia and the Middle East market. The Turkish construction sector interacts with large international companies such as ARUP, Foster & Partners, which paves the way for progressive design. Zaha Hadid's Kartal-Pendik Master Plan by Zaha Hadid, which is at the forefront of sustainable design and LEED certified, has yet to be implemented by the Istanbul Municipality.

Soyak, a Turkish construction company, has designed and LEED-certified a number of green projects and provided green loans to homeowners. However, this green credit was provided by a local branch of the Turkish Bank and was only applied to this project. Although Soyak and many other companies are undertaking green building projects, very few buildings in Istanbul are LEED and BREEAM certified. This small number constitutes almost 3% of the building density in Istanbul.

For the first time in Turkish politics, the establishment of the Undersecretariat of Environment in 1978 marked the first time that the environment was dealt with, and then the right to live in a healthy and balanced environment was included in the 1982 Constitution. In 1983, the first Environmental Law was adopted (Korkmaz, 2009). In 1996, Habitat II, the Second United Nations Conference on Human Settlements, was organized in Istanbul. The aim of the conference was to create conditions to improve living environments. At the time, this conference succeeded in attracting media and public attention and encouraged the creation of environmentally friendly building mentality and techniques. The real incentives for environmental reform started to materialize after 2000, with the new harmonization laws required by the European Union. Another reason for the recent growth of sustainable development in Turkey is the cooperation and knowledge sharing between different countries, organizations and governments.

CHAPTER III LAYERS OF CIVILIZATION

3.1. THE HISTORICAL URBAN DEVELOPMENT OF ISTANBUL

Fig.15
Istanbul Picture

Istanbul has been home to various cultures, three of which were great empires. Istanbul, which has a unique geography with seven hills, has changed greatly in the historical process with the civilizations that lived on it, their cultures, and the way they used the physical space. From the foundation of the city until today, the settlements and civilizations, monuments, green areas, and the transportation network of the city have developed in a way that reflects the culture and characteristics of each civilization that lived here and formed today's Istanbul. With the overlapping of these settlements and civilizations as layers, the second and third dimensions of space in Istanbul have sometimes emerged with similar forms and heights, and sometimes with different forms and heights.

As a result of the sevents, the topography of Istanbul has maintained its continuity, developed and reached the present day. In short, different civilizations and peoples have formed today's Istabul with their contributions and made it a center of civilization. When the historical development of Istanbul is examined, it is seen that the first remains of the people settled on this area date back to ancient times. However, the basic development of Istanbul dates back to 7000-8000 BC. It is concluded that the settlements established during this period were concentrated on the northern shores of the Marmara Sea due to various remains found there. The Yarımburgaz Cave on the shore of Küçükçekmece Lake and the settlements of Alaçalı and Ağaçlı on the Black Sea coast in the north were found. When the remains from that period and the sea movements are evaluated; it is thought that people came to these areas by sea and established settlements. The ideas of ships drawn on the walls in these caves supported this idea and it was concluded that this society was engaged in seafaring. The fact that even the most primitive settlements have a relationship with seafaring and water shows that these elements are very important in shaping today's Istanbul and are among the determining factors of topography. Istanbul's relationship with the sea is an issue emphasized by scientists who have produced a product.

Prof. Dr. Doğan Kuban described this relationship with the following words: "Istanbul is a city created and given life by the sea. With its walls, monuments, palaces, churches and mosques, it rises like the hull of a giant ship between two seas.". Istanbul's urban history is as special as its relationship with the sea and its topography. This city has seen great wars, fires, earthquakes and the architectural structures and monuments bearing the traces of the great civilizations that have lived in this city have sometimes been destroyed, burned, buried or largely destroyed by human hands. Istanbul, which has been home to important civilizations in every period, can be better understood when examined in periods. These periods are as follows:

1.Early Settlements and Chalcolithic Period (~ 6500 BC - 3000 BC)
2.Thracian Period (~ 1000 BC - 700 BC)
3.Ancient Greece and the City of Byzantion (667 BC)
4.Roman Empire Period (73 - 330 AD)
5.Byzantine Empire Period (330 - 1453)
6.Ottoman Empire Period (1453 - 1923)
7.Republican Period (1923 - present)

3.1.1 EARLY SETTLEMENTS AND PRE-URBANIZATION PERIOD

In this context, the three major periods that have most influenced the historical topography of Istanbul are the Byzantine, Ottoman and Republican periods. The first traces in the settlement history of Istanbul date back to the Neolithic and Chalcolithic periods. This period is the first period when people moved from nomadic life to settled life, engaged in agriculture and animal husbandry, and formed the first village settlements.

Fig.16
Excavations of Yenikapı
Fig.17
Yarımburgaz Cave

In this period, between approximately 6500-5500 BC, traces of this transition can be seen in Fikirtepe around Kadıköy on the Anatolian side. Excavations in this settlement yielded pottery samples, chipped stone tools, bone needles and various fishing tools, indicating that this area is one of the oldest settlements in Istanbul. It also shows that subsistence in this region was based on both water and land resources. Archaeological finds show that people domesticated animals such as cattle, sheep and goats and practiced agriculture. This proves that this society was completely settled. Some items similar to these finds were also found in Pendik and Dudullu excavations. Some of these discoveries show that the culture in Fikirtepe spread to the surrounding area. Some of them are early pottery and stone tool samples found during the excavations. These settlements were generally built near water sources, which tells us about the strategic settlement of the period. Another important archaeological site with the oldest human traces in Istanbul is the Yarımburgaz Cave. The archaeological remains found here date back to 400,000 BC and traces of settlement from the Chalcolithic period were also found in the lower layers of this cave. Although there are traces of settlement on both sides of Istanbul, there are more settlements on the Asian side during this period. Since urbanization had not yet begun in the face of external threats, people lived in villages in harmony with nature. In this period, between approximately 6500-5500 BC, traces of this transition can be seen in Fikirtepe around Kadıköy on the Anatolian side. Excavations in this settlement yielded pottery samples, chipped stone tools, bone needles and various fishing tools, indicating that this area is one of the oldest settlements in Istanbul. It also shows that subsistence in this region was based on both water and land resources. Archaeological finds show that people domesticated animals such as cattle, sheep and goats and practiced agriculture. This proves that this society was completely settled. Some items similar to these finds were also found in Pendik and Dudullu excavations. Some of these discoveries show that the culture in Fikirtepe spread to the surrounding area.Some of them are early pottery and stone tool samples found during the excavations. These settlements were generally built near water sources, which tells us about the strategic settlement of the period.

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Fig.18
The Roman Constantinople

3.1.2. GREEK AND BYZANTION PERIOD

After this settlement, the Greeks from Megara founded the city of Byzantion in this area. The reason why they settled here is that Sarayburn dominates the Golden Horn and is a natural harbor between the Bosphorus and the Marmara Sea. This provides an advantageous location for the city of Byzantion. The city was founded with the Greek polis system and urban elements such as Agora (market place), temples, theater, cisterns and city walls were built in the city. City planning was done around the acropolis. It became a fishing and trade center on the sea route to the Black Sea, and this growth attracted the attention of the great empires of the following years, Rome and Byzantium.

3.1.3 ROMAN EMPIRE

It then came under the sovereignty of the Roman Empire in 73 AD. This new settlement became an important Roman colony on the eastern trade routes. In this process, the Roman Empire tried to maintain its existence as a colony that partially preserved its independence, but there were many destructions with the revolts that broke out. After this destruction, the city was completely rebuilt. The city was surrounded by walls, public buildings such as baths, roads, hippodrome, theaters, temples and waterways were built. This change laid the groundwork for the city's later identity as Constantinople.

Istanbul from the First Settlements to the Roman Empire

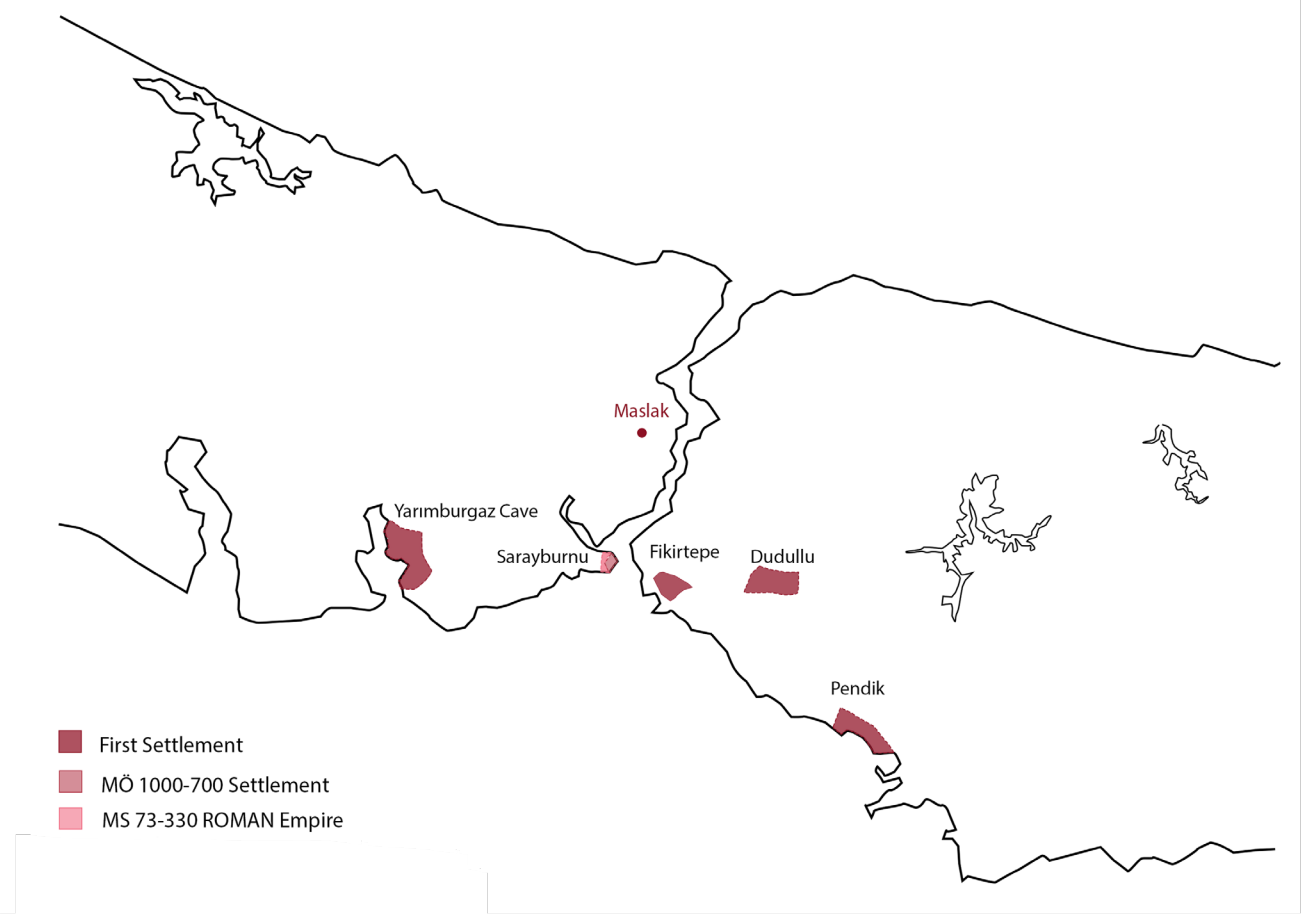


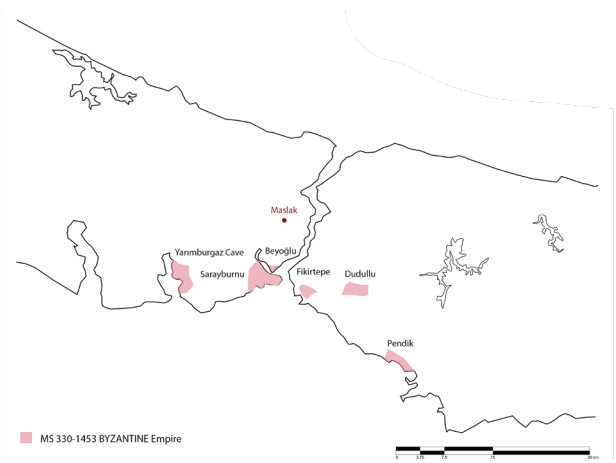
Fig.19
Istanbul from the First Settlements to the Roman Empire
Source: Map illustrated by the author.

3.1.4. BYZANTINE PERIOD

Fig.20
The Byzantine Constantinople

In 330 AD, the Roman Emperor Constantine I enlarged the city and founded the new capital, which he called Nova Roma (New Rome). However, this name was not adopted as much as desired and Constantinople, the city founder, became the new name of the city. This name also became a symbol of turning east and Christianization. Although Constantinople bears the traces of the Roman city, many basilicas, churches and chapels were built with the rise of Christianity. In the 5th century AD, Emperor Theodosius II built the Theodosius Walls (413 AD), which protected Constantinople from wars and attacks from both land and water until its fall in 1453. During the reign of Emperor Justinian (527-565), the city developed both architecturally, politically and militarily. The Hagia Sophia was built during this period and Constantinople became a center of trade, culture and theology during the Byzantine period. In 1453, the Ottoman Empire ended the Byzantine rule with the siege of Constantinople, but it became one of the most profound and influential periods.

Fig.21
The Byzantine Constantinople Map
Source: Map illustrated by the



3.1.5. OTTOMAN EMPIRE

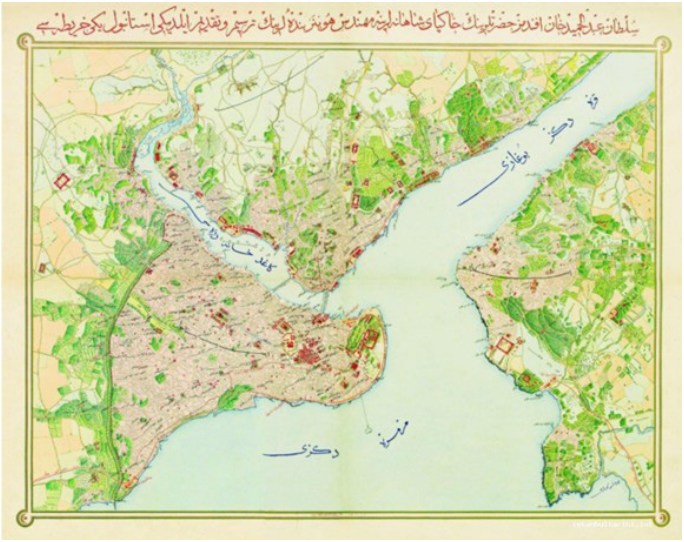


Fig.22
Ottoman Period Constantinople

On May 29, 1453, Istanbul was conquered by the Ottoman Sultan Mehmet the Conqueror. Thus, the Byzantine empire, which had lasted for more than a thousand years, came to an end. This conquest was also a major religious, social and spatial transformation, and the process of Islamization began for the important religious buildings that remained here.There have been many changes in the city but there changes werent about demolishing but they were more preserving, improving and changing the functions of the existing buildings. Many churches, most notably Hagia Sophia (Ayasofya), were converted into mosques, and then Islamic buildings such as madrasas (medreseler) and imaret were added around them. These changes were necessary strategic changes to create the Turkish image. With the removal of urban security concerns, settlements began to form outside the city walls, that is, along the Golden Horn and the Bosphorus. With the conquest of Istanbul, changes began to occur in its urban spatial structure. The city's deliberate population growth, its witnessing of both the empire's strong and weak periods, and its exposure to Turkish-Islamic culture were the primary contributors to this development. From this period until the early 19th century, Istanbul experienced two distinct types of growth: one inland and one coastal. Reconstruction began during the reign of Fatih Sultan Mehmet, but the walled city became the administrative center for the Ottomans. In the same period, buildings such as the covered bazaar and Topkapi palace were built and Istanbul was developed. Thanks to these developments and growths, Istanbul became not only a Muslim capital but also a cosmopolitan center. Turks, Greeks, Armenians, Jews, Jews, Levantines and other communities shared the same urban space even though they lived on their own streets. The city's infrastructure showed great improvements during this period.

Aqueducts, dykes and cisterns that continued the systems inherited from the Byzantine period were built.Ottomans were unsatisfied with there results, so they also built madrasahs, caravanserais, inns, baths, lodges and dervish lodges, and almshouses. During the Ottoman period, the urban fabric began to change, and wood became the preferred building material. Istanbul began to decline in poverty in the 18th century; by the 19th century, the old Istanbul's topography suffered significant damage due to a fire, and this led to changes. Wooden architecture and artifacts began to disappear, replaced by masonry structures. Roads in traditional neighborhoods such as Aksaray, Kumkapı, Unkapanı, Fener, Balat, and Samatya were damaged and lost their original structure. Green spaces diminished, and housing began to appear in these areas.

Houses in Beşiktaş

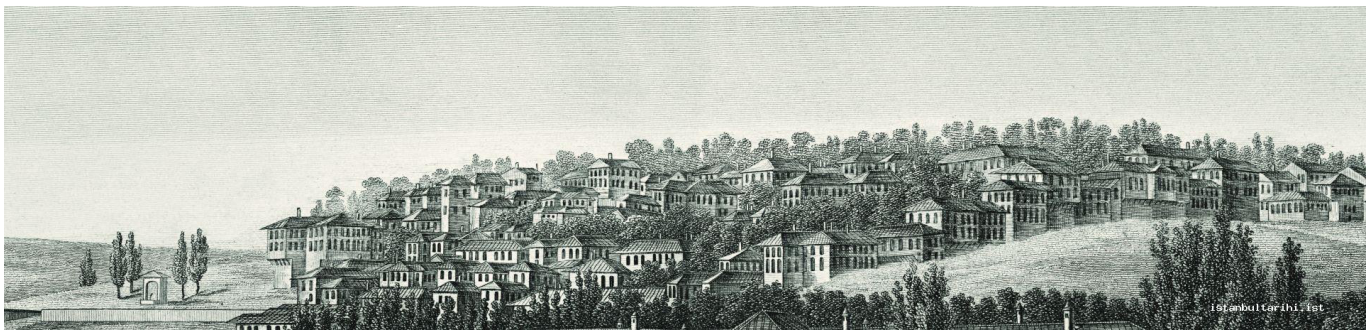


Fig.23
Houses in Beşiktaş

During the Ottoman period, studies were conducted on the seven hills and the silhouette phenomenon. Similar to the Roman and Byzantine periods, religious structures or monumental buildings were constructed on the hills.The first hill of Istanbul is located on the tip of the historic peninsula, offering a view of the entire city and encompassing Topkapı Palace, Hagia Sophia, and Sultanahmet Square. The second hill is Çemberli Taş Hill, the commercial center of the city with connections to maritime trade. The third hill is Beyazıt Hill, the fourth is Fatih Hill, the fifth is Yavuz Sultan Selim Hill, the sixth is Edirne Gate Hill, and the seventh is Kocamustafapaşa Hill. All these hills are located around the historic peninsula, which was the center of Istanbul at that time, and illustrate the influence of the Ottoman Empire on the expansion of Istanbul during that period.

Istanbul's Seven Hills

Fig.24
Istanbul's Seven Hills

Green spaces in the Ottoman Empire were located within cities in different ways compared to the rest of the world. Instead of green spaces open to public use, the Ottomans designed small green gardens located on private property or green spaces in mosque courtyards. The main reason for designing green spaces in this way was the Islamic culture embraced by the Ottomans, which considered the home and family life to be private. For this reason, residences were planned to be more inward-looking. Gardens were located at the back or inside of the house and there green areas were not public spaces. In Ottoman culture, mosque complexes were the center of social life, which is why there were wooded areas, shaded courtyards, and small gardens around these areas. Although these areas were not public spaces in the modern sense, they served as semi-public green spaces where the community spent time and gathered. During the Ottoman period, foundations carried out public affairs. Therefore, the graves, gardens, fountains, and shaded areas that were built were generally on foundation lands. Green spaces during this period served the community through religious or semi-private institutions. While planned large parks (e.g., Hyde Park, Jardin des Tuileries) became part of urban planning in Europe until the 19th century, green spaces in the Ottoman Empire were more scattered, fragmented, and existed as private or religious areas. Thus, green spaces during this period were shaped by the Muslim social structure, the concept of privacy, and the role of mosques and social centers. This situation began to change in the 18th and 19th centuries,and recreational areas were created. By the 19th century, recreational areas could be found in every district of Istanbul. Each neighborhood in Istanbul has been highlighted for its unique characteristics, either for its historical value or natural beauty. In this context, the prominent areas of the city are Harem, Çemberlitaş, Laleli, Cağaloğlu, Bab-ı Ali, Çarşılar Region, Vefa, Süleymaniye, Samatya, Haliç, Cibali, Fener, Balat, Ayvansaray, Unkapanı, Zeyrek, Fatih Çarşamba Neighborhood, Eyüp, Karaköy, Pera, Tarlabaşı, Fındıklı, Tophane, Bosphorus, Dolmabahçe, Ortaköy, Kuruçeşme, Arnavutköy, Bebek, Baltalimanı, Emirgan, İstinye, Sarıyer, Rumelikavağı, Anadolukavağı, Beykoz, Paşabahçe, Çubuklu, Kandilli, Çengelköy, Beylerbeyi, Kuzguncuk,Salacak, Çamlıca, Kalamış, Fenerbahçe, and Adalar.

Ottoman Period Constantinople

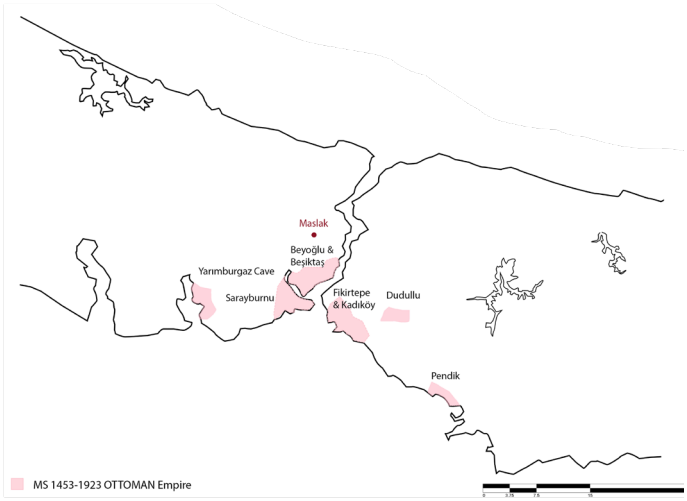


Fig.25
Ottoman Period Constantinople Map
Source: Map illustrated by the author.

With the economic activity experienced during the Tanzimat period and the development of maritime transport, the Bosphorus, which had been used as a summer resort, began to urbanize. Another important factor in its development was the preference of Ottoman sultans in the 19th century to live in the Bosphorus.

For this reason, the Yıldız, Ihlamur, Beylerbeyi, and Dolmabahçe palaces were built during this period. While the Yıldız, Ihlamur, and Dolmabahçe palaces are located in Beşiktaş, the Beylerbeyi Palace is located in Üsküdar on the Anatolian side. The palace's interest in these areas led to their development and urbanization. The other most important structures that define the Bosphorus and contribute to its development are the yalı mansions. Yalı mansions are large, luxurious houses designed to face the sea. At the same time, Galata continued to develop as a commercial center, and its surroundings also began to develop. During this period, the borders of Istanbul expanded with these new structures and were divided into three main regions; Suriçi (Historical Peninsula), Galata, Üsküdar and Kadıköy. In the following periods of the Ottoman Empire, modernization projects were initiated under the influence of the West, streets and squares were widened in the city and Western-style buildings were built.

3.1.6. REPUBLICAN PERIOD

The Monument of Republic and İnönü Promenade (Taksim Square)

Fig.26

The Monument of Republic and İnönü Promenade (Taksim Square)

After the War of Independence, social, economic, and political developments and difficulties were experienced throughout the country, but Istanbul was most affected by this situation. Over time, many changes occurred in the structure and size of the city. The biggest reason for this change was the selection of Ankara as the capital instead of Istanbul. With Ankara becoming the capital, the country's financial resources were concentrated on Ankara, leading to the neglect of Istanbul in terms of urban planning and giving it a poorer appearance. In the 1930s and 1940s, foreign planners and architects began working on urban planning in Istanbul and making development plans. Unfortunately, Istanbul's topography began to change from its old appearance and history to what it is today.

Although Istanbul began to change in the 1930s and 1940s, the real change began in the 1950s with the Adnan Menderes era. The urban population growth that began in Istanbul in 1950 led to the straining of Istanbul's natural thresholds and the change in the natural and architectural values that were once valued. This change, especially after the 1960s, with the increasing population, the spread and increase of shantytowns and industrial facilities, has led to the deterioration of the city's historical center, architectural understanding, and urban fabric. New buildings constructed in historical areas have damaged the image of the region with designs that do not fit the urban fabric. The Bosphorus Bridge built in 1973 and the Fatih Sultan Mehmet Bridge built in 1988 played a major role in changing the city's topography. These bridges caused a trend of development towards the north and damaged the city's northern forests. This development, which began in the 1950s, led to uncontrolled development in the east-west and north directions of the city and began to damage the natural environment. The city's ecological corridors and water sources have also suffered significant damage as a result. The historic city center has also been affected by this situation and has begun to disappear behind foreign structures, losing its identity and silhouette. The city's rapid population growth during this period, which continues today, has caused and continues to cause many infrastructure problems, service deficiencies, and poor quality. The most significant developments during this period were the opening of some streets in the historic peninsula to the coastal road and the widening of streets such as Dolmabahçe-Karaköy, Bağdat, and Büyükdere. Although these road widenings were important for the growing population, unfortunately, many historic buildings were demolished or damaged in the process. At the same time, the increase in urbanization towards the north of Istanbul and the formation of shantytowns have damaged many natural areas.

Fig.27
Unkapanı Bridge built over the Golden Horn

Unkapanı Bridge built over the Golden Horn

Istanbul: Layers of Civilization

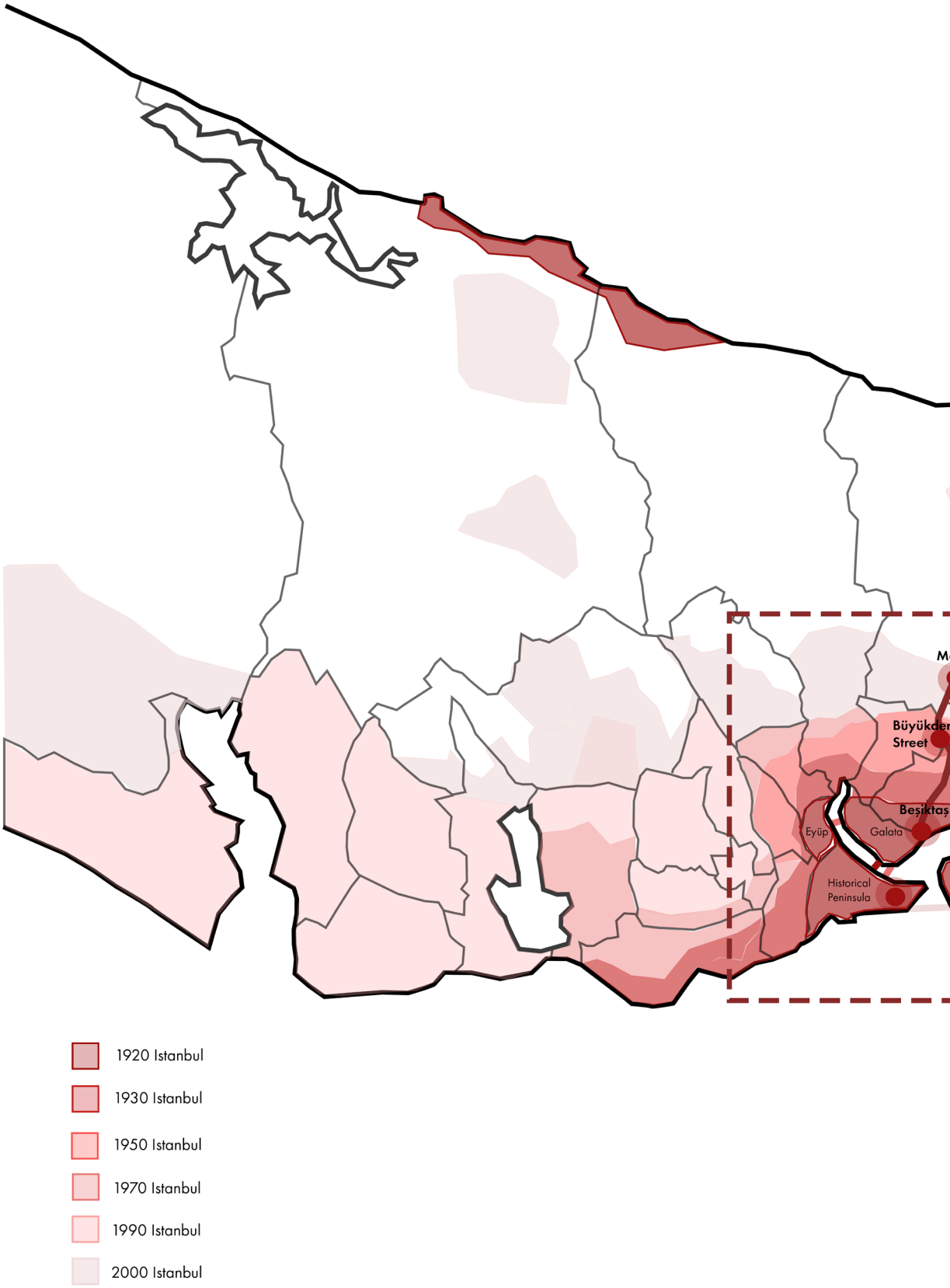
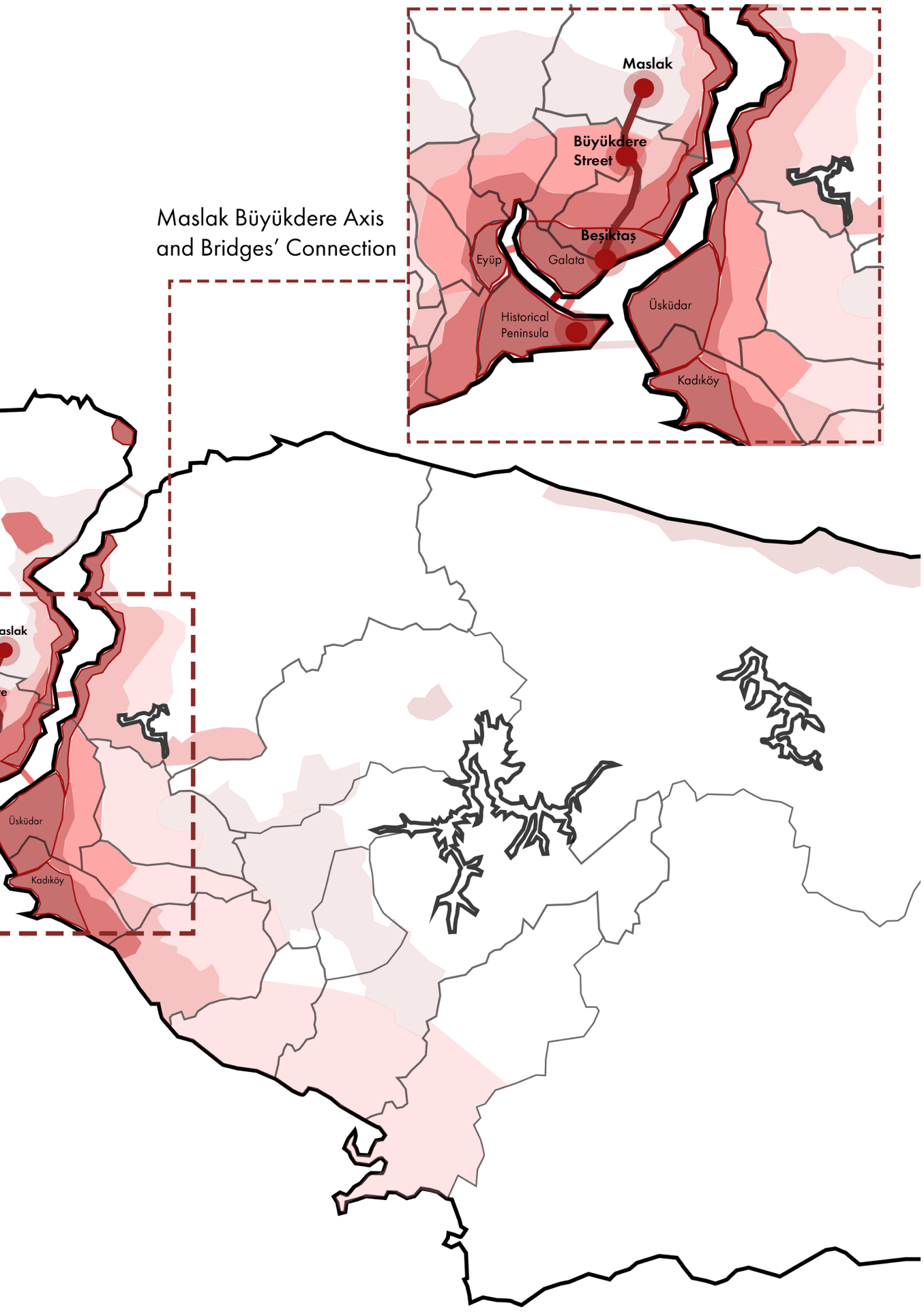


Fig.28

Istanbul: Layers of Civilization

Source: Map illustrated by the


Maslak
Büyükdere
Street
Beşiktaş
Eyüp
Galata
Historical
Peninsula
Üsküdar
Kadıköy
Maslak Büyükdere Axis
and Bridges' Connection
aslak
Üsküdar
Kadıköy

CHAPTER IV URBAN TRANSFORMATION

4.1. URBAN TRANSFORMATION OF MASLAK ALONG THE BÜYÜKDERE AVENUE AXIS

MASLAK

Before 1940, the Maslak area was rural and far from the city center With the structural reforms made in industry and agriculture here; industrialization and urbanization in Maslak gained great speed.

BÜYÜKDERE

In 1955, an indus consultants and With this plan, th appliances, auto be built along the Büyükdere Avenu with the opening

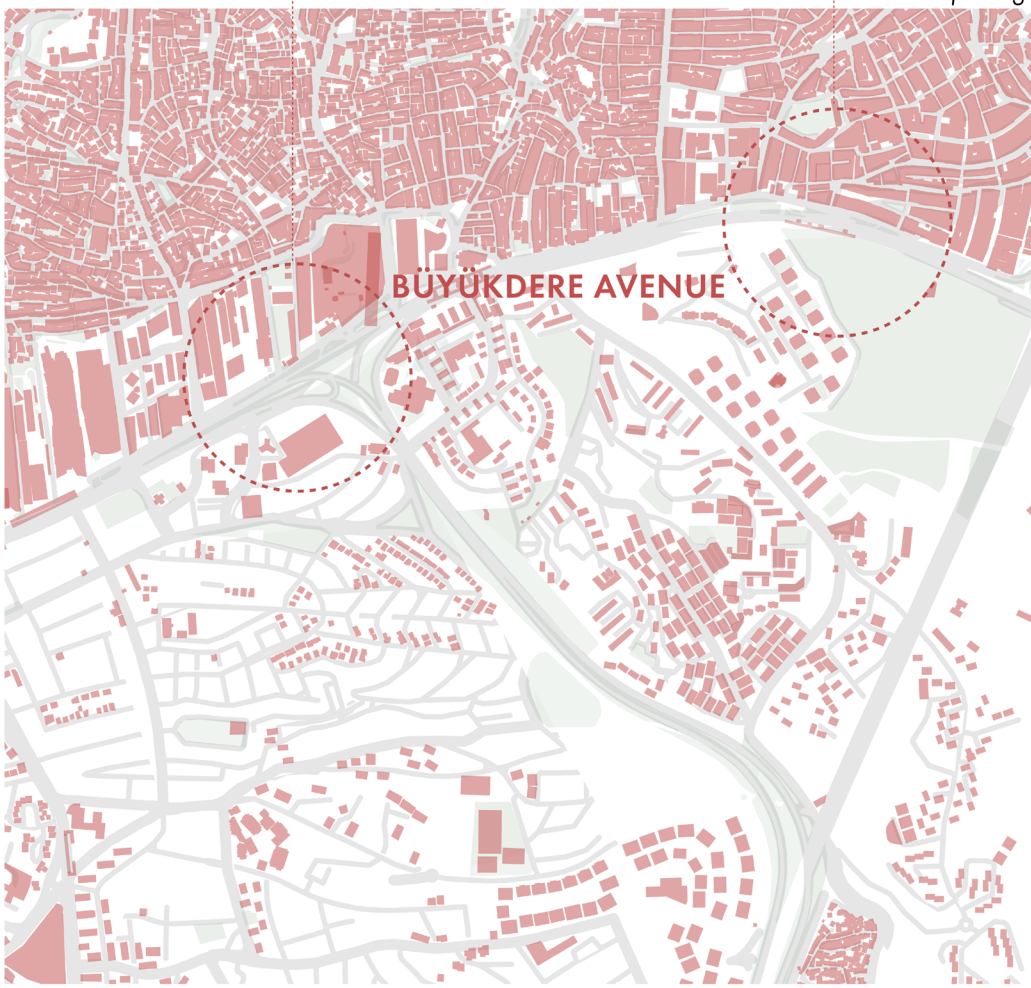
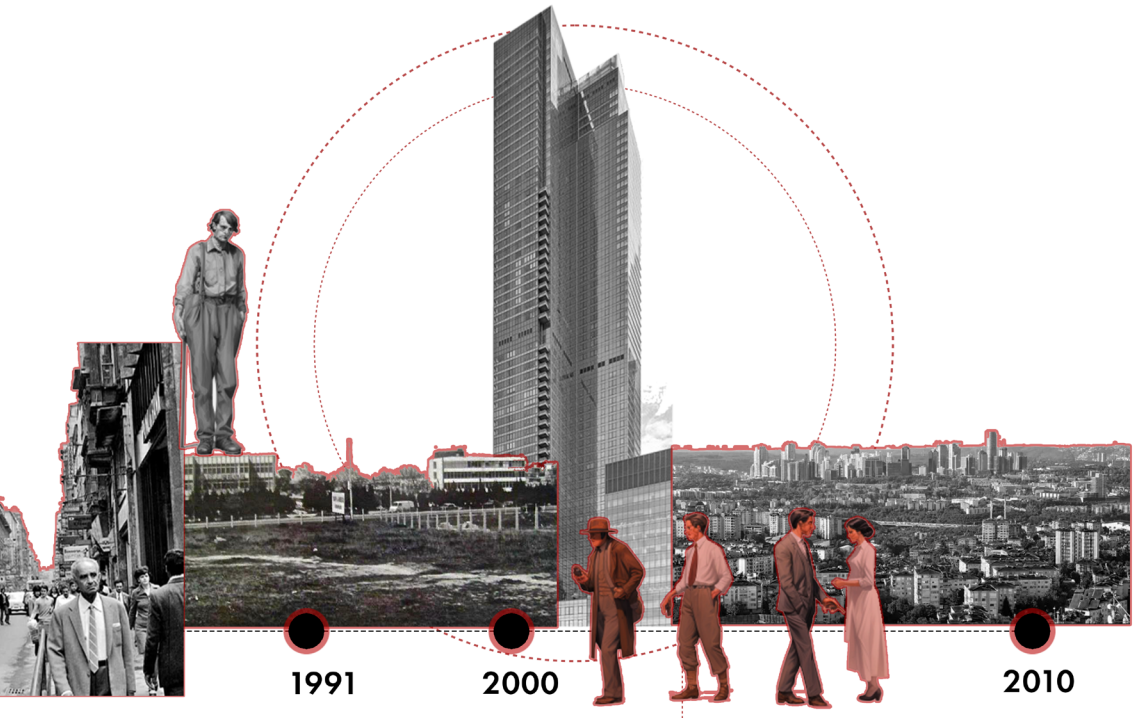


Fig.29
Urban Transformation Of Maslak Along The Büyükdere Avenue Axis
Source: Map illustrated by the Author



AVENUE

strial plan was prepared by a committee of new industrial areas were planned in Levent. e pharmaceutical industry, clothing, electrical motive industry and metal industry started to e axis from Zincirlikuyu to Maslak through ue.The transformation on the axis accelerated of the Bosphorus Bridge in 1974.

MASLAK

In 1970's with the change of city planing the areas which originally belonged to the army, have now been converted into business centers, plazas, luxury residences, residences, business centers and industrial areas.

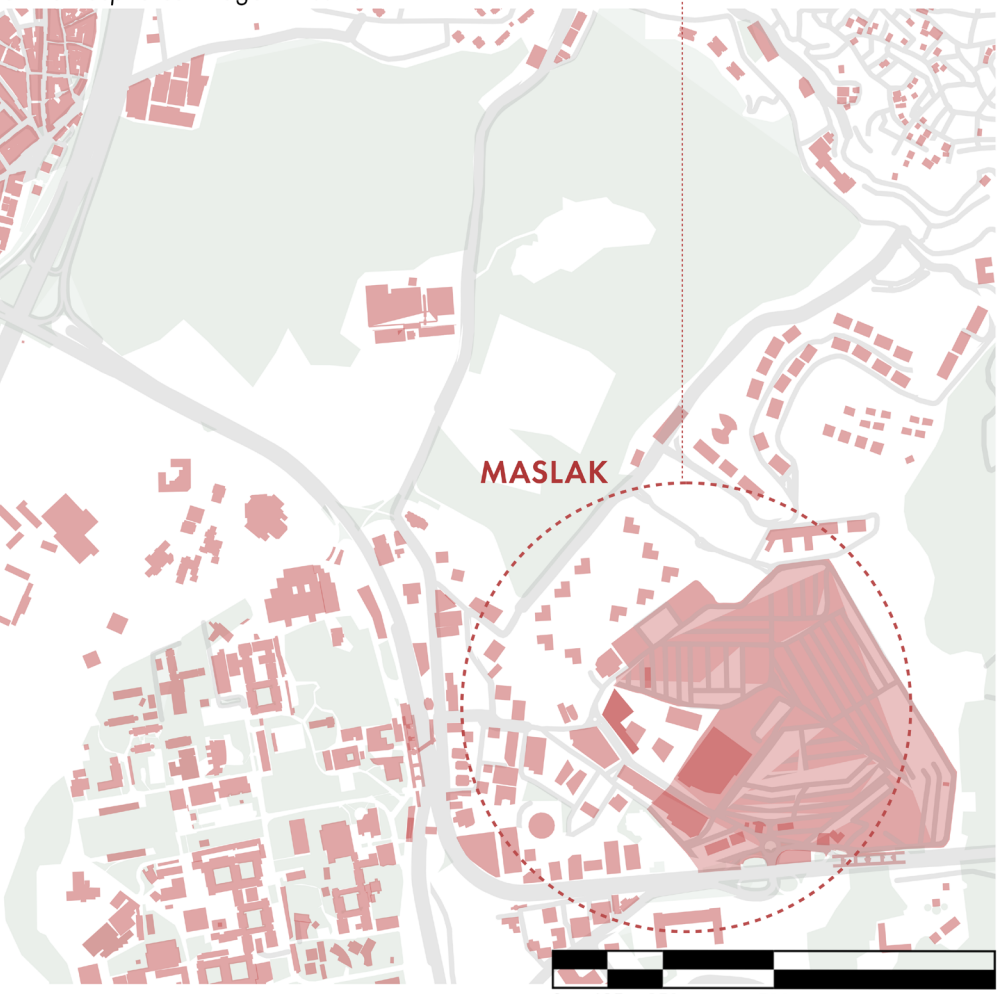
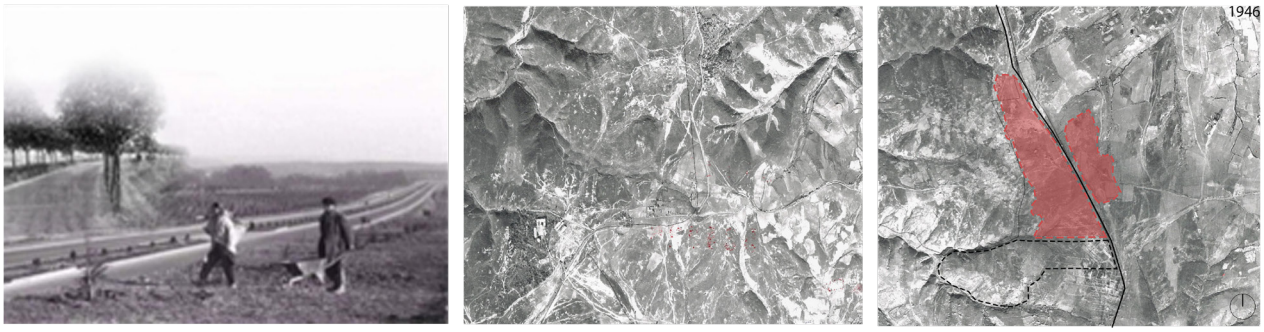
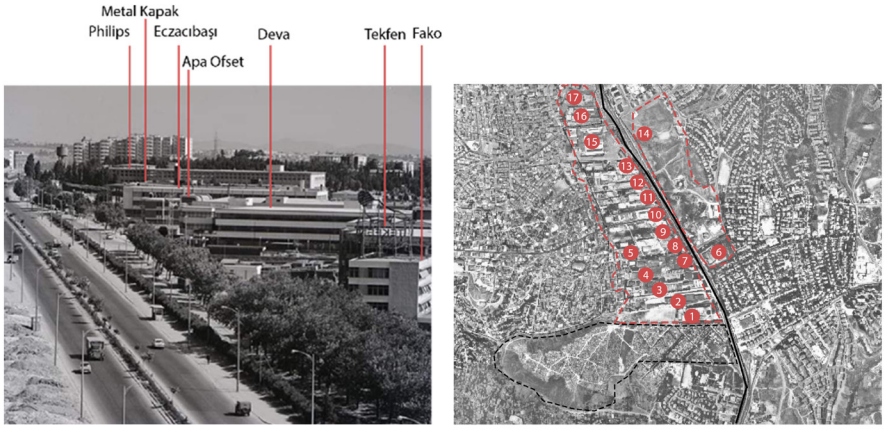


Fig.30
Maslak
Source: collage illustrated by the author
Fig.31
1940 Maslak rural area
Fig.32
Büyükdere Street Map
Source: map illustrated by the author

Maslak is located within the provincial borders of Sarıyer district in Europe. Maslak has undergone significant geographical and socio-economic changes in the last 50 years. Historically, it has been located close to natural forest areas, with easy access to water resources and the Bosphorus. Before 1940, the Maslak area was rural and far from the city center With the structural reforms made in industry and agriculture here; industrialization and urbanization in Maslak gained great speed. In 1955, an industrial plan was prepared by a committee of consultants and new industrial areas were planned in Levent. With this plan, the pharmaceutical industry, clothing, electrical appliances, automotive industry and metal industry started to be built along the axis from Zincirlikuyu to Maslak. On the land of these facilities, modern facades were constructed on the part facing Büyükdere Avenue, symbolizing the prestige of the company. Some of these companies include Roche Pharmaceutical Factory, Tekfen Light Bulb Factory, Philips TV Factory, Eczacıbaşı Pharmaceutical Factory, Deva Pharmaceutical Factory. These factories and management buildings were the first examples for the plazas to be developed in this area. In the Industrial Area Plans designed after 1960, Automotive Industry was planned in IV.Levent. Levent is one of the development areas near Maslak.



After a certain period of time, this industrial area became insufficient and people started to leave the planned area, so a large area was allocated for small-scale industry in Maslak. This area, which had a rural structure in the 1950s, started to be filled with shanty houses in the 1960s with the arrival of industry in this area. Gültepe, Çeliktepe, Seyrantepe and Sanayi neighborhoods started to form in the immediate vicinity of the industry. In 1967, an article added to the building regulations allowed the construction of multi-storey, high-rise buildings called skyscrapers in Istanbul. And with this article, multi-storey buildings started to be built in the Maslak region, which increased in number.



1-Turkish Philips Industry
2-Renault-Mais
3-Roche Pharmaceutical Factory
4-Eczacıbaşı Pharmaceutical Factory
5-Small Factory
6-E.R. Squibb & Sons Pharmaceutical Factory
7-Metal Kapak, Metal Goods
8-Apa Offset Facilities, Printing
9-Neyir Knitting, Textile
10-Deva Pharmaceutical Factory
11-Fako Pharmaceutical Factory
12-Tekfen Bulb Factory
13-Sandoz Pharmaceutical Factory
14-Vacant Area
15-IETT Levent Bus Garage
16-Doğan Tire Factory
17-Esan Battery Factory

Until 1970, Eminönü, Karaköy and Beyoğlu districts in the Historical Peninsula in Istanbul were known as the Central Business District (CBD); after 1970, with the development of the north of the city, the area between Zincirlikuyu and Levent was defined as the "administration center". The necessary high-rise construction decisions for these areas were made by the Metropolitan Municipality advisory board. The aim of this project is to preserve the identity of the "Old City" in the historical peninsula, while reducing the pressure of production areas in the center and providing relief in the center by moving them out of the center. On the other hand, as the buildings in the Historical Peninsula are facing physical and functional obsolescence, offices have started to prefer modern office buildings instead of places in this area. At the same time, with the increasing traffic and density as the demand in this area cannot be met, the location demands of the offices have started to shift to the Maslak-Büyükdere axis. With Maslak starting to be defined as the management center, the increase in the sales of the first skyscrapers built with the permissions given for high-rise buildings in this area, and the prestigious international companies starting to take place here, the investor demand for the region has increased, which has led to land speculation. After this legal construction and industries, the Maslak Büyükdere axis has also evolved into a region where illegal constructions are also present. Maslak, which had previously become a prestigious area for local and foreign investors, has given way to skyscrapers.

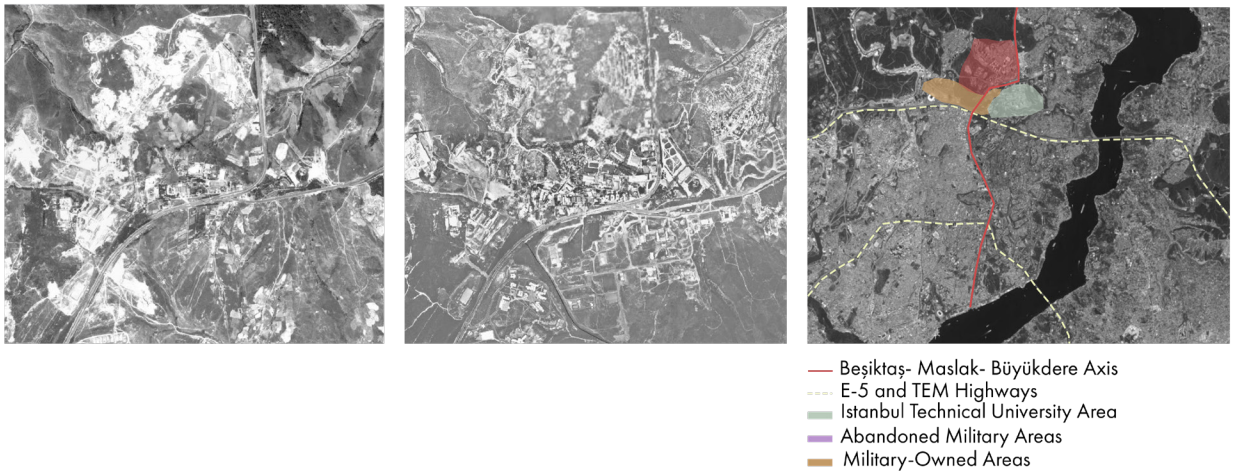
Fig.33
Büyükdere Picture Collage
Source: collage illustrated by the author

Fig.34
Büyükdere Map
Source: map illustrated by the author

Fig.35 & Fig.36
1970-Eminönü, Karaköy and Beyoğlu districts pictures

Fig.37
Maslak-Ayazağa 1970
Fig.38
Maslak-Ayazağa1982
Fig.39
Büyükdere Street Map
Source: map illustrated by the author

We can give the following buildings as important examples on this axis: Roche Pharmaceutical Factory became Özdilek Park, Tekfen Ampoule Factory became Tekfen Tower, Philips TV Factory became Metrocity, Eczacıbaşı Pharmaceutical Factory became Kanyon, Deva Pharmaceutical Factory became Zorlu Office. The transformation on the axis accelerated with the opening of the Bosphorus Bridge in 1974. Traffic on Beşiktaş Barbaros Boulevard, which is on the axis, became denser, and with the opening of the bridge, Zincirlikuyu and Büyükdere Streets were also connected to the Bosphorus Bridge. Thus, a structure connecting the European and Anatolian sides was formed. At the same time, with the decisions taken in the 1974 Master Plan, the area given to the army in the Maslak Ayazağa region was increased and a large area was given to Istanbul Technical University here. However, in the late 1970s, a decision was taken in the opposite direction to these decisions and the area belonging to the army was reduced. With this reduction, these areas, which originally belonged to the army, have now been converted into business centers, plazas, luxury residences, residences, business centers and industrial areas.



After 1984, the authority to make plans, implement and change them was transferred from the central government to the local government. In addition, the idea of transforming Istanbul into the international trade center of the Middle East and Europe was put forward and with this project plan, the design of the Büyükdere-Maslak axis as an international business center was brought to the agenda. The development of this axis continued in the 1970s with the construction of skyscrapers on this axis by large companies. In the 1980s, Büyükdere Street became the most important secondary central business area of Istanbul by connecting important centers such as Taksim Şişli, Mecidiyeköy, Esentepe, Zincirlikuyu, Levent and Maslak.

Another important aspect of this area is that it has access to sub-centers such as Altunizade and Kavacık on the Anatolian side via bridges. The Bosphorus and Fatih Sultan Mehmet bridges opened in 1988, ring roads such as E5 and TEM and of course the Atatürk Airport opened in 1953 played a major role in the effective restoration of the Maslak-Büyükdere axis and facilitated access to the northeastern and western fringes, connecting this area to both Istanbul and the world.

Over time, the TEM highway has become a transportation route for high-income families to residences and luxury housing areas rather than transit traffic. Maslak's important geographical location is due to its proximity to Belgrad Forest to the north, densely urbanized districts such as Levent and Zincirlikuyu to the south, Ayazağa to the west, and İstinye and the Bosphorus coastline to the east. This strategic location has made Maslak an important center for real estate investments and transformed it from a semi-rural area to one of the busiest business areas in Istanbul in the 1990s. With the changes in communication, production technologies, small and medium-sized industries, and the service sector in Istanbul in the 1990s, the gap between income groups has gradually widened. With the widening of this gap, luxury housing, residences, shopping malls, and entertainment centers, designed to meet the living requirements of the new group, independent of the city, have begun to be built. The first examples of this construction can be seen in Etiler, which is Maslak's neighbor, and on the Büyükdere-Maslak line. In 1991, in the 1st Levent section, buildings were allowed to be used as commercial areas for tourism purposes upon request, provided that the building sizes and floor heights were preserved. With this decision, a very rapid change took place along the Beşiktaş, Levent, Maslak-Büyükdere axis. Instead of living in their properties in this area, homeowners began to rent them for business. This transformed the area from being mostly residential to mostly commercial. In the meantime, the central government declared Maslak as a tourism area and transferred the authority to make changes from the local government to the ministry. The Beşiktaş-Maslak axis began to change with the tourism area decisions created for individual zoning blocks. These areas were given high-rise rights, which caused an imbalance between them and neighboring parcels, and a rapid increase in multi-story buildings. Of course, this major change also began to change the silhouette of the city to a great extent. In the years 1989-2009, Büyükdere Street was supported to become an international financial center. In the 2000s, in addition to this international financial center, the axis also included high-rise luxury residences, shopping malls, and plazas. However, historically Maslak is an ecological extension of the Belgrade Forest and therefore there were plenty of green areas, natural basins and surface water elements in this area. Streams such as Maslak and Ayazağa streams in this area were once important areas for the local ecosystem. However, in the 2000s, these streams were either dried or directed to underground concrete systems. This intervention disrupted the microclimate and damaged the ecological balance of the region. At the same time, it was determined that the axis had negative effects on both the forest areas in the north and the drinking water basins of the city with the construction of both the TEM highway and the 3rd Bridge. This dense construction in Maslak caused an irreversible decrease in green areas. After 2000, people's preferences, desires and needs have changed. They have now started to prefer multifunctional structures where they can meet all their needs, and residences, which are an important symbol of luxury consumption.

Naturally, the construction sector was affected by this change, and high-rise residences replaced pharmaceutical factories and industrial areas. The Büyükdere-Maslak axis began to fill with high-rise buildings in this style, namely City, Tower, Center and Plaza. It has come to such a point that Maslak has begun to be known as the "Manhattan" of Istanbul. After 2010, these buildings, shopping malls and residences contributed to the development of transportation in the west, east and north directions of the city.

4.2. TRANSFORMATION OF MASLAK

In the recent past, the Maslak valleys were a natural green area hosting riverbeds, but today they have become a new center for office towers, plazas, and transportation networks. For most of the 20th century, this area was sparsely populated with little civilian settlement, characterized by forested areas, military zones, and some agricultural fields. In particular, the areas where some of today's residential and tower projects are located previously housed military barracks and forest areas for many years (e.g., Maslak 1453). This naturally undeveloped area began to change with the planning decisions, zoning changes, and economic developments that began to be implemented in 1980. During this period, with the transfer of military areas in Maslak to the private sector, investments made, and urban growth shifting northward, it ceased to be one of Istanbul's green buffer zones and became a high-density central business district. In this process, the developing Levent-Maslak axis, namely the Büyükdere axis, led to Maslak playing an important role. Maslak is a neighborhood located in the Sarıyer district of Istanbul. With the city's expansion northward, it has developed since the 1980s into a business center that rivals Levent. Due to its large size and dense population, Istanbul has many business centers, which are mainly located along Büyükdere Avenue, with Maslak at its northernmost point. This route is like a backbone, starting from the historic city center and proceeding along the Barbaros Boulevard in Beşiktaş, then along Büyükdere Avenue, passing through Şişli, Zincirlikuyu, Esentepe, and Levent, finally reaching Maslak. With its location and rapid rise, Maslak has become one of these business centers and has begun to represent the northern end of this backbone. As of 2022, its population has reached 12,260, and as of 2025, it is estimated to reach 13,153. However, this population is not a sufficient indicator to explain Maslak's urban identity. This is because Maslak has high-rise offices, universities, mixed-use projects, and a service sector that transcend the neighborhood scale. In the 1990s and 2000s, demand for office space along this axis increased, leading to the construction of high-rise plazas. These plazas began to change the city's skyline. Consequently, Maslak has come to be recognized as the CBD (Central Business District) developing at the northernmost end of the Büyükdere axis, which began to develop after the 1980s.

Transportation investments have also played a major role in this process. In particular, thanks to the M2 (Istanbul Metro) line built in 2009, Maslak has been connected to the urban rail system extending from the Historic Peninsula to Hacıosman. The metro line has contributed to the intensification of development along Büyükdere Avenue. The 1/100,000 Scale Environmental Plan developed by the Istanbul Metropolitan Municipality shows that Istanbul has developed as a multi-centered structure in an east-west-north context. Within this framework, centers such as Levent and Maslak are located in the north. This planning has triggered an increase in high-rise residences, office buildings, and prestigious projects. Although the skyscrapers rising in Maslak are far from Istanbul's historical structure, they affect its silhouette due to Istanbul's topography. This shows us that the relationship these tall buildings establish with their environment and historical areas must be taken into consideration. As of 2021, the majority of Istanbul's Class A office stock was concentrated in Maslak, which also demonstrates Maslak's place in the urban economy. As a result, Maslak has undergone not only structural but also economic and ecological changes during this transformation. The reduction in green corridors, forested areas, and military green spaces has had a significant impact on the microclimate in this area. The temperature difference in Maslak's Belgrade Forest has reached up to 10 °C during the summer months. This clearly demonstrates the environmental dimension of this change. The increase in large buildings, concrete transit areas, loss of green cover, and disruption of wind corridors in Maslak have intensified the heat island effect here.

4.2.1. CHRONOLOGICAL URBAN DEVELOPMENT OF MASLAK

Fig.40
Maslak Main Residential Area Map
Source: map illustrated by the author

To establish Istanbul as a "global city," Maslak is being developed as a financial center. Compared to other in Istanbul, it is a recent residential area that has experienced an extremely rapid urbanization process. The construction of skyscrapers in the 1990s resulted in the creation of unsustainable urban fabric and intense urbanization. In highly populated developing nations such as Turkey, the primary purpose of these buildings is residential. Research by Aydın, D., & Mihlayanlar, E. (2020) indicates that over 53% of high-rise buildings in Turkey serve as residential structures, while 27% function as mixed-use living spaces. The study shows that the higher material and energy consumption in the construction and operation of tall buildings compared to other structures is related to the large scale of these buildings, and more than 75% of energy use in these buildings is allocated to HVAC systems. This indicates that high-rise structures possess major opportunities for energy conservation and the application of sustainability concepts. The following section will examine projects such as Ağaoğlu Maslak 1453, Mashattan, Maslak No.1, and 42 Maslak. The Maslak 1453 project, finalized in 2015, is an extensive complex with a building area of 2,000,000 square meters, accommodating over 40,000 residents, as well as office and commercial spaces. The facade is designed with a stick system curtain wall, and the terraces are composed of structural glass barriers. Even though the glazing was selected to provide solar control, a substantial portion of the facade is made up of glass. The wide glass surfaces increase heat radiation around the structure, increasing the heat island effect. Moreover, the aluminum panels installed on the facade worsen the problem. Metals with high thermal conductivity, such as aluminum, quickly absorb heat from the sun and radiate it into the surrounding environment. The emphasis on the facade glass type is important, but it is not enough to achieve a sustainable building design on its own. One of the most important flaws in the Maslak 1453 proposal is that the green areas included in the design are limited and decorative. In addition to doing nothing to reduce the heat island effect, these parks and other green areas are purely aesthetic. So, the design is missing sustainable elements such as vertical gardens and green roofs.

Maslak 1453 Building

Fig.41
Maslak 1453 Building

Another surrounding development, the Mashattan project, is dealing with very similar issues. Although it occupies a smaller area than Maslak 1453, Mashattan is also a high-rise development that lacks meaningful green spaces. The project consists of ten 33-story buildings, each 119 meters high, surrounded by 130 acres of land allocated for landscaping, social areas, shopping, and commercial use. Despite the apparent size of the property, the landscaping plan calls for very few trees and makes extensive use of grass area, parking areas and pools. Although Maslak 1453 has been awarded LEED Gold Certification, it still displays a multitude of sustainability concerns. Similarly, there are serious problems with the energy efficiency and ecological consciousness of the Mashattan project, which has not acquired LEED certification. Aluminum composite panels were used as facades in both buildings, which is a major mistake because it increases thermal challenges. Aydın & Mıhlayanlar (2020) estimate that insufficient facade insulation and the absence of shade devices may increase cooling energy consumption in high-rise buildings by up to 30%. The design of Mashattan, characterized by a lack of natural vegetation and connected green spaces, ignores opportunities for improving local air quality and biodiversity.

Mashattan Building

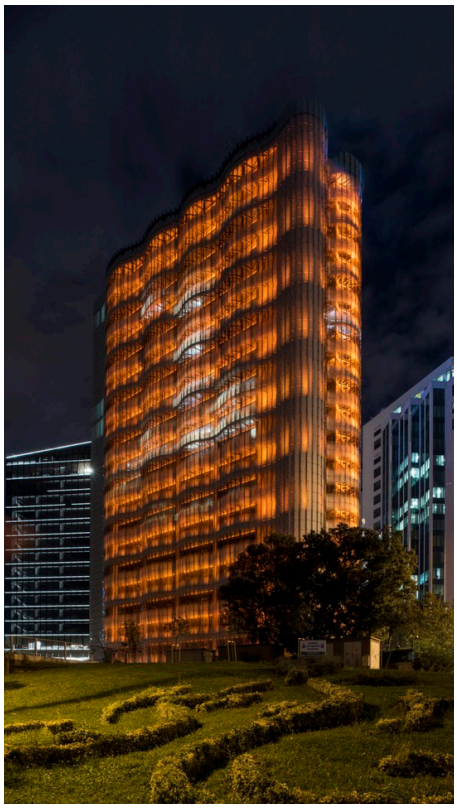
Fig.42
Maslak Main Residential Area Map
Source: map illustrated by the author

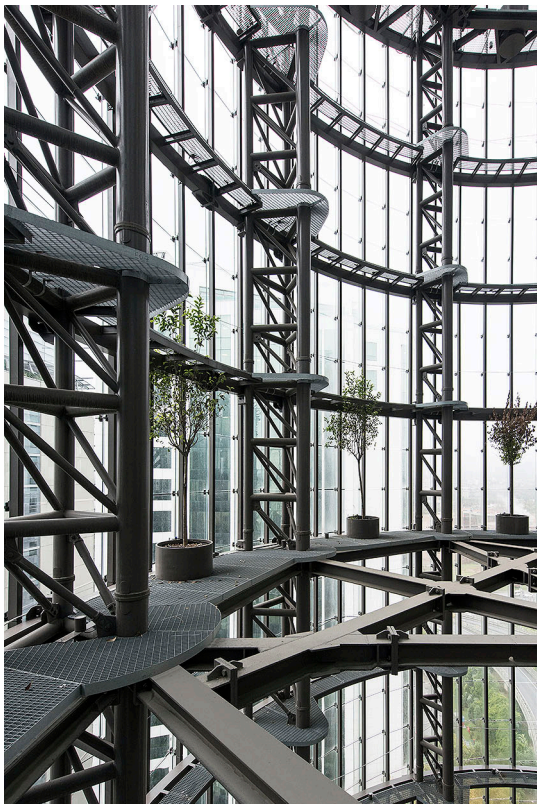
Therefore, the design and implementation of these two adjacent projects present similar sustainability challenges. In addition to problematic examples, the 42 Maslak project and the Maslak No.1 Tower are able to make partial efforts to resolve environmental concerns.

The facade of the Maslak No.1 Tower uses advanced double-glazed and coated glass technology. (Aydın & Mıhlayanlar, 2020) Based on studies on similar facade designs in Istanbul, energy savings of 20% to 50% can be achieved if the facade design is designed with double layers or air corridors. The percentage of this energy saving depends on the materials used in the design. This analysis indicates that the facade design of the Maslak No.1 Tower aligns more closely with the ideal. A film layer has been applied to the surface of the facade's glass to regulate direct sunlight. These films vary in opacity depending on the orientation of the curvilinear facade. While a less translucent design was chosen for the south, a nearly transparent coating was applied for the north. However, the application of the films on the exterior windows prevents the light intake from changing according to the seasons. Although this may prevent heating and less energy consumption during the summer months, it forces the building to consume energy for heating during the winter. The intermediate space created by the application of two facades is considered a buffer zone, both acoustically, and climatically. The structure is constructed of reinforced concrete with a steel outside facade. A 20-meter-high vertical garden installation was attempted in the between these two facades. As shown in the images, this area was used for some flowerpots rather than a vertical garden. Not only was the landscape design of the project restricted to the unsuccessful vertical garden design, but the areas were also designed for private use only, and no connections were made to the surrounding green area.

Maslak NO:1 Tower

Fig.43 & Fig.44
Maslak NO:1 Tower





In the Maslak 42 project, it is also possible to see residential and commercial functions together. This project, like other projects, has small-scale green areas and decorative roof gardens aiming to obtain LEED certification. Despite claims that the project uses green roofs, the applications of terraces and green roofs are limited to specific regions. The proposed green roof application for the residential section in the design was not implemented in the project. Most of the green spaces were decorative, and the surrounding area mainly was made of concrete. The region was unable to develop a relationship with the neighboring green areas. The project was tried to be built in accordance with sustainability legislation. The office buildings were awarded a Platinum LEED Certificate, while the tower acquired a Gold LEED Certificate for the residential and penthouse sections. This success can be attributed to the use of energy modeling applications optimized to reduce the heating and cooling load of the building and the design being carried out using computer software for energy efficiency, thermal comfort, daylight use, architecture, and facade systems. This application for the Maslak 42 building shows that passive architectural strategies in Turkish conditions provide designers with the opportunity to reduce the cooling load and improve the energy performance of the building. Likewise, rainwater runoff simulations were also performed for extreme weather conditions. As a result of the modeling based on all these, materials were selected that would keep the life cycle costs of the building at the lowest level. This project sets an example for many buildings in Maslak and even in Istanbul in terms of sustainability, specially building modeling, material selection, and application of passive systems. The biggest problem is the inadequate use of green areas and their integration with the environment. The lifestyle increasingly dominated by concrete continues to disconnect people from nature. .

Fig.45 & Fig.46
Maslak 42 Building

Maslak 42 Building

In Ağaoğlu Maslak 1453, Maslak No.1 Tower, and 42 Maslak have been awarded LEED certification; however, Mashattan has not. It is a fact that buildings that can receive this certificate set an example in terms of sustainability. Unfortunately, these certificates have not solved Maslak's concretization, green area reduction, or urban heat island problems.

Fig.47
Maslak

As mentioned, some problems continue to exist in the name of sustainability in these certified projects. The most important lesson to be learned from these initiatives is that, despite their efforts to accomplish sustainability within themselves, they are inadequate in terms of addressing environmental issues and establishing connections with the wider environment. This conclusion can be reached by examining the project's failure to reduce local temperatures, its limited impact on improving air quality, its lack of connectivity with surrounding green spaces, its limited implementation of interconnected green infrastructure, and its reliance on conventional cooling systems.

4.2.2 GREEN SPACE DYNAMICS IN AYAZAĞA AND SARIYER

As integral ecological extensions to the Maslak district, the neighborhoods of Ayazağa and Sarıyer have historically functioned as environmental buffers, regulating climatic conditions, supporting biodiversity, and facilitating urban respiration. Their geographical continuity with Maslak positions them not merely as adjacent territories but as ecological contributors to the wider northern green belt of Istanbul. The transformation of these areas, much like Maslak, has been driven by urban expansion, speculative real estate, and infrastructural development, with significant consequences for the sustainability of the entire region. Ayazağa, situated directly west of Maslak, was once a semi-rural settlement characterized by orchards, agricultural fields, and scattered woodlands. Aerial imagery from the 1970s (Environmental Monitoring of Spatio-Temporal Changes in Northern Istanbul 2018) shows that over 60% of Ayazağa's surface area was covered in dense vegetation or undeveloped land.

This coverage created an uninterrupted ecological transition between the Belgrad Forest and Maslak, contributing to the area's microclimatic stability. However, following its incorporation into the broader urban planning frameworks of the 1980s and 1990s, Ayazağa became a hotspot for mid-rise residential blocks and light industrial developments.

By 2010, large scale projects such as the expansion of the Istanbul Technical University's campus, industrial zoning changes, and urban renewal programs had dramatically reduced green space continuity. ENVI-met models simulate this shift with striking clarity: the percentage of green ground surface decreased from 48% in 1995 to 21% by 2020, resulting in increased land surface temperatures of up to 3.7°C in localized zones (Measuring Effects of Building Orientation 2023). These temperature shifts also influenced Maslak's thermal environment due to the loss of prevailing air currents and evaporative cooling.

Sarıyer, encompassing Maslak and Ayazağa within its southern edge, remains one of Istanbul's most forested districts, largely due to the presence of the Belgrad Forest. Nevertheless, pressure on its green areas has intensified. The construction of highways, the third Bosphorus bridge, and associated road networks have bisected previously intact forestlands. According to the MDPI study "Unveiling Istanbul's City Dynamics" (2024), fragmentation patterns in northern Sarıyer increased by 26% between 2000 and 2020. These spatial breaks reduce ecological connectivity and diminish the effectiveness of Sarıyer as a green lung. Furthermore, luxury residential compounds, often marketed as "green living" developments, have emerged on the peripheries of the forest, ironically replacing actual green infrastructure with artificial landscaping. As emphasized in the report "The Green Divide and Heat Exposure" (Frontiers in Environmental Science 2023), this paradoxical form of greenwashing undercuts the environmental value of vegetation by reducing it to a marketing tool rather than a functioning ecosystem component.

Field studies from 2022 documented a significant decrease in avian and small mammal biodiversity in both Ayazağa and Sarıyer, attributed to habitat loss and increased noise and light pollution. The decline in biodiversity also corresponds with reduced ecosystem services such as pollination, seed dispersal, and insect population control all of which are critical to ecological balance. Crucially, the combined effects of vegetation loss in Ayazağa and Sarıyer are not confined to their boundaries but actively shape Maslak's environmental context. Reduced tree cover leads to increased carbon emissions, diminished oxygen production, and higher particulate matter concentration. These changes contribute to the overall deterioration of Maslak's urban air quality, which has been recorded as exceeding EU and who thresholds in recent environmental assessments (Wiley 2024).

Remote sensing imagery further supports these conclusions. Normalized Difference Vegetation Index (NDVI) values extracted from 1984, 2000, and 2022 datasets show a marked reduction in vegetation density throughout the region, particularly at the junction zones where Sarıyer, Ayazağa, and Maslak meet. These findings point to a cumulative degradation process driven by policy fragmentation, enforcement inconsistencies, and prioritization of short-term economic gains over long-term ecological resilience.

In response to these challenges, some restoration efforts have emerged. The Istanbul Metropolitan Municipality (IBB) has proposed ecological corridor systems connecting fragmented green patches across Ayazağa and Maslak. Pilot projects in vertical greening, green roofs, and community gardens have shown promise, but remain limited in scale and impact. Scholars argue that unless these efforts are codified into regulatory frameworks and integrated with regional planning mechanisms, they will be insufficient to reverse current trends (Conservation of Historic Sarıyer District 2018). Ultimately, the intertwined fate of green spaces in Ayazağa and Sarıyer with Maslak's environmental viability cannot be overstated. The degradation of these adjacent areas amplifies Maslak's exposure to climate stress, air pollution, and biodiversity loss. A holistic planning perspective that transcends administrative boundaries and centers ecological function is essential for safeguarding Istanbul's northern green infrastructure.

4.2.3. MASLAK'S CONNECTION TO FATİH FOREST AND EMERGING THREATS

The transformation of Maslak from a forest-adjacent semi-rural zone into a vertical urban landscape has significant implications for the neighboring Fatih Forest, one of the remaining intact forest ecosystems near Istanbul's urban core. Fatih Forest, which lies just northwest of Maslak, acts as a critical green buffer and biodiversity corridor that links with the Belgrad Forest system. However, its ecological integrity is increasingly jeopardized by aggressive real estate development in the Maslak region, most notably through large-scale projects such as Maslak 1453. Fatih Forest spans hundreds of hectares and supports diverse flora and fauna native to the Marmara ecological zone. Historically, the forest was integrated into Istanbul's green infrastructure, serving as a vital water catchment and providing microclimatic stability to nearby urban areas. It also acted as a natural noise and air pollution barrier against the growing metropolitan zones of Sarıyer and Şişli. Until the early 2000s, the boundary between urban development and the forest was clearly defined and respected in planning documents. The development of Maslak 1453 in the early 2010s marked a turning point.

Constructed immediately adjacent to the forest, the project included over 4,700 housing units, office buildings, and shopping centers spread over a massive footprint. Despite promises of "green integration," much of the green space included in the project consists of ornamental landscaping rather than functional ecosystems.

More critically, the proximity of such high-density development to Fatih Forest initiated edge effects such as increased light, noise, and anthropogenic activity, all of which fragment habitats and stress local wildlife populations. Remote sensing data from 2012 to 2022 indicate a steady encroachment of impervious surfaces toward the forest's boundary. According to spatial analyses presented in the "Environmental Monitoring of Spatio-Temporal Changes" report (ResearchGate 2018), urban development around Maslak increased by 38% during this period, with over 20 hectares of vegetation lost in the forest's southern margins alone. This loss compromises not only biodiversity but also the forest's capacity to function as a carbon sink and water filtration zone.

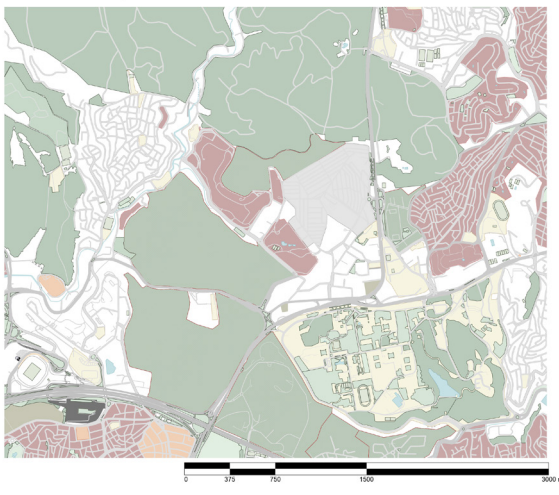
Furthermore, real estate marketing narratives often appropriate the forest as a selling point, describing views of Fatih Forest as a luxury amenity. This commodification of nature transforms public ecological assets into private backdrops, excluding the general public from access while simultaneously threatening the long-term survival of the ecosystem itself. The resulting socio-ecological imbalance raises questions about environmental justice and governance. Hydrological impacts have also become evident. As more surface area around Maslak has been paved over, rainwater infiltration has declined, increasing runoff into the forest and altering the soil composition and health of native plant species. Studies show that such changes can lead to increased erosion, nutrient depletion, and eventual forest dieback if unregulated. Policy responses have so far been inadequate. Although Fatih Forest remains under partial protection as a recreational area managed by Istanbul's municipal authorities, enforcement of development setbacks and pollution controls remains weak. Local advocacy groups have raised concerns, particularly following the opening of new roads and transportation corridors that now dissect what was once continuous canopy cover.

The risk is not only ecological but also symbolic. Fatih Forest represents one of the last thresholds before Istanbul's northern forests are fully absorbed by urban sprawl. The loss or degradation of this forest would signify a major defeat for urban sustainability efforts, severing one of the last tangible connections between Istanbul's citizens and their natural environment. In this context, projects like Maslak 1453 and similar developments pose a twofold threat: they physically disrupt ecological systems and psychologically normalize the conversion of green space into real estate commodities. Reversing this trend requires integrated planning, legal protections, and a cultural shift that recognizes forests not as luxuries, but as necessities for urban survival.

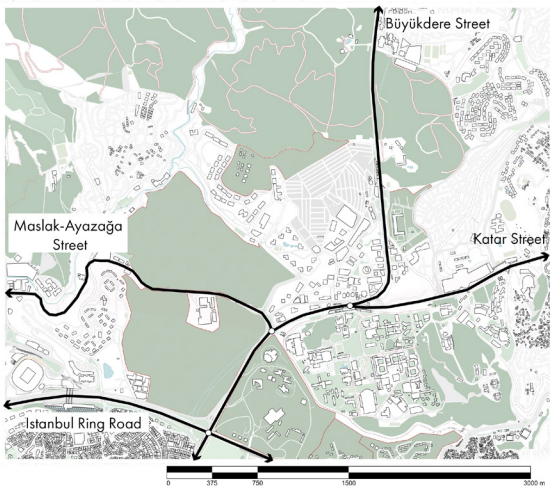
CHAPTER V GREEN CORRIDOR DESIGN IN MASLAK

5.1. MASLAK ANALYSIS

Zone Map



Main Road Connetctions



Walking Dista

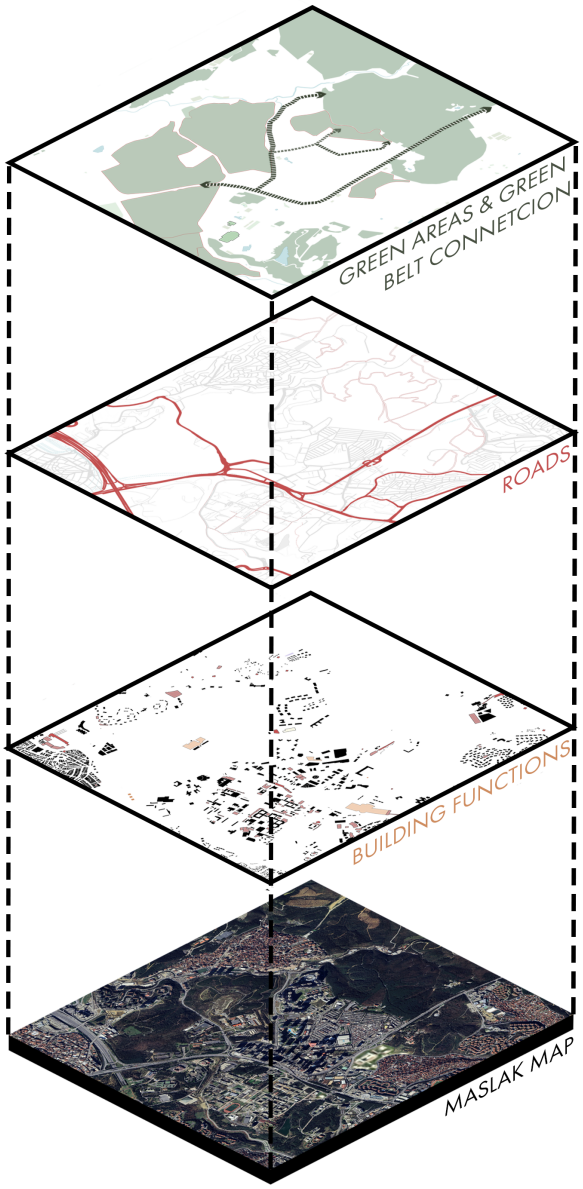


Fig.48
Urban Analysis of Maslak, Istanbul
Source: map illustrated by the author

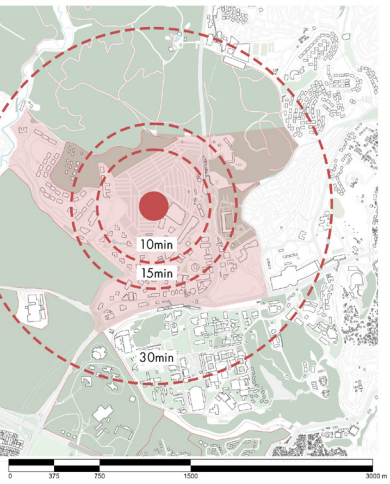
Fig.49
Zone Map of Maslak
Source: map illustrated by the author

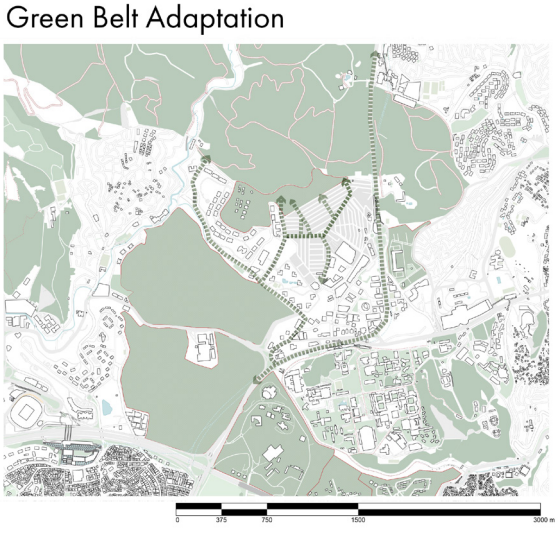
Fig.50
Main Road Connection Map of Maslak
Source: map illustrated by the author

Fig.51
Walking Distance Map of Maslak
Source: map illustrated by the author

Fig.52
Green Corridor Strategy of Maslak
Source: map illustrated by the author

Fig.53
Explode Map of Maslak
Source: map illustrated by the author



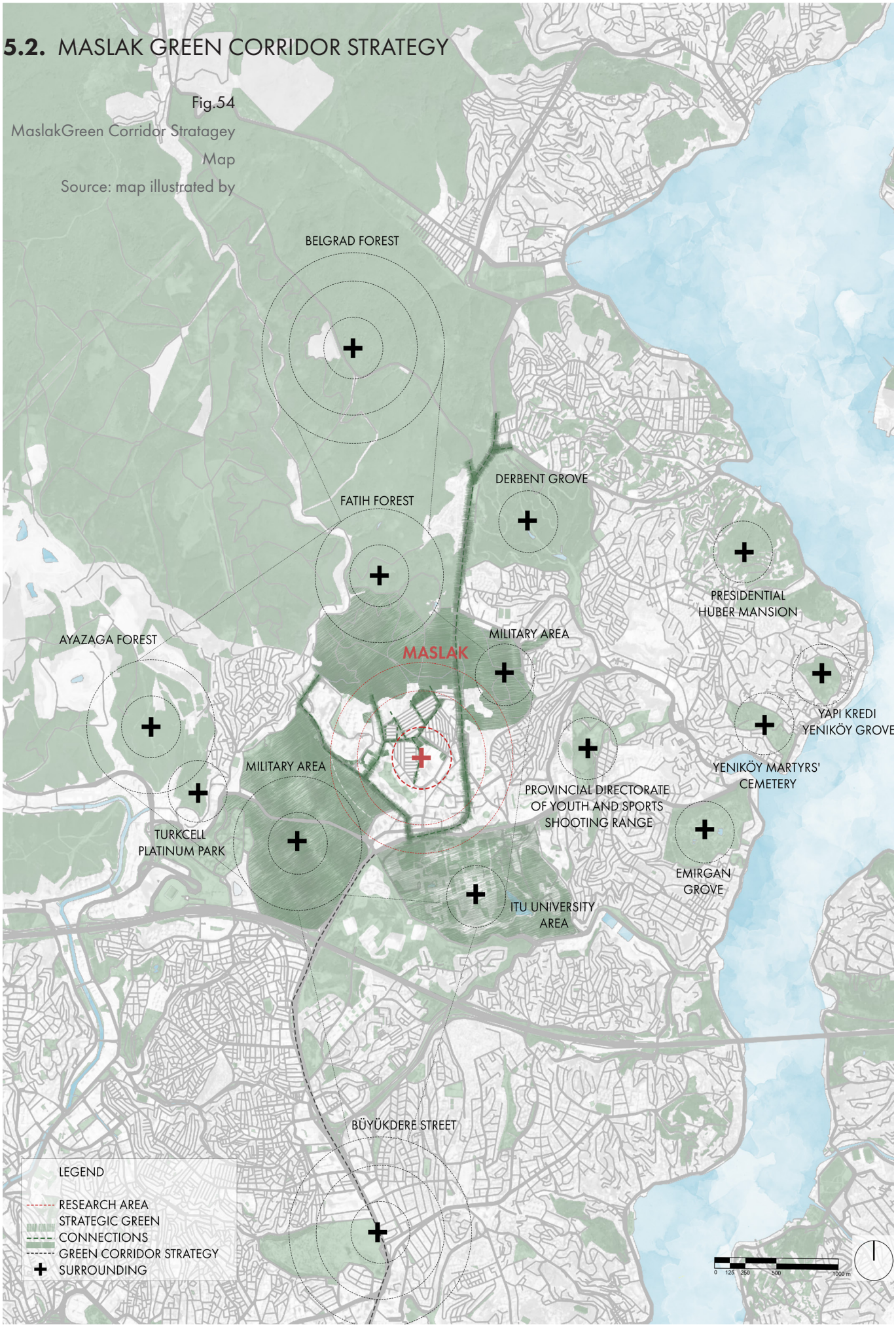


5.2. MASLAK GREEN CORRIDOR STRATEGY

Fig.54

MaslakGreen Corridor Stratagey Map

Source: map illustrated by



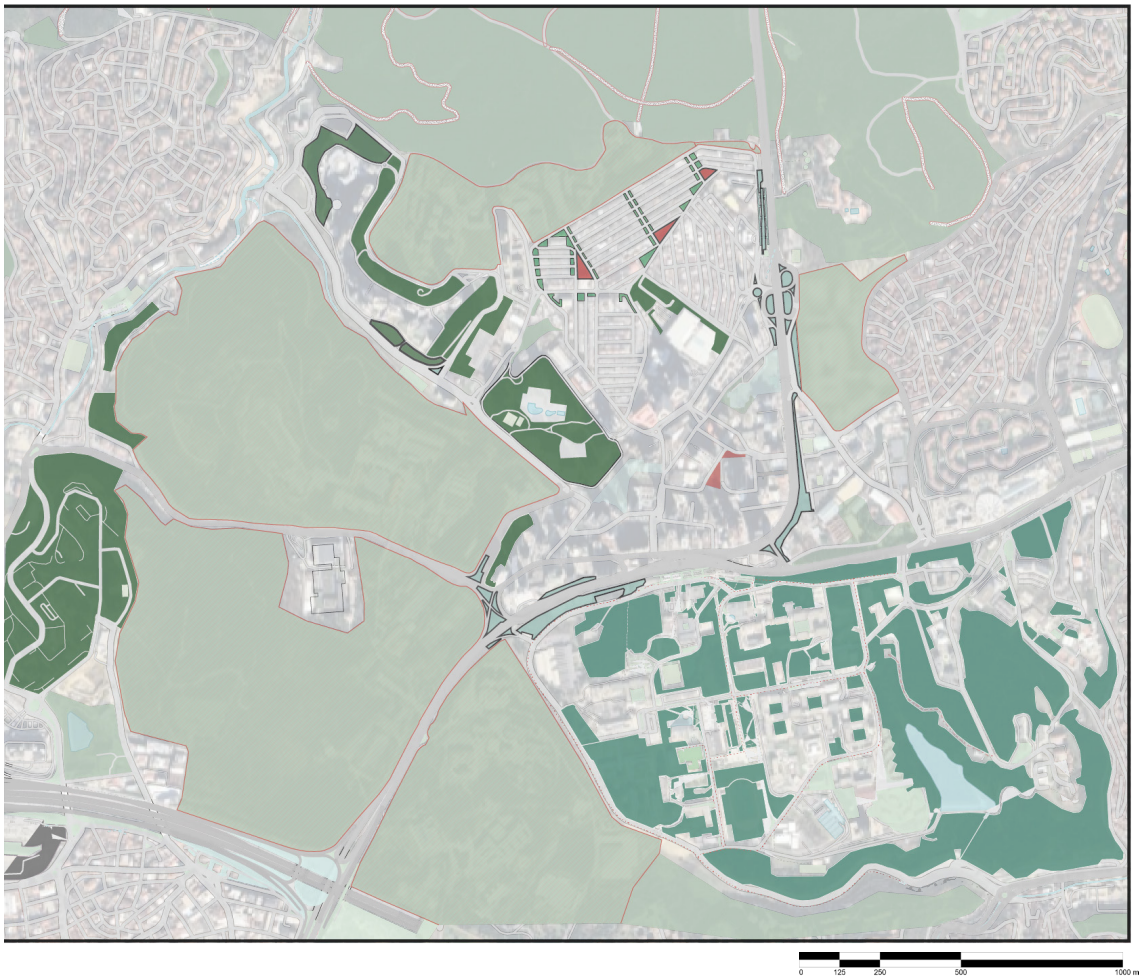


Fig.55
Maslak Green Area Analysis Map
Source: map illustrated by the author

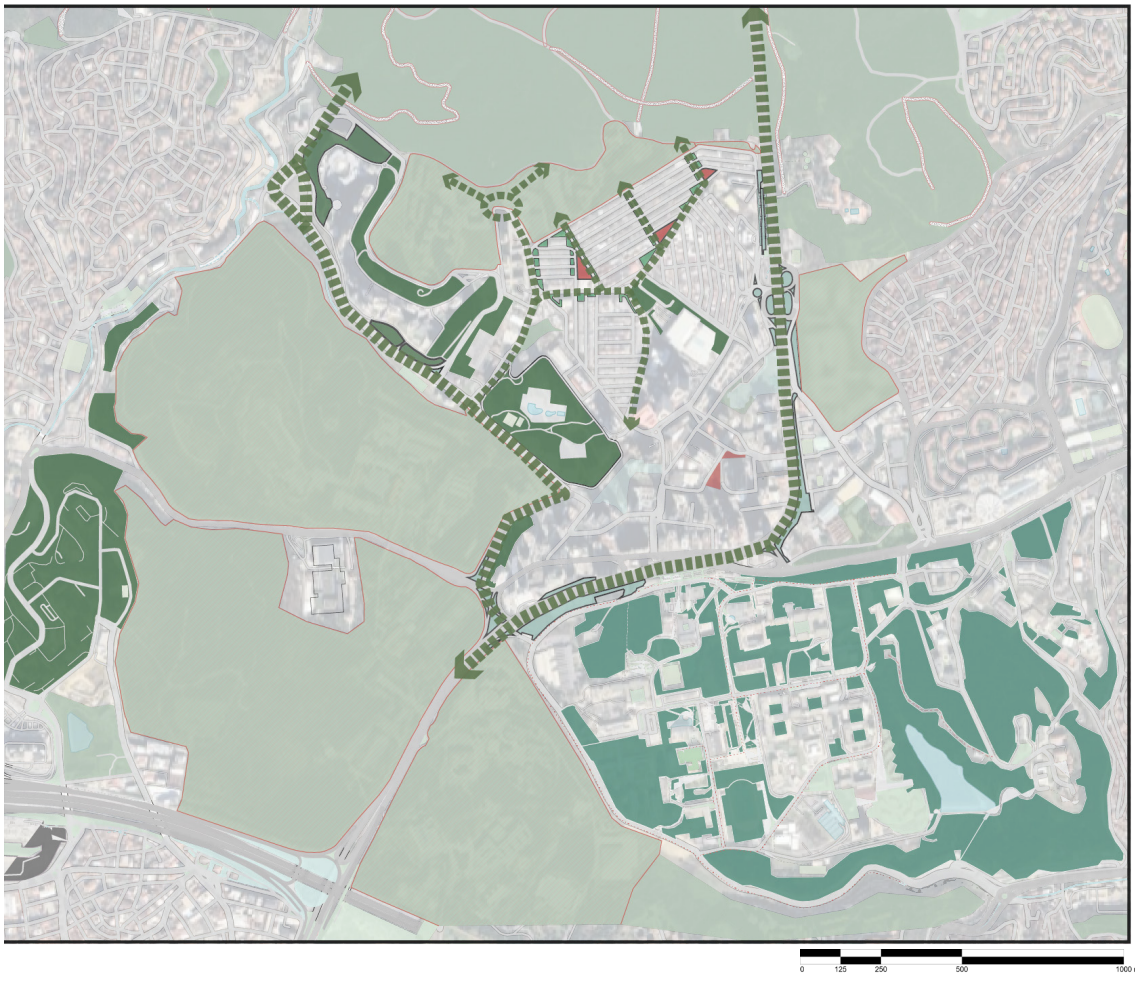
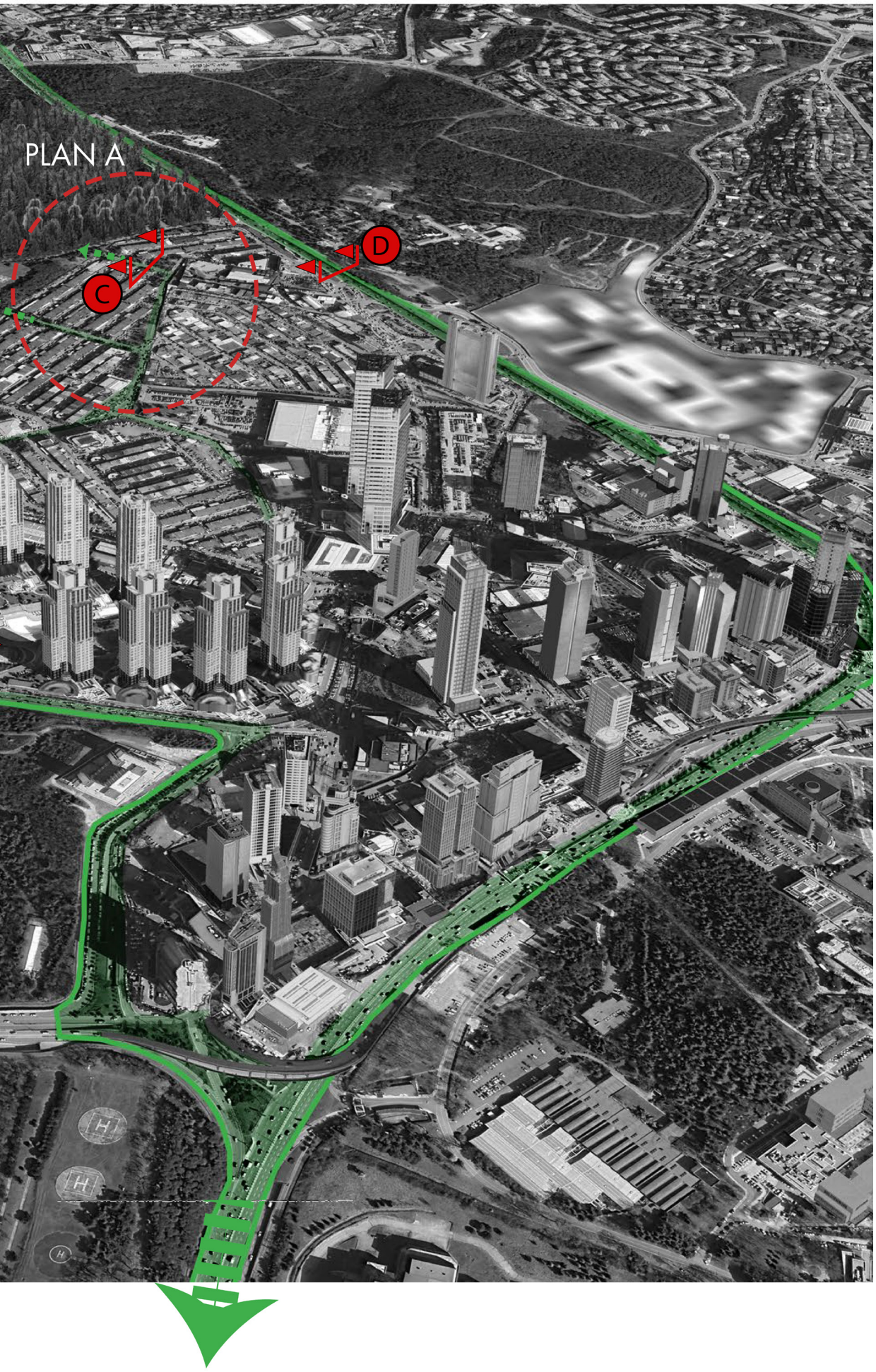


Fig.56
Maslak Green Corridor Strategy Map
Source: map illustrated by the author

Fig.57
Maslak Green
Corridor Stratagey
Axonometric Map
Source: map illustrated by Author


PLAN A
C
D


0
25

Fig.58
Plan A – Existing Condition
Source: map illustrated by the author


0
25

Fig.59
Plan A – Proposed Strategy
Source: map illustrated by the author

Fig.60
Plan A – Existing Condition Close-up Plan
Source: map illustrated by Author

Fig.61
Plan A – Proposed Strategy Close-up Plan
Source: map illustrated by the author


0
25
50

Fig.62
Plan B – Existing Condition
Source: map illustrated by the author


0
25
50

Fig.63
Plan B – Proposed Strategy
Source: map illustrated by the author

Fig.64
Plan B – Existing Condition Close-up Plan
Source: map illustrated by Author

Fig.65
Plan B – Proposed Strategy Close-up Plan
Source: map illustrated by the author

5.3. SECTIONS OF MASLAK'S GREEN CORRIDOR STRATEGY

A-A' SECTİON

Fig.66
Section A–A', Existing Situation

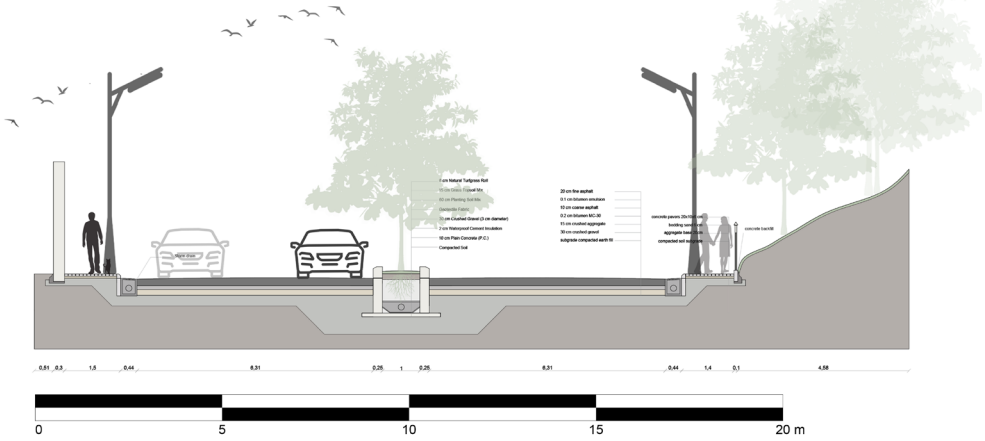


Fig.67
Plan A–A', Existing Situation

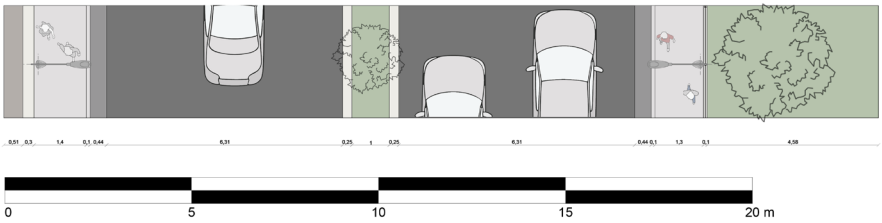


Fig.68
Section A–A', Design Strategy

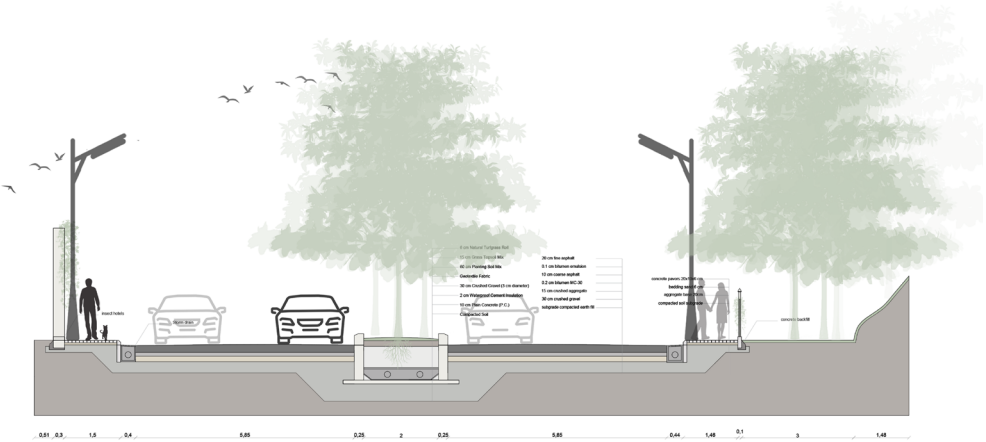
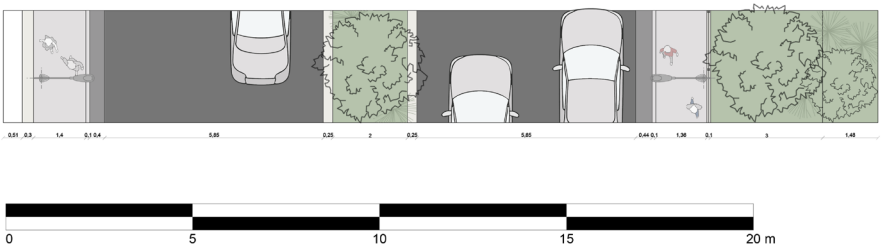


Fig.69
Plan A–A', Design Strategy



B_B' SECTİON

Fig.70
SectionB_B', Existing Situation
Fig.71
Plan B_B', Existing Situation

Fig.72
Section B_B', Design Strategy

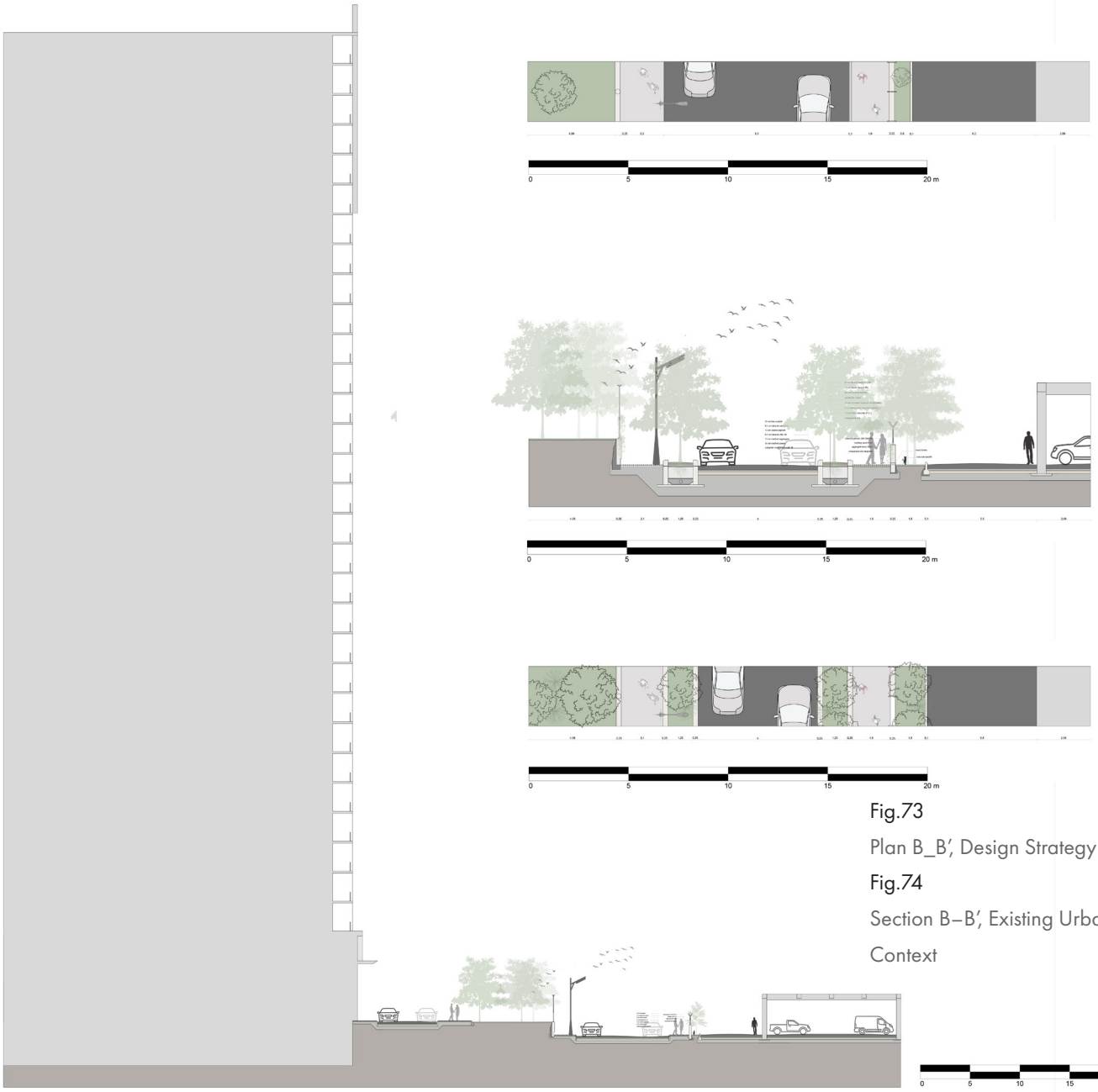


Fig.73
Plan B_B', Design Strategy
Fig.74
Section B–B', Existing Urban Context

C-C′ SECTİON

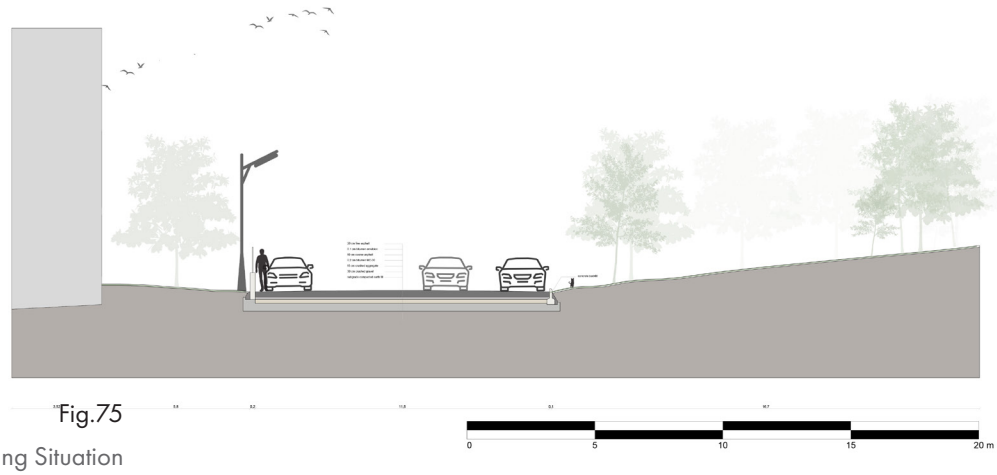


Fig.75
SectionC_C′, Existing Situation

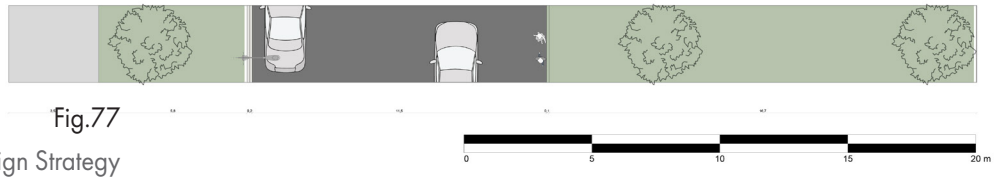


Fig.76
Plan C_C′, Existing Situation

Fig.77
Section C_C′, Design Strategy

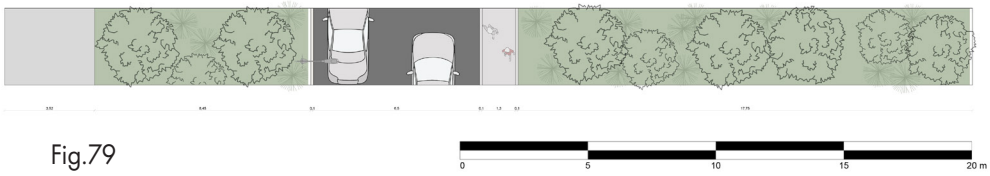


Fig.78
Plan C_C′, Design Strategy

Fig.79
Section C–C′, Existing Urban Context

D_D' SECTİON

Fig.80
Section D_D', Existing Situation
Fig.81
Plan D_D', Existing Situation

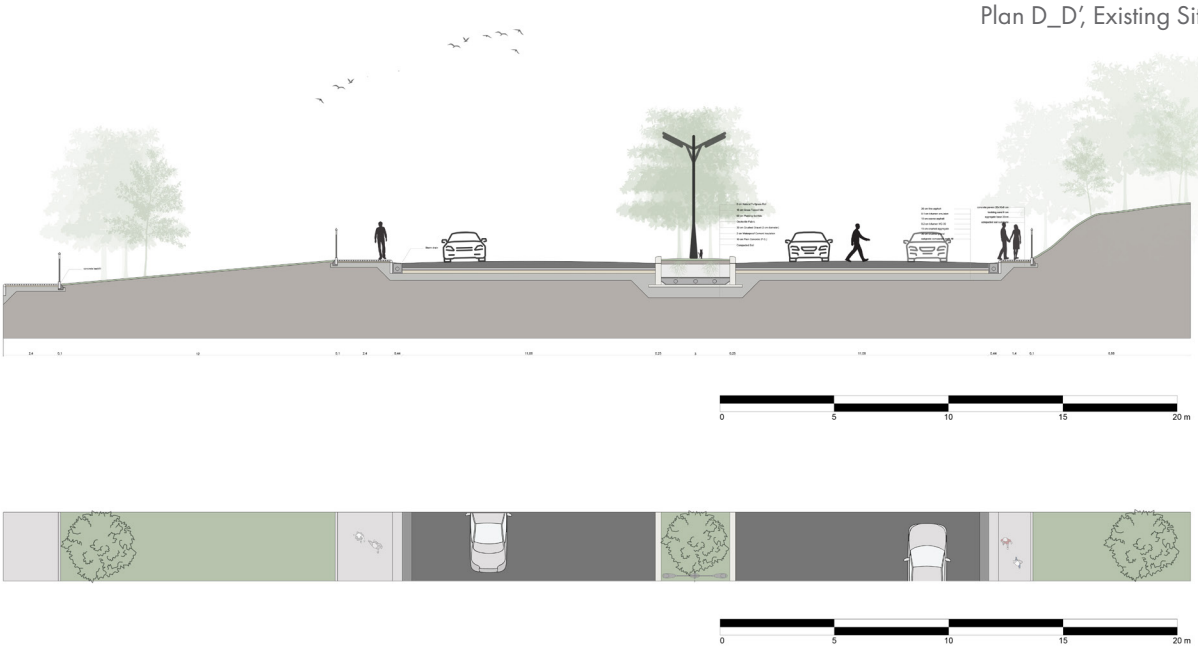
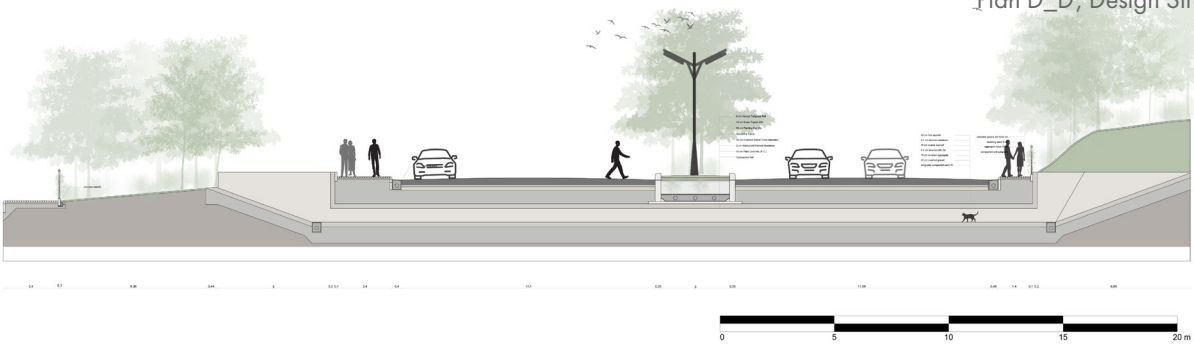


Fig.82
Section D_D', Design Strategy
Fig.83
Plan D_D', Design Strategy



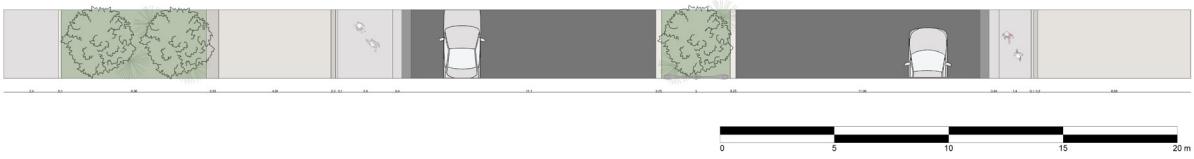
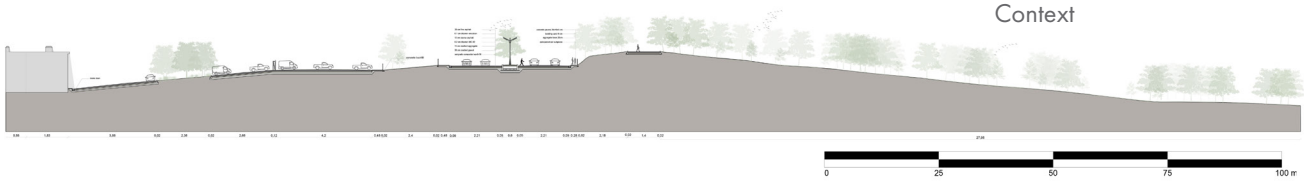


Fig.84
Section D–D', Existing Urban Context



CHAPTER VI CONCULUSION

This thesis analyzes the northward development and urbanization of Istanbul through Maslak. It examines and evaluates the ecological impacts of the newly formed dense business center. Analyses of land use changes across Istanbul, the distribution of green space per capita, and accessibility to these green spaces show that the problem in the city is not only related to the amount of green space but also to the fact that green spaces are disconnected from each other. These disconnected green spaces show us that Istanbul's green spaces have structural problems. Historical and spatial studies conducted on Maslak reveal that Maslak has transformed from a rural threshold area associated with the Belgrade Forest into a developed central business district along the Büyükdere axis. The most important reasons for Maslak becoming a significant investment focus and business center between the two shores (Asia-Europe) are government decisions allowing high-rise construction and the industrialization policies adopted in this area, as well as the construction of the Bosphorus Bridge in 1973 and the Fatih Sultan Mehmet Bridge in 1988. These developments accelerated growth towards the north and led to the weakening of green spaces and the fragmentation of the remaining green areas. The analyses, maps, and sections produced have shown that Maslak is not entirely devoid of greenery, but there is no system of green areas. Based on these findings, a Green Corridor Strategy has been developed. This system aims to reorganize the green areas within Maslak into a network system and increase the contribution of these areas to the ecosystem. The maps, plans, and sections created show that these green areas are connected by corridors and designed to establish continuity with the larger green areas surrounding Maslak. At specific points, wildlife crossings have been proposed to reduce the disruption caused by roads to wildlife. This has created an infrastructure that supports the safe movement of small animal species. Insect hotels have been created on long wall surfaces with the aim of increasing habitat diversity on a micro scale. And by choosing the right tree species, increasing shading capacity, and using ground cover that increases surface permeability, the goal is to reduce the urban heat island effect and improve air quality while creating this green corridor. In conclusion, this thesis demonstrates that urban growth and ecological continuity are not opposing concepts. It shows that ecological connectivity can be established even in high-density business centers through strategically organized existing green spaces. The developed Green Corridor approach treats nature as a fundamental component of urban organization and presents a model that integrates an environmental continuity perspective into the planning process.

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LIST OF FIGURES

13-Fig.13 Page 20- Neighborhood-Level Distribution of Green Area per Capita in Istanbul- Istanbul Metropolitan Municipality. (n.d.). *Background of green areas in Istanbul [Map].* YAYSİS. https://yaysis.istanbul/en/planning-approach/background-of-green-areas-in-istanbul

14-Fig.14 Page 21- Progressive Loss of Green Spaces in Istanbul (1986–2025)-

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15-Fig.15 Page 23- Istanbul Picture- Wikipedia contributors. (2022, July 19). *Historical peninsula and modern skyline of Istanbul [Photograph].* Wikipedia. https://upload.wikimedia.org/wikipedia/commons/4/42/Historical_peninsula_and_modern_skyline_of_Istanbul.jpg

16-Fig.16 Page 25- Excavations of Yenikapı- Travel Atelier. (n.d.). *Excavations of Yenikapı [Photograph].* Travel Atelier. https://travelatelier.com/blog/history-istanbul/

17-Fig.17 Page 25- Yarımburgaz Cave- Travel Atelier. (n.d.). Yarımburgaz Cave*[-Photograph].* Travel Atelier. https://travelatelier.com/blog/history-istanbul/

18-Fig.18 Page 26- The Roman Constantinople- Istanbul Clues. (n.d.). *Historic view of Constantinople [Photograph].* Istanbul Clues. https://istanbulclues.com/wp-content/uploads/2015/11/CONSTANTINOPLE_4.jpg

19-Fig.19 Page 27- Istanbul from the First Settlements to the Roman Empire- **Map illustrated by Author**- T*he historical topography of Istanbul: A literary review (n.d.).* Academia.edu. https://www.academia.edu/88296088/The_Historical_Topography_of_Istanbul_A_Literary_Review

20-Fig.20 Page 28- The Byzantine Constantinople- Cartwright, M. (2018). *Map of Byzantine Constantinople* [Map]. World History Encyclopedia. https://www.worldhistory.org/image/564/map-of-byzantine-constantinople/

21-Fig.21 Page 28- The Byzantine Constantinople- **Map illustrated by Author**- T*he historical topography of Istanbul: A literary review (n.d.).* Academia.edu. https://www.academia.edu/88296088/The_Historical_Topography_of_Istanbul_A_Literary_Review

22-Fig.22 Page 29- Ottoman Period Constantinople- *Ottoman-period map of Istanbul [Map].* (n.d.). Osmanlı Haritalarında İstanbul. İstanbul Tarihi. https://istanbultarihi.ist/29-osmanli-haritalarinda-istanbul#gallery-8

23- Fig.23 Page 30- Houses in Beşiktaş- *Eighteenth-century Istanbul houses [Photograph].* (n.d.). Eighteenth-Century Istanbul Houses. İstanbul Tarihi. https://istanbultarihi.ist/706-eighteenth-century-istanbul-houses#gallery-3

24-Fig.24 Page 30- Istanbul's Seven Hills- Obilet. (n.d.). *Yedi tepeli İstanbul [Photograph].* Obilet Blog. https://blog.obilet.com/yedi-tepeli-istanbul/

25-Fig.25 Page 31- Ottoman Period Constantinople Map- **Map illustrated by Author**- T*he historical topography of Istanbul: A literary review (n.d.).* Academia.edu. https://www.academia.edu/88296088/The_Historical_Topography_of_Istanbul_A_Literary_Review
26-Fig.26 Page 32- The Monument of Republic and İnönü Promenade (Taksim Square)-*Architecture in Istanbul in the Republican Period [Photograph].* (n.d.). İstanbul Tarihi. https://istanbultarihi.ist/716-architecture-in-istanbul-in-the-republican-period#gallery-2
27- Fig.27 Page 33- Unkapanı Bridge built over the Golden Horn- *Dolmabahçe Square in the Republican Era [Photograph].* (n.d.). Architecture in Istanbul in the Republican Period. İstanbul Tarihi. https://istanbultarihi.ist/716-architecture-in-istanbul-in-the-republican-period#gallery-3
28-Fig.28 Page 34/35- Istanbul: Layers of Civilization-**Map illustrated by Author**- T*he historical topography of Istanbul: A literary review (n.d.).* Academia.edu. https://www.academia.edu/88296088/The_Historical_Topography_of_Istanbul_A_Literary_Review
29-Fig.29 Page 36/37- Urban Transformation Of Maslak Along The Büyükdere Avenue Axis
30- Fig.30 Page 38- Maslak- **Collage illustrated by Author**- -Ayik, U., & Avci, S. (2020). Spatial reflections of industrialization and deindustrialization processes in Büyükdere Street (Istanbul-Turkey). Coğrafya Dergisi, (40). https://doi.org/10.26650/JGEOG2019-0054
31-Fig.31 Page 38- 1940 Maslak rural area- Google. (1940). I*stanbul, Turkey (general view) [Google Earth satellite image].* Google Earth. https://earth.google.com/
32-Fig.32 Page 38- Büyükdere Street Map-**Map illustrated by Author**- Ayik, U., & Avci, S. (2020). Spatial reflections of industrialization and deindustrialization processes in Büyükdere Street (Istanbul-Turkey). Coğrafya Dergisi, (40). https://doi.org/10.26650/JGEOG2019-0054
33-Fig.33 Page 39- Büyükdere Picture Collage- **Map illustrated by Author**- Ayik, U., & Avci, S. (2020). Spatial reflections of industrialization and deindustrialization processes in Büyükdere Street (Istanbul-Turkey). Coğrafya Dergisi, (40). https://doi.org/10.26650/JGEOG2019-0054
34-Fig.34 Page 39- Büyükdere Map-**Map illustrated by Author**- Ayik, U., & Avci, S. (2020). Spatial reflections of industrialization and deindustrialization processes in Büyükdere Street (Istanbul-Turkey). Coğrafya Dergisi, (40). https://doi.org/10.26650/JGEOG2019-0054
35-Fig.35 Page 39- 1970-Eminönü, Karaköy and Beyoğlu districts pictures-*Eski Zamanlarda İstanbul'un Fotoğrafları. (n.d.). Karaköy, 1970'ler [Photograph].* Facebook. https://www.facebook.com/EskiZamanlardaIstanbulunFotograflari/photos/karak%C3%B6y-1970ler/917497907083803/
36-Fig.36 Page 39- 1970-Eminönü, Karaköy and Beyoğlu districts pictures Vento & Fredd. (2022). *Başka devrin çocukları [Album cover].* Genius. https://genius.com/Vento-and-fredd-baska-devrin-cocuklar-sample
37-Fig.37 Page 40- Maslak-Ayazağa 1970- Google. (1970). I*stanbul, Turkey (general view) [Google Earth satellite image].* Google Earth. https://earth.google.com/

38-Fig.38 Page 40- Maslak-Ayazağa 1982- Google. (1982). I*stanbul, Turkey (general view) [Google Earth satellite image]*. Google Earth. https://earth.google.com/
39- Fig.39 Page 40- Büyükdere Street Map-Göksu, T. (2019). *19. Yüzyıldan 20. Yüzyıla Beşiktaş-Maslak-Büyükdere Aksı.* Yakın Mimarlık Dergisi, 2(2). https://dergi.neu.edu.tr/public/journals/6/pdf/sayi-4-makale-8.pdf
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42- Fig.42 Page 45-Maslak Main Residential Area Map - Mashattan 0918 [Photograph]. (n.d.). Taşyapı. https://www.tasyapi.com/en/mashattan-0918
43- Fig.43 Page 46-Maslak NO:1 - Tower ArchDaily. (2016, November 30). *Maslak No.1 Office Tower / EAA – Emre Arolat Architecture. ArchDaily [Photograph].* https://www.archdaily.com/800160/maslak-n-office-tower-emre-arolat-architects
44- Fig.44 Page 46-Maslak NO:1 Tower- ower ArchDaily. (2016, November 30). *Maslak No.1 Office Tower / EAA – Emre Arolat Architecture. ArchDaily [Photograph].* https://www.archdaily.com/800160/maslak-n-office-tower-emre-arolat-architects
45- Fig.45 Page 47- Maslak 42 Building-Residence Index. (n.d.). *Maslak 42*. https://www.residenceindex.com/en/proje/182/maslak-42.html
46- Fig.4 Page 47- Maslak 42 Building-Chapman Taylor. (n.d.). *42 Maslak [Photograph]*. https://www.chapmantaylor.com/projects/42-maslak
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