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SOCIAL SUSTAINABILITY THROUGH GREEN PUBLIC SPACES: A CASE STUDY OF BAĞCILAR, İSTANBUL

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Master's Thesis

Supervisor

Prof. Dr. Aykut KARMAN

İstanbul, 2025

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The thesis titled SOCIAL SUSTAINABILITY THROUGH GREEN PUBLIC SPACES: A CASE STUDY OF BAĞCILAR, İSTANBUL prepared by AESHAH ADEL ABDULLAH AL AZZAWI and submitted on 29/05/2025 has been **accepted unanimously** for the degree of Master of Science in Architecture.

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Aeshah Adel Abdullah AL AZZAWI

Signature

DEDICATION

To my family, my first home, my forever strength.

ABSTRACT

SOCIAL SUSTAINABILITY THROUGH GREEN PUBLIC SPACES: A CASE STUDY OF BAĞCILAR, İSTANBUL

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The concept of sustainability has become increasingly important. While sustainability is often defined by its "economic, environmental, and social" aspects, with increasing social issues within society, the dimension of society related to sustainability has gained more recognition. The goal of the thesis is to explore the roles of the green public spaces in promoting sustainable social development, which considered as the most approachable public areas, were chosen as the focal point of the research because they reflect the critical societal challenges, as a case study of the thesis the bağcılar district was selected to enhance the society within the dimensions of the social sustainability. The thesis begins with a literature review to clarify the role of social sustainability within an overarching sustainability framework. By examining various approaches to social sustainability and by adopting a framework by Berkeley Group and the UK Green Building Council, which was created in 2012 to evaluate its dimensions with other frameworks in social sustainability and Place-Making theory, while this research considers the development of green public spaces as communal places and analyzes their connection to essential characteristics related to social sustainability. Following examination of the theory, the findings demonstrate urban green public spaces regarding belonging, equality, and human rights for the Bağcılar district.

Keywords: Social Sustainability, Urban Green Public Spaces, Place-Making, Sustainability, Green Spaces.

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1. INTRODUCTION

Figure 1.1: Location of Bağcılar District) , Edited (Google, 2024).

Sustainability and sustainable development have become central concepts in contemporary urban planning, especially as rapidly growing districts such as Bağcılar confront mounting pressures on planning, housing, and urban regulations (Sönmez Özdemir, 2024). The contemporary sustainability framework is commonly structured around three interdependent pillars: the economic, environmental, and social dimensions, which collectively underpin the concept of sustainable urban development (Macintosh and Wilkinson, 2006). While each pillar contributes to balanced urban progress, recent research has increasingly emphasized the importance of social sustainability as a fundamental aspect of sustainable development,

particularly in social equity, inclusion, and the enhancement of community well-being (Colantonio, 2008). This shift reflects the growing understanding that sustainable urban development requires measured strategies to foster social cohesion and improve the quality of urban life in such a highly dense district as Bağcilar (see Figure 1.1).

Social sustainability, as defined by Davidson and Wilson (2009), emphasizes improving community quality of life and the continuous process through which communities, such as those in Bağcılar, might attain this level of sustainability. As cities receive increasing attention, the significance of sustainability in present-day urban design and planning efforts continues to expand. In Bağcılar, the need for sustainability is underscored by livability, green infrastructure, and social equity challenges. Certainly. Here is a clear, concise, and explicitly social sustainability-focused version. The need to develop urban areas that are both livable and socially sustainable is particularly urgent in Bağcılar, where rapid growth has heightened challenges related to social equity, inclusion, and community well-being.

According to the planning specifications, establishing an equitable urban form is essential to creating innovative ways of envisioning future urban places. This goal shapes much of Bağcılar's recent development strategy. Therefore, it is feasible to discuss the design ideas and methodologies employed in diverse ancient and contemporary towns and how these might inform sustainable transformation in Bağcılar. The longevity of urban architecture is enhanced by its aesthetic value, which is essential to human nature and is increasingly prioritized in Bağcılar's emerging urban identity.

The 20th century saw a significant rise in literature on design principles, focusing on the scientific analysis of urban phenomena. According to Günay (1999), urban design is solely concerned with the arrangement of property boundaries. An issue that remains central in districts like Bağcılar, where rapid urbanization presents unique challenges and opportunities (Sönmez Özdemir, 2024). Property serves as the cornerstone of design in all these periods. The prevalence of the phrases "public" and "private" in urban design literature can be attributed to their significance and prominence, particularly as they manifest in the spatial structure of Bağcılar. Green Public space design is a subject of study that examines several aspects, such as politics, physicality, morphology, utility, social factors, and, more recently, environmental considerations and dimensions directly relevant to the evolving landscape of Bağcılar.

In summary, the case of Bağcılar exemplifies the complex interplay between rapid urbanization and the evolving priorities of sustainable development, particularly the growing centrality of social sustainability. This research explores how urban design and planning in Bağcılar can respond to these challenges, drawing on both the theoretical frameworks and practical approaches to promote a more livable, equitable, and sustainable urban future.

1.1 CONCEPTUAL FRAMEWORK AND RESEARCH APPROACH

This research adopts a mixed-methods approach, drawing from established theories in public space studies, social sustainability, and urban planning. The primary focus of this research is to promote social sustainability, which is key to sustainable urban development and boosts social interaction, equity, cohesiveness, and a sense of belonging in urban communities. The Conceptual framework builds on Yiftachel and Hedgcock (1993), Colantonio and Dixon (2011), and the Berkeley Group and UK-GBC (2012), identifying key dimensions of social sustainability, including equity, safety, quality of life, accessibility, participation, social cohesion, human rights, and poverty alleviation as they manifest in urban public green spaces.

This research shows that green public spaces are crucial assets to foster social capital, inclusiveness, and well-being, particularly in high-density urban environments such as Bağcılar. The reason of focusing on the green public spaces is the Recent scholarship suggests that urban green public spaces play a pivotal role in enhancing social sustainability by promoting inclusive access, encouraging interaction among diverse groups, and mitigating socio-spatial inequalities (Dempsey et al., 2011; Haq, 2011; Gibson et al., 2019). In rapidly urbanizing districts facing demographic pressure and infrastructure limitations (Sönmez Özdemir, 2024), the quality, accessibility, and distribution of green public spaces become key indicators of social sustainability.

By integrating theoretical perspectives with a mixed-methods research design and an in-depth case study of Bağcılar, this research aims to develop strategies for enhancing the equality, accessibility, and quality of urban green spaces. The findings are intended to inform policy and practice in Bağcılar and offer transferable insights for other rapidly urbanizing contexts.

1.2 PROBLEM STATEMENT

Bağcılar is one of the most populated districts in Istanbul, experiencing significant growth since the 1980s because of migration from rural regions to the urban center. Situated in Turkey's European side of Istanbul (Sönmez Özdemir, 2024). It is situated between the districts of Küçükçekmece to the west, Bahçelievler to the south, Güngören to the southeast, Esenler to the northeast, and Başakşehir to the northwest. The district is strategically positioned near major transportation routes, including the TEM (Trans-European Motorway) and the E5 highway, making it well-connected to other parts of Istanbul. Bağcılar is also served by the metro system lines, which provide direct access to Istanbul's central areas.

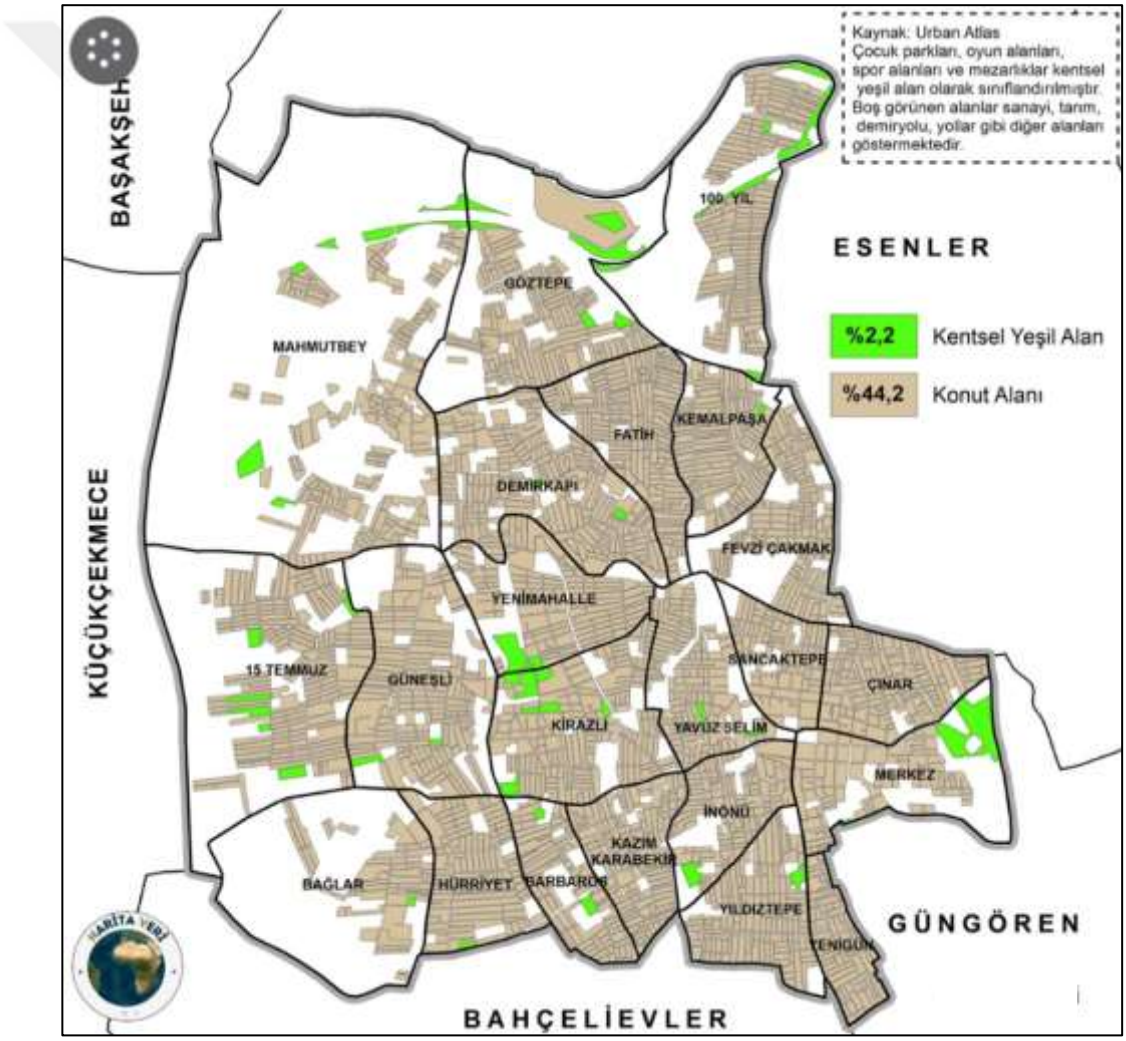


Figure 1.2: Green Public Spaces in Bağcilar District (Istanbul Metropolitan Municipality, 2024).

Social sustainability depends on urban green public spaces, which allow people to relax, meet others, and enjoy a better quality of life. In Bağcılar District, one of the most crowded areas in Istanbul, a set of linked problems prevents green public spaces from serving their key functions. This district's rapid and largely unplanned urbanization, high population density, and persistent socio-economic inequalities have resulted in a built environment that does not adequately support inclusive and sustainable community well-being for the region of Bağcilar.

In addition, the district's topography is diverse in height, with some areas facilitating extensive construction and urban development.

This study addresses critical concerns in Bağcılar, including restricted green spaces, socio-economic inequality, and accessibility, by exploring how green public spaces might contribute to social sustainability (see Figure 1.2).

Key Problems Identified in Bağcılar:

a. Limited and Poorly Distributed Green Spaces

    i. Most green areas of Bağcilar consist of small parks or playgrounds, with few large or multifunctional public spaces.

    ii. Many residents face barriers to accessing these areas due to their uneven distribution and long distances from their homes.

b. Socio-Economic Disparities:

    i. Income or social status often determines access to high-quality green spaces, exacerbating existing inequalities.

    ii. Marginalized groups face greater obstacles to participating in public and recreational activities.

c. Urban Heat Island Effect:

    i. Dense construction and limited vegetation lead to higher local temperatures and increased heat in these areas.

d. Air Quality and Environmental Health

   i. Industrial zones and major transportation routes reduce air quality and negatively impact the public health of the area.

e. Rapid, Unregulated Development

   i. High-density construction of buildings has often prioritized built space over creating public green areas for its residents.

f. Overcrowding, Noise, and Inadequate Facilities

   i. Overcrowding and noise pollution reduce the usability of existing public spaces, resulting in a lack of accessible recreational and community facilities.

Table 1.1: Main Challenges Facing Urban Green Public Spaces in Bağcılar.

Problem Area	**Description**	**Impact on Social Sustainability**
Limited Green Spaces	Small, fragmented, and poorly distributed parks and playgrounds	Exclusion, low usage, reduced access
Socio-Economic Disparities	Unequal access to green spaces based on income and social status	Inequity, social exclusion
Urban Heat Island Effect	Lack of vegetation and dense buildings result in higher temperatures	Discomfort, vulnerable populations
Air Quality Issues	Pollution from industry and traffic; insufficient green buffers	Health risks, discourages outdoor activity
Rapid, Unregulated Growth	High-density development with little provision for public green areas	Diminished communal spaces, fragmentation
Overcrowding & Noise	Overpopulated housing and persistent noise undermine the quality and function of public spaces	Lower quality of life, disengagement
Inadequate Facilities	Lack of accessible, multifunctional recreational and social amenities	Limits social interaction and community ties

Concluding that Bağcılar faces a complex set of challenges that undermine the social sustainability of its urban green public spaces (see Table 1.1). Limited and unevenly distributed green areas, socio-economic disparities, the urban heat island effect, poor air quality, rapid unregulated development, overcrowding, and inadequate facilities collectively restrict residents' access to quality public spaces.

These problems diminish opportunities for recreation, social interaction, and community well-being, ultimately lowering the quality of urban life. Addressing these interrelated issues is essential for promoting social equity and fostering a more sustainable urban environment in Bağcılar, which is the focus of this research. The goal is to identify all of these problems that exist within the region of bağcılar and suggest a set of solutions to promote the social sustainability of the bağcılar region.

1.3 RESEARCH AIM, SCOPE, AND OBJECTIVES

Research Aim: The primary aim of this thesis is to investigate the role of public spaces, particularly green areas, in advancing social sustainability within urban environments, and to develop strategies for creating more sustainable, equitable, and livable cities.

Research Scope: This research focuses on the district of Bağcılar as a case study, examining the interplay between public green spaces and social sustainability in a densely populated and rapidly urbanizing context. The study considers green public spaces as physical entities and integral components of community life, influencing daily interactions, well-being, and social equity.

Research Objectives:

a. To assess the current distribution, accessibility, and quality of green public spaces in Bağcılar.

b. To analyze the social dimensions in sustainability in urban planning of Bağcilar, which is often overshadowed by environmental and economic considerations.

c. The aim is to explore the relationship between residents and their urban environment, focusing on how green public spaces in Bağcilar shape social dynamics and community cohesion.

d. To identify the challenges and the barriers that hinder the effective contribution of green public spaces to the social sustainability of Bağcilar.

e. To propose targeted interventions and strategies to enhance urban public spaces, social, environmental, and spatial qualities.

Research Significance: This research emphasizes the social dimension of sustainability, which addresses a critical gap in the literature and practice of urban planning within the Turkish context. It recognizes that green public spaces are vital for environmental health and for fostering inclusive, vibrant, and social communities. The findings are intended to inform policy and urban design practices in Bağcılar and offer insights transferable to other urban contexts facing similar challenges.

1.4 RESEARCH QUESTIONS AND PURPOSES

This research begins with a practical question: How can green public spaces in Bağcılar truly support a more socially sustainable community? , This research draws from several academic frameworks and studies, carefully selecting and adapting those ideas that best fit Bağcılar's unique conditions. The research first defines "social sustainability" by considering multiple perspectives from the literature and then examines the relationship between urban green public spaces and social sustainability. This allows the research to set clear criteria for the analysis part and criteria that are not just imported from elsewhere but can be implemented for Bağcılar's green public spaces.

The study's primary purpose is to better understand how public green spaces in Bağcılar can improve social connections, equality, community life, and the overall sense of belonging. The aim is to move beyond general suggestions and instead develop practical, place-based strategies for the district. Three questions are set for this research:

a. How can social sustainability be clearly defined and systematically evaluated within the context of Bağcılar's urban public green spaces, and which conceptual and methodological frameworks are most appropriate for this analysis?

b. How do public green spaces in Bağcılar impact accessibility, social cohesion, equity, spatial perception, and quality of life among residents, and what local challenges hinder these positive outcomes?

c. What targeted and evidence-based strategies can urban planners and policymakers recommend improving the planning, design, and management of public green spaces in Bağcılar and strengthen social sustainability?

These research questions are based on the interdisciplinary approach taken in this study, which links urban green public spaces to improving social sustainability in highly dense regions. The study pays attention to the assessment tools, main achievements, and social aspects of sustainability in Bağcılar, along with the interactions between social and environmental objectives, to address the theoretical and practical gaps in the literature. The goal is to create a pragmatic approach that helps increase the quality and equality of urban green spaces in Bağcılar.

1.5 LIMITATIONS

The Limitation for this research is that the implemented a framework by the Berkeley Group and the UK Green Building Council, which encompasses various elements of social sustainability, including availability, safety, social unity, superiority of life, belonging, equity, poverty, human rights, and participation, which are considered to be beneficial also for the context of bağcılar with these elements of social sustainability can be implemented to enhance the social sustainability of Bağcılar's green public spaces. Additionally, incorporates certain beliefs. The "Bağcılar district" was selected as the case study for this research. The case examination relies on the acknowledgment of urban green spaces through evaluations. Another constraint proved the clarity and sufficiency of the responses provided in the survey form by the residents.

The survey questionnaire is developed for this research and includes a part that assesses the standard of living within the green zones; psychological elements, such as relaxation and stress alleviation, were not considered in this section. Variability became a further constraining factor associated with the limited number of participants and the insufficient participants. The survey was conducted with a limited sample of 116 people. Most of the

participants were infrequent visitors to the Bağcılar district. The research examines social sustainability in the design stage and does not consider the construction phase.

1.6 STRUCTURE OF THE STUDY

The study structure follows a systematic research process which is designed to build a clear and rigorous argument, beginning with an introduction part where the research problem, aims, and significance are clearly explained in this research, and then the study proceeds by organizing the conceptual framework and literature review that synthesizes key theoretical perspectives on sustainability, social sustainability, and urban green public spaces with implementing the concept of place-making to the context of Bağcılar's green public spaces, setting the stage for the study approach. After that, the Methodological part was explained in detail, including the rationale for employing the mixed-methods approach that combines spatial analysis, survey data, and qualitative content analysis. An in-depth case study of Bağcılar follows this. Next, detailed research in Bağcılar includes mapping and analyzing its spaces, residents, and society with GIS and DepthmapX and surveying the population for their experiences to understand better the connection between these parks in the region how they connected the degree of the connectivity in the area and other crucial data to lead us understand better the current condition and how and what solution can be implemented. The findings section integrates quantitative and qualitative results to provide a comprehensive evaluation of the current state of social sustainability and the impact of green areas in the bağcılar district.

These results are then analyzed and discussed alongside the main ideas, which help to create recommendations to increase social sustainability by altering urban planning and adding green areas. Once the discussion is done, the thesis summarizes the main ideas, addresses any research issues, and outlines possible directions for additional work. As a result, the study covers the necessary steps from theory to practice. With the research context and objectives established, the next chapter explains the methodological approach used to analyze how green public spaces influence social sustainability in Bağcılar, and the data needed to be analyzed to see what strategies need to be implemented in Bağcılar's green public spaces.

2. METHODOLOGY

2.1 METHODOLOGICAL APPROACH

This chapter explains the systematic approach to exploring the relationship between green public spaces and social sustainability in Bağcılar, Istanbul. Combining quantitative and qualitative research methods within a robust conceptual framework ensures a comprehensive and contextually relevant analysis to understand the current condition of Bağcılar's green public spaces.

2.2 AIM AND STUDY OBJECTIVES

The goal is to systematically examine the relationship between green public spaces and social sustainability in Bağcılar, emphasizing spatial perception, equity, accessibility, safety, participation, social cohesion, quality of life, and inclusion.

Objectives:

a. To define and contextualize social sustainability and spatial perception, drawing from key theoretical frameworks and adapting them to Bağcılar's unique urban conditions.

b. To develop and implement criteria for assessing social sustainability and spatial perception in public green spaces.

c. To examine the spatial distribution, accessibility, and experiential qualities of green public spaces using advanced analytical tools.

d. To evaluate residents' perceptions, sense of place, and daily experiences through surveys and spatial analysis.

e. To synthesize empirical findings and theoretical insights into practical recommendations for urban planning and policy in Bağcılar.

2.3 RESEARCH FRAMEWORK AND METHODS

Several well-known theories were the basis for this thesis's social sustainability assessment. Yiftachel and Hedgcock (1993), Colantonio and Dixon (2011), the Berkeley Group and UK-GBC (2012), and Chan and Lee (2008) were among the models that were considered in the

evaluation. The dimensions of social sustainability highlighted by every approach are marginally different yet overlap. Colantonio & Dixon, for example, concentrate on social cohesion and participation, Yiftachel & Hedgcock stress equality and community, the Berkeley Group & UK-GBC emphasize infrastructure and cultural identity, and Chan & Lee introduce the importance of design and psychological fulfilment. The study develops a thorough and locally applicable set of standards through comparison and integration (see Table 2.1).

Table 2.1: Conceptual Frameworks and Evaluation Dimensions in Social Sustainability.

Framework	Key Dimensions
Yiftachel and Hedgcock (1993)	Equality, urbanity, community engagement
Colantonio and Dixon (2011)	Safety, education, occupation, health, social cohesion, participation
Berkeley Group and UK-GBC (2012)	Infrastructure, social services, cultural identity, empowerment
Spatial Perception	Accessibility, spatial connectivity, visibility, sense of place, experiential quality
Chan and Lee (2008)	Social infrastructure, accessibility, design, local identity, psychological satisfaction
Adapted for this Study	Equity, safety, quality of life, sense of belonging, accessibility, social cohesion, human rights, participation, poverty, spatial perception

The research proposes an analytical model for assessing the social sustainability of green public spaces in urban green areas by developing a model for social sustainability, which is essential to comprehend the approaches used to determine social sustainability. And the social sustainability assessment identifies its definition by the Berkeley Group and UK-GBC (2012). Therefore, it is imperative to locate social sustainability as a fundamental endeavor. By examining relevant literature from various fields, this literature review seeks to define social sustainability and its essential elements. The primary key to social sustainability theory was introduced by Yiftachel and Hedgcock, prominent urban planning researchers.

Examines it through three main aspects: community, urbanity, and equality. The comprehension of social sustainability has grown since further research has improved and expanded upon these variables.

Based on the frameworks above and the specific needs of Bağcılar, this research synthesizes the following dimensions of social sustainability for detailed analysis, as shown in Table 2.2. The synthesized analytical dimensions related to social sustainability are used in this thesis. This research uses the social sustainability dimensions to assess Bağcılar's green public spaces' ability to promote a socially sustainable urban environment. It also identifies the region's green public spaces' social sustainability by highlighting their strengths, weaknesses, and areas for improvement.

Table 2.2: Social Sustainability Dimensions Applied in Bağcılar Case Study.

Dimension	**Description**
Accessibility	Ensures universal, easy, and equitable use of green spaces
Security	Safety, crime prevention, and perceived comfort in public areas
Social Cohesion	Community ties, interaction, trust, and shared identity
Quality of Life	Enhanced well-being, health, and life satisfaction
Sense of Belonging	Local identity, cultural relevance, and personal attachment to place
Equity	Fair access regardless of demographic background
Participation	Inclusion in decision-making, civic engagement
Human Rights	Respect for all rights and non-discrimination
Poverty Alleviation	Reaching the most disadvantaged, reducing exclusion
Spatial Perception	How space design affects experience, navigation, and comfort

Various analysis types and research methods are employed to capture the complexity of social sustainability in Bağcılar. Each technique addresses specific dimensions or fills gaps that a single approach would leave (see Table 2.3). Spatial analysis objectively measures accessibility and spatial perception of the Bağcilar district, while surveys and qualitative analysis provide insight into lived experiences, preferences, and perceived barriers.

a. Spatial Analysis: Using GIS mapping and DepthmapX (space syntax) to analyze the physical distribution, accessibility, and integration of green spaces in the urban fabric.

b. Quantitative Analysis: Structured surveys with closed-ended questions (Likert scales, demographics, frequency of use) to measure how different population groups use and perceive green spaces, and to statistically examine patterns and relationships.

c. Qualitative Analysis: Open-ended survey questions and content analysis to capture nuanced resident experiences, expectations, and suggestions.

Triangulation: Integrating spatial, quantitative, and qualitative findings to validate results and ensure a holistic understanding of the green public spaces of Bağcilar.

Table 2.3: Analysis Types and Their Purpose in the Research.

Analysis Type	**Main Tools/Techniques**	**Purpose and Output**
Spatial Analysis	GIS, DepthmapX	Map green space location, measure accessibility & connectivity
Quantitative Analysis	Surveys, Statistics, Regression	Profile user patterns, measure perceptions, identify disparities
Qualitative Analysis	Open-ended questions, Content analysis	Understand detailed experiences, needs, and social dynamics
Triangulation	Integrative cross-checking	Ensure reliability and comprehensive coverage

GIS and DepthmapX software tools (space syntax analysis) were used to assess the physical distribution, accessibility, and connection of green public areas in Bağcılar. In contrast, GIS provides a comprehensive spatial mapping of the locations of green public spaces, land use trends, and demographic overlays in the Bağcılar district. As shown in Figure 2.1, DepthmapX made it possible to analyze pedestrian movement potential, network integration, and the potential for social interaction in different places. These tools were selected because they allow for evidence-based assessment of urban form and its impact on social outcomes, an essential requirement of the research framework.

By combining these approaches and methods, the research ensures that both objective and subjective social experiences are fully considered for Bağcılar's green public spaces, producing findings that are robust, actionable, and directly relevant to the challenges and opportunities facing Bağcılar.

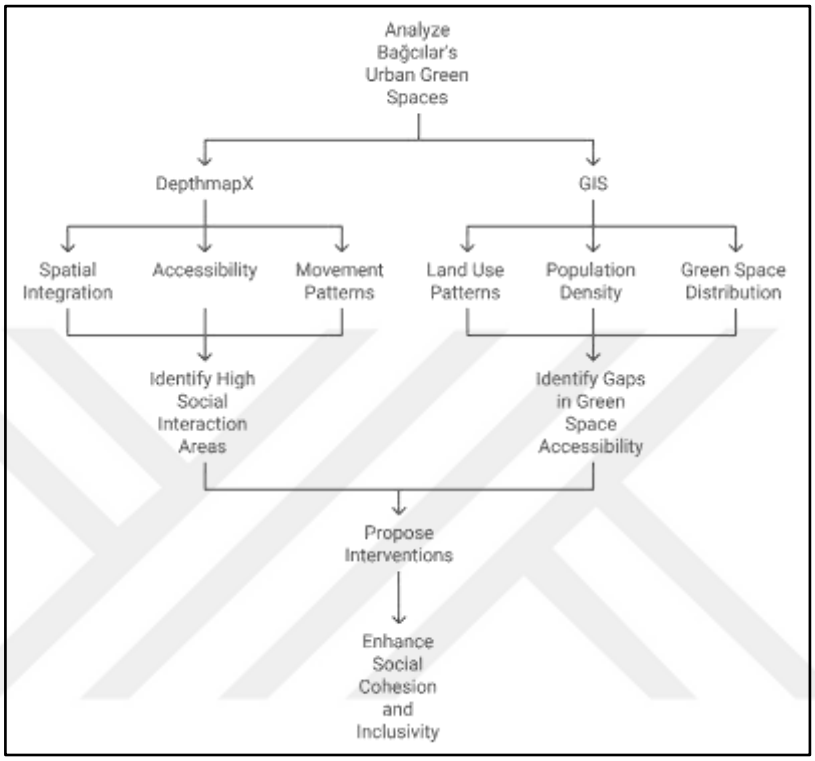


Figure 2.1: Analysis Tools Used for Bağcılar Case, Prepared by Author.

2.4 STUDY CONSTRAINTS

While every effort was made to ensure the reliability and depth of this research, several practical and methodological limitations should be acknowledged. Being transparent about these constraints helps provide context for interpreting the findings and clarifies the boundaries of what this study can claim.

Sampling and Participation: Despite aiming for a broad and representative survey sample, certain groups in Bağcılar, such as elderly residents, migrants, or those with limited internet access, may not be fully reflected in the responses. Participation was voluntary, so some voices may be missing simply because they chose not to or could not participate.

Access to Data: The spatial analyses relied on the best available GIS datasets and mapping tools. However, not all up-to-date or fine-grained urban data was accessible, which may have affected the precision of some spatial findings, especially in areas undergoing rapid change.

Timing of Data Collection: All surveys and field observations took place within a defined timeframe. This means the research provides a snapshot of Bağcılar during that period. Any subsequent changes, such as new green spaces, policy shifts, or shifts in community sentiment, fall outside the scope of the study.

Interpreting Qualitative Responses: Although qualitative data provides valuable insights, interpreting open-ended answers always involves some level of researcher judgment. Although thematic coding was carried out carefully and systematically, another researcher might have grouped or interpreted some responses differently.

Contextual Relevance: The study's frameworks and recommendations were explicitly designed for Bağcılar. While some insights may apply to similar districts, direct transfer to other contexts should be done cautiously, always considering differences in local social, economic, or spatial dynamics.

Resource Limitations: As with any field research, available time and resources influenced the scale and depth of data collection. Larger samples or additional site observations could have provided even richer findings, but they were beyond the scope of this project.

By acknowledging these constraints, this study aims to present its findings in a balanced and credible way, clarifying the research's strengths and natural boundaries. These limitations suggest valuable directions for future studies to build on or refine this work.

3. SUSTAINABILITY

Understanding the social sustainability in cities demands a critical engagement with the literature on sustainability first, then with the urban green public spaces, and place-making theory for this research. This literature review aims to gather the main academic concepts that will be applied to this research and review the case study of Bağcilar. By examining the evolution of sustainability thinking. With a focus on the social dimensions. Alongside various definitions and roles of urban green public spaces and the place-making theory, the research establishes the theoretical and empirical foundations for assessing social sustainability in Bağcılar and a set of strategies that are driven by these concepts and theories then apply them in the Bağcilar green public analysis to enhance the overall green public spaces of Bağcilar.

The following chapters discuss he sustainability, social sustainability, and urban green public spaces with place-making theory, which provides valuable insights into the lived experiences and social functions of green public spaces of Bağcilar. Together, these components of literature justify the selection of core evaluation dimensions such as accessibility, equity, participation, and belonging, and frame the research questions that guide the empirical analysis in this research.

3.1 THEORETICAL FOUNDATIONS OF SUSTAINABILITY

The concept of sustainability was first described as rooted in balancing present needs with the well-being of future generations. Since the beginning, this concept has expanded to include equitable social and economic development and resource conservation. The three interrelated pillars of sustainability, the environmental, financial, and social dimensions, are most frequently used in contemporary urban studies (Macintosh and Wilkinson, 2006).

The growth of Bağcılar is directly impacted by modern approaches that emphasize the creation of inclusive and sustainable neighborhoods, as highlighted by Carmona (2010) and the UN (2014, 2015). By 2030, cities should be more accessible, safe, equitable, and environmentally conscious, ensuring everyone has fair access to green public areas. This is the goal of the United Nations Sustainable Development Goals (SDGs), which were established in 2015. Bağcılar is particularly relevant to this goal due to its dense population

and lack of green infrastructure, taking into consideration the amount of green public space with the current number of residents in the district. In addition, the 2015 Paris Climate Conference emphasized the importance of creating sustainable communities, reducing waste and manufacturing inside residential areas, and encouraging environmental responsibility, all factors that metropolitan areas like Bağcılar are currently dealing with (Sönmez Özdemir, 2024).

According to the Oxford Dictionary, sustainable development is "preserving property without reducing it." The Brundtland Report (1987) specifies sustainability as meeting present needs without compromising those of future generations, a particularly significant challenge in a rapidly urbanized environment such as Bağcılar. Since the 1960s, the central focus of sustainability research has been the relationship between environmental capacity and the needs of current and future communities.

Although sustainability is derived from the natural sciences, it has expanded to incorporate the institutions and economies, addressing challenges such as hazardous waste, renewable energy, and economic integration (Vos, 2007). Scholars such as Hawken, Costanza, and Viederman (1994) have emphasized balancing economic and ecological goals. At the same time, Tekeli has advanced an ethical comprehension of sustainability that prioritizes social and environmental well-being. Therefore, equilibrium among economic, social, and ecological factors is essential for enhancing quality of life, supporting functional urban environments, and building inclusive communities for future generations. Priorities that are central to the ongoing transformation of Bağcılar. In summary, sustainability, which comprises social, environmental, and economic components, provides a theoretical foundation for urban development in Bağcılar by addressing resource depletion, urbanization, and environmental change (Sönmez Özdemir, 2024). The following section examines definitions and concepts relevant to the historical developments of sustainability.

3.2 HISTORICAL DEVELOPMENTS OF SUSTAINABILITY

Since the 1960s, the definition of sustainability has undergone a radical transformation. In her 1962 book Silent Spring, Rachel Carson emphasized the interdependence between social, economic, and environmental variables, which guided further exploration. The first Earth Day celebration occurred in 1970 to increase understanding of the ecological impacts (see

Figure 3.1). Environmental sustainability was initially put out at the UNESCO Intergovernmental Conference in 1968. Ecological and economic concerns were brought together at the 1972 Stockholm Conference, which opened the possibility of establishing organizations such as UNEP. The 1980s saw the expansion of sustainability issues to include overpopulation, social inequality, and poverty.

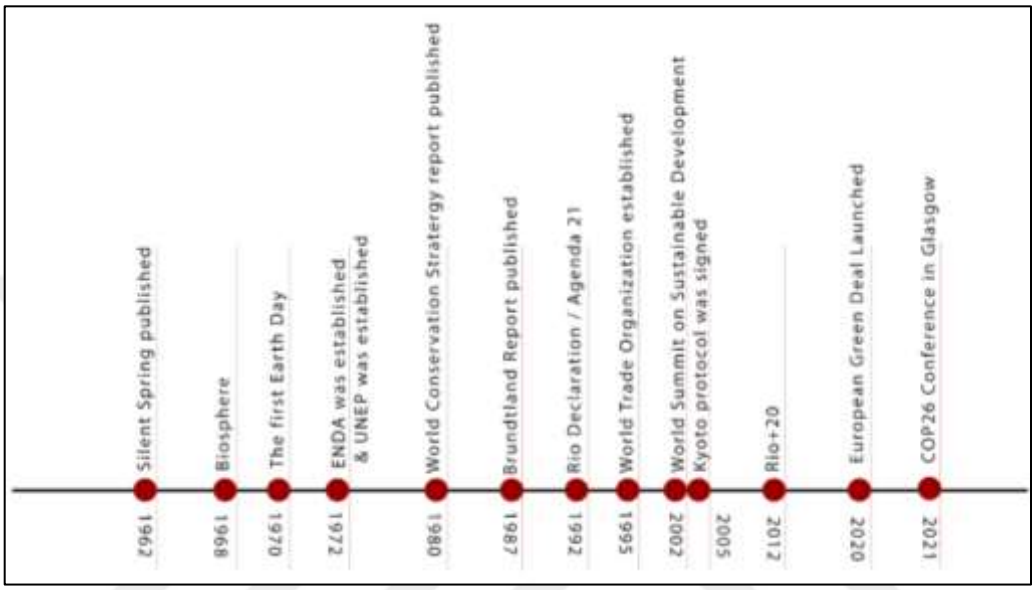


Figure 3.1: A Timeline of Significant Incidents in The Principle of Sustainability, Prepared by Author..

In 1987, Brundtland's publication Our Common Future promoted "sustainable development" as a theme for governments and non-profits to conserve the environment. Through meetings at UNCED and Rio in 1992, the world community adopted sustainable human development guidelines that demand social fairness and representative decision-making. 2002 during the World Summit, three sustainable development dimensions were recognized, featuring economic, social, and environmental aspects. In 2005, the Kyoto Protocol created goals to slow global warming and decrease environmental pollution. The 2012 Rio+20 meeting showed we need to develop sustainable systems for all aspects of life without harming future generations and their societies.

Although sustainability originated in Eastern and medieval European societies, it gained popularity in modern studies after urbanization. By the beginning of the 20th century, interest in sustainability was increasing because of capitalism’s dedication to earning, worsening the imbalance in the environment (Keleş, 2013). The Malthusian viewpoint

suggested limiting development to avoid reducing resources, global warming, and pollution. In the 1960s and 1970s, worries about energy shortages and environmental harm grew, leading to studies such as The Limits to Growth (1972), which warned against the dangers of uncontrolled industrialization and population growth. The 1972 Stockholm conference, which improved the fundamental sustainability models and connected social equality, economic prosperity, and environmental security, was a critical point. The Brundtland Report (1987) later specified sustainable development as facing the existing challenges without pushing future generations to risk. Rio Ummit (1992) emphasized sustainability as a universal aim, which led to Agenda 21's attainment plan, which strongly emphasized sustainable urban, rural, and local government planning. The idea continued to develop with Habitat II (1996), which concentrated on affordable housing and sustainable human settlements, and the Johannesburg Summit in 2002, which re-examined sustainable development goals. Habitat III launched the new urban Agenda in 2016, promoting sustainable urbanization as an indicator of social, economic, and environmental growth, considering the outlined expansion of the world's population by 2050. This agenda advances collaboration to build comprehensive, flexible, and sustainable communities. Following Rio Ummit (1992), who emphasized sustainability as a universal goal, which led to Agenda 21's achievement plan, which gives sustainable urban, rural, and local government planning.

Sustainability has developed over time as a finding of global opportunities and challenges, including the dynamic interaction of social, economic, and environmental goals. In addition to the original focus on pollution control and source conservation, the aim has expanded to include complex issues such as urbanization, social justice, and climate change mitigation. As sustainability expanded acceptance, including these factors became crucial to preserving a balanced growth method. This cleared the way for more complex frameworks that provide several perspectives on how to build long-term environmental and social immovability while addressing the limitations of economic development. The following section discusses the core dimensions of sustainability studied in more depth, with the focus of this research on the social dimensions.

3.3 THREE CORE DIMENSIONS OF SUSTAINABILITY

Several theoretical frameworks have presented the three components' sustainability principles and their connection. The main sustainability framework is symbolized by three

circular elements defined in Figure 3.2: Social, Environmental, and Economic. The key to understanding this sustainable model is recognizing how the three components are interdependent and how to achieve stability between them. This approach may be used to study the internal processes of each sector and the interactions at their interfaces.

Firstly, Littig and Griessler (2006) believe these three components are critical. Sustainability should consider social, cultural, and ecological aspects to preserve essential resources for future generations. Dillard et al. (2008) suggest achieving long-term environmental, economic, and social sustainability. However, a high-growth population affects environmental sustainability by raising resource demand, which could lead to ecological catastrophe if uncontrolled (DfID, 1999).

Secondly, according to Goodland (2003), environmentally friendly improvements provide human benefits by protecting life-sustaining essential services. The efficiency of eco-friendly declarations depends on focusing on the urban social and economic problems, such as abject poverty (Enyedi, 2002). According to DFID (1999), financial sustainability ensures the long-term protection of income and investments. It is established on the sources that link and collect works and involves wealth generation and affordability (Castells, 2007).

Lastly, the aims of social sustainability consist of the distribution of resources and peaceful neighborhoods. It adopts human rights, incorporation, and social cohesion (Sachs, 1999; Polèse and Stren, 2000). The significance of "equitable accessibility" and "community sustainability" is emphasized by (Bramley et al., 2009). In urban development announcements, Holden (2012) emphasizes the importance of social sustainability. In contrast, Colantonio and Dixon (2011) successfully provide justification for stabilizing lifestyles within the boundaries of the globe (Dempsey et al., 2011; Shirazi and Keivani, 2017). The social sustainability helps populations, in addition to governments, collaborate by bridging the gap between social and natural infrastructure.

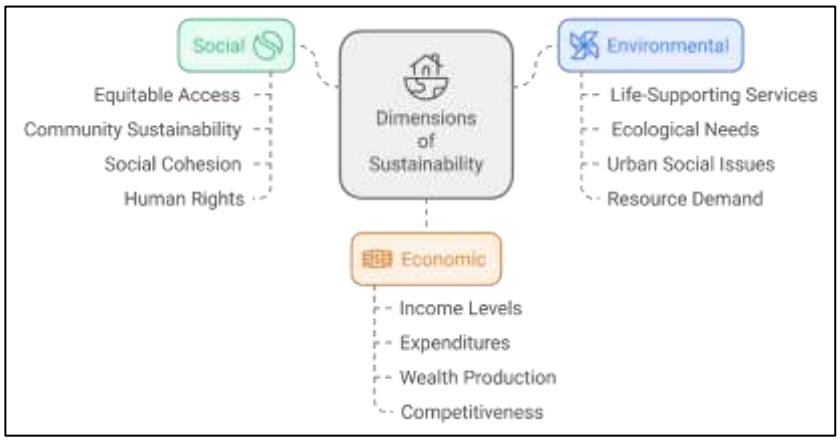


Figure 3.2: A Literal Pillar as Depicted (Make and Peacock, 2011).

Public space sustainability is evaluated based on three components: ecological, economic, and social factors. These factors identify the qualities of public spaces and crucial principles for an environmentally sustainable city, according to Dillard, Dujon, & King (2008), which consist of:

a. Ecological Sustainability: Since nature is viewed as a cycle, public areas increase their environmental features by providing sunlight, airflow, temperature, and humidity, all of which are required for a sustainable model.

b. Economic Sustainability: Investing in residences and corporations is related to public spaces. In Berlin, residential neighborhoods next to community playgrounds showed a 16% increase in land standards, establishing the positive effect of proximity to green places on property standards (Luther and Gruehn, 2001). This financial benefit is connected to social life and everyday needs.

c. Social Sustainability: Conversations and communication take place in public areas. Equality in space, security, and inclusion. Components of social sustainability (Carmona, 2010) recognize five categories: neighborhood ties, security, equitable access, people's space for communications, and the involvement of public areas. (Gehl,1987) and (Whyte, 2005) emphasize the adoption of social links and activities in public spaces, which are essential for community vitality and contributions. This dimension is taken as the focus of this research to be discussed and implemented its factors and principles for the case of Bağcılar's green public spaces.

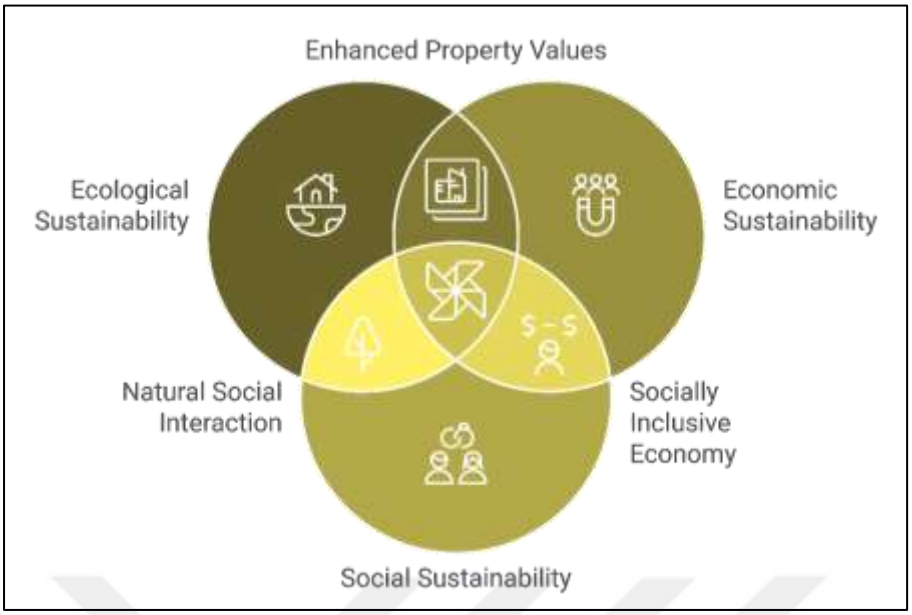


Figure 3.3: Holistic Public Spaces Sustainability, Prepared by Author.

The three main parts of sustainability for social impact, financial returns, and environmental health must shape how we build and run public spaces. Sustainable development starts from these three fundamental rules. Public spaces become more sustainable when designers, architects, and policymakers incorporate natural structures that protect the environmental system and ensure individual sunlight, air flow, and biodiversity implementation. Public spaces are key economic vehicles that promote commercial growth while increasing real property value and reducing local taxes over time. The importance of social sustainability is shown in its support for welcoming diverse people to connect with their community and feel secure everywhere (see Figure 3.3).

These three factors also serve as the foundation for creating and preserving sustainable public spaces that foster ecological balance, social cohesiveness, and economic advancement. When these elements are included, public areas become assets that allow sustainable ecosystems to draw in investment and encourage diversity and communal organization. These consistent components show how sustainability has developed beyond its ecological origins to involve comprehensive structures for dealing with global effects. The following section investigates the historical evolution of the sustainability concept, highlighting its progress and turning points.

3.4 CURRENT CONCEPTUAL STATE OF SUSTAINABILITY

3.4.1 Concept of Sustainability

"Sustainability," which is connected to "futurity," can be defined as a stabilizing action (Basiago, 1995). Since sources are limited, the goal is to use them carefully and rationally to realize long-term purposes. The sustainability proposal was first established by the 1987 publication of the Brundtland Report, which was part of Our Common Future. The research defines sustainability as a growth production that meets its requirements, given its broad applicability and capacity to be applied to all systems. Sustainability ensures the existence of any issue (Manderson, 2006). Sustainability is a continual process rather than a destination in and of itself, that defies easy categorization by either preset goals or methods.

It all started in the 1960s, when the environmental movement was at its height, and many people were worried about how rapidly natural resources were being exhausted by human beings. Sustainable enhancement is advancement that intersects the potential of recent residents while preserving the capability of forthcoming generations to address their difficulties. The oldest description of advancement was offered by the appointment in 1987, according to Annandale et al. (2004). Over the years, several definitions have been based on the idea that the concept must be observed in the context of three interconnected main components (social, economic, and environmental) (Barron and Gauntlett, 2002; Davidson and Wilson, 2009; Macintosh and Wilkinson, 2006).

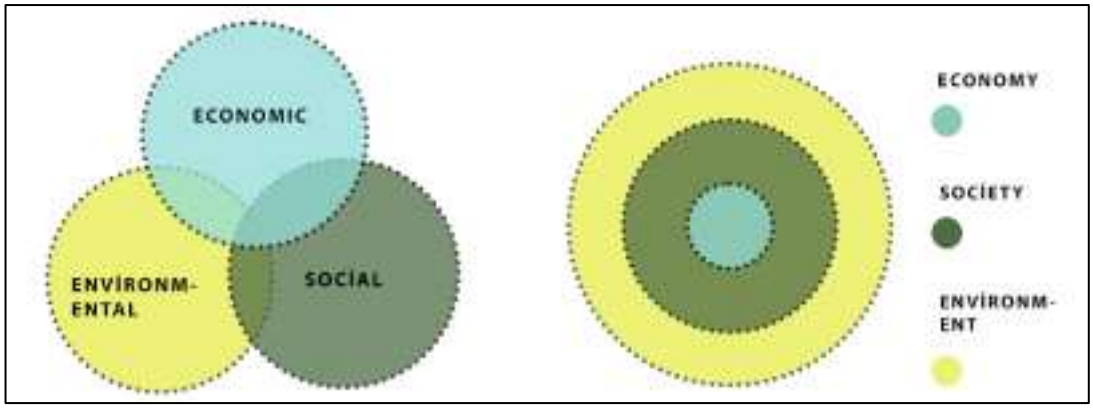


Figure 3.4: Model of Sustainability (Barron, L., & Gauntlett, E., 2002).

Several conceptual models have been developed around the principle of sustainability and the relationship between the three pillars. The first model is characterized by three concentric

areas. This sustainability model is identified by recognizing the interdependencies among the three parts and achieving a balance between them. This approach may be used to study each domain's dynamics and the dynamics at their interfaces.

The second model presents sustainability as a three-tiered structure, with the ecosystem, human civilization, and economics as interdependent systems. Since all aspects of the economy rely on human interaction, it demonstrates that the economy does not exist apart from society. All of man's "relations" beyond the purely economic "transactions" of commodities and services comprise society, encompassing much more than just the economy. In this view, the natural environment upon which human survival depends is fundamental to society. The two models are not interchangeable. The concentric model shows our understanding of the interplay between the natural, social, and economic realms. It first suggests their independence before ultimately revealing our dependency on the physical world in our roles as economic and social creatures (see Figure 3.4).. However, one method to visually show how we might learn about the characteristics of each sphere is via the interconnected spheres model (Barron and Gauntlett, 2002).

Along with the focus on the concept of interconnecting circles, there has been a lot of research into the environmental and economic components of sustainability. Still, the social element was overlooked and has received little attention. Hence, this thesis aims to evaluate the cultural and social aspects of sustainability in bağcılar, Istanbul's urban green public places. Models that highlight the interdependence of these components and aid in understanding their relationship with one another include nested circles and interlocking circles. However, environmental and economic considerations have often taken center stage, while the social dimension has received much less attention. Now that we have that settled, we can talk about how sustainability's environmental, social, and economic facets all work together to foster comprehensive and fair growth.

Sustainability and linking its three pillars have resulted in various conceptual models examining how social, economic, and environmental systems relate (Barron and Gauntlett, 2002). Table 3.1 highlights that the interlocking circles model shows how the three domains should work together, while the nested circles model points out that society and the economy depend on the environment. Both the Brundtland Report (WCED, 1987) and later works point out that we should meet our needs now and at the same time ensure resources are

available for future generations, further proving how these areas are connected (Annandale et al., 2004; Macintosh and Wilkinson, 2006; Davidson and Wilson, 2009). Most of the early studies in this area emphasize environmental and economic issues more than social ones. It aims to fill this gap by examining the social and cultural aspects of sustainability in Bağcılar's urban green public spaces, using these models to highlight the importance of all three pillars and how essential equal growth is in Bağcılar's case (see Table 3.1)..

Table 3.1: Summary of Key Sustainability Models, Prepared by Author.

Model Name	Structure	Key Features	Main Reference
Interlocking Circles	Three overlapping circles (economic, social, environmental)	Emphasizes the interdependence and balance between the three domains; each can be analyzed separately or together	Barron and Gauntlett (2002)
Nested Circles	Three concentric circles (economy inside society, inside environment)	Highlights that the economy exists within society, which itself depends fundamentally on the environment	Barron and Gauntlett (2002)
Brundtland Model	Conceptual (no strict visual)	Defines sustainability as meeting present needs without compromising future generations	WCED, 1987; Annandale et al. (2004)
Three Pillars/Components	Social, Economic, Environmental	Stresses interconnectedness: comprehensive sustainable development requires all three dimensions	Macintosh and Wilkinson (2006); Davidson and Wilson (2009)

3.4.2 Current State of Sustainability

Sustainability is now the guiding concept for environmental development. Several authorities, such as the United Nations, have established sustainable advancement targets for 2020, 2030, and 2050, designated as target years for implementing several of these objectives. To achieve these goals, the research is incessantly being guided. Developing environmentally friendly urban spaces is of the highest significance for the future. Many citizens provide commercial motivations for sustainable activities to encourage sustainable urbanization. Grant promotion is also given to proposals that match sustainability principles

to increase public significance and participation in organizations and cooperation. Under these conditions, corporations, non-governmental organizations, and people all have a responsibility to play in reaching sustainable development goals, in addition to governments and global organizations.

Individuals who are more aware prioritize environmental issues and employ the right skills. Sustainability does not involve discontinuing development (Tekeli, 2001). Several sustainability-related strategies enhance overall living quality, promote personal safety, create healthy environments, and aid in developing inclusive communities now and in the future. To accomplish these objectives, sustainability must be seen as a comprehensive concept and a crucial component of every discipline.

Recognition and activity are promoted through grants and tax exemptions for eco-friendly strategies. However, institutional requirements or general guidelines alone cannot ensure sustainability. Promoting a worldview that emphasizes the interconnectedness of individuals, and the environment requires the active participation of individuals, corporations, and non-governmental groups. The physical setting, activity, and meaning all combine to create the sense of place, according to relational theories of place-making. This integrated strategy reflects this idea. Since sustainable place-making and strong sustainability stress the value of comprehensive integration, they work well together (see Figure 3.5).

Figure 3.5: Global Sustainability Initiatives, Prepared by Author.

By addressing sustainability at the intersection of urban proposal, social ecological integrity, and equity, cities can become vibrant, strong, and inclusive spaces. Communities may become active, adaptable, and accessible places by embracing sustainability at the intersections of social sustainability, environmental equality, and urban planning. Integrating Place-Making theory and sustainability emphasizes establishing spaces that satisfy the current need while assuring future generations' well-being.

3.4.3 Current Sustainability and Green Public Spaces

Public open spaces were first utilized for various social, religious, and commercial objectives. In Greek towns, these sites fostered social activity, in roman cities however, they took on three primary methods: enclosed area for public buildings, walkways with cafes and shops, and stored, and gardens around the recreational amenities like theatres and baths following Roma, Cathedral squares served as the hub and social life in Northern Europe and served both religious and economic purposes. Throughout the Renaissance, public in France and İtaly evolved into thriving hubs of social interaction However, by the 1600s, public spaces had begun to lose their significance, and as cities grew in the 1700s, just observing strangers became a social activity Despite being established to provide fresh air during the industrial period in the middle of the 1800s, parks and gardens progressively lost their social significance Public area progressively transforms into "leftover" areas because of changing lifestyles and commercialization, with social life that switched in parts to the online platforms (brill,1989). Chidister (1998) asserts that privatizations have restricted access to some regions to groups, such as office workers. Gehl and Gemzore (1996) argued that everyday activities have changed over time, with spaces like malls, shops, and outdoor markets indicating a strong interest in public areas. Environments that are thoughtfully designed improve everyday living and encourage interpersonal communication. Carmona (2010) identified three traditions. As having an impact on high-quality urban spaces: the visual-imaginative, social-usage, and place-making civilizations. The concepts of sustainable urban spaces align with the place-making tradition (see Figure 3.6).

a. The visual-artistic tradition highlights regional building materials, patterns, and aesthetics. According to Sitte (1889) and Cullen (1961), visual arrangement affects a place's personality and feeling of places. Dempsey (2008) establishes a picture's three primary qualities: visual experience, intricacy, and appeal.

b. Social-Usage Tradition: Has two strands and focuses on how places are used. According to the first, which looks at psychology, places are considered secure and cozy and associated with memories and significance (Alexander et al., 1977; Lynch, 1960). The second, proposed by Gehl (1996) and Jacobs (1961), emphasizes activity, contending that improved crowded areas attract more people.

c. The Place-making explains previous practices that demonstrate meaningful connections between people to create successful public spaces. This strategy shows that by integrating physical design, physical experiences, and activities, even places with simple designs might survive through strong community connections.

These standards show how the visuals, social, and sensory components are integrated to provide a complete framework that combines social well-being and quality of the environment. Reintegrating these locations into the urban fabric as vibrant, accessible, and inclusive spaces is critical, based on the sustainable urban design concepts, especially those based on patterns such as place-making. In furtherance of promoting social interactions, well-designed public spaces that include the visual, social, and experiential factors closely align with sustainability purposes, creating healthful and more organized communities.

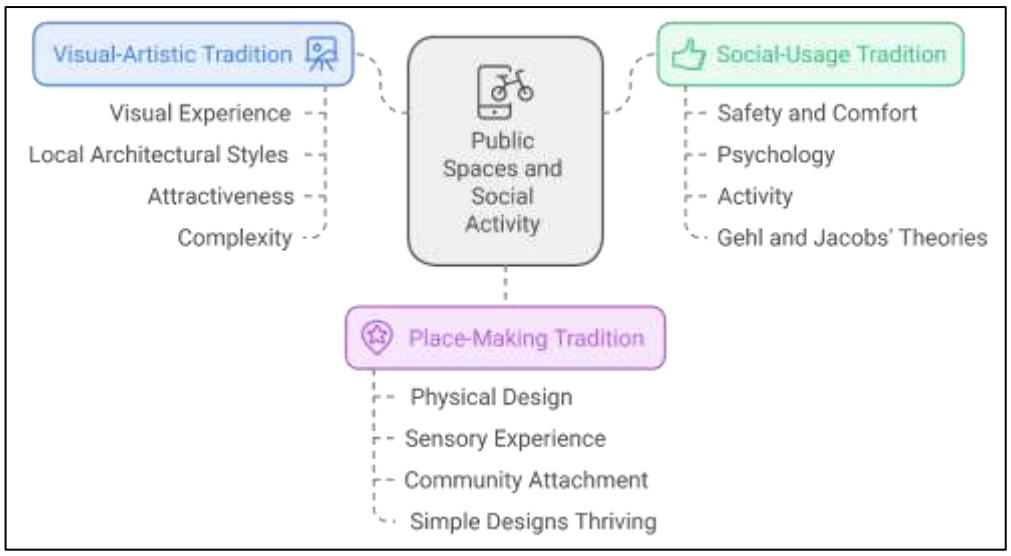


Figure 3.6: Public Spaces and Social Activities, Prepared by Author.

Public areas connect the urban and neighborhood levels, fostering a relationship through sustainable development tiers. These scales are critical in converting international sustainability objectives into successful, regional proposals. Sustainable public spaces

combine the bottom-up and community-driven methods with bigger global goals, providing practical models of how sustainability might be implemented in local and urban places. This relationship highlights that multi-scale cooperation is essential to promoting environmental advancement and shared safety throughout local growth proposals. Public spaces are an Exceptional proof of this integration, which has converted from traditional meeting places to critical factors of sustainable urban planning, which promote commitment, equity, and caring for the environment. Cities might use the place-making principles to regenerate these communities and transform the distinct sustainability goals into significant, community-centered accomplishments. Building on this understanding, the following section explores the interactions between many features of sustainable improvements, reaching from global to local, leading to some strategies and rules that efficiently connect the all-embracing purposes with applied achievement.

3.5 SUSTAINABILITY ACROSS SCALES TO GLOBAL INTERCONNECTIONS

To achieve its objectives, sustainable development uses solutions at various scales, including the national, international, urban, neighborhood, and building levels (see Figure 3.7). As established by conferences such as Stockholm and Habitat, global initiatives that provide broad concepts are required at this point for effective implementation, localized adaptation, and monitoring (UN, 2000).

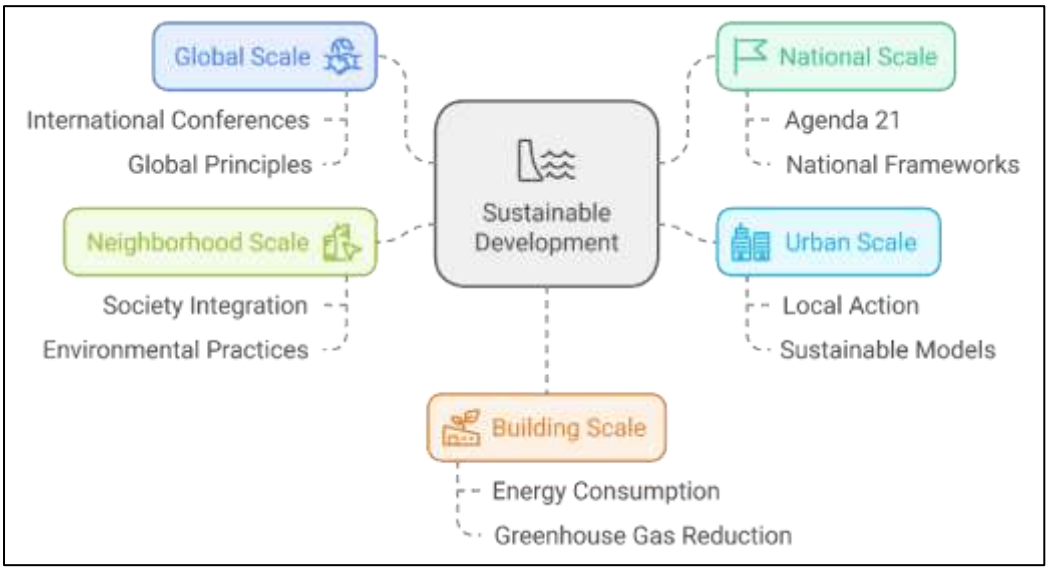


Figure 3.7: Sustainability Development Scales, Prepared by Author.

a. Building Scale: Buildings contribute significantly to energy use and emissions. With proper investment, they offer substantial potential for reducing energy consumption and greenhouse gases.

b. Neighborhood Scale: Neighborhoods integrate society, individuals, and the environment, making them ideal for implementing sustainable practices that can spread to broader areas (Özdal Oktay, 2015). Sustainable neighborhood designs serve as models for larger-scale initiatives.

c. Urban Scale: Cities are crucial for translating national policies into local action. Urban planning approaches support sustainable development by promoting local, sustainable models (Özdal Oktay, 2015).

d. National Scale: National policies, as outlined in Agenda 21, align global sustainability goals with unique national frameworks, bridging global principles with local application.

e. Global Scale: International conferences, declarations, and agreements have shaped global sustainability efforts, requiring national commitments and multi-level collaboration (Özdal Oktay, 2015).

A sustainable world requires a top-down tactic for the board and a bottom-up tactic for localized implementation. Urban and neighborhood sustainability, sitting between these levels, is key in connecting and ensuring environmental progress across scales. Consequently, this part proposes a framework for understanding the sustainability characteristics in forming public places, determining the foundation for further studies on social sustainability. Social sustainability is a necessary part of sustainability that places a high significance on social cohesion, equity, and inclusion, which will be assessed in the forthcoming section. The study of social sustainability explores how urban environments may enhance human benefits, secure community ties, and ensure equitable access to opportunities and resources. This point of view shapes the concepts examined in this chapter by highlighting how the public areas could function as spots for promoting social communication, cultural identity, and long-term social flexibility.

3.6 CONTEMPORARY CHALLENGES AND OPPORTUNITIES

Contemporary approaches to sustainability face ongoing challenges due to rapid urbanization, increased resource demands, and environmental pressures. Urban districts must contend with social inequality, economic instability, and fragmented governance, all of which complicate efforts to achieve a balanced approach to sustainable development (Barron and Gauntlett, 2002).

One key issue is integrating ecological, economic, and social dimensions in decision-making. Often, economic growth is prioritized above environmental protection or social equity, making it challenging to implement truly sustainable policies (Colantonio, 2008). Urban planning in rapidly urbanized districts can be further constrained by informal development patterns, evolving demographics, and limited community participation in planning processes.

However, these obstacles also create space for new opportunities. Increased public awareness, the development of green infrastructure, and participatory urban planning models are allowing districts to address sustainability more holistically. The growing recognition of social sustainability, especially concerning equity, accessibility, quality of life, and active citizenship, has broadened the focus of sustainable development (Davidson and Wilson, 2009).

Achieving sustainability in districts such as Bağcılar depends on addressing these complex challenges while taking advantage of innovative approaches and emerging opportunities. With continued emphasis on social and environmental priorities, urban districts have the potential to develop in equitable and sustainable ways.

4. SOCIAL SUSTAINABILITY

This chapter establishes a core theory and a foundational basis for social sustainability that can later be used for Bağcılar. As stated in the previous chapter, social sustainability has become an essential pillar of sustainable urban development. However, increasing attention is being paid to enhancing and fostering the social sustainability of urban communities' lived experiences, rights, and needs. For a long time, cities were planned, and policies were made with attention to environmental and economic priorities. Still, it is widely accepted that social needs are equally crucial for fair and inclusive cities. Social sustainability highlights the processes, relationships, and institutions that promote equity, participation, belonging, and collective quality of life, particularly vital in dense, diverse districts such as Bağcılar.

Green public spaces in urban areas constitute a tangible arena for fostering social sustainability. These environments enable social interaction, encourage active social responsibility, provide recreation and cultural exchange, and strengthen community ties. The first section of this chapter reviews the major theoretical foundations and conceptual frameworks of social sustainability. It then determines the principal dimensions and indicators used in academic and applied research. Finally, it investigates how these concepts are realized and contested in urban green public spaces, with a special reference to the Bağcılar context.

4.1 THEORETICAL FOUNDATIONS AND FRAMEWORKS

Over time, the study of social sustainability has moved from a secondary concern to the central focus of urban planning and policy making. Key frameworks in the International and Turkish literature point to slightly different and sometimes overlapping dimensions which means that these dimensions and frameworks can be used and implemented internationally with the selections of these dimensions and frameworks after analyzing the proposed area and then executing the needed dimensions for the specific requirement of the region and the type of issue it faces taking all these frameworks and dimensions in consideration within Bağcılar context (see Table 4.1).

a. Major International Frameworks, such as those by Yiftachel and Hedgcock (1993), Colantonio and Dixon (2011), Chan and Lee (2008), Vallance et al. (2011), and Eizenberg and Jabareen (2017), highlight elements including social equity, cohesion, participation, identity, safety, and opportunities for disadvantaged groups.

b. Turkish Context Applied Frameworks, including Yıldız et al. (2020) and Akcali and Cahantimur (2023), emphasize the built environment, accessibility, open space quality, and social facilities in fostering a sense of belonging and community sustainability. A critical review of these frameworks is summarized in Table 4.1.

Table 4.1: The Existing Main Frameworks and Key Dimensions in Social Sustainability, Prepared by Author.

Framework/Author	Key Dimensions/Indicators	Focus
Yiftachel and Hedgcock (1993)	Community, Urbanity, Equality	Social structure, inclusion
Colantonio and Dixon (2011)	Social cohesion, participation, safety, education, health, occupation, well-being, demographic change	Urban regeneration
Chan and Lee (2008)	Social infrastructure, job opportunities, accessibility, identity, urban form	Urban renewal, local identity
Berkeley Group and UK-GBC (2012)	Infrastructure, services, empowerment, safety, health, identity, participation	Housing/urban development
Vallance et al. (2011)	Development, Maintenance, Bridge (needs, behavior, continuity)	Societal processes
Eizenberg and Jabareen (2017)	Equity (recognition, redistribution, participation), safety, eco-prosumption, urban form	Integrated urban sustainability
Yıldız et al. (2020, TR)	Accessibility, resource conservation, built environment, social life, disadvantaged groups	Turkish cities/local adaptation
Akcali and Cahantimur (2023)	Accessibility, open space, social facilities, attachment, participation, safety, environmental equity	Istanbul/urban green spaces

4.2 DIMENSIONS AND INDICATORS OF SOCIAL SUSTAINABILITY

To translate social-sustainability theories into actionable tools that can be used for analysis, this research adopts a mixed-methods framework that integrates quantitative spatial metrics with qualitative insights into residents' lived experiences, as explained in previous chapters. Based on the eight frameworks surveyed in the last section 4.1, and reflecting Bağcılar's specific socio-spatial characteristics (high density, limited green provision, and cultural diversity), this research has thirteen core dimensions explained and understood in depth, with the use of enhancing the Bağcılar green public spaces. Each dimension is paired with dual quantitative and qualitative indicators to ensure a holistic evaluation.

Qualitative and quantitative methods must be combined to address social sustainability rather than just depending on the established statistical methods. Frameworks and ideas from applied research were used as models to determine the primary facets of social sustainability.

The Berkeley Group has created a methodology for assessing social sustainability within urban green public spaces. Thirteen themes are included in the framework, which is divided into three different aspects (see Figure 4.1). This concept evaluated social sustainability in six UK residential areas between 2011 and 2013 (Dixon and Woodcraft, 2013). Also, Colantonio and Dixon developed a score system to assess social sustainability in revitalization initiatives.

Figure 4.1: Social Sustainability Metrics **(**Berkeley Group and UK-GBC, 2012).

This layout has 10 dimensions. Every aspect of an urban restoration case is assessed using this framework, and the scale used for evaluation ranges from 1 to 5. To examine their urban renewal and social sustainability approaches: Rotterdam, Turin, Carolina, Leipzig, and Sant Adriá de Besós Colantonio and Dixon, 2011). As these dimensions contributed to enhancing the typical sustainability of green public spaces, the relationship between these dimensions will be studied and considered with other existing frameworks that have already been applied within the Turkish context in this research.

Figure 4.1 divides the Berkeley Group's proposal for social sustainability into three main zones. Colantonio and Dixon chose five European towns: Facilities and infrastructure, communal and intellectual life, and influence and voice. Dividing each category into distinct elements, such as transportation connections, community identity, and influence capacity, improves understanding of social sustainability.

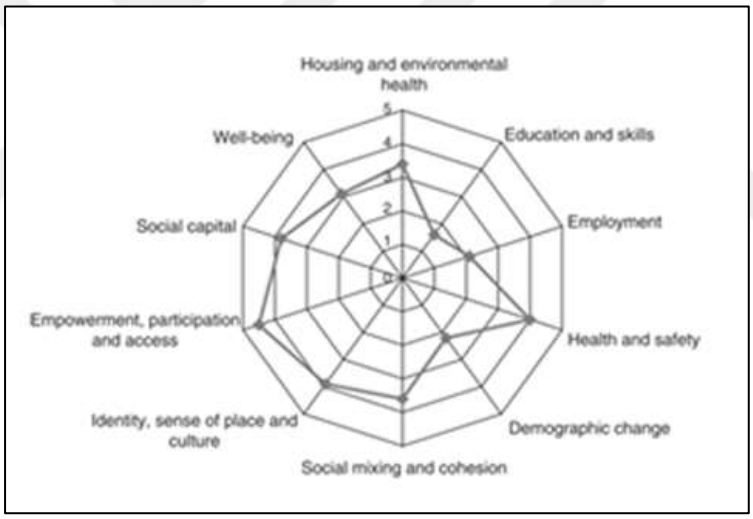


Figure 4.2: Urban Regeneration & Social Sustainability **(**Colantonio and Dixon, 2011).

A rating system developed by Colantonio and Dixon (2011) for assessing revitalization initiatives is shown in the diagram (Figure 4.2). The paper has a spider's web graphic that evaluates several factors, such as social capital, employment, credentials and talents, housing and environmental health, and more. On a scale of 1 to 5, each criterion is evaluated to show how well the project performs concerning social sustainability considerations. According to this chapter, social sustainability includes poverty, equality, human rights, social cohesion, security, accessibility, and a sense of belonging. A paradigm for evaluating social sustainability that unifies similar ideas from literature into a single dimension.

The Berkeley Group and UK-GBC (2012) framework is selected as one of the main concepts to be used in the research because it uniquely spans all the social-sustainability dimensions we need, including community infrastructure, empowerment (voice & influence), and social/cultural well-being, while offering clear, measurable indicators. It has already been applied successfully in the diverse housing developments in the UK and many research studies that share similar dimensions as the Berkeley Group and UK-GBC framework, which share similarities and make it directly applicable to the situation in Bağcılar (see Figure 4.3).

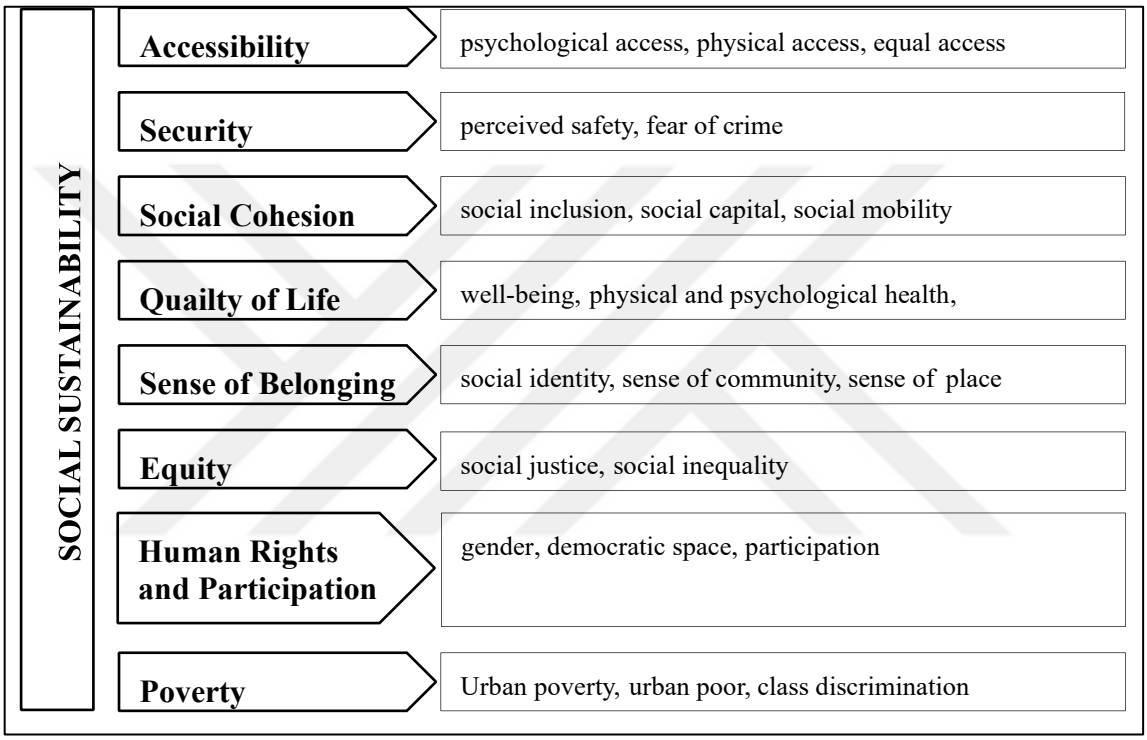


Figure 4.3: The Key Dimensions of Social Sustainability, Prepared by Author.

4.2.1 Security

The security aspect for enhancing the social sustainability of the green public green spaces is a crucial aspect; there must be security in every park surrounding residential areas. Neighborhoods designed following outline principles are safer for locals, which may help reduce crime. Among the contributing factors to safety vulnerabilities is people's incapacity to control open spaces in their environment. When public spaces are frequently classified as private or semi-private places, people are more likely to take action to protect them; in contrast, public areas are often seen as the responsibility of others. As a result, maintaining security in public areas is challenging (Corbett and Corbett, 1999). Several aspects of social

sustainability are integrally associated with security in urban settings. A person's social connection and participation in community activities are inversely correlated with their closeness to crime and discomfort. Security fosters mutual trust and a sense of community and belonging.

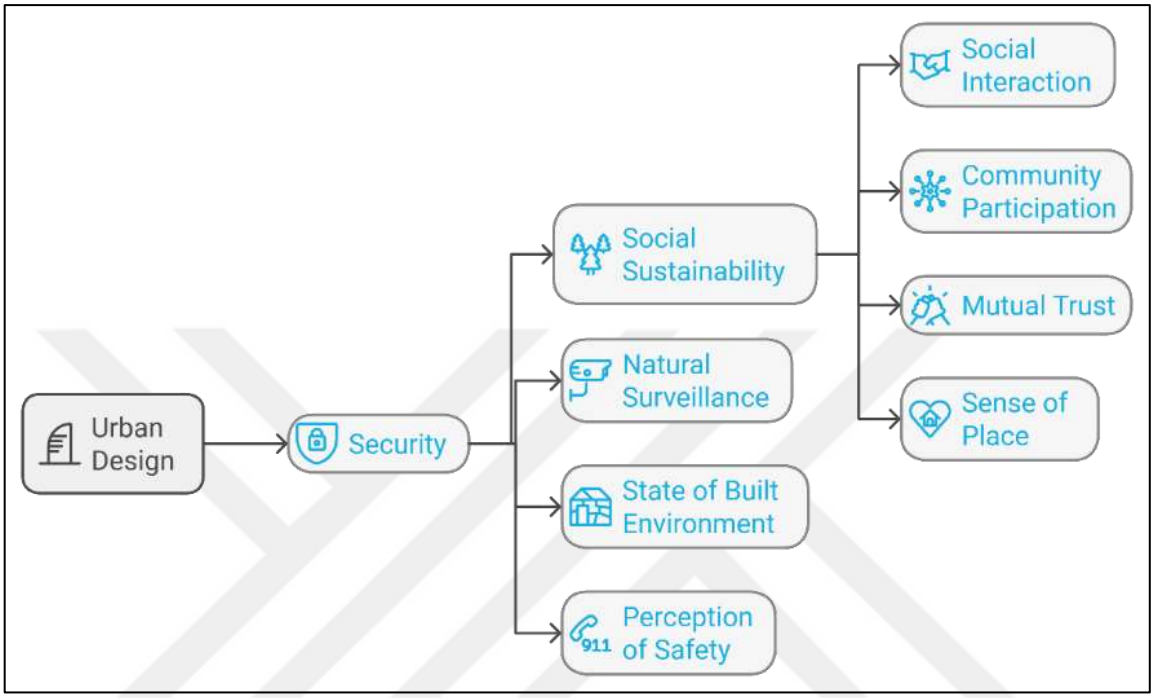


Figure 4.4: A Diagram of Security and Safety, Prepared by Author.

Protection of the constructed natural environment has a significant impact on security. Increased natural monitoring improves perceptions of comfort and safety in social interactions. According to Dempsey et al. (2011), the state of the built environment detrimentally affects people's psychological well-being (see Figure 4.4).

Ensuring the' objective safety and perceived security of green public spaces is foundational to social sustainability. Drawing on Crime Prevention Through Environmental Design (CPTED) principles (Hong et al., 2018; Berkeley Group and UK-GBC, 2012), parks should be designed and managed so that:

a. Sightlines: remain unobstructed by low-level planting or excessive furniture, allowing users to see across the space and feel monitored by formal staff and informal passers-by.

b. Active edges: shops, cafés, community centers, overlook the park and generate legitimate activity throughout the day, deterring misuse.

c. Lighting: Uniform and glare-free lighting illuminates the entrance, paths, and focal areas to extend safe use into evening hours.

d. Wayfinding signage: directs visitors to exits, facilities, and transit connections, reducing confusion and discouragement.

Implications for Bağcılar's Parks: park designs should integrate these CPTED elements, which means "Crime Prevention Through Environmental Design" from the outset; retrofit strategies must audit existing lighting, vegetation, and building edges; and management plans should include regular patrols or volunteer "park stewards."

4.2.2 Social Cohesion

The development of sustainable communities depends on social cohesion. A unified identity aims to improve everyone's well-being to prevent social exclusion and marginalization (OECD, 2016). The Organization for Economic Cooperation and Development examines social cohesion from three perspectives (see Figure 4.5). The perspectives on the global development study are social mobility, social inclusion, and social capital.

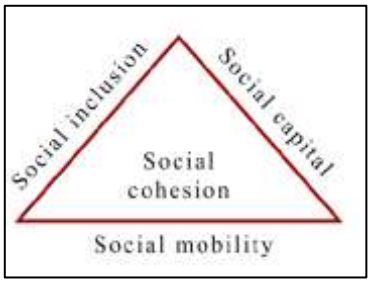


Figure 4.5: The Components of Social Cohesion. (OECD, 2016).

Social Exclusion: Social exclusion contains things such as opposition, poverty, and inequality. It looks at poverty's broader causes and impacts, even if connected to economic inequality and insecurity. Social exclusion, according to the British Government, is a word that involves the effects of several issues, including family dissolution, high crime rates, inadequate housing, low income, unemployment, a lack of skills, and poor health. Because of its flexibility, this definition may be expanded to include more exclusion characteristics.

Social exclusion can impact anyone, although some people are more vulnerable than others. Low income, family disagreements, placement in foster care, academic experiments, ethnical and socioeconomic status, staying in poor regions, stage, and incapacity are some variables that contribute to exclusion. Discrimination in the workplace puts older adults at a higher risk of hardship. Older people who cannot move about easily might find it hard to join social activities, which can lower their confidence and lead to feelings of loneliness and sadness.

The degree of social exclusion is thought to obstruct the completion of social sustainability. Disproportions of access to public services, work, or transportation are examples of functional social exclusion, which is the denial of people's social and physical rights and possibilities for participation, adopting social exclusion requirements to the social sustainability approaches. Combining disadvantaged groups into the political, social, and economic fields is a top priority for social sustainability initiatives.

Social Capital: Group membership and continuing interpersonal trust are related to social capital. The importance of social capital in connection with social sustainability is highlighted in several literature investigations. Social capital is the common expectations, duties, trust, and behavioral standards within a particular area or group. Communal understanding and societal peace are prompted by the social capital levels. (Colantonio and Dixon, 2011). Social capital is critical for community commitment because it advances self-confidence, cooperation, and cooperative decision-making within the communities. According to Bramley and Power, social sustainability is attained when people in society interact and work together. Social associations increase the issues of social exclusion, social capital, and harmony in society. These concepts highlight the significance of being implicated in society and having acceptable access to the social advantages (claim Bramley and Power, 2009).

Social mobility: The idea of the social mobility related to the capability of the individuals to change their social status; equal opportunities among individuals encourages social mobility; equal income distribution might be accomplished through the extension of the educational opportunities and the encouragement of the commercial endeavors; education is the chance to gain not only high-paying careers but also safer, better-organized, and more effective

employment opportunities; and as a result, social mobility might be improve, especially for the groups such as immigrants who struggle with common adaptation (OECD).

Strength of interpersonal bonds, trust, and collective identity fostered by shared spaces (Kaźmierczak and James, 2007; Yıldız et al., 2020).

a. Quantitative Indicator: Frequency of organized communal events within the green public spaces.
b. Qualitative Indicator: Interviews on cross-group interactions and perceived solidarity.

Regular festivals and exercise classes signal high social capital; ethnographic observation reveals whether diverse groups mingle or self-segregate within the same park.

4.2.3 Accessibility

Accessibility is a significant factor in achieving social sustainability. People decide to belong to areas that present family-friendly amenities and qualified opportunities, reducing the need for extended commutes to access cultural attractions and employment events (see Figure 4.6). Every location must maintain accessibility for all people at any age or with any physical difficulty. All people, regardless of their physical condition or age, need straightforward access to specific places daily, according to Chan and Lee (2008). Liu and Zhu define accessibility as the basic advantage of using any mobility system to move between areas. Accessibility depends on how potential locations link to each other through transportation networks, how well people can move (Liu and Zhu, 2004), and the quality of accessible locations, travel choices, and site connectivity.

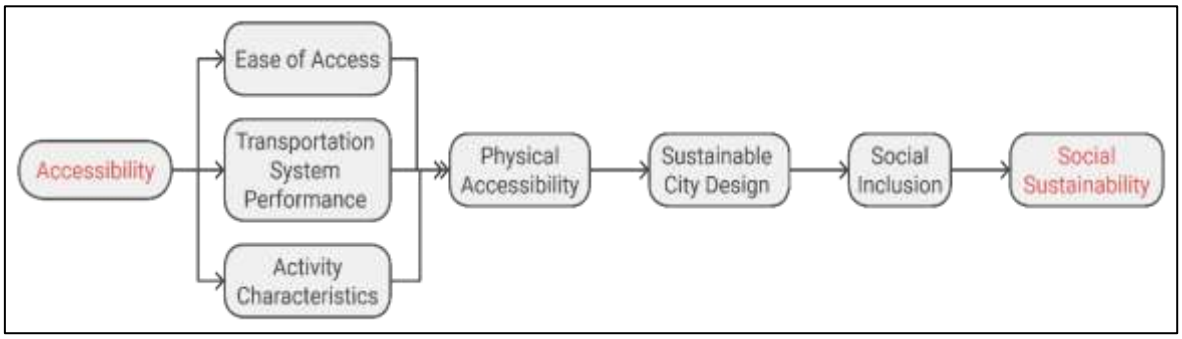


Figure 4.6: A Diagram of Accessibility, Prepared by Author.

The sustainable model of the urban areas takes into consideration the needs of people with disabilities, older people, children, and those in momentary states like injury, pregnancy, or exhaustion (Greco and Giacometti, 2013). Partridge defines physical accessibility as "identical access to all elements of life, including living and covering conditions, amenities and facilities, as well as the possibilities for involvement in cultural, social, and political frameworks and improvements." This is another essential component to consider." Social sustainability might be attained by avoiding social exclusion and enhancing accessibility (Partridge, 2005).

Definition: Ease of physical and cognitive access to green public spaces, encompassing distance, legibility, and barrier-free design (Chan and Lee, 2008; Vallance et al., 2011).

a. Quantitative Indicator: Mean walking time to nearest park (500 m buffer analysis in GIS).

b. Qualitative Indicator: Reported obstacles (signage, mobility constraints) from user-journey interviews.

Walkable catchments under 10 minutes are linked to higher usage (Tabassum and Sharmin, 2013). In Bağcılar's narrow alleys and steep slopes, physical barriers often impede easy access, an issue uncovered only by blending spatial buffers with user narratives.

4.2.4 Quality of Life

Despite existing as a distinctly subjective idea that cannot easily be defined, quality of life is an opportunity to prioritize the qualitative dimension of social sustainability for improving human welfare. Instead of promoting unsustainable consumption for the benefit of influential and entitled people, this idea needs to be focused on improving the lives of people with limited opportunities. (Partridge, 2005) Although equality is an important goal, it is inseparable from the quality of life. Bramley and colleagues identify well-being as a fundamental quality of social sustainability. The urban setting has a significant impact on well-being. (Bramley et al., 2009) They argued that a person's well-being is impacted by both direct and indirect aspects of social interaction, security, neighborhood environments, and accessibility services. Mental health is significantly affected when these circumstances have adverse effects. Listen and associates claim that its importance increases when well-

being is incorporated into the political agenda alongside sustainable development. Former President Nicolas Sarkozy of France requested Joseph Stiglitz and Amartya Sen to compose a report about developing new indicators for sustainability and prosperity in 2008. A novel effort to give members more control over their careers has started. Current improvements have modelled uncertainty on the economic expansion perspective as limited by the significant domestic effect signs. International organizations like the Organization for Economic Cooperation and Development have expressed interest in well-being and factors that affect sustainability and welfare.

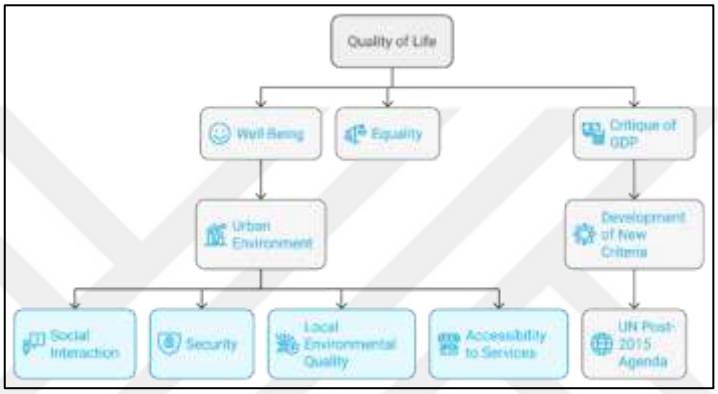


Figure 4.7: A Diagram of Quality of Life**,** Prepared by Author.

They created proposals to improve the measurement system for measuring well-being and sustainability. The question of whether our well-being might be sustained over a presented duration of time is more doubtful than ever. This issue has become even more problematic considering the 2008 economic crisis. In addition to the ongoing financial crisis, it is accurate to assert that an environmental emergency, exemplified by ecological alteration, and a social disaster are concurrently unfolding within societies and nations (see Figure 4.7).

The United Nations Post-2015 Agenda, which defines several stated objectives planned to achieve a higher sustainability by 2030, is one proposal for a more sustainable world. The main obstacle to achieving these goals is concentrating on a society where everyone has a respectable standard of living, wealth is divided more fairly, and future generations of citizens are considered (Lintsen et al., 2018).

4.2.5 Equity

Concepts such as equality and social justice are highly valued in social sustainability studies. In general, social equality may be identified as a distribution method that balances the community's affluent and at-risk situations, while its precise definition is debatable. This balance gives birth to the importance of social equality. Environmental sustainability may suffer from the imbalance between favorable and unfavorable circumstances (Burton, Williams, and Mike, 2005). The most often mentioned social sustainability criterion is equity. Social sustainability is hampered by social disparity because it causes division, conflict, and instability. The foundation of any approach addressing social sustainability must be equal opportunity.

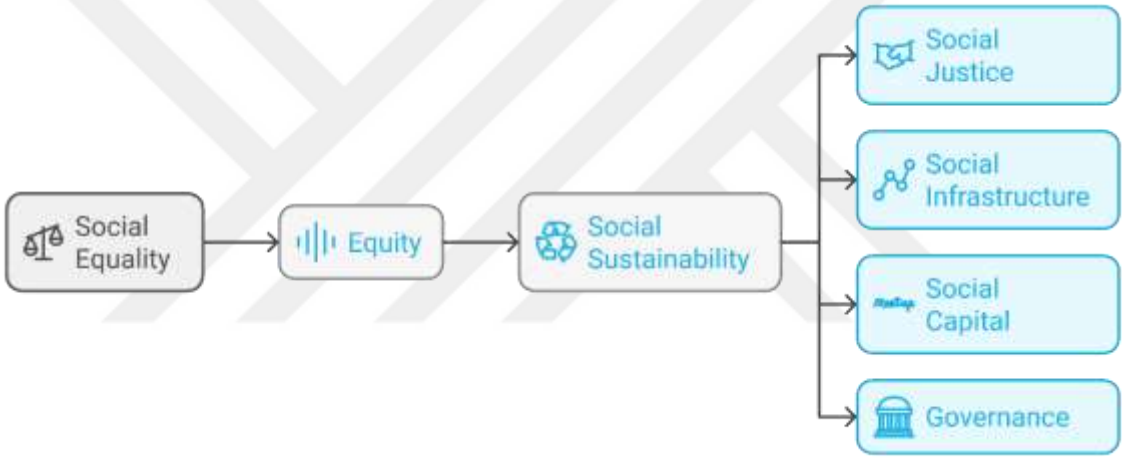


Figure 4.8: A diagram of Social Equality**,** Prepared by Author.

According to McManus, quoted in Partridge, social justice must be a component of sustainability since equality between and among generations prevents a wealthy minority from overspending. Sustainability highlights social justice, but it does not indicate that today's socioeconomic environments are acceptable. In circumstances when natural capital reserves have already been destroyed for specific populations, for example, social sustainability has been adopted through a retroactive social justice element (Partridge, 2005). Cuthill's social component of sustainability is built around two components. According to him, environmentally friendly issues are fundamentally societal issues. He continues by saying that the citizens have to make the economy work for them, rather than vice versa. The

reasonable allocation of sources is the focal aim of these economic strategies (see Figure 4.8).

Fair distribution of green public spaces benefits all demographic and socio-economic groups (Eizenberg and Jabareen, 2017; Yiftachel and Hedgcock, 1993).

a. Quantitative Indicator: The number of parks that exist within a particular area, neighborhood (GIS-derived).

b. Qualitative Indicator: Resident perceptions of fairness and inclusion, elicited via semi-structured interviews and surveys (Colantonio and Dixon, 2011).

Bağcılar exhibits significant income heterogeneity (Sönmez Özdemir, 2024). Measuring per-capita green space, testing if low-income areas fall below the mean, reveals structural inequities, while interviews illuminate whether residents feel genuinely served by existing parks.

4.2.6 Sense of Belonging

The feeling of belonging is knotted with ideas like community, geography, and social characteristics. Since enjoying one's communities is crucial to attaining sustainability, a sense of place is seen as a component of social sustainability. People's commitment to a form can be weakened by neglect or significant damage in that area (Nash and Christie, 2003). Talen argues that the feeling of the place, social communication, and belongingness contribute to the community. Since perception may affect emotions, the architectural circumstances directly affect how a location feels (Talen, 1999). A sense of community identity and belonging, acceptance for society with dissimilar nations and thoughts, cooperative and helpful neighborhood actions, opportunities for cultural and social engagement, safety, and the prospect to participate in social activities all support social sustainability (see Figure 4.9).

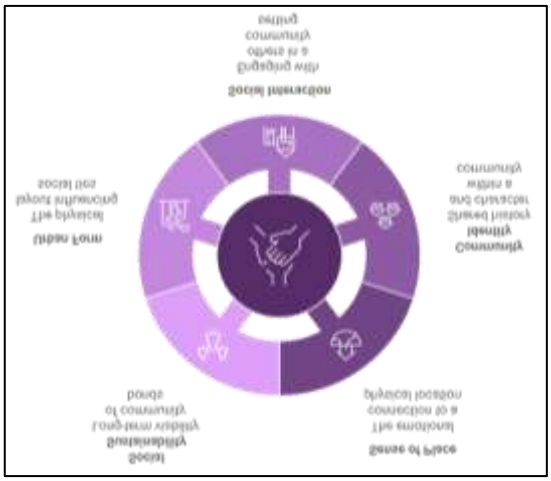


Figure 4.9: Elements of Sense of Belonging, Prepared by Author.

A region's history, oral culture, and community celebrations and experiences all significantly form its identity throughout time. Michael Young's research indicates that in New Earswick, a new town established by Joseph Rowntree in 1904, "length of residence, a location with an identity of itself, and residents who share a common history" are the three components that constitute a sense of community. Strong local links may help a community in several ways, such as providing a feeling of community and belonging, access to limited updates and knowledge, confidential supervision, important nationals, and advice on local jobs (Woodcraft et al., 2012). According to Forrest and Kearns, the neighborhood is an essential source of social identity since it functions as an extension of the house for social interactions, which is why it is necessary for identity development. Compared to the beginning of the 20th century, the relationship between people and places may be more critical now (Forrest and Kearns, 2001). Nevertheless, Dempsey and other researchers claim that an individual's urban characteristics play a significant role in verifying their feeling of identity and belonging. By interacting with the built environment, residents create a sense of community that sets their private community apart from others (Dempsey et al., 2011). Emotional attachment to place and affirmation of local identity of the area (Cowan and Hill, 2005; Vallance et al., 2011).

a. Quantitative Indicator: The type of people attending the parks (local vs. non-local).

b. Qualitative Indicator: through surveys and interviews to understand the current condition of these parks and ways for promoting their social sustainability through enhancing the sense of belonging when visiting these green public spaces.

Beyond mere proximity, residents must feel a sense of belonging to the area, which involves creating and analyzing the current symbolic meanings of the parks that exist in Bağcılar.

4.2.7 Poverty

The inability to meet fundamental life needs is what defines poverty. Poverty is an international problem. Only at the local level can one observe reflections of poverty. Poverty includes disproportions in the general quality of life, health, and education. (Açıkgöz and Yusufoğlu, 2012) Assert that discrimination, marginalization, and social exclusion are also associated with poverty. This method relates necessities like clothes, food, and shelter to complete destitution. Relative poverty, on the other hand, places more emphasis on minimal well-being standards than minimum living circumstances. Inequalities in wealth and consumption within a community are a sign of relative poverty. The poor, according to Açıkgöz and Yusufoğlu (2012), comprise people who live below the average level of consumption in society as well as those who are homeless. In almost every country in the world, unemployment is a significant problem. In developing and undeveloped countries, unemployment has a considerable influence on poverty levels (Açıkgöz and Yusufoğlu, 2012). One essential element of the structure of society is employment. People who lose their jobs express being less satisfied than those with similar income levels. In this case, it affects the individual's sense of self, but not their actual loss of money. The high unemployment rate is also thoroughly connected to high rates of alcoholism, divorce, and suicide. One of the most critical factors of social sustainability is occupation (see Figure 4.10).

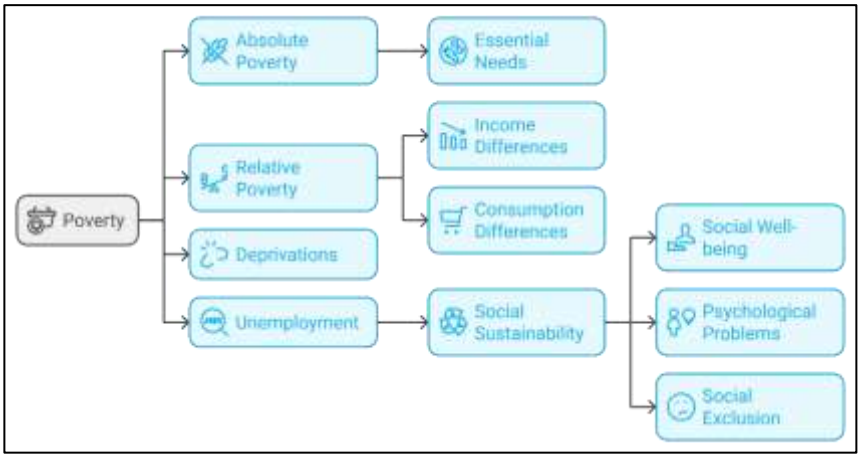


Figure 4.10: Poverty and Employment, Prepared by Author.

It provides jobs, social engagement, and interaction, which promote people's social well-being. According to Stiglitz (2002) and Chan and Lee (2008), as the employment rate increases, poverty, social marginalization, and mental health problems decrease. Since employment provides most of the necessary money, it is essential for social sustainability. Achieving social sustainability and personal well-being simultaneously requires participation, social interactions at work, and the right to social security. Employment provides people with security by meeting a variety of requirements.

Urban green spaces can serve as anti-crisis infrastructures, directly mitigating poverty's effects on health, social inclusion, and food security (Gibson et al., 2019). Key strategies include:

a. Free or subsidized programming: exercise classes and areas, cultural workshops.

b. Urban agriculture plots: small-scale community gardens within parks where residents can cultivate food, learn skills, and form social ties.

c. Localized mini-parks in the densest, lowest-income blocks to ensure a "nature dose" within walking distance of every household that can access these parks.

Implications for Bağcılar's Renewal Initiatives: Future planning must allocate at least a certain number of green public spaces to community gardening; programming budgets should earmark inclusion grants; and transport link pilots (e.g., weekend community shuttles) can extend larger-park access to the most resource-constrained neighborhoods.

4.2.8 Human Rights and Participation

Social needs are often defined by principles such as ethics, equality, and human rights. While urban writing focuses more on the physical environment than the social needs, policy literature highlights equality, participation, human rights, and social services within the larger framework of sustainable societies (Smith, 2010). The human rights of city inhabitants are a crucial aspect of city life. There is a knotted relationship between the sustainability of societies and the development of local democracy. A strong republic must have public engagement and knowledge (György Enyedi, 2004). It is possible to interact in both formal and casual ways. Formal involvement includes the authorities' activities, including public meetings of government agencies or municipal referendums (György Enyedi, 2004). On the

other hand, the public's informal engagement is voluntary and acts as a supplementary procedure. Laws must be followed when it comes to informal public engagement. Informal involvement may impact communities even when they do not have the power to make decisions (György Enyedi, 2004).

The integration of many social groupings is the essential component of participation. Social groups that are particularly disregarded could require assistance in communicating their issues. Accordingly, citizen involvement is crucial for public services and city management (György Enyedi, 2004). To maintain social sustainability, society must defend itself. It is possible to view efforts to uplift the local population as morally righteous, democratic, and socially sustainable. However, a key element of involvement is the integration of various social groups, displacing existing communities, and the negative health repercussions. Particularly marginalized social groups could need help expressing their problems.

Citizen commitment is necessary for effective municipal processing and establishing the public foundation (György Enyedi, 2004). Society must put in place protective processes to ensure its sustainability. Local population empowerment proposals can be seen as ethically just and democratic, which promotes social sustainability. However, health issues, the loss of affordable housing, migration within existing communities, and disruptions to social networks all have a detrimental influence on the situation. Social networking, strategic location, and a dedication to moral principles and human rights are all necessary for social sustainability. Different gender-related requirements have an impact on social networks. Gandelsonas explores the gendered aspects of social sustainability by looking at women's personal needs, social networking concepts, and governance concerns. Women are empowered by social capital, which also fosters social sustainability in local communities. Developing, preserving, and replicating social capital are necessary environments for successful leadership. The concept of social sustainability must have gendered aspects to attain greater gender equality (see Figure 4.11).

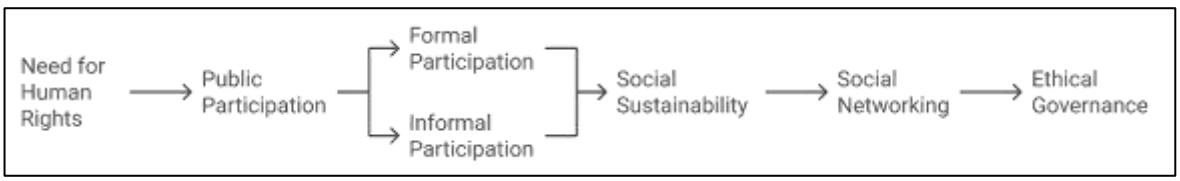


Figure 4.11: Human Rights in Social Sustainability, Prepared by Author.

It is easier to reconsider social structures and the relationships between men and women when the emphasis is shifted from women to the definition of gender equality. The social structure needs to be changed to guarantee that women have the same status as men in every area of life. Societal sustainability depends on women's empowerment and societal benefits. According to Gandelsonas, social capital improves community sustainability and empowers women.

A rights-based approach to public space design guarantees that every resident can claim, access, and shape their green spaces as civic commons (Rabare et al., 2009; Colantonio and Dixon, 2011). This entails:

a. Universal accessibility: ramps, tactile guides, seating at regular intervals, and signage in multiple local languages, ensuring compliance with disability and language-access standards.

b. Gender and age-sensitive design: well-lit rest areas for women and seniors, safe play equipment for children, and seating areas that foster intergenerational interaction.

c. Mandated co-design processes: at least three participatory workshops per project, with proactive outreach to women's groups, elders, migrants, and youth networks, so plans reflect diverse needs.

d. Transparent governance: public publication of design briefs, budgets, meeting minutes, and maintenance schedules in accessible formats, building trust through accountability.

Implications for Bağcılar's Governance Models: Institutionalize a "Park Council" in each neighborhood with reserved seats for vulnerable groups; integrate human-rights audits into every park's design review; and launch a multilingual "Plan & Build" website featuring real-time updates and feedback channels.

4.2.9 Summary of Dimensions and Indicators

As shown in Table 4.2, the eight interrelated dimensions—equity, Accessibility, Participation, Social Cohesion, Sense of Belonging, Safety, Support for Disadvantaged Groups, and Quality of Life are identified from leading international and Turkish

frameworks. For each dimension, this research paired a quantitative indicator, such as GIS tools, with a qualitative indicator (e.g., resident perceptions of fairness, focus-group narratives of exclusion, observational mapping of inter-group interactions).

Table 4.2: Social Sustainability Dimensions and Quantitative and Qualitative Indicators, Prepared by Author.

Dimension	Quantitative Indicators	Qualitative Indicators
1. Equity	Green-space area per capita by neighborhood; Gini of park distribution	Resident narratives on fairness; inclusion/exclusion experiences
2. Accessibility	Mean walking distance to nearest park; of barrier-free entrances	Reported obstacles (cost, signage, culture)
3. Participation	of community discussions, volunteer-hours logged	Satisfaction with consultation process; sense of agency
4. Social Cohesion	Frequency of organized events; social-network size	Observed inter-group interactions; trust surveys
5. Sense of Belonging	Festival attendance rates; local-art installations count	Interviews on pride, identity, “home” feeling
6. Safety	Reported incidents per 1,000 users: CPTED audit scores	Fear-of-crime scales; comfort in evening hours
7. Support for Disadvantaged	of accessible amenities (ramps, play equipment); subsidized program slots	Focus-groups with elders/disabled/migrants
8. Quality of Life	Self-reported health & well-being indices; average park-visit durations	Restorative experience mapping; stress-reduction narratives

This mixed-methods design ensures that Bağcılar’s social sustainability is evaluated by objective spatial metrics and its diverse community’s lived experiences, needs, and aspirations. The next chapter will empirically measure and analyses these indicators, providing a robust foundation for targeted recommendations for Bağcılar’s green public spaces.

4.3 SOCIAL SUSTAINABILITY IN URBAN GREEN PUBLIC SPACES

Urban green areas improve social sustainability and are a necessary part of cities. The city benefits from these areas on an ecological and social level. Urban parks, city forests, green bands, and public and private open spaces in urban environments characterized by vegetation are examples of urban green spaces as described by scientists, economists, social scientists, and planners (Haq, 2011). Because the features of urban green spaces are influenced by economic, political, and social changes, these changes may be seen in urban green spaces. This goal is achieved in part through urban green areas. In addition to addressing social difficulties, urban green areas help teach environmental ideas (Cranz and Boland, 2004). According to Timisi (2012), urban green spaces are public locations that provide social value rather than financial gains. They belong to a kind of public area that is very accessible.

Madanipour, a theorist and professor of urban design who studies the societal and psychological significance of open areas and the progressions that define them, emphasizes that public spaces are places where social communication can occur and that they encourage a sense of community by inspiring social collaboration (Madanipour, 2003). To promote social sustainability, urban green areas' social values are essential (Öztürk Kurtaslan, 2017).

Diversity and commitment are necessary for social sustainability. Urban green places are adaptable areas that promote public association and multiplicity. Every social setting where people gather helps to create its structure and sense of community. Urban green spaces are welcoming spaces that collect people from many cultural backgrounds. Different cultures in different areas can express who they are on their own. Urban green spaces are intended to improve social sustainability elements, such as promoting social cohesiveness and well-being in an ecologically sustainable community.

The following section will discuss the influence of social and economic activities on urban green spaces and their use as open spaces in the US and Europe. The effects of such modifications on Turkish cities' green areas will be the main topic of the examination for this research to be later applied in the context of Bağcılar’s green public spaces. Finally, urban green areas' social sustainability features will be assessed, and the theory of place-making will also be discussed and integrated with explained theories and dimensions of social sustainability for Bağcılar’s green public spaces.

5. PLACE-MAKING APPROACH IN URBAN GREEN PUBLIC SPACES

Building on the social-sustainability framework of the previous chapter, this chapter demonstrates how place-making theory, a people-centered design and activation process, can turn Bağcılar's green spaces into inclusive, well-used community hubs and enhance its social sustainability.

5.1 PLACE MAKING AND MODELS FOR SUSTAINABLE PLACE

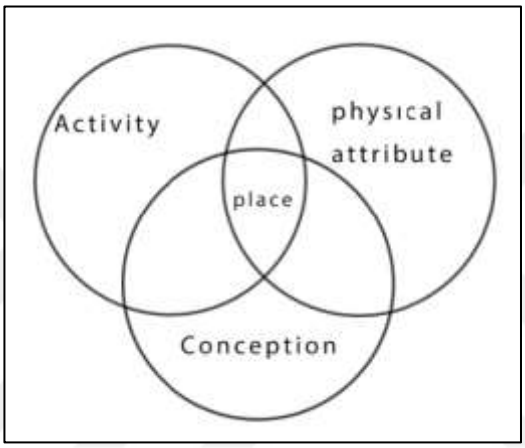


Figure 5.1:. The Psychology of Place, Architectural Press (Canter, D., 1977)

First, Relph (1976) defines a place's physical location, operation, and significance as three elements. His relational viewpoint emphasizes that a place is an institution that takes in its surroundings' cultural, social, and economic features rather than an unchangeable property frame. He points out that the attitudes of the citizens and the physical characteristics of a specific region contribute to establishing a sense of place.

Secondly, Canter (1997), a psychologist, distinguished three main elements: action, conceptualization, and materiality. To create a place. His 1977 model explains how action, cognition, and physical attributes interact to make the place. Figure 5.1 has interesting similarities to the weak sustainability framework, which holds that sustainability occurs at the intersection or point of integration of the environment, society, and economy. Parallel to this, the crucial part of a well-designed public area is mixing the place's physical characteristics and activities with its remarkable descriptions, which are influenced by memory and experiences.

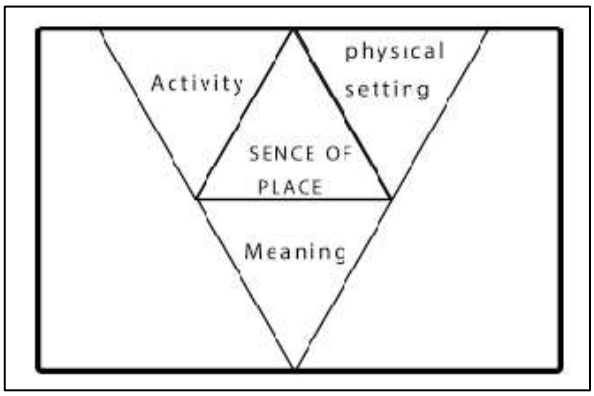


Figure 5.2:. Participation in the Design of Urban Space (Punter, J., 1991)

Finally, in Cresswell (2009) and his discussions with Punter (1991), he developed a more comprehensive model of location and explained its materiality, meaning, and practice (see Figure 5.2). According to Punter's model figure, a "Sensibility of place" is achieved by the mutually beneficial combination of "Activity," "Physiological setting," and "Meaning. "The 'Sensibility of place' is established where these elements converge, which are shown as interlocking triangles.

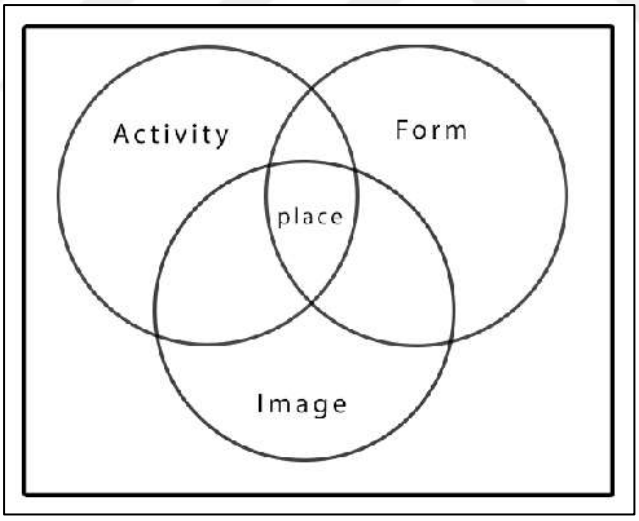


Figure 5.3: Making A City: Urbanity, Vitality, and Urban Design (Montgomery, J., 1998)

Montgomery's graphic figure depicts the three main components of "Sense of Place": "Activity," "Form," and "Image", as well as how urban design initiatives may enhance these components (see Figure 5.3).. The "Place" suggests that the cooperation of these components creates a powerful feeling of place since it is situated where these three intersect. The three components of place that were identified by (Relph and Agnew, 1987) are the locality, which is the context in which social bonds are formed: the location, which is the geographic area

that includes the circumstances for social interactions, and the sense of place, which is the local framework of the sentiments. He underlined that all three factors must be considered for the location to be completely indicated.

In other words, considerable places adopt a feeling of community among their residents because they result from social interactions, shaped by their physical location, and connected to their social, economic, and cultural surroundings. This view of locations is more in line with the robust sustainability paradigm, which holds that the environment, society, and economy should all be considered equally crucial without being nested in their interactions. However, this point of view might be articulated as geographical location, which encompasses locality and a sense of place, as a place cannot exist apart from its physical position.

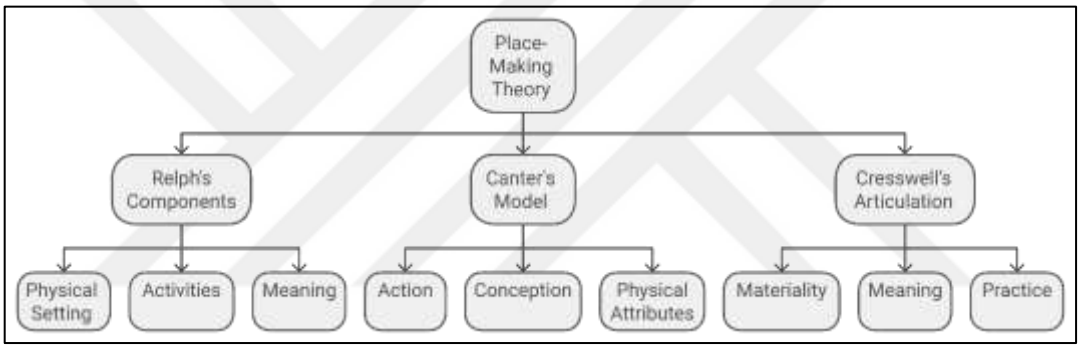


Figure 5.4: Place-Making Theory Diagram, Prepared by Author.

Place-making theories, including those of Relph, Canter, and Montgomery, highlight the complex interrelationships between a place's physical characteristics, activities, and the meaning people attach to it. These elements in well-planned spaces highlight uniqueness, promote conversation, and foster a friendly environment (see Figure 5.4). All three elements must cooperate for urban environments to be significant and long-lasting. This is consistent with the idea of strong sustainability. This kind of integration lays the foundation for public spaces to be used for purposes other than providing essentials by highlighting their importance in building communities and improving people's quality of life. as a model of how sustainability principles may influence city design and usage, this transition from place-making ideas to public spaces building bridges historical and modern urban concerns.

5.2 URBAN GREEN PUBLIC SPACES CLASSIFICATIONS

Urban green public spaces are publicly accessible outdoor environments dominated by vegetation, trees, lawns, gardens, and designed to support leisure, recreation, and social exchange (Zhou and Rana, 2012).

Table 5.1: Classification by Scale & Function, Prepared by Author.

Category	**Key Uses**
Pocket Park	Quick respite, seating, micro-gardens, phone booths
Local Park	Playground, dog run, casual stroll, small gatherings
District Park	Sports courts/fields, picnic areas, community festivals
Regional Park	Botanical gardens, woodlands, large-scale cultural events

Access & Management Models:

a. Fully Public: Open at all hours, no fees (e.g., municipal parks).

b. Semi-Public: Restricted hours or membership needed (e.g., school grounds after 5 pm).

c. Private Green: Only residents or members (e.g., condo courtyards).

Activity Typology:

a. Active: Sport facilities, outdoor gyms, skate parks.

b. Passive: Lawns, ornamental gardens, reading nooks.

c. Hybrid: Mixed uses, café terraces, art installations, pop-up markets.

This classification clarifies green public spaces' scale, uses, and access modalities, providing the groundwork for place-making strategies tailored to each park type. Recognizing these distinctions ensures that design and programming align with community needs, whether a quick urban respite or a large cultural gathering (see Table 5.1).

5.3 PLACE-MAKING THEORY AND ITS ROLE IN URBAN SUSTAINABILITY

As shown in Table 5.2, Place-making theory emphasizes three interwoven elements:

a. Physical Form: Layout, materials, plantings, and amenities

b. Human Activity: Formal programs, spontaneous gatherings, play

c. Meaning: Cultural narratives, personal memories, community identity

Table 5.2: Key Theorists of Place-Making & Contributions to Social Sustainability, Prepared by Author.

Theorist	Core Insight
Kevin Lynch, (1960)	Mental maps via paths, edges, districts, nodes, landmarks (Lynch, 1960)
Edward Relph, (1976)	*Sense of place* = physical setting + lived experience + emotional meaning (Relph, 1976)
David Canter, (1977)	Action–Concept–Material triad (Canter, 1977)
Jan Gehl, (1987)	Encouraging *optional* and *social* uses beyond mere transit (Gehl, 1987)
John Punter, (1991)	Activity-Setting-Conceived Place model; participatory design (Punter, 1991)
Jane Jacobs, (1961)	"Eyes on the street" and mixed-use edges foster safety and vitality (Jacobs, 1961)
Joye & van den Berg, (2011)	Restorative attributes—richness, refuge, mystery—aid mental health (Joye & van den Berg, 2011)
Newman & Kenworthy, (1999)	Compact, walkable neighborhoods reduce car-dependence, supporting active public-space use (1999)

5.4 IMPORTANCE OF SOCIAL DIMENSIONS IN ENHANCING URBAN GREEN PUBLIC SPACES

The social circumstances of a community are reflected in urban green areas. Communities benefit from the urban green areas in both social and ecological aspects. In addition to reducing social problems and inequalities within the communities, these spaces offer residents a pleasant environment. Urban green spaces are therefore strategically vital for social sustainability (Zhou and Rana, 2012). Urban green spaces adopt an environment that supports the communal mentality, prosperity, social cohesion, and belonging, all of which are critical for social sustainability. Social transformation challenges have emerged by encouraging constructive tensions between culture and environment. As a result, these areas promote a new way of life by providing the community with amusement and opportunities

for new relationships (Uludağ, 1998). Determining the role of urban green spaces in social sustainability requires understanding the concept of social sustainability. The preceding chapter described the components necessary for assessing social sustainability and discussed social sustainability approaches in the literature.

This section will emphasize the encouragement of urban green spaces for social sustainability by investigating their relationship to the characteristics of social sustainability, poverty, human rights, participation, quality of life, feeling of belonging, accessibility, security, and social cohesion.

5.4.1 Accessibility in Urban Green Public Spaces

Accessibility should enable underprivileged individuals to access and enjoy enclosed and open spaces. Accessibility is a critical component of social sustainability (Greco and Giacometti, 2013). Because they provide city people a chance to disconnect from the metropolis and reconnect with nature, either actively or passively, urban green spaces are vital. These spaces should be easy to access, especially for elderly and young people, as their efficacy depends on their use (Tabassum and Sharmin, 2013). To develop accessibility, Natural England, a UK environmental protection group, established a guideline that identifies green spaces as places that are open and unconstrained. They set size and distance criteria for accessible green spaces: two hectares must be within 300 meters of homes, twenty hectares must be within two kilometers, one hundred hectares must be within five kilometers, and five hundred hectares must be beyond ten kilometers. Additionally, there should be one hectare of local nature reserve for every 1,000 residents (Pengelly Consulting, 2010).

Both physical and psychological access influence accessibility. Long commutes, expensive service sectors, and a lack of pedestrian-friendly paths all make access difficult; however, other problems include staffing shortages, bad service, and cultural disproportions, all of which contribute (Gibson et al., 2019). As shown in Figure 5.6, accessibility may be improved by creating comprehensive green spaces that benefit all users and adaptive interaction to an extent (Pengelly Consulting, 2010).

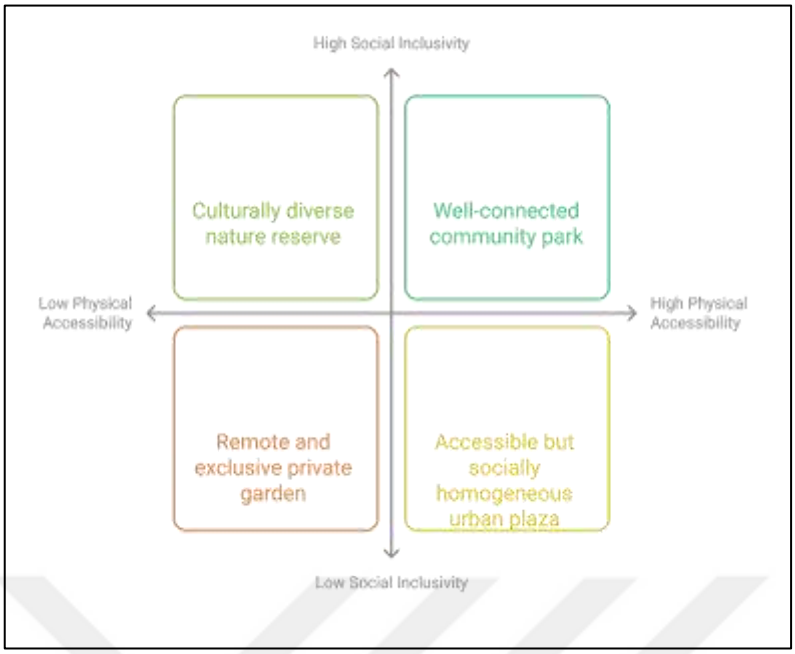


Figure 5.5: Enhancing Urban Green Space Accessibility, Prepared by Author.

5.4.2 Equity in Urban Green Public Spaces

All members of society, specifically the poor and vulnerable, must have adequate access to the urban green areas (McKenzie, 2004). Guests may benefit both physically and mentally from urban green spaces. This confirms that the necessary attributes of the urban green spaces are preserved, giving all the visitors adequate access to the opportunities they find inside these places. This means that different social groups may use urban and green space differently from one another. The utilization of urban green areas may be influenced by the wealth discrepancies among individuals. The geographical spread and quality of urban green areas are the leading causes of the discrepancies. As a result, the challenges are not just physical but also related to social dynamics, personalities, and structural problems. Different socioeconomic classes use urban green spaces more frequently because of the psychological differences in access to these sites. Depending on user harmony, urban green spaces are used in different ways. Therefore, fair park distribution, culturally sensitive park design, improved park accessibility for underprivileged communities, the use of local knowledge in park design, and public participation may all help to reduce the disparities in park usage.

When analyzing the equality of the urban green areas, it is necessary to look at the user demographics and the accessibility. The concept of spatial equality is used while talking

about the park's accessibility to assess the opportunities and user distances. On the other hand, social equity highlights the needs of the groups, including the low-income people, the older people, children, and ethnic subgroups, by emphasizing the distribution of dependable public services to all urban inhabitants (Tan, Tang, and Wu, 2019). Additionally, it asserts that social sustainability is based on the fair allocation and use of resources (Baffoe and Mutisya, 2015). Urban green areas could consequently give the different communities equitable access to the amenities (see Figure 5.7).

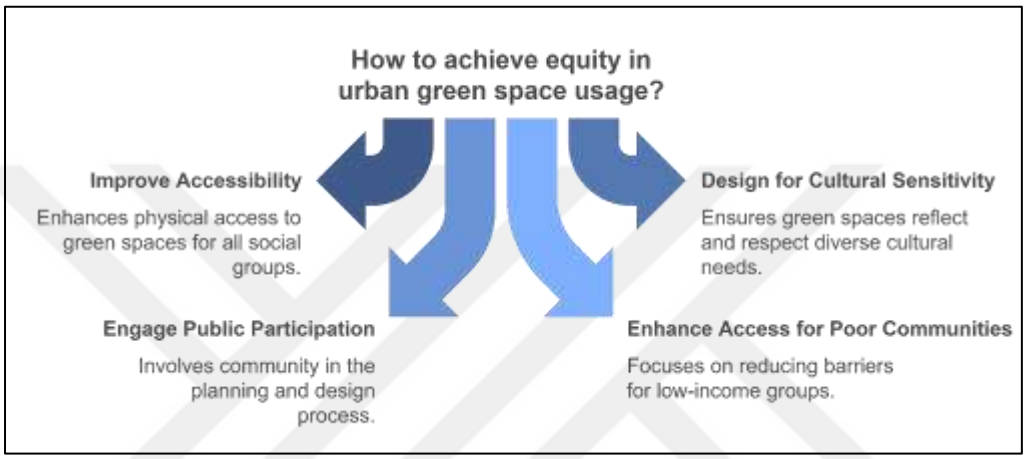


Figure 5.6: Achieving Equity in Urban Green Space Usage, Prepared by Author.

5.4.3 Security in Urban Green Public Spaces

The use of urban green areas is significantly impacted by security and safety. A socially viable community is founded on robust social connections. Individuals in the communities essentially depend on a sense of security. Since ancient times, individuals have gathered in urban green places for various purposes. According to (Ekinci and Sağlam, 2016), urban green spaces serve as public open areas where people may socialize. People's participation and interactions with others are related to their level of safety. It is both a sensation and a perception. Age, gender, the social context, time, situational conditions, geography, socioeconomic level, and cultural characteristics can all impact how safe a person feels. Furthermore, security observation is investigated using views such as risk, warning, danger, and fear. Urban green areas are perceived as perilous and insecure locations within the city, characterized by high crime rates that elicit avoidance behavior. Though frequently connected to a fear of crime, the sense of security should be considered from a broader viewpoint. Doğrusoy and Zengel examined three categories in their study on urban parks'

perceived safety: demographic, perceptual, and environmental aspects. Recognizing security is prompted by several significant elements, including lighting, protection, landscape design, and ambient proposal.

Public Spaces (PPS), a non-profit organization composed of designers and urban planners, has examined the function of the environmental strategy in determining safety in urban parks. They contend that observed safety is directly induced by the park's design. Urban parks characterized by inadequate illumination, ambiguous layouts, physical and auditory isolation, poor visibility, difficulties in locating assistance, concealed sections, insufficient upkeep, vandalism, and several unwanted individuals are seen as hazardous by users. Illumination is a factor intrinsically linked to felt security. Lighting must be interconnected to illuminate possible concealment areas and provided in conjunction with directional signage. This explains the park's configuration and improves the nocturnal utilization. Additionally, a key factor of the sense of safety is construction. A well-considered arrangement makes the park easier for visitors to examine and navigate.

Users experience relaxation and protection through accessible access, definite guidance, and a noticeable outline of the limits. Isolation is another aspect that affects felt safety. Individuals have a sense of security in environments where they are visible and audible to others. A heightened sense of safety arises from a reduced number of secluded areas where criminal activity is neither visible nor audible. Similarly, visibility is a necessary factor in improving the observation of security. The impression of security is enhanced when individuals can observe their surroundings and be observed by others. Subsequently, the park's barriers, collected with the design features such as vegetation, barriers, and accommodation constructions, are critical for the visible permeability and identified security. Aside from such architectural aspects, park attendants and public telephones enhance the perception of safety by facilitating access to assistance during crises. According to Türkseven Doğrusoy and Zengel, noticeable aspects that include familiarity, crowded locations, celestial navigation, and user compensation impact perceiving security.

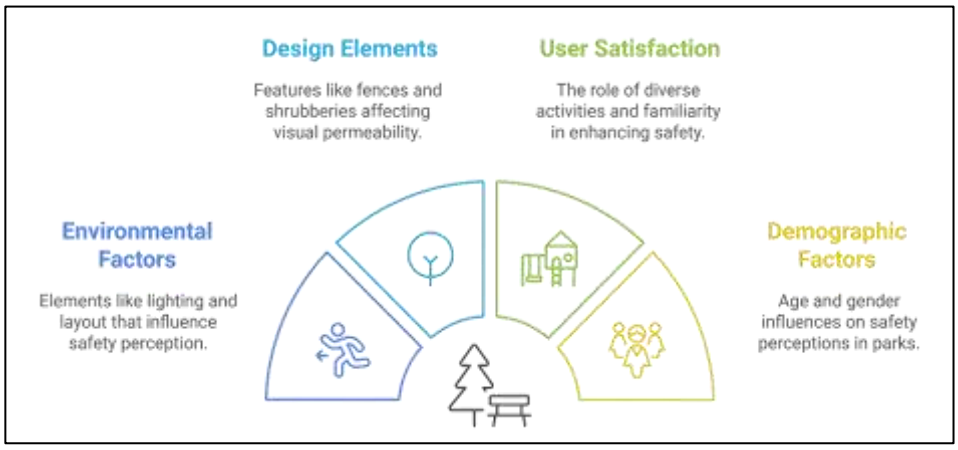


Figure 5.7: Perceived Safety in Urban Green Spaces, Prepared by Author.

User contentment is a characteristic that enhances perceived safety. The perception of security is also increased by expanding the variety of usage and developing new activities that consumers could find interesting (PPS, 2008). Another element that affects felt safety is familiarity. In addition to being a visual phenomenon, familiarity is also a modification of the experience based on the user's preceding interactions. According to the Tranquiller, people feel safer in familiar surroundings, specifically in public areas (Traunmueller, 2016). There is a negative correlation between navigational anxiety and perceived safety. Lawton and Kallai state that "in a safe environment, users are less likely to experience anxiety about wayfinding" (Lawton and Kallai, 2002).

The demographic parameters most associated with felt safety are age and gender. Women predominantly express more concerns regarding their personal security in public areas than men. Women's apprehensions over their utilization of public spaces are likely to influence their usage. Women avoid accessing secluded regions in parks due to safety concerns and express apprehension about visiting parks after dark (PPS, 2008). The elderly are another demographic that experiences insecurity in urban parks, alongside women.

The susceptibility of older individuals to criminal activity instills a phobia of visiting urban parks. Consequently, older individuals will experience greater insecurity than younger individuals (Deniz, 2016). Other variable quantities, such as marital status, wealth, and level of education, can also impact how safe people feel in the parks (see Figure 5.8).

5.4.4 Social Cohesion in Urban Green Public Spaces

Social cohesiveness is founded on interpersonal interactions (Jennings and Bamkole, 2019). Urban green areas are among the locations that promote interpersonal connections. Urban green spaces foster social interaction and collaboration among neighbors. Social connection in open areas provides the possibility for relaxed engagement with others. So, urban green space principles adoptive community improvement and social cohesion, social contacts provide beneficial interactions, alternatives to separation, and promote strengthening bonds with neighbors and strangers. At the same time, urban green areas ensure that conflicts continue to remain reasonable and that existing interactions are maintained. According to (Kaźmierczak and James, 2007), social exclusions decrease as social links strengthen.

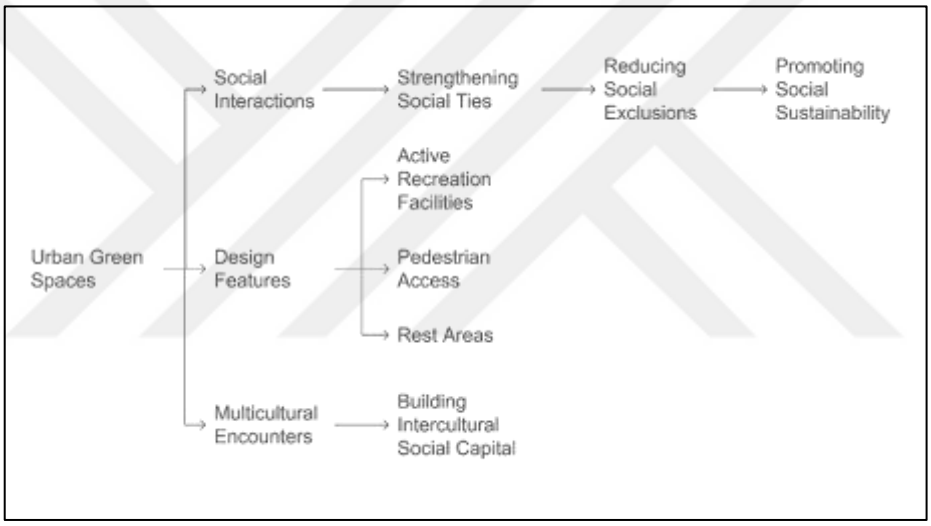


Figure 5.8: Social Cohesion in Urban Green Spaces, Prepared by Author.

The improvement of social connections throughout the communities is a necessary qualification for social sustainability. Urban green areas provide equitable access to all individuals inside a metropolis. These circumstances foster cross-cultural interaction and the capability for significant social interaction. Furthermore, disenfranchised societal minorities, such as immigrants and jobless youth, might convene in urban green areas to cultivate international social capital. These days, international gardens are utilized to connect foreigners with urban green in Germany and the USA. The multicultural framework in the context of globalization and migration should be considered when building green spaces in cities (Seeland, Dübendorfer, and Hansmann, 2009).

Possibilities and Urban Green Space Design Elements. The configuration of options and attributes in urban green areas might affect social cohesiveness. For instance, social interactions inside urban green spaces are improved by amenities for active leisure, easy pedestrian access, shaded rest places, and playgrounds with practical uses (Jennings and Bamkole, 2019). Social cohesion within urban green places is additionally supported by social principles. The way civilization is encountered throughout time, creating connections between unrelated groups within different cultures, is referred to as social capital. Social arrangements are significantly promoted in public areas, specifically in urban green public spaces. These public venues create additional possibilities for social interactions and reduce social gaps within the minority group. Social incorporation is enhanced by the interactions that are adopted by the well-designed urban green areas. Urban parks are a good example of the city's vitality (see Figure 5.9).

These locations are ideal because they balance social seclusion and intensity. One important factor influencing the city's destiny and the longevity of the society is the will of its residents to remain in it (Ijla, 2012).

5.4.5 Poverty in Urban Green Public Spaces

Poverty levels and the growth of urban green areas are significantly correlated. There were noticeable health disparities between the rich and the poor in the 19th century. The problems of crowded cities, housing shortages, and urban residents' working circumstances are lessened by urban green areas. Laws pertaining to wastewater and clean water have attempted to ameliorate underdeveloped regions. Urban green spaces were developed throughout industrialization to provide a hygienic environment for individuals from various socioeconomic backgrounds (Cohen et al., 2012). In disadvantaged areas where many people struggle to access open spaces, parks are beneficial (Gibson, Loukaitou-Sideris, and Mukhija, 2019).

According to an investigation in Southern California, low-income neighborhoods and ethnic components suffer because of differences in the park’s distribution, quality, and safety (Rigolon, Browning, and Jennings, 2018).

Individuals with limited means encounter considerable challenges in financing the high charges at recreational facilities situated far from their neighborhoods. Individuals with little

money cannot pay the expensive fees charged by entertainment facilities located far from their areas. Reaching such sites poses significant difficulties for children and teenagers. Thus, those with low income have a heightened need for urban green spaces and public parks compared to their wealthier counterparts (Rigolon, Browning, and Jennings, 2018). Public spaces are frequented mainly by those from low-income backgrounds. Municipal parks provide a safe playing area for children.

Densely crowded, constricted communities in urban living pose a serious challenge. Public green areas, including municipal parks, aim to improve the harmful urban environment and the quality of urban life (Bakar, Malek, and Mansor, 2016).

5.4.6 Sense of Belonging in Urban Green Public Spaces

Identification and a feeling of the place is dependent on the urban green spaces that showcase the variety of regional customs and culture. To establish and maintain a distinct sense of place, accommodations for the natural essential services that wetlands, barriers, trees, and forests provide are important. The ability of these venues to reflect society's identity and culture is linked to their efficacy, claim Cowan and Hill (2005). Urban green areas foster community and social interaction, which lessens feelings of isolation. These spaces adopt social capital and improve personal well-being by developing social connections (Nath, Zhe Han, and Lechner, 2018). A feeling of community is associated with membership, influence, integration, and shared emotional links. A sensation of belonging to a group is what defines membership. Influence is created by the importance one group member places on other group members.

This has to do with integration. When the collective's resources can meet the needs of its members, integration takes place. As time passes, the neighborhood's cooperative historical realization creates thoughtful connections. Furthermore, urban green areas foster social communication and incorporation (Gomez et al., 2015). These are the best settings for promoting social well-being and improving neighborly relationships, ensuring social sustainability.

5.4.7 Human Rights and Participation in Urban Green

Urban green spaces allow underprivileged sections of society to participate in social activities and promote social connection amongst vulnerable groups (Rabe, Okech, & Onyango, 2009). These are excellent localities for recreational activities. Nevertheless, societal observations of gender influence leisure activities. It is believed that women's leisure activities are an extension of childcare and housework. Women frequently spend their leisure time with their families or children, whilst males spend much of their time with their friends participating in sports and hiking. Among the limitations that limit the alternatives for socializing, especially for migrant women, are domestic tasks, language barriers, and inadequate transportation (Ho et al., 2005). Gender roles in society lead to inequality in the public and private spheres, such as the family and the job. Gender is associated with several social places. Women find it difficult to participate in streets, pubs, and parks since these are seen as male-dominated spaces. However, women are the ones who use urban green spaces the most. Urban green spaces may serve as private places for women to foster closeness and care for their children, even if they are identified as public areas. These enclosed spaces are usually used by women for activities that take place outside the house. During working hours, women with little children are the ones who go to the park.

They like these enclosures because they provide their kids access to clean air and recreational opportunities. Women find psychological relaxation in returning to urban natural spaces to relieve the stress of parenting and household duties (Timisi, 2012). "The development of an environment of democracy which enables citizens to express themselves effectively is essential for a socially sustainable society."

5.5 COMPARISON OF SUSTAINABILITY THEORY AND PLACE THEORY

Productive public spaces, which are recognized for their sense of place, depend on the number of variable quantities in balance rather than just the local structural design. Equally significant are the events occurring within that area and their subsequent contribution to a collection of memories that imbue the place with significance. Valid comparisons may be drawn utilizing the theoretical sustainability paradigm (see Figure 5.10).

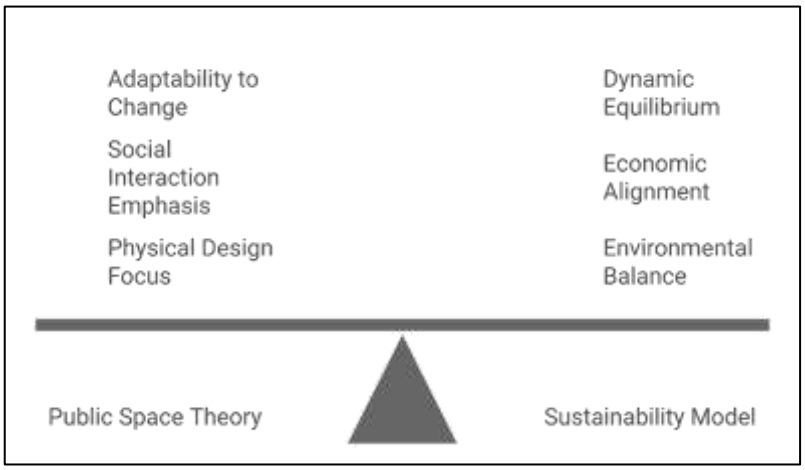


Figure 5.9: Balancing Public Space and Sustainability, Prepared by Author.

A balance must be achieved among the three domains of surroundings, society, and economics. Sustainability cannot be attained just by environmental preservation, even if such preservation were feasible. The economy must be compatible with the planet's ability to provide resources to achieve sustainability. In addition, society needs to change to meet this need for balance. This stability is permanently modified. Sustainability is a goal for humanity to live within the bounds of the resources that the planet's ecosystems provide, which will vary in tandem with natural changes. It is not a static state.

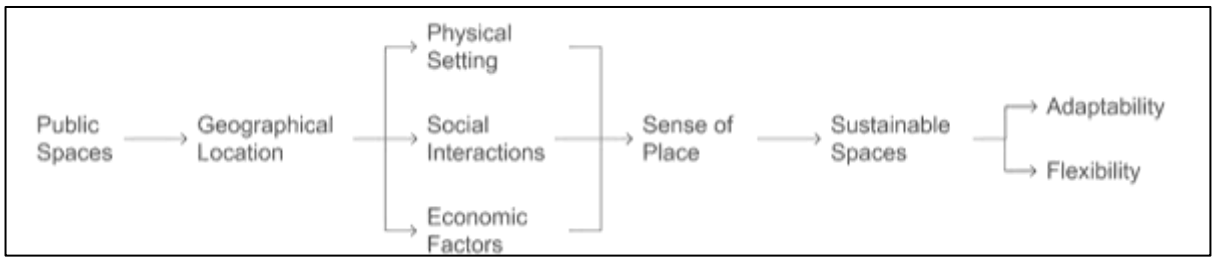


Figure 5.10: Cycle of Sustainable Public Spaces, Prepared by Author.

Public spaces are areas where individual events, along with their physical surroundings, shape their observations of the place, and a sense of place develops from the relationship between these three considerations. The elements of location are independent. Consequently, the degree of physical engagement escalates, along with the attachment to the area. To put it another way, sustainable spaces satisfy human requirements while also balancing with their physical and social surroundings so they may enhance people's social lives. Considering that their factors essentially disagree, sustainable environments are adaptive and flexible. (see Figure 5.11).

Sustainable public spaces are dynamic classifications where environmental, social, and economic establishments meet with the physical characteristics of the place, including its location, activities, and the meanings that its users have assigned to it. This dynamic ensures that sustainable development is an ongoing process that adapts to changes in the environment, social principles, and economic capacity rather than being an objective. When people interact with the public areas crossing their shapes, experiencing their functions, and adopting them into their cultural and social descriptions, they become a symbol of sustainability's fundamental values. By adapting to changing the imagination accessibility, rules, alterations, technological developments, and neighborhood objectives, they make urban life possible. Designers understand that no one component can achieve sustainability on its own.

This study highlights the value of green public areas in promoting human well-being, cultural characteristics, and comprehensive social collaboration by investigating aspects that include accessibility, equity, social cohesion, and quality of life. It utilizes well-established sustainability and place-making theories. These statements give a thorough analysis of the Bağcılar district by providing an actual framework for evaluating the effectiveness of the proposed framework and its place in the larger conversation on urban sustainability.

6. THE CASE OF BAĞCILAR

6.1 OBJECTIVE AND CONCEPTUAL FOUNDATION

This chapter applies the theory of social sustainability. Particularly the dimensions of accessibility, equity, social cohesion, and quality of life, as derived from literature (Colantonio and Dixon, 2011; Berkeley Group and UK-GBC, 2012) and other theories such as the Place-Making theory in a real-world context.

Bağcılar District, Istanbul. The primary objective is to examine how urban green public spaces influence social sustainability outcomes within this dense, socioeconomically diverse metropolitan area. Bağcılar region is selected as a prototypical district facing high urban density, infrastructure strain, and spatial inequality. By positioning the case study within a conceptually defined framework, this research bridges theory and practice to reveal spatial and social patterns. The chapter integrates spatial data analysis, GIS mapping, survey research, and detailed evaluations of selected parks with different scales to assess how Bağcılar's urban form meets social sustainability benchmarks, and a set of strategies and recommendations will be presented after conducting and applying the methodological approaches as defined in this research.

The research addresses the subject from a socio-spatial planning perspective, rooted in urban design and sustainability science. It aligns with place-based planning theories and the place-making approach, arguing that equitable access to urban green public spaces is a foundational pillar of social sustainability.

The justification for the case selection is based on:

a. Bağcılar has notably scarce green space for its residents, among Istanbul’s most underserved districts in terms of park area.

b. The district’s rapid urbanization, largely informal urbanization, has produced one of the city’s highest population densities, exacerbating challenges such as unequal access to services and social infrastructure (Sönmez Özdemir, 2024).

c. Fragmented street patterns added to unevenly distributed public territories, undermining pedestrian connectivity and communal gathering places (Sönmez Özdemir, 2024).

Thus, this study investigates how spatial variables such as distribution, accessibility, and quality of green public areas interact with social indicators such as sense of belonging, participation, safety, and well-being in the district. The following section identifies the research methodological evaluation criteria.

Research Methodological Evaluation Criteria: Critical to restate how the evaluation criteria (accessibility, safety, participation) were operationalized from theory, as shown in Table 6.1.

Table 6.1: Evaluation Criteria in Bağcılar Context, Prepared by Author.

Dimension	**Evaluation Criteria in Bağcılar Context**
Accessibility	Distance from residence, transportation method, ease of entry
Social Cohesion	Degree of participation in social activities, perceived community connection
Sense of Belonging	Identity with place, personal attachment, frequency of visits
Safety	Perception of safety in parks (day/night), reported obstacles
Quality of Life	Impact of green space on well-being, relaxation, interaction opportunities
Equity	Green space distribution among low-income neighborhoods

These indicators were derived from the literature and adapted to the local morphology using spatial analysis (GIS, DepthmapX) and resident surveys. The case study of Bağcılar provides a critical aspect to examine how theoretical constructs of social sustainability manifest in the Bağcılar district. By integrating the spatial analytics tools and discussing lived experience data, this research provides evidence-based insights for policy and planning interventions specific to under-resourced urban districts.

6.2 INTRODUCTION TO BAĞCILAR DISTRICT

With the goal of examining the connection between urban green public areas and social sustainability, this chapter provides a thorough case study of Bağcılar, a heavily populated neighborhood in Istanbul. Thus, the choice of Bağcılar district was due to its high rate of urbanization, diverse socio-economic profiles, and the deficiency of green spaces in the studied region, as a consideration of this issue may provide significant insights into understanding the impact of green spaces on social sustainability. One of Istanbul's most

populated districts, it has seen massive growth during the 1980s because of a migration wave from the Bağcılar region, located on the European side of Istanbul (Sönmez Özdemir, 2024) (see Figure 6.1).

Figure 6.1: Location of Bağcılar District, Edited (Google, 2024).

It is situated between the districts of Küçükçekmece, which is located to the west, Bahçelievler, placed to the south, Güngören to the southeast, Esenler to the northeast, and Başakşehir positioned to the northwest (see Figure 6.2).

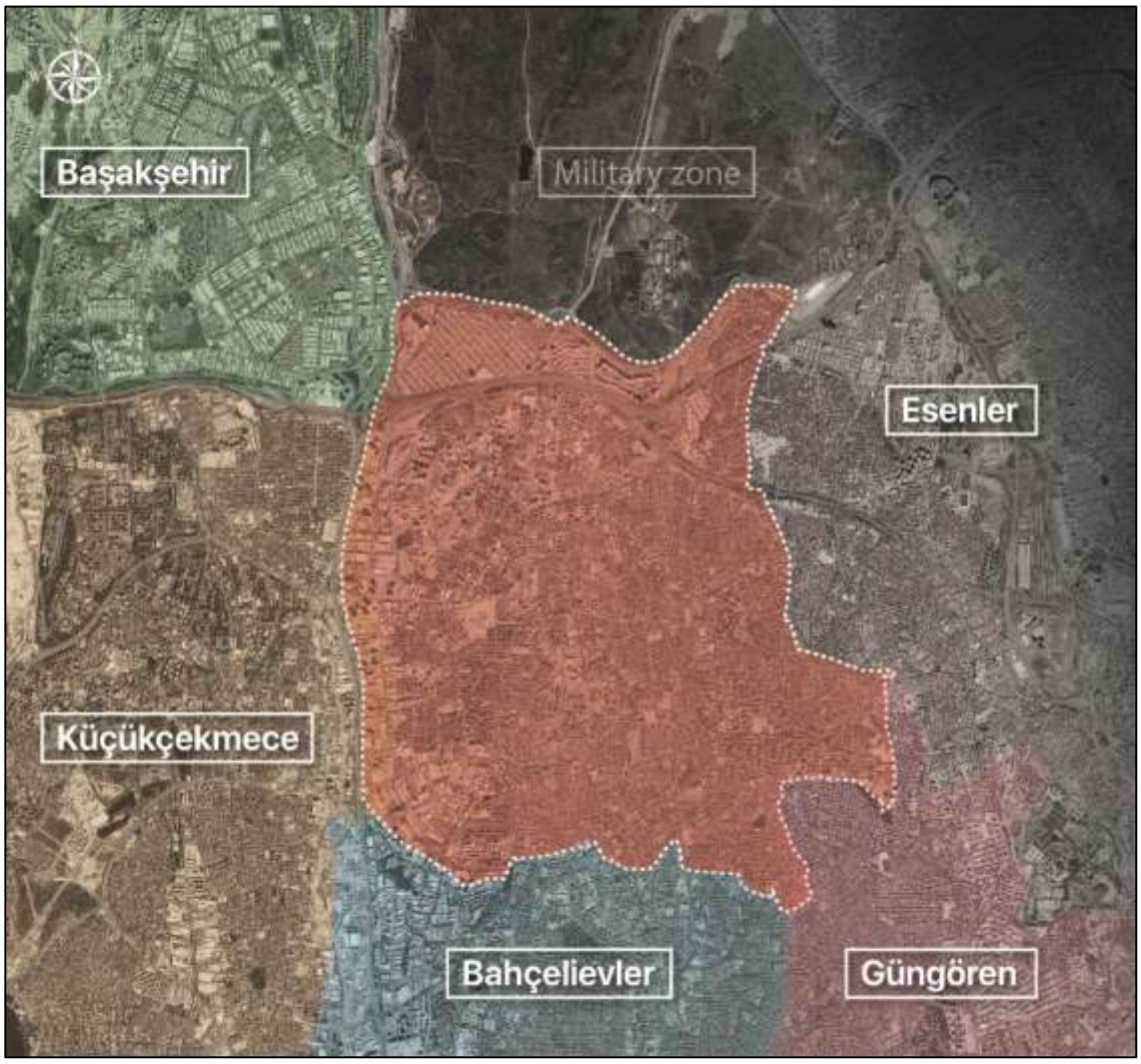


Figure 6.2: Cross Districts of Bağcilar, Prepared by Author.

Bağcılar is an area of about 23 km^2, characterized by a highly urbanized landscape with dense residential, commercial, and industrial developments, primarily consisting of multi-story buildings, many of which were constructed during the rapid urbanization period of the late 20th century (Sönmez Özdemir, 2024).

The district lacks green spaces. Most of its open areas are occupied by small parks, playgrounds, and larger public squares. However, these urban green public areas are unevenly distributed, making it more difficult for locals to access them.

The overwhelming presence of constructed areas suggests that the district has a very dense urban fabric. Residents in some communities have limited access to parks and green spaces, since most of the parks and green areas are not well distributed throughout the district

(Sönmez Özdemir, 2024). The main structure for metropolitan connectedness is the grid-like pattern of major roads and highways. The difficulties of Bağcılar's urbanization, including the lack of open spaces and large central green spaces that may act as gathering places for social interaction and recreation, are reflected in the built environment's density.

Green urban public spaces may be more convenient if located near essential transit routes, but they are limited and may not meet the population’s recreational or environmental needs. Bağcilar has a hot and humid summer and a warm and wet winter, which is characteristic of the Marmara region. Due to the district's high human population density and limited vegetation, temperatures are higher than in the surrounding areas, leading to urban heat island effects.

The air pollution in the district is attributed to transport-related industrial zones. In this context, it is possible to see that the structure of the Bağcılar district corresponds to the rapid, often spontaneous, and unplanned development of the area. Despite this, there is a progressive development of public transportation and services in the district; however, issues like noise pollution, traffic congestion, and the unavailability of proper recreation facilities are present.

6.3 HISTORICAL BACKGROUND OF BAĞCILAR DISTRICT

Rapid urbanization in the district started in the 196s and 1970s, when people from rural areas of Anatolia migrated to Istanbul in search of better opportunities. It was typical across Turkey that people moved to urban areas for work with the rise of industrialization, which caused the metropolitan areas to grow rapidly (Sönmez Özdemir, 2024). Due to the government's failure to plan for such migration, the region’s growth of informal residential areas without a proper plan for development in Bağcılar (Yiftachel and Hedgcock, 1993).

Due to the failure to control migration and in alignment with the high urbanization, Bağcılar has experienced several socioeconomic and spatial problems. This also led to the Informal settlements expanding without adequate infrastructure or services. Significantly, these included: the population density, lack of basic facilities such as schools and health facilities, and increasing pollution (Sönmez Özdemir, 2024). These challenges are deepened by the fact that diverse ethnic and socio-economic populations reside in the district (Gibson et al., 2019). Bağcılar went from a rural area to an urbanized one throughout the years, from a

small rural community to a congested metropolitan area (see Figure 6.3). The region's economy has also diversified as more people are now employed by companies in the retail, manufacturing, and services sectors. Socioeconomic inequalities persist even after economic growth; therefore, a large population of society exists in poverty and may be unable to afford proper housing and other basic amenities (Chan and Lee, 2008).

Figure 6.3: Bağcılar District Formation Process, Edited (Google, 2024).

The urban problems that Bağcılar faces have been addressed in recent years. The goals of urban regeneration initiatives have been to increase green space, improve infrastructure, and improve the standard of living of inhabitants in general. However, these initiatives often face challenges in the form of local resistance, funding problems, and the challenge of retrofitting an area that has already been densely developed (Colantonio and Dixon, 2011). The socio-economic development of Bağcılar is discussed to discuss the experiences of rapid urban growth and related urban issues. Such knowledge is essential for identifying key approaches to improve the social sustainability of the district, utilizing green public spaces.

6.4 BAĞCILAR DISTRICT SPATIAL AND GIS-BASED ANALYSIS

The purpose of this study is to assess the physical distribution, accessibility, and spatial integration of green public spaces in Bağcılar using GIS and space syntax tools. This chapter has four parts, each with a type of analysis, such as using the synthesized framework as dimensions of social sustainability to be applied, as discussed in the methodological basis of this research for Bağcılar urban green public spaces. In the following section, the land use, distribution of green public spaces, and transportation system analysis are conducted.

6.4.1 Land Use Analysis of Bağcılar District

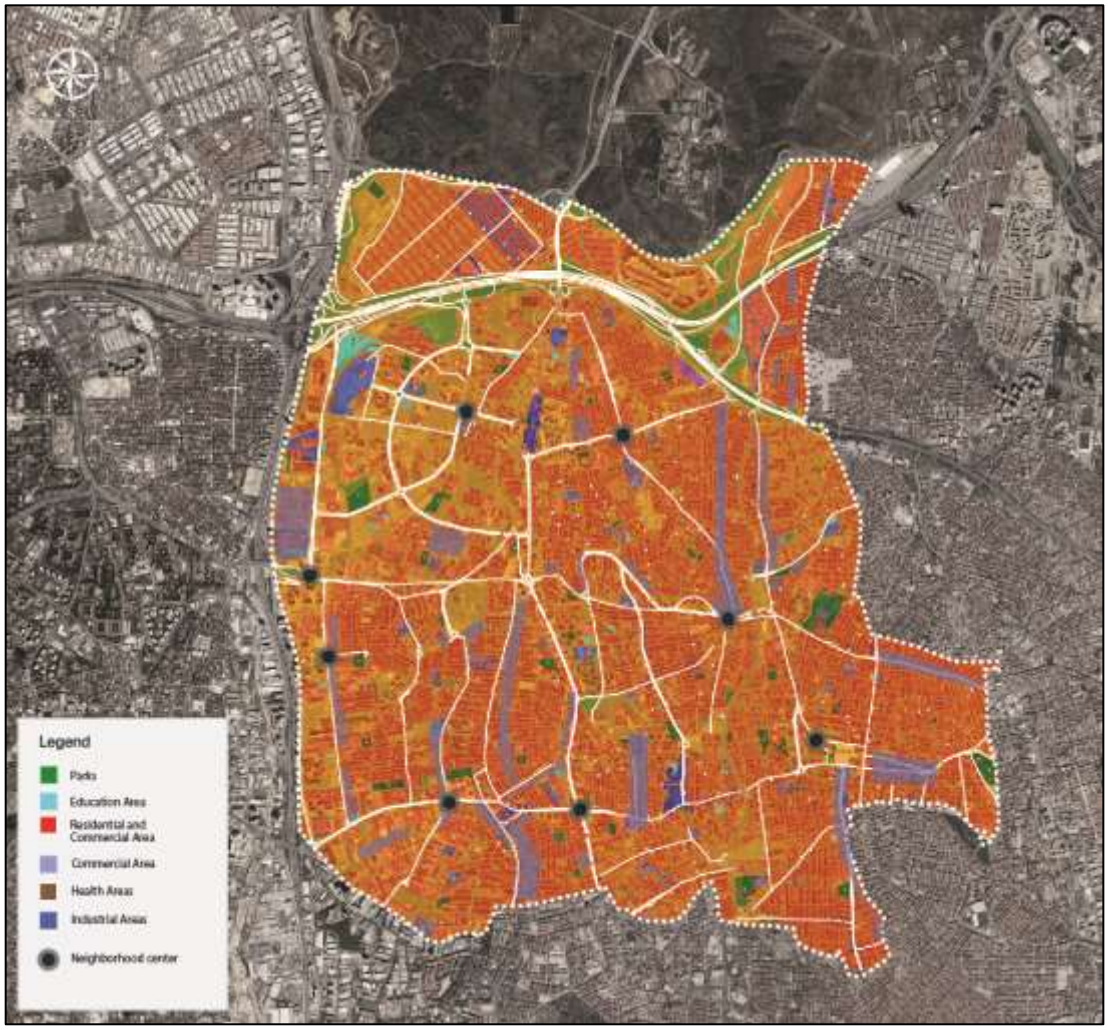


Figure 6.4: Land Use of Bağcılar, Prepared by Author.

Land Use of Bağcılar District, as represented in Figure 6.4, showcases key urban elements' diverse zoning and spatial distribution. Includes commercial spaces as well as industrial

areas, green spaces, public spaces, and presentation areas. Retail, business, and office functions are part of the commercial zone, therefore representing an essential component of the district's economic performance. Industrial areas provide manufacturing and warehousing as a centre of activities that are necessary for the local economy, but they tend to cause pollution and urban heat islands.

Importantly, Bağcılar's green spaces, such as parks, gardens, and recreational areas, are considered essential places where the community can unite and socialize. Therefore, Bağcılar lacks enough green spaces to adequately serve its significant community population, so residents have fewer chances to enjoy leisure time and build social connections.

It is crucial to emphasize that Bağcılar's public spaces are essential hubs for social and cultural interactions that foster a sense of community. The district's problems with overcrowding and socioeconomic inequality hampered equality of access to these areas. Plazas and cultural sites enhance the district's identity, but they are insufficient to meet the broader demands of its expanding population. The following section discusses the distribution of spaces in Bağcılar.

6.4.2 Urban Green Public Spaces Distribution in Bağcılar District

The green spaces distribution map of Bağcılar District, as shown in Figure 6.5, highlights the green urban public spaces in all neighborhoods of Bağcilar. Greenery represents parks and open spaces, but their distribution across the neighborhoods is uneven, showing that some areas lack entirely green areas. In some dense areas, small parks exist near schools and transportation, leaving significant portions of the district underserved in terms of access to recreational and ecological resources.

Even though these parks are considered limited in size and somehow scattered, it makes it difficult for residents to use them effectively for social interactions and recreation. Additionally, since these green spaces restrict their ability to create a unified system that could help connect with the areas surrounding them and promote biodiversity, urban cooling, and better air quality. The gap in underserved areas might be closed by enlarging and making the most of unused spaces to build more parks or community gardens.

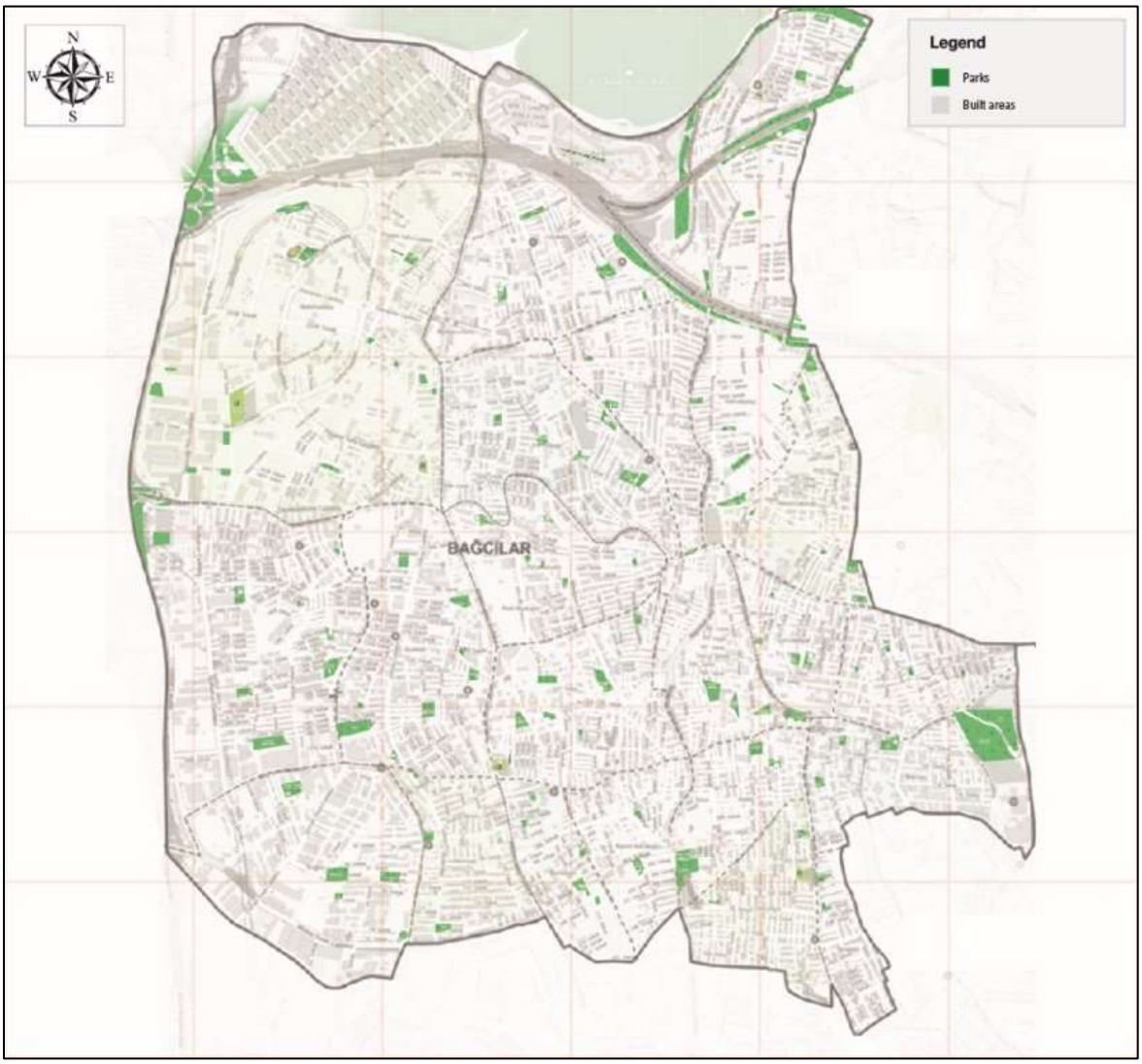


Figure 6.5: Green Spaces Distribution, Prepared by Author.

Because of its location, the district has excellent connections with other districts. With metro systems such as M7, M3, M9, and other metro lines. The M1B metro line gives residents access to Istanbul's city center and is a primary transport station. And A Tram System that connects with other parts of Istanbul, with the start point station of this tram located in Bağcılar meydan, while linking to the E5 and TEM road systems throughout the city (see Figure 6.6)

6.4.3 Connectivity and Accessibility Analysis

6.4.3.1 Metro line analysis

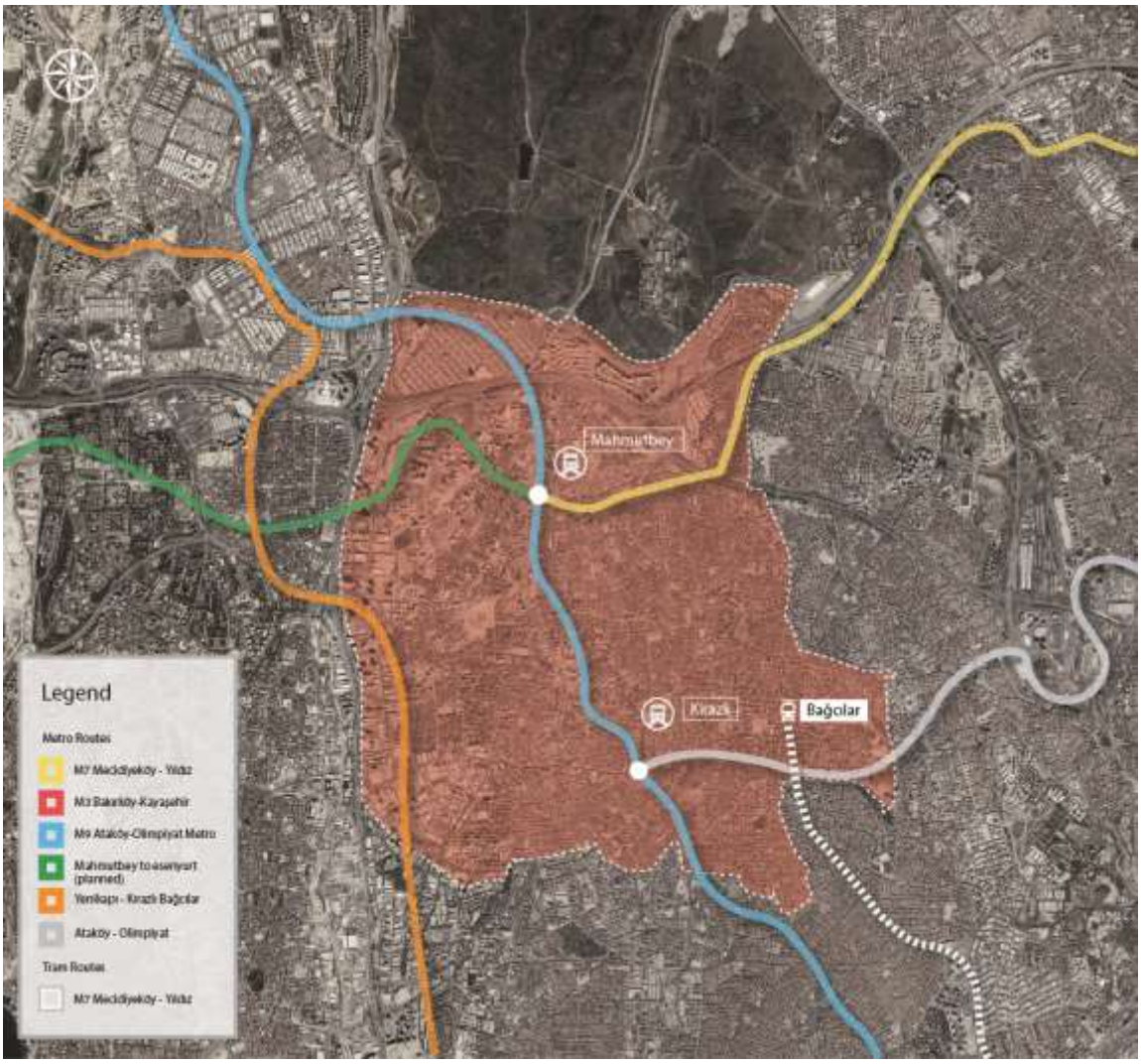


Figure 6.6: Metro Lines of Bağcılar, Prepared by Author.

The following section, where Space-syntax analysis was carried out in DepthmapX, reveals the underlying spatial structure of Bağcılar's street network. Four complementary measures were computed (see Table 6.2):

a. Integration quantifies how easily a street segment can be reached from all other segments, highlighting potential movement attractors in Bağcılar.

b. Connectivity tallies the number of immediate links each segment has, indicating local choice points of Bağcılar.

c. Mean Depth calculates the average topological distance from each segment to all others, reflecting overall accessibility.

d. Entropy assesses the variation in link distribution around each node, capturing degrees of spatial uniformity versus fragmentation.

These metrics provide a multifaceted view of urban form, identifying well-integrated thoroughfares, local hubs, peripheral, and uneven patterns that will be correlated with social sustainability indicators in this research.

Table 6.2: DepthmapX Analysis Conducted in Bağcılar District.

Type of Analysis	**Purpose**
Integration	Measure overall connectivity and spatial centrality
Connectivity (Entropy)	Assess variety and quality of spatial connections
Entropy Analysis	Measure connectivity diversity in the street network
Angular Segment Analysis	Understand potential movement and wayfinding patterns
Mean Depth	Examine depth from main streets and relative inaccessibility
Movement Intensity Analysis	Analyze potential pedestrian volumes in street segments

DepthmapX spatial analyses also provide a deeper interpretation of the morphological and functional qualities of Bağcılar's urban layout. The integration and connectivity scores offer insights into participation, social cohesion, and sense of belonging, as they indicate how well different parts of the city are interlinked for everyday movement. Angular segment and entropy analyses reveal whether people can navigate freely or face barriers, which affects equity, inclusion, and spatial justice. Mean depth values uncover spatial isolation that can reduce access to public life and limit engagement, directly impacting community cohesion and quality of life. These spatial diagnostics provide empirical evidence for the conceptual model by showing where the physical environment supports or hinders social sustainability. The outcomes:

a. Many parks are outside the 500m walkable distance for most of the population.

b. Low integration values in DepthmapX suggests spatial fragmentation.

c. Heat map analysis reveals a correlation between sparse green space and higher urban heat zones.

Spatial data confirms accessibility gaps and unequal distribution of green areas. Areas with low connectivity also suffer from higher heat exposure and lower pedestrian integration, negatively affecting social cohesion and quality of life. This reinforces the importance of strategically placed, well-connected parks.

6.4.3.2 Network analysis

Figure 6.7: Accessibility Analysis, Main Streets, Secondary Street, Prepared by Author.

Social sustainability requires analyzing how well everyone can reach urban green spaces, especially children, the elderly, and people with limited mobility. Green space availability in Bağcilar becomes restricted due to poor network design and unequal distribution among different social classes. The main roadways are considered main attractions where pedestrian activities and transportation between the neighborhoods provide access to public areas and commercial spaces (see Figure 6.7).

Main streets in Bağcılar, however, have problems with congestion, lack of greenery, and insufficient pedestrian-friendly design. By incorporating green corridors, improving pedestrian pathways, and adding shaded walkways, these streets can be dramatically enhanced to improve accessibility. Secondly, streets further support neighborhood connectivity by linking residential areas to main roads and nearby public spaces. Currently, most of these streets in Bağcılar suffer from poor pedestrian infrastructure and unregulated development, reducing walkability and safety.

To address this, measures such as traffic calming, improved pathways, and the inclusion of small green spaces along secondary streets are recommended to create a more accessible and sustainable urban environment.

a. All residents, including children, the elderly, and those with limited mobility, face restricted park access due to Bağcılar's uneven street network and park locations.

b. Major roads are congested, lack greenery, and offer poor sidewalks, limiting safe entry to public and commercial spaces.

c. Green corridors, wider sidewalks, and shade trees along main streets would immediately boost accessibility.

d. Secondary streets are currently fragmented and unsafe, and linking homes to parks, adding traffic calming, continuous pathways, and pocket greens would improve walkability.

The following relativized entropy analysis identifies how evenly movement opportunities are distributed across Bağcılar's street network.

Figure 6.8: Relativized Entropy, Prepared by Author.

Relativized Entropy / Spatial Uniformity and Connectivity Analysis

a. The Blue areas have a more uniform spatial distribution, which indicates balanced connectivity or movement within these streets.

b. Green and yellow areas indicate that these zones have slightly more variability in connectivity or movement than regular or close to balance.

These areas share equal access to resources and services. Regions marked by green and yellow show fluctuations in how things move across space, showing that some locations receive different amounts of connectivity than others. These regions are potential indications of spatially unequal locations where the locals have trouble accessing these amenities, such as green spaces or transit systems. Prioritizing interventions, particularly those in green and yellow zones, could enhance the social amenities within these spaces (see Figure 6.8).

The entropy map below quantifies the diverse and unpredictable pedestrian and vehicular flows across Bağcılar's street network.

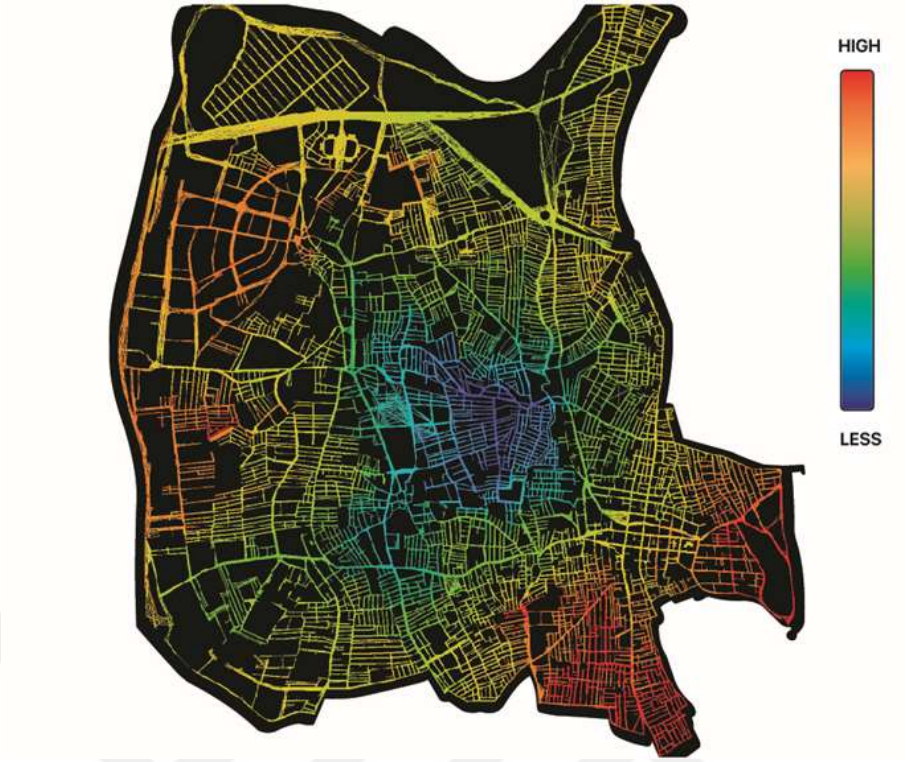


Figure 6.9: Entropy (Connectivity Diversity in Urban Network, Prepared by Author.

Entropy Analysis

a. The red areas are frequently found close to main hubs or intersections and indicate considerable variability or dynamic connectedness of these areas.

b. Blue zones, which are frequently found in residential or calmer areas, indicate reliable connectivity.

Bağcılar's entropy analysis assesses the diversity or uncertainty of connectivity throughout the district's urban network. Zones with high variability or dynamic connections are indicated by areas shaded in red; these are usually found close to important crossroads or transit hubs. These red zones indicate a primary business or transportation location with more movement (see Figure 6.9).

The following analysis of the RA (Penn) map measures how angularly integrated each street segment is within Bağcılar’s network.

Figure 6.10: RA (PENN), Angular Segment Analysis, Prepared by Author.

RA (Penn) Analysis:

a. Red areas highlight A highly integrated street central to the movement system.

b. Blue zones show limited accessibility to the movement system.

Bağcılar's angular segment analysis (RA Penn) highlights the street integration based on angular distances. Highly integrated routes that are essential to the urban movement system are indicated by red streets. These red zones function as primary routes for public services, business, and transportation; these locations offer superior accessibility and connectivity. Therefore, these locations are highlighted, which is the magical Meydan connection to the north with the Göztepe Meydan (see Figure 6.10).

The following analysis map uses global integration, the inverse of average topological depth, to reveal each segment’s centrality in Bağcılar.

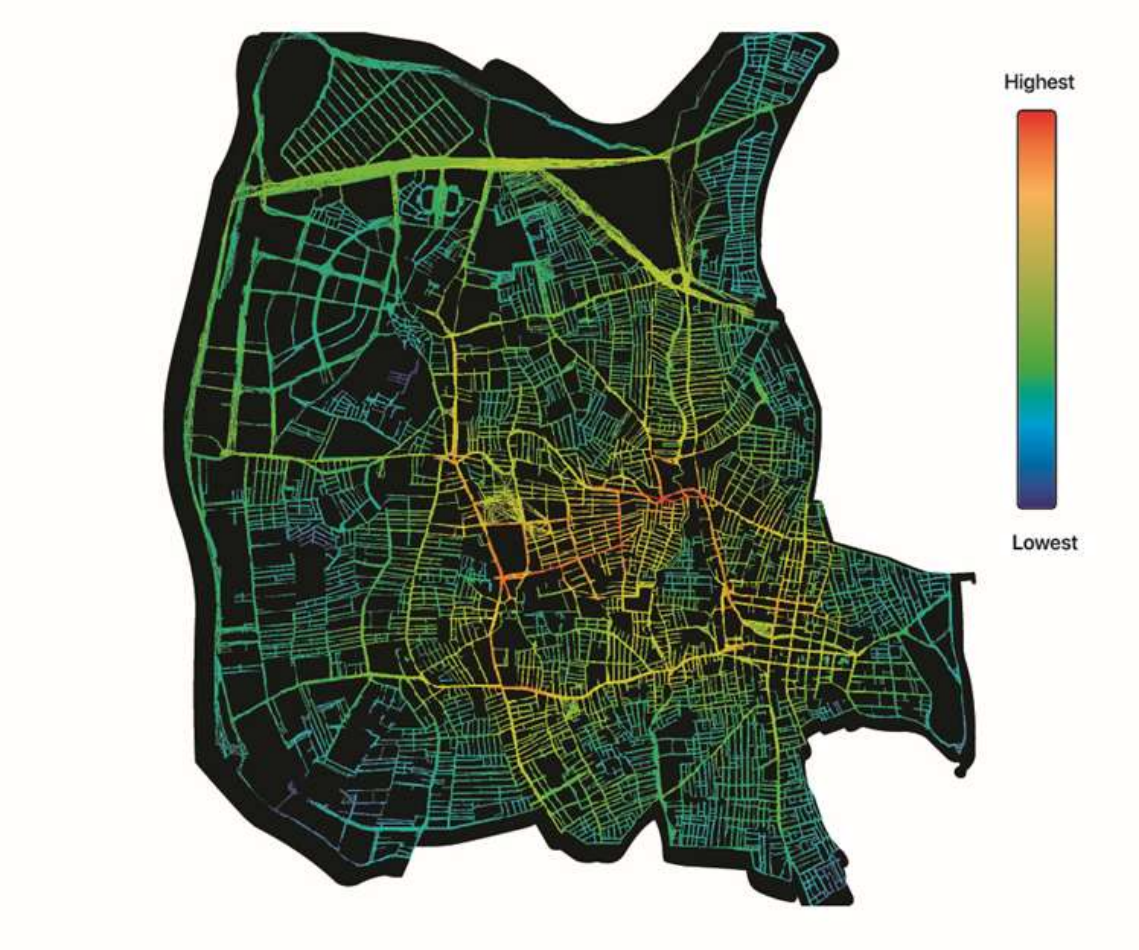


Figure 6.11: Integration (Urban Centrality and Accessibility, Prepared by Author.

Integration Analysis:

a. Red and yellow areas are highly integrated and form the core movement structure.

b. Blue and green areas are less integrated and may also experience social or spatial isolation.

The integration analysis of Bağcılar evaluates the centrality of streets within the district's urban network by identifying areas with varying degrees of connectivity. Streets shaded in red and yellow indicate high integration levels; these areas are well-connected and function as key hubs for transport, commerce, and social interaction (see Figure 6.11).

The following analysis measures the potential flow of each segment by combining its connectivity and integration in Bağcılar.

Figure 6.12: Intensity (potential volume of movement analysis), Prepared by Author.

Intensity Analysis:

a. Red areas indicate high movement intensity due to the central location.

b. Blue areas, which indicate lower intensity, indicate quieter or less trafficked zones.

The intensity analysis of Bağcılar examines the potential volume of movement through each street segment, combining aspects of connectivity and local integration. The streets in red represent areas with high movement intensity, typically due to their centrality. These high-intensity areas can be significant corridors for traffic, commerce, and social interaction (see Figure 6.12).

The following analysis measure calculates each street segment's average topological distance to all other segments, capturing overall network accessibility.

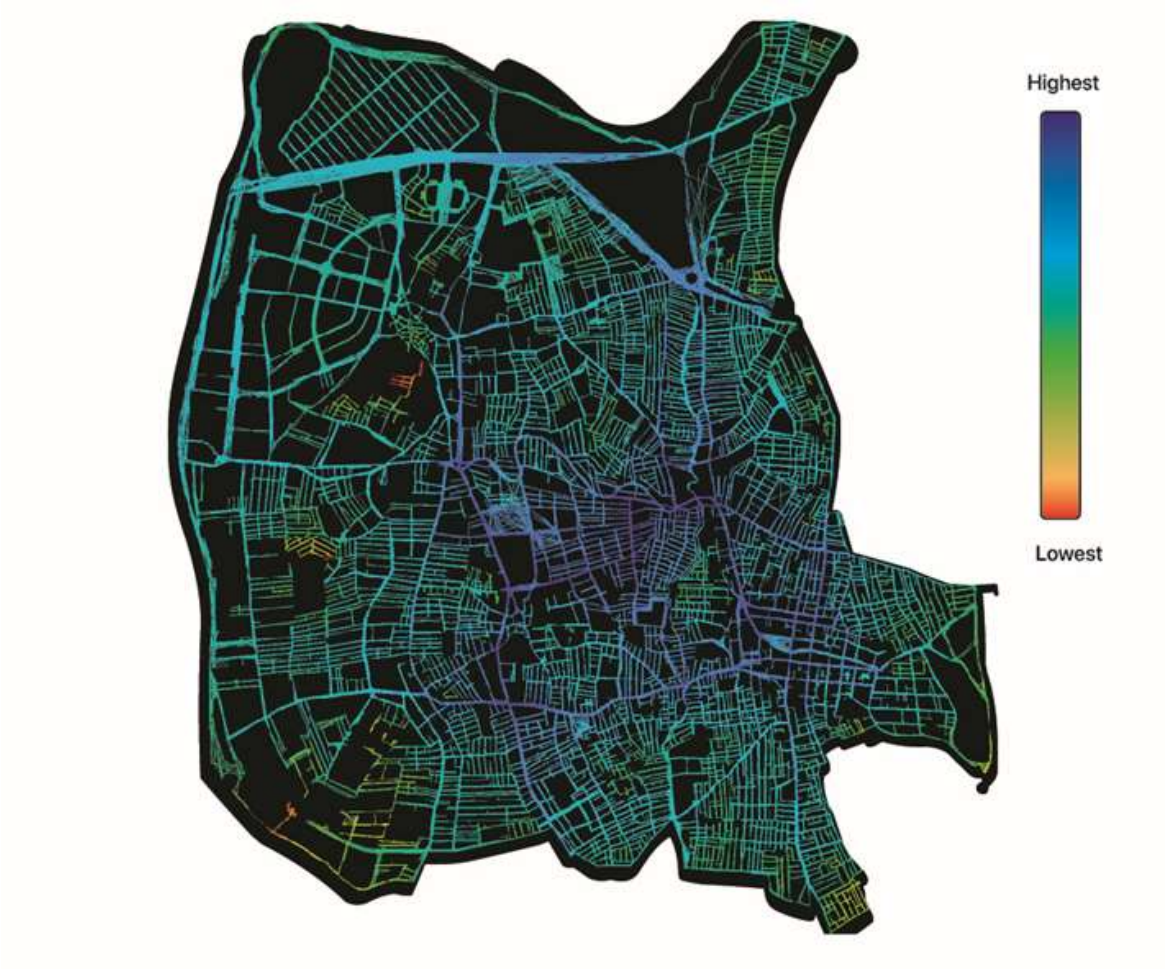


Figure 6.13: Mean Depth Analysis, Prepared by Author.

Mean Depth Analysis (Accessibility Across the Network):

Blue areas are shallow in the map, indicating high accessibility. The mean depth analysis of Bağcılar evaluates the average number of steps or angular turns required to access all other nodes in the urban network. Blue areas, with lower mean depth, indicate high accessibility and integration within the network system. On the other hand, red areas with higher mean depth values emphasize areas that are segregated or isolated within the network due to limited connectivity (see Figure 6.13).

6.4.4 Summary of the DepthmapX Analysis of Bağcilar

The urban analysis of Bağcılar findings highlights critical observations and implications for its development. The central spine of the district, consistently identified in red and yellow

across the RA (Penn), Integration, and Intensity maps, represents the highly integrated core zones that act as the primary hubs for movement and activity.

Table 6.3: Summary of the DepthmapX Analyses in Bağcılar and Their Benefits, Prepared by Author.

Analysis	What It Measures	Benefit / Application
Relativized Entropy	Uniformity of links around each node	Identifies zones of uneven connectivity for targeted infill pedestrian links.
Entropy	Diversity of route choices at intersections	Pinpoints dynamic hubs (red) for amenity clustering and quiet pockets (blue) for local play areas.
Angular Integration	Ease of travel via minimal turns (RA-PENN)	Marks primary through-routes for greenway extensions and sidewalk upgrades.
Global Integration	Overall centrality (fewest network "steps" to all others)	Highlights central corridors for enhanced greening and transit-oriented social spaces.
Movement Intensity	Potential flow by combining connectivity & integration	Guides placement of shade trees, benches, and pocket parks along high-traffic streets.
Mean Depth	Average "steps" from each segment to every other	Reveals peripheral sectors needing new pedestrian cut throughs or park connectors.

On the other hand, blue and green areas in the Mean Depth and Entropy maps represent peripheral or isolated areas that are not well connected and therefore need interventions. Relativized Entropy and Entropy maps, respectively, also revealed the spatially uneven distribution of connectivity across the district, urging us to address spatial inequities to achieve more balanced accessibility. High-intensity zones naturally serve as hubs for economic and social activities. In contrast, low intensity zones can be used for quieter residential neighborhoods or as green buffers for enhancing urban quality. This is essential, however, to reduce dependence on the central spine and strengthen the integration of peripheral areas.

Steps are recommended to address these challenges, including improvements to public transit and investments in infrastructure, commercial facilities, and public services, which are needed to sustain high activity levels in core zones (see Table 6.3).

Based on these spatial analyses, a coordinated set of interventions is proposed for Bağcılar:

a. Greenway Corridors: Plant continuous rows of shade trees and install low-impact pathways along the top-scoring integration.

b. Tactical Links: Create new cut-through connections in high mean-depth (blue) pockets, transforming underused lanes into pedestrian shortcuts.

c. Pocket Parks: Introduce small, easily maintained green spaces at entropy-identified "cold spots" to distribute recreational amenities more evenly.

d. Enhanced Transit Stops: Upgrade bus and metro stops within high-intensity (red) segments with seating, lighting, and micro-greens to improve waiting environments.

e. Traffic Calming: Apply curb-bulbs and raised crosswalks on moderately integrated streets to slow vehicles and enhance pedestrian safety.

f. Community Stewards: Establish local "Park Ambassadors" in under-connected neighbourhoods to advocate for incremental improvements and monitor usage patterns.

Moderately integrated zones provide potential for mixed-use development, where residential, commercial, and public space are combined to support balanced and sustainable development. Social sustainability strategies will enable Bağcılar to become more inclusive and connected as an urban environment, responding to its short-term pressures and long-term development needs.

The following part of the analysis used in this research is the GIS tools (see Table 6.4), to map park locations, buffer zones (500m), land use patterns, population density, and a heat map. Each GIS output corresponds to one or more social sustainability indicators defined in the thesis's conceptual framework.

The green space distribution map and metro accessibility map reflect issues of equity and accessibility, two key dimensions of social sustainability. The buffer zone analysis is critical to evaluating walkability and quality of life, showing how far residents must travel to access green space. Heat island and air quality assessments use the human rights and environmental justice lens, emphasizing that the physical environment impacts social well-being.

Table 6.4: Types of GIS Analysis Used in Bağcılar, Prepared by Author.

Type of GIS Analysis	Purpose
Green Space Distribution Map	Identify spatial distribution of parks
Metro Accessibility Map	Understand transport access to green areas
Buffer Zone (500m)	Evaluate pedestrian accessibility
Heat Island Mapping	Examine heat vulnerability in dense areas
Air Quality Analysis	Relate air quality to green space availability
Population Density Overlay	Correlate green spaces with population clusters

Finally, overlaying population data helps contextualize which communities are most affected by green space deficiencies, highlighting gaps in social cohesion and participation opportunities (see Table 6.4).

6.4.5 Green Spaces Distribution With Walkable Distances 500 Buffer Zone

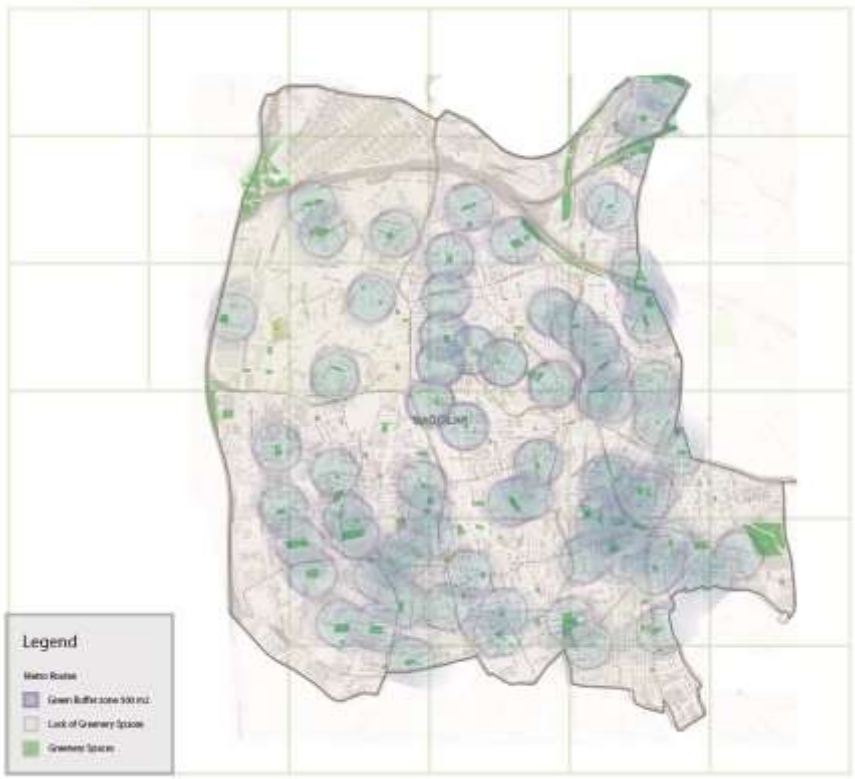


Figure 6.14: Green Spaces with a Buffer Zone of 500 Square Meters, Prepared by Author.

The map shows the green spaces in Bağcılar and the walkable distance to them, within a 500-meter zone. Some parts of the district benefit from green surroundings nearby, but in densely populated areas, a large percentage of the district doesn't have enough access to them. These represent gaps in the distribution of green spaces and are equivalent to a lack of recreation opportunities, exacerbate social inequalities, and create environmental problems such as the urban heat island effect (see Figure 6.14).

Although including metro routes hints at improved accessibility, the map highlights the desire for further green spaces to support social sustainability, equity, and quality of life in Bağcılar.

6.5 ENVIRONMENTAL ANALYSIS

6.5.1 Heat Analysis

The analysis for Bağcılar shows the intensity of conditions (likely tied to urban density, as shown in Figure 6.14, environmental pressures across the district as a heat map. Red areas indicate the highest intensities of temperature (those areas are usually most densely populated or most active, yellow areas represent lower intensities, suggesting less densely populated or quieter areas.

In Bağcılar, the most likely red zones are situated in the northern and central parts of the district, where population density, urban activities, and vehicular movement are highest. These are hot spots for economic and social interaction. Still, at the same time, they are experiencing high degrees of traffic congestion, urban heat island effects, pressure on infrastructure, and green space. Less intense activity is indicated by the yellow zones, mainly in the southern and peripheral areas, perhaps associated with lower-density residential neighborhoods or less urbanized regions (see Figure 6.15).

The spatial imbalance in this distribution reveals that the urban pressures are borne by central areas while peripheral areas are still underutilized. Redistribution of activity and improved spatial equity should be the focus of urban planning interventions. Actions might include designing green buffers in high intensities to mitigate environmental stress, boosting connectivity to aggregate periphery in the urban arrangement, and facilitating mixed-use

developments in lower intensities to balance the activity throughout the zone. If these challenges are addressed, Bağcılar can develop a more sustainable urban environment.

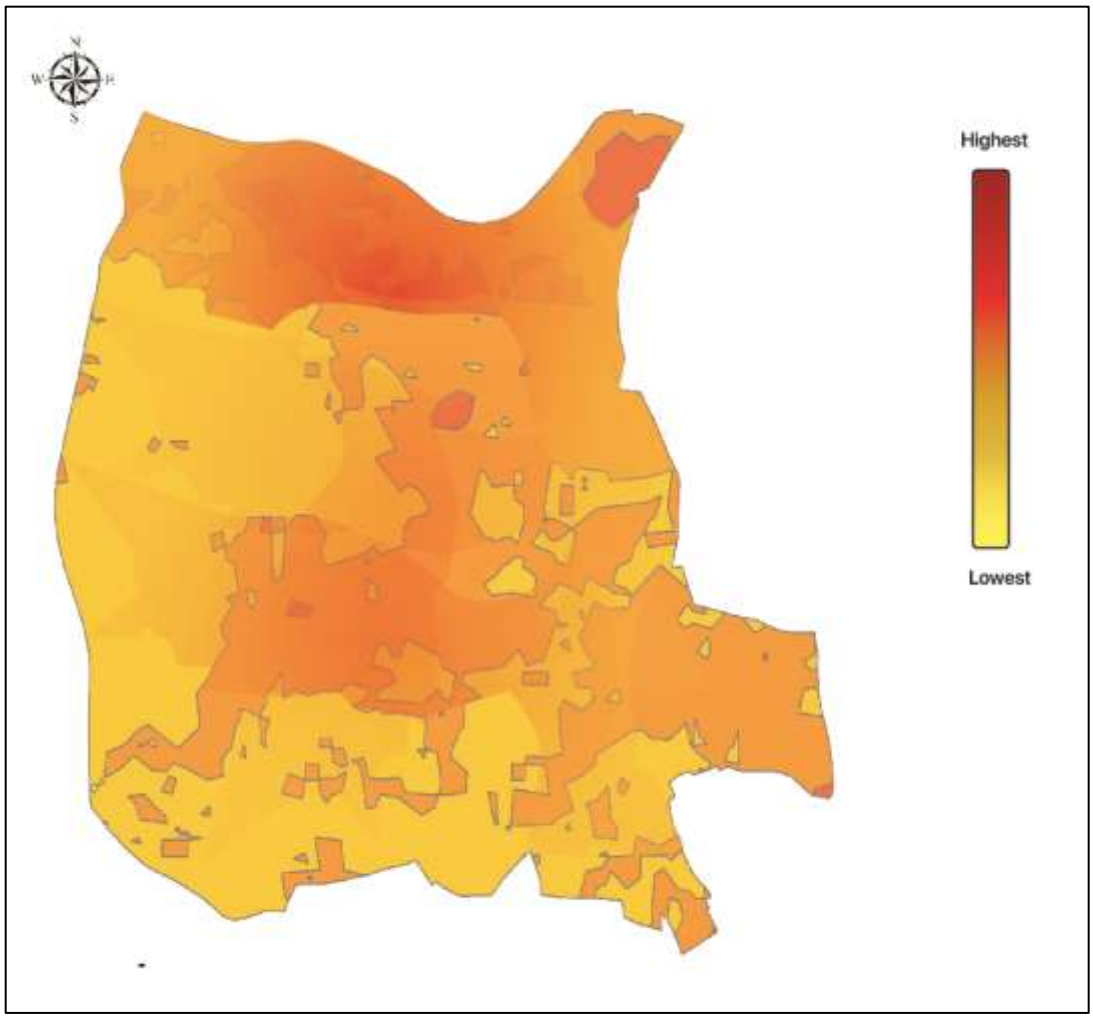


Figure 6.15: Heat Analysis, Prepared by Author.

6.5.2 Air Quality

The air quality map of Bağcılar and surrounding areas shows different pollution levels with a plume index scale. Zones in light green and yellow represent relatively lower pollution areas, while orange, red, and darker areas represent higher pollution areas. Central urban areas within Bağcılar seem to have moderate to high levels of pollution, which might be due to the high population, high traffic, and industrial activities. The densely populated urban district of Bağcılar plays a significant role in the challenges to air quality.

Emissions from major roads and highways, combined with the lack of green spaces, make pollution levels worse in highly urbanized areas. Elevated pollution in Bağcılar also occurs

near industrial centers or busy transit routes surrounding Bağcılar. Green spaces and distance from major highways seem to be associated with relatively better air quality (see Figure 6.16).

The findings of this analysis point out the urgent need for environmental interventions in Bağcılar. The most polluting zones can benefit from absorbing more of this pollutant if the space is green, say, more green spaces. Also, vehicular emissions can be reduced by encouraging people to use public transit, cycling, walking, etc. Bağcılar should be made a healthier and more sustainable environment for its residents, and its efforts in urban planning should centre around reducing the sources of pollution.

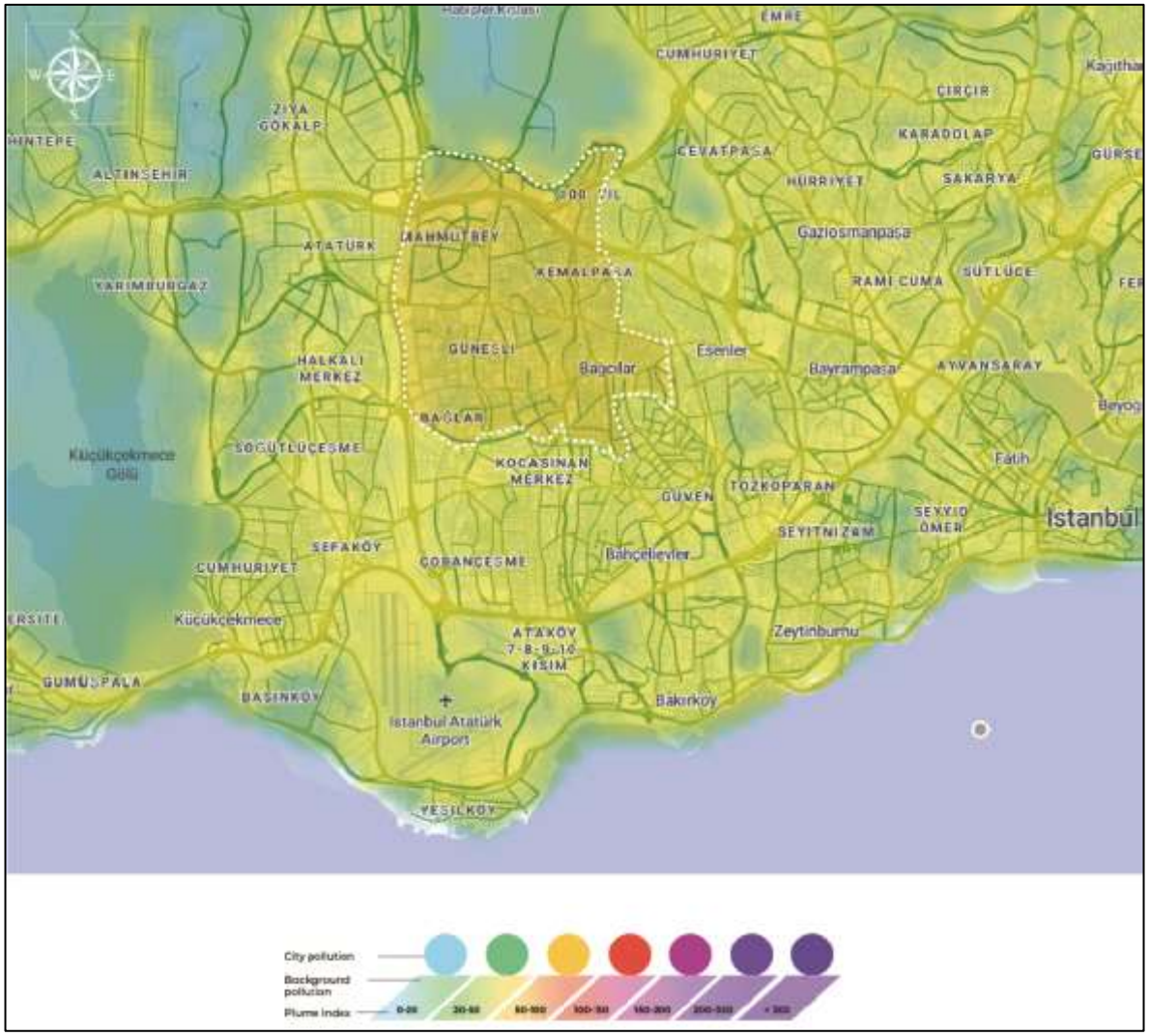


Figure 6.16: Air Quality of Bağcilar, Prepared by Author.

6.6 SOCIAL DEMOGRAPHIC ANALYSIS

Bağcılar District population density distribution map of the Bağcılar District is presented here; darker shades represent a denser population. The most populated neighborhoods are those that have the highest challenges regarding access to green spaces: Demirkapı (53,801), Fatih (41,071), Göztepe (40,790). High population results in high pressure on the limited available resources. In contrast, neighborhoods such as Bağlar (17,086) and İnönü (22,920) have lower population densities and may have more accessible green spaces.

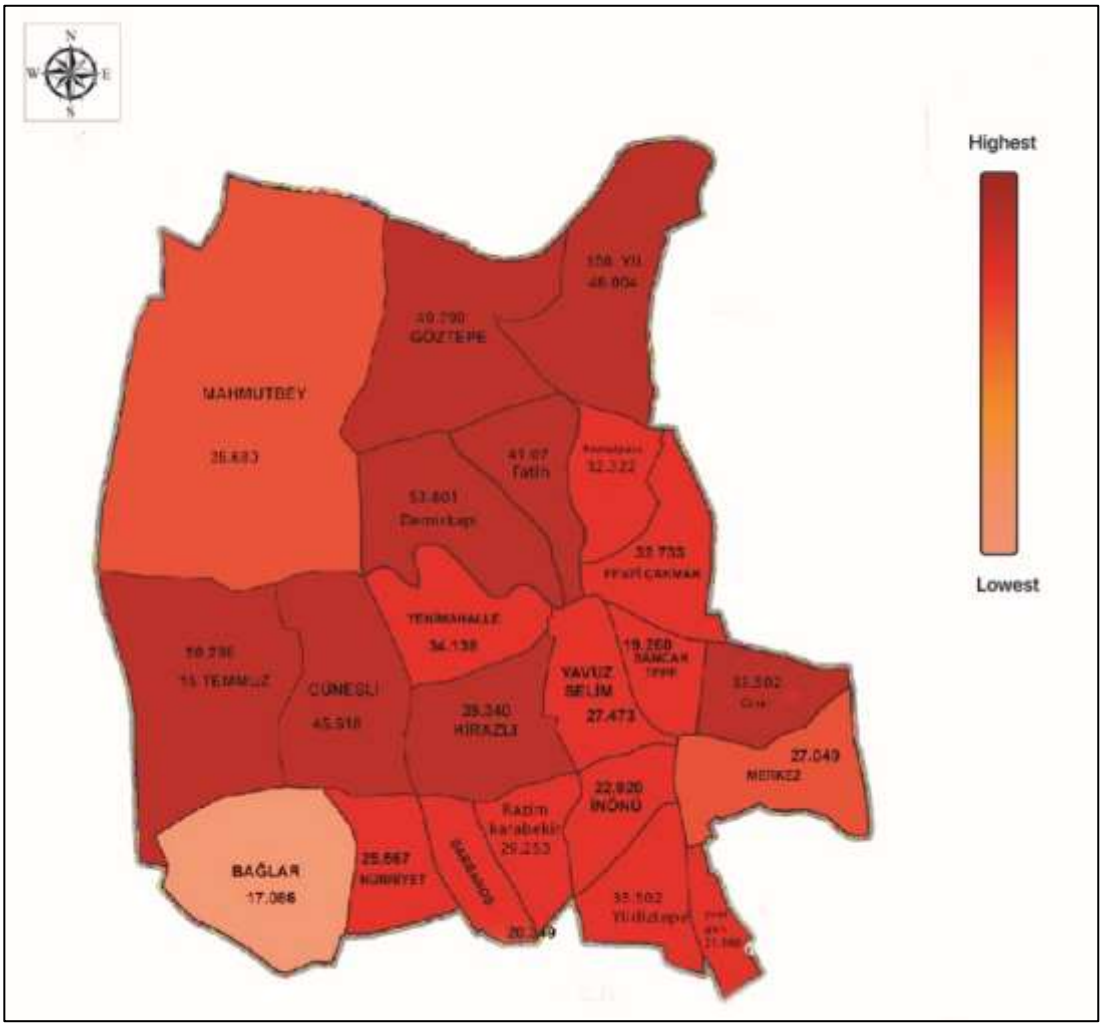


Figure 6.17: Population Analysis of Bağcılar, Prepared by Author.

The thesis identifies population density as a critical factor influencing the equitable distribution and accessibility of green public spaces. When spaces designed for relaxation and enjoyment are packed with too many people, they become less usable and count for less in helping people connect socially and relax. The shortage of parks and green spaces makes

neighborhood problems even worse, while spotlighting the need for special programs to support specific groups. To address these challenges, the thesis recommends increasing green space provision in high-density neighborhoods by optimizing underutilized areas, integrating green corridors to improve connectivity, and ensuring equitable distribution of recreational facilities (see Figures 6.17-6.18).

These strategies can enhance access, promote social sustainability, and improve the overall quality of life for Bağcılar's residents by prioritizing these densely populated areas.

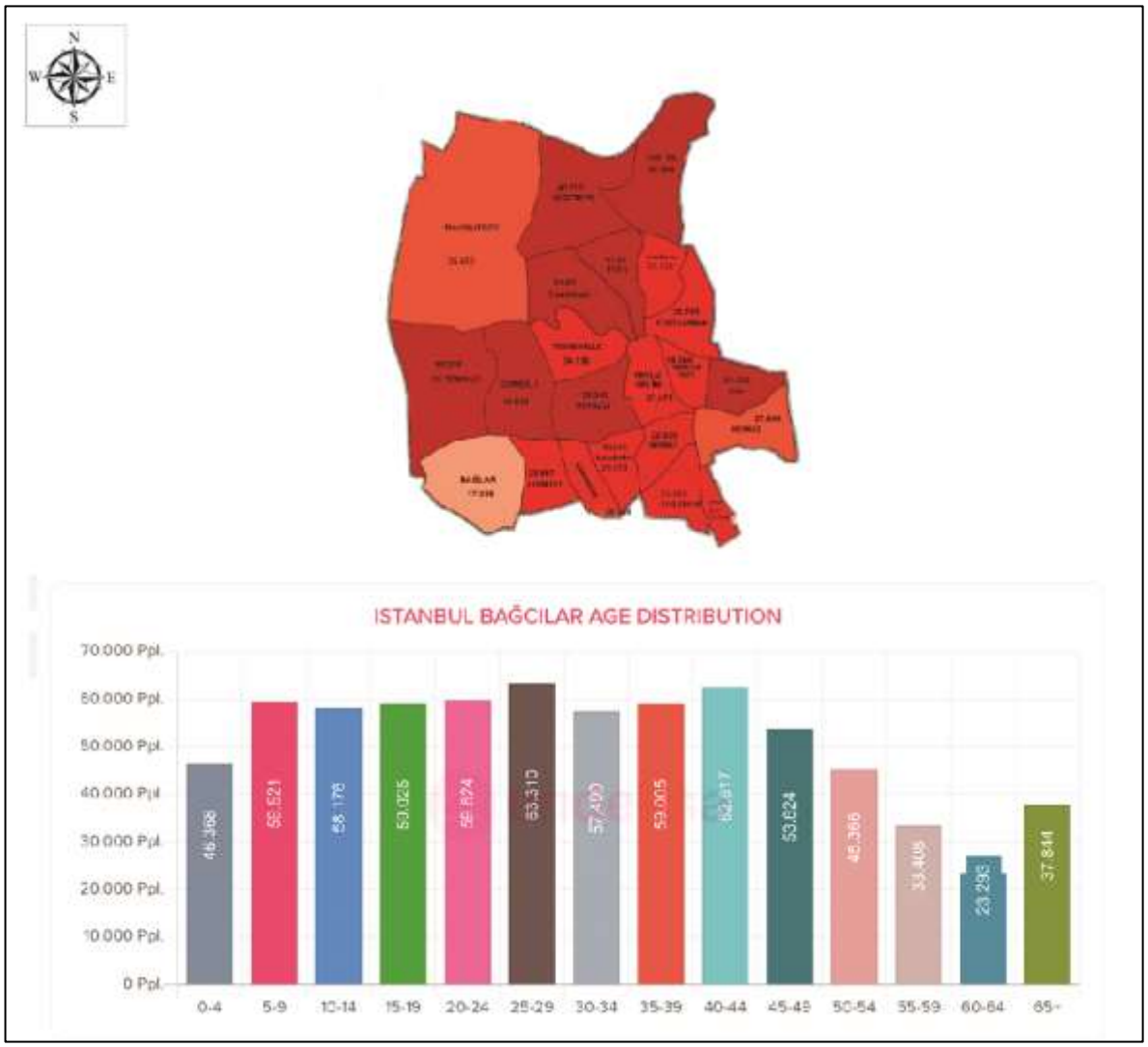


Figure 6.18: Population and Age Dynamics, Prepared by Author.

High Population Density and Age Groups:

a. Neighborhoods like Demirkapı, Güneşli, and Fatih attract families. They contain a mix of young families, children, and working-age adults.

b. The young (1–14) and 25–44-year-olds create substantial demand for recreational green spaces to enjoy with their family and relax in.

Limited Resources for Vulnerable Groups:

a. Young children and the elderly, who form a considerable proportion of Bağcılar's population, are particularly vulnerable due to the lack of green spaces within walking distance.

b. This demographic requires well-designed spaces that meet the residents' needs and nearby green spaces for activities such as play, exercise, and social interaction, which are crucial for their physical and mental well-being.

Social Demographic Challenges in Bağcılar:

a. The demand on current resources is further increased by a disconnect between population density, age demographics, and the amount of green space.

b. There are fewer green areas in high-density areas in contrast with younger residents (like Demirkapı and Fatih), which limits the kids' chances for socialization and space for play and interaction.

c. In their local living environment, middle-aged and working adults have few possibilities for leisure and activities that relieve stress.

Social Demographic Recommendations for Bağcılar:

a. Increase the Green Spaces in High-Density Neighborhoods by building more green spaces in low-income areas to meet the needs of families and children.

b. Optimize the Underutilized Spaces: By converting abandoned or underutilized areas into multifunctional green areas for all residents.

c. Age-Inclusive Design: Green areas must have implemented social amenities like playgrounds and other social design elements to accommodate all age groups.

d. Increase Connectivity: Create pathways and green corridors to connect existing areas, ensuring people of all backgrounds can use them.

By addressing these challenges, Bağcılar can better meet the recreational and social needs of its diverse population, promoting both social sustainability and improved quality of life.

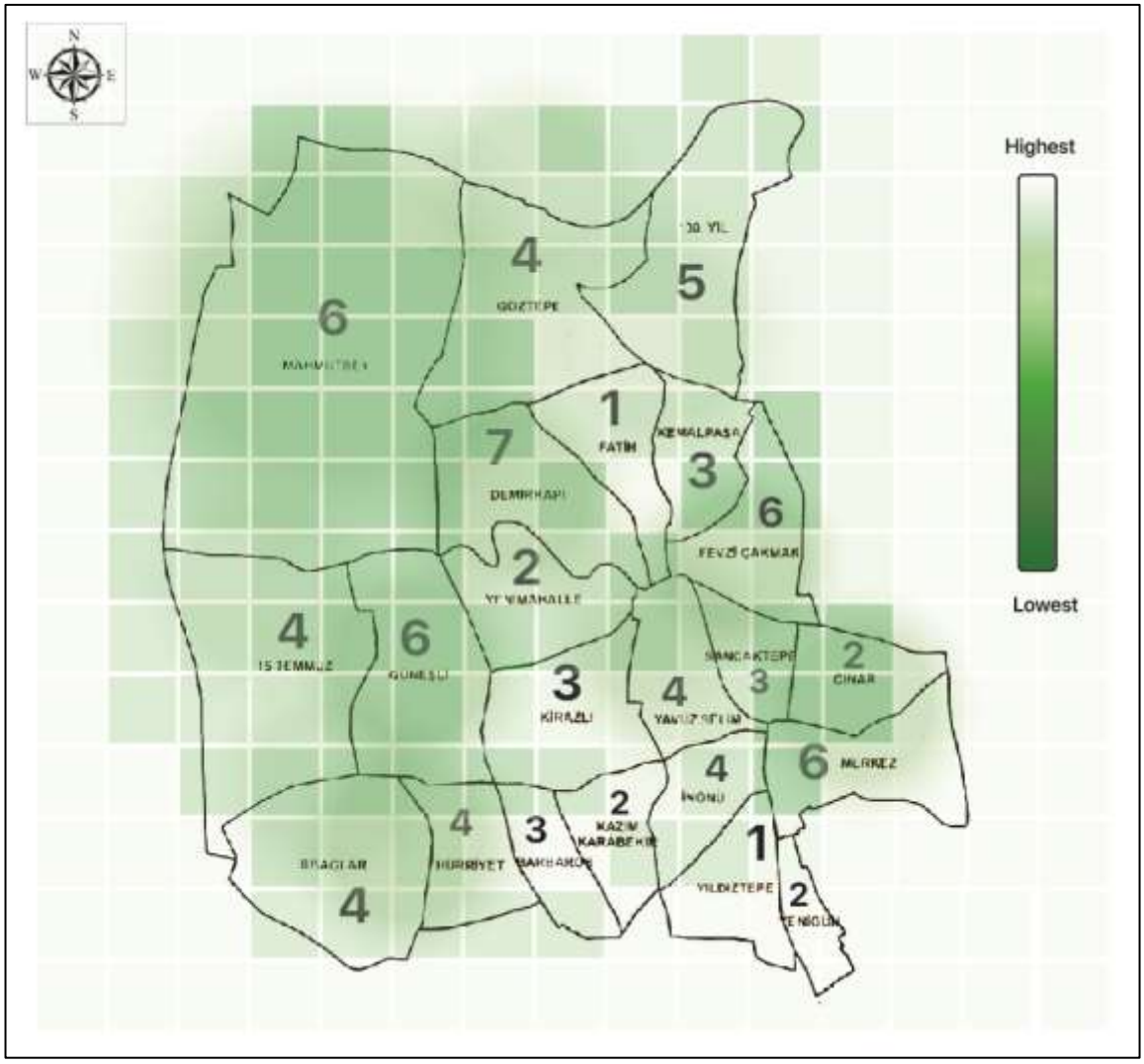


Figure 6.19: Green Spaces Distribution Across Bağcılar, Prepared by Author.

Figure 6.18 shows that the amount of urban green public spaces, such as Çınar neighborhood (2), Yıldıztepe (1), and Fatih (1), has the least amount of green public spaces in Bağcılar and has the least access to green spaces. These neighborhoods are distinguished by a lack of buffer zones that cannot sufficiently serve the dense population, which causes existing green

spaces to become overcrowded and restricts chances for leisure and social contact. Conversely, less densely populated areas, such as Mahmutbey (6) and Güneşli (6), show relatively more urban green public spaces within the buffer zone. However, these parks are still isolated from the surrounding areas with gated walls (see Figure 6.19).

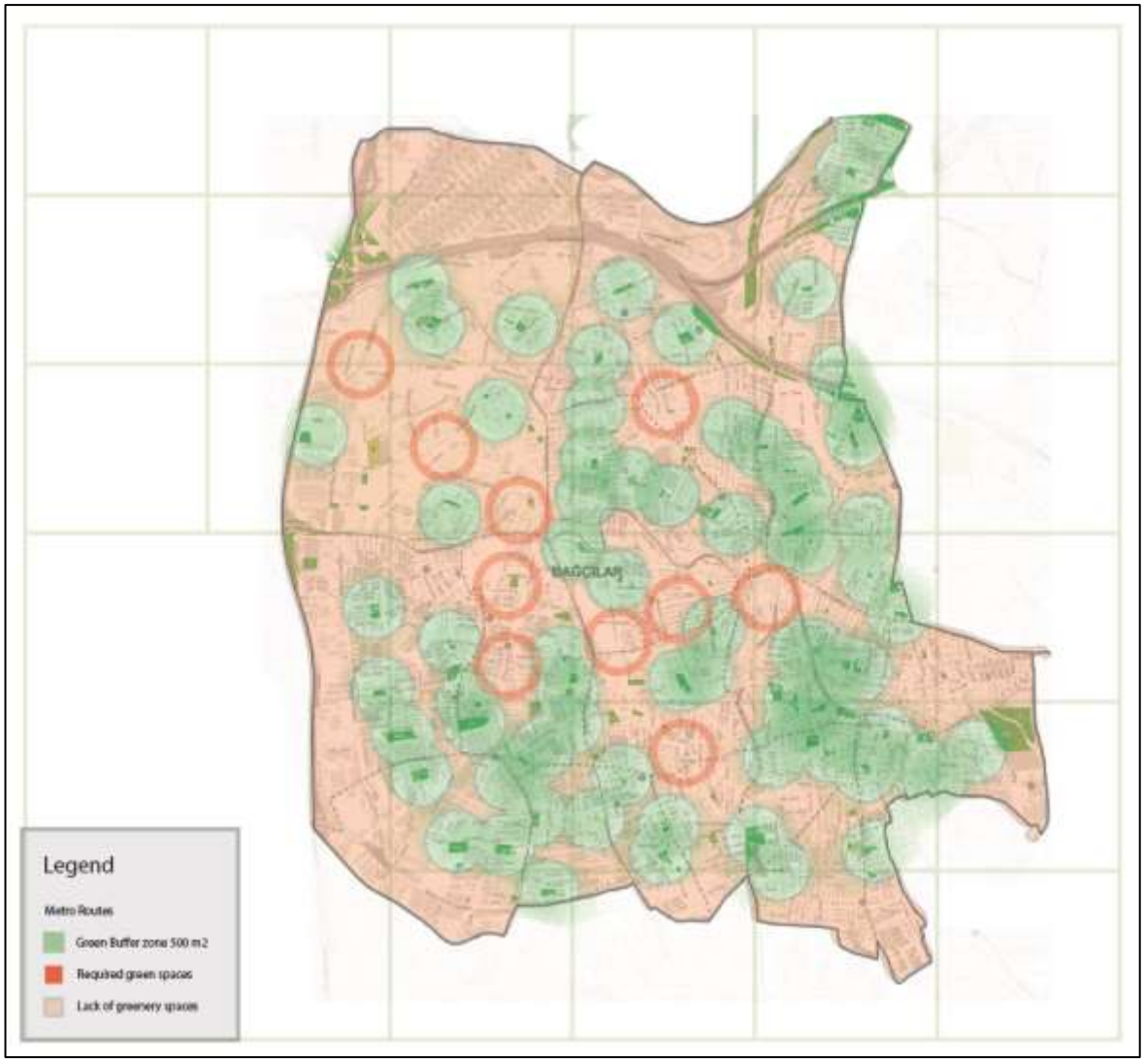


Figure 6.20: Green Spaces with a Buffer Zone of 500 Square Meters**,** Prepared by Author.

To address these issues, as shown in Figure 6.23, we can redistribute green spaces across the district, add new green spaces in high-density underserved regions, and improve park connectivity through green corridors. The red circles indicate locations lacking greenery, whereas the green circles indicate areas inside the 500-meter buffer zone of existing green spaces. The gaps between these buffers indicate zones where residents must travel further than the walkable distance to reach a green space. The map emphasizes the unequal

distribution of green spaces across Bağcılar, as significant portions of the district lack access to public green areas, shown in light orange. Red circles indicate that green space implementation is required within these specified areas. This uneven coverage makes it challenging for many residents, especially children, the elderly, and individuals with limited mobility, to access green public spaces. Implement these social stability strategies to ensure residents across all districts have access to green spaces (see Figure 6.20).

Concluding with this second part of the GIS analysis conducted, which shown the existed of green public spaces across Bağcılar with the number of accessible parks and how the heat map shows a high temperature in areas with less green spaces exist and how the lack of adequate green public spaces affecting the overall atmosphere of the surrounding areas, and lastly the recommended strategies to overcome these challenges with building and creating more accessible green public spaces and integrate them within the Surroundings areas to serve all type of groups of the residents.

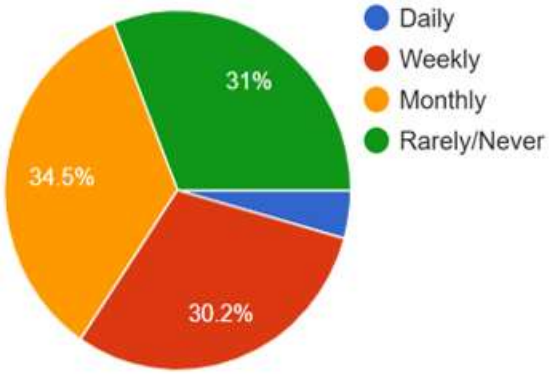
The following part, which is the results of the survey conducted for Bağcılar, aims to understand public perception, usage patterns, and the social impacts of urban public green spaces within Bağcılar.

6.7 SURVEY RESULTS

To understand public perception, usage patterns, and the social impacts of green spaces in Bağcılar, a structured survey was conducted involving 116 residents from various neighborhoods within the district. The survey employed quantitative and qualitative tools, including a five-point Likert scale and open-ended response sections. The data were analyzed using SPSS for statistical patterns and content analysis for narrative responses.

The survey was designed and prepared to measure core social sustainability dimensions, namely, sense of belonging, safety, accessibility, social activity, equity, and inclusion. Thus, it aligns directly with the conceptual framework outlined in this research.

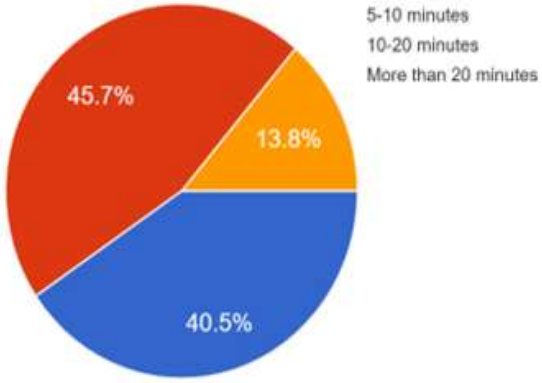
Table 6.5: Visits to the Nearest Green Public Spaces Survey Results.



Visits	Frequency	Percentage
Daily	5	4.3%
Weekly	35	30.2%
Monthly	40	34.5%
Rarely/Never	36	31%
Total	116	100%

When the frequency of the participants' visits was examined, 35.1% visited once a month, 32.5% visited rarely/never, 27.3% visited a week, and 5.8% visited daily (see Table 6.5). When the responses are evaluated, it is seen that the area is not a preferred place to visit every day.

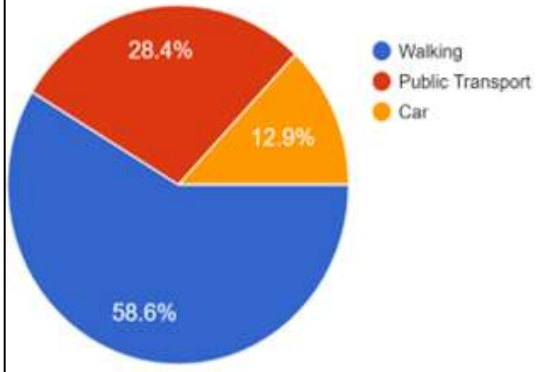
Table 6.6: How Far Is the Nearest Green Space from Your Home? Survey Results.



Time	Frequency	Percentage
5-10 min	47	40.5%
10-20 min	53	45.7%
More than 20 min	16	13.8%
Total	116	100%

As shown in Table 6.6, 45.7% of participants live 10-20 minutes from green spaces, 40.5% within 5-10 minutes, and 13.8% over 20 minutes away. While most have moderate access, a notable portion faces challenges, highlighting the need for improved accessibility.

Table 6.7: Transportation Method Used to Reach the Green Spaces Survey Results.



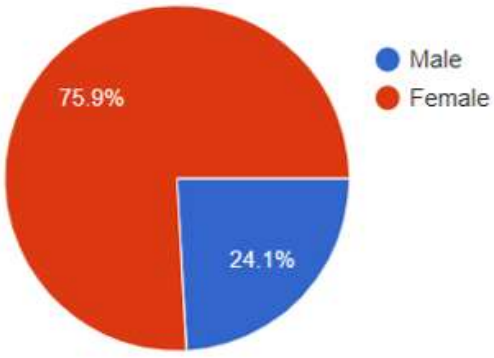
type	Frequency	Percentage
walking	68	58.6%
Public transport	33	28.4%
car	15	12.9%
Total	116	100%

Table 6.7 shows that 58.6% of participants reach green spaces by walking, 28.4% use public transport, and 12.9% rely on cars. This suggests that most green spaces are within walking distance, but some residents depend on transport, highlighting potential gaps in accessibility.

6.7.1 Socio-Demographic Analysis

Socio-Demographic Profile of the Sample Group. When evaluating the questionnaire results, first, frequency analysis was performed to examine the socio-demographic profile of the bağcılar district users. After determining the

Table 6.8: Gender Survey Results.

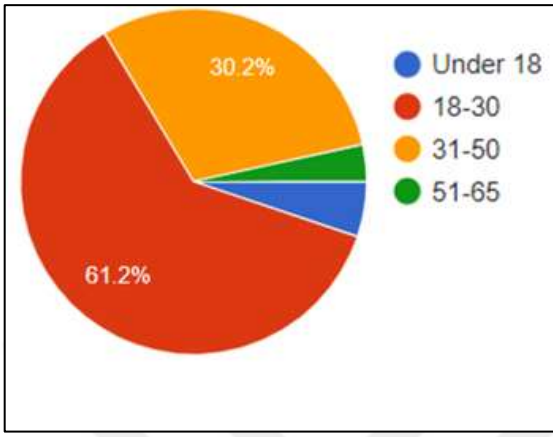


gender	Frequency	Percentage
Male	28	24.1%
Female	88	75.9%
Total	116	100%

Gender, age, and income level of the participants, as well as the frequency of using the area and visiting hours, were evaluated. During the case study, efforts were made to ensure that the gender distribution was equal or approximate. 75.9% of the respondents were female, and 42.1% were male (see Table 6.8). Most of the questionnaire participants were women.

Women prefer to use urban green spaces because they can be more comfortable with their children and because these spaces provide opportunities for housewives to socialize with other women.

Table 6.9: Age Range Survey Results.

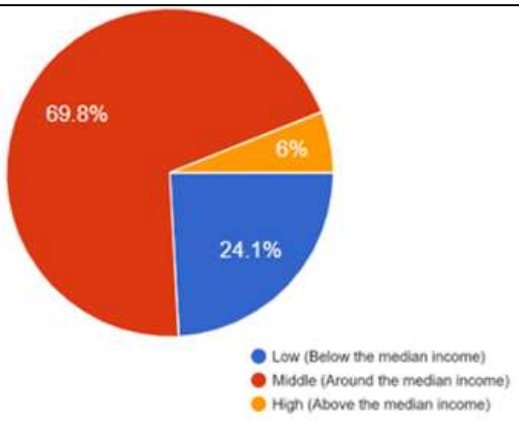


Age	Frequency	Percentage
Under 18	6	5.2%
18-30	71	61.2%
31-50	35	30.2%
51-60	4	3.4%
Total	116	100%

In Table 6.9**,** th**e** participants were predominantly in the 18-30 age range (61.2%). This is followed by the 31-50 age group (30.2%), the 51-65 age group (3.4%), and the under-18 age group (5.2%).

6.7.2 Income Analysis and Walkable Distance to Green Areas With Buffer Zone

Table 6.10: Income-Level Survey Results.



Income level	Frequency	Percentage
Low	28	24.1%
Middle	81	69.8%
High	7	6%
Total	116	100%

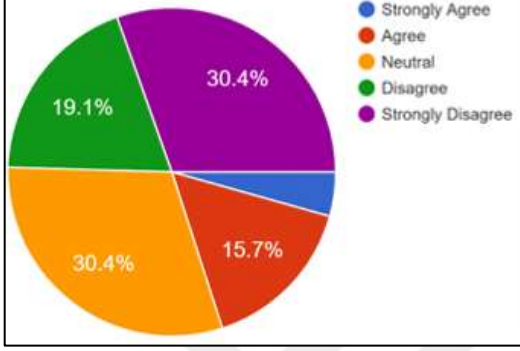
As shown in Table 6.10, when the income group of the participants is examined, it is seen that the majority (69.8%) is around the median income. This place is accessible by public transport, and the activity types are suitable for all income groups. These factors can be attractive for the middle and lower economic groups.

6.7.3 Equity and Inclusivity Analysis

6.7.3.1 Distribution of green public spaces across neighborhoods

Specifying from the lowest to the highest number of green areas in public spaces of the neighborhoods within colors

Table 6.11: Distribution of Green Public Spaces in Bağcılar Survey Results.

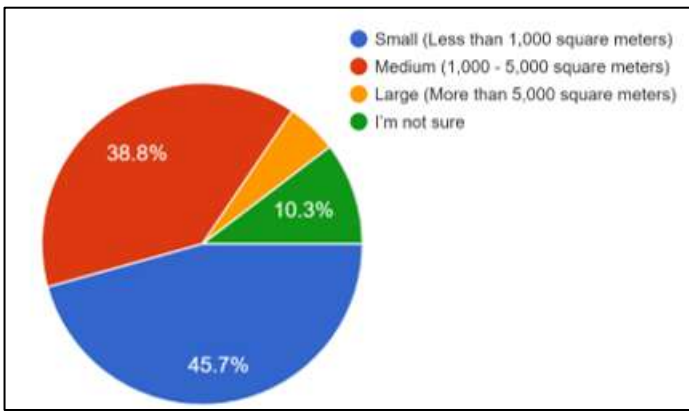


point	Frequency	Percentage
Strongly agree	5	4.3%
Agree	18	15.7%
Neutral	35	30.4%
Disagree	22	19.1%
Strongly disagree	35	30.4%
Total	116	100%

Shows that 30.4% of participants are neutral about the distribution of green public spaces in Bağcılar, while 19.1% disagree and 30.4% strongly disagree. Only 15.7% agree, and 4.3% strongly agree. The survey results show people are unhappy with how the district distributes public green spaces (see Table 6.11).

6.7.3.2 Cultural sensitivity analysis

Table 6.12: Size of The Green Public Spaces in Bağcılar Survey Results.

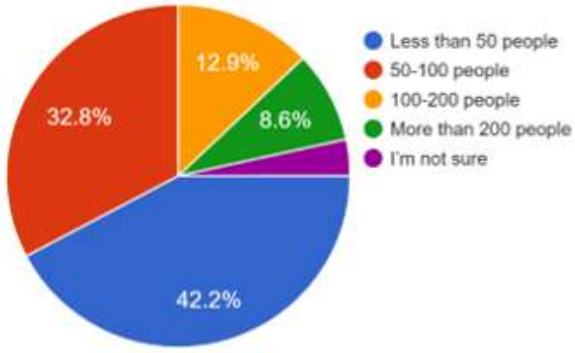


size	Frequency	Percentage
small	53	45.7%
medium	45	38.8%
large	6	5.2%
Not sure	12	10.3%
Total	116	100%

As shown in Table 6.12, this analysis evaluates the small park located in a densely populated residential area of Bağcılar. The focus is on assessing all aspects of the space, from how accessible it is to everyone to how inclusive its design is, to see if it meets community needs.

Indicates that 45.7% of participants perceive green public spaces in Bağcılar as small, 38.8% as medium-sized, and only 5.2% as large. Additionally, 10.3% are unsure about the size. This suggests that most green spaces are relatively small, highlighting the need for larger and more diverse green areas in the district.

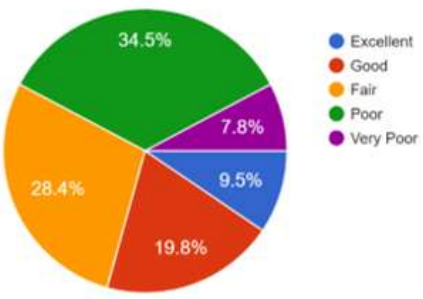
Table 6.13: Capacity of Green Public Spaces Survey Results.



size	Frequency	Percentage
Less than 50	49	42.2%
50-100	38	32.8%
100-200	15	12.9%
More than 200	10	8.6%
I'm not sure	4	3.4%
Total	116	100%

As in Table 6.13, 42.2% of participants believe green public spaces can accommodate fewer than 50 people at once, while 32.8% estimate 50-100 people, and 12.9% estimate 100-200 people. Only 8.6% think these spaces can host more than 200 people, and 3.4% are unsure. Research reveals that many people see green spaces as lacking enough space, so we need bigger facilities to serve everyone.

Table 6.14: Rate the Overall Condition of Nearest Green Public Space Survey Results.



Rate condition	Frequency	Percentage
Excellent	11	9.5%
Good	23	19.8%
Fair	33	28.4%
Poor	40	34.5%
Very poor	9	7.8%
Total	116	100%

As shown in Table 6.14, 34.5% of participants rated the condition of their nearest green public space as poor, while 28.4% rated it as fair. Only 19.8% considered it good, 9.5% rated it excellent, and 7.8% rated it very poor. These findings indicate a general dissatisfaction

related to the quality of green public spaces, highlighting the need for improvements in maintenance and facilities.

6.7.4 Social Cohesion Analysis

Table 6.15: Facilities Provided in The Green Public Spaces in Bağcılar Survey Results.

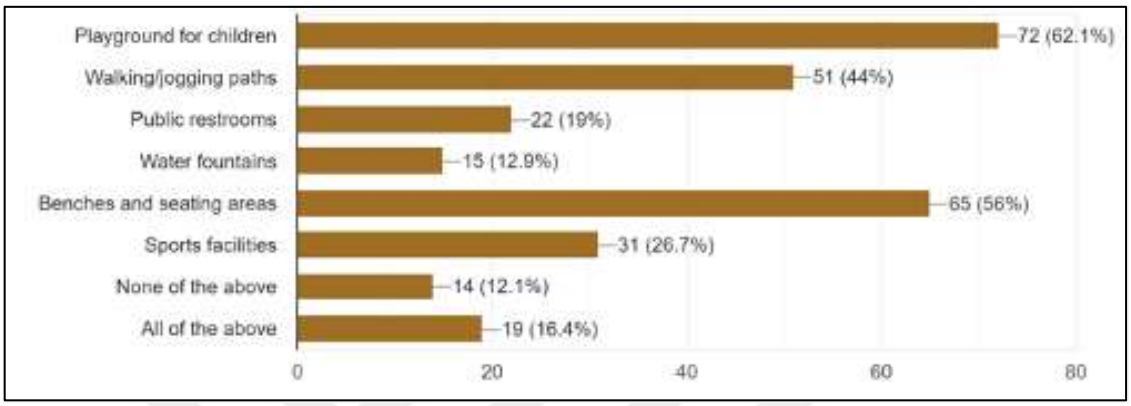
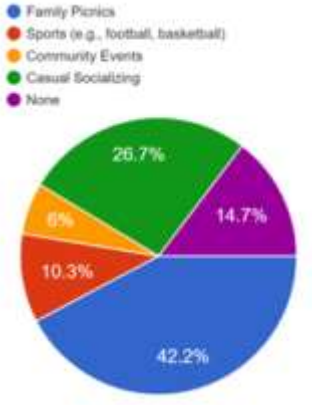


Table 6.15 illustrates the availability of facilities in green public spaces in Bağcılar. Playgrounds for children are the most common facility (62.1%), followed by benches and seating areas (56%) and walking/jogging paths (44%). Sports facilities are present in 26.7% of spaces, while public restrooms (19%) and water fountains (12.9%) are less frequent. Notably, 16.4% reported that all facilities were present, while 12.1% stated none were available. This highlights the need to enhance the Basic facilities, such as water fountains and public restrooms, to ensure they are maintained.

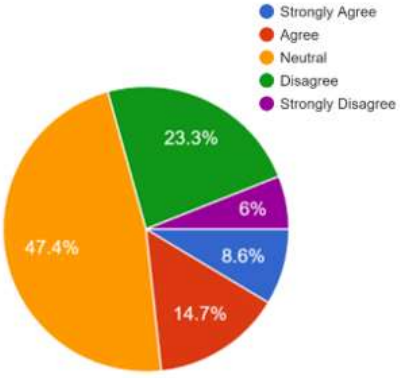
Table 6.16: Types of Social Activities In: Green Public Spaces Survey Results.



Activity types	Frequency	Percentage
Family picnics	49	42.2%
sports	12	10.3%
Community events	7	6%
Casual socializing	31	26.7%
None	17	14.7 %
Total	116	100%

Table 6.16 shows that family picnics are the most common social activity in green public spaces (42.2%), followed by casual socializing (26.7%). Sports activities are participated in by 10.3%, while community events account for only 6%. Notably, 14.7% of participants do not engage in any activities. This suggests the possibility of promoting more varied uses of green spaces, such as planned community events, even while family-oriented and casual socializing activities are everyday.

Table 6.17: Community Connection Through Green Spaces in Bağcılar Survey Results.



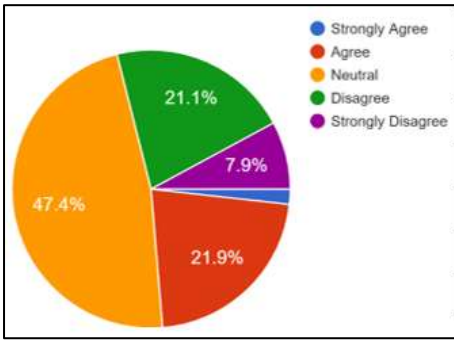
Rate	Frequency	Percentage
Strongly Agree	10	8.6%
Agree	17	14.7%
Neutral	55	47.4%
Disagree	27	23.3%
Strongly Disagree	7	6%
Total	116	100%

Table 6.17 shows that 47.4% of participants feel neutral about green spaces in Bağcılar, helping them connect with their community. Meanwhile, 23.3% disagree, and 6% strongly disagree. On the positive side, 14.7% agree, and 8.6% strongly agree. This suggests the possibility that most participants do not strongly associate green spaces with fostering community connections, indicating a need for targeted initiatives to improve their social role.

6.7.5 Quality of Life

6.7.5.1 Enhancing well-being

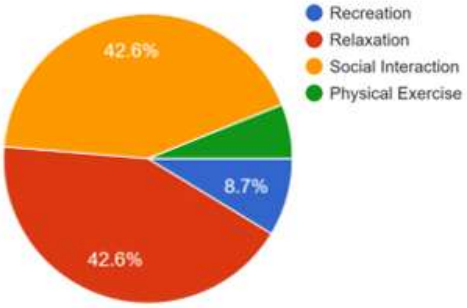
Table 6.18: Sense of Belonging Survey Results.



Rate	Frequency	Percentage
Strongly Agree	2	1.8%
Agree	25	21.9%
Neutral	54	47.4%
Disagree	24	21.1%
Strongly Disagree	9	7.9%
Total	116	100%

Table 6.18 reveals the participants' sense of belonging in green public spaces. Nearly half of the respondents (47.4%) remain neutral on the subject, while 21.9% agree and 1.8% strongly agree that they feel a sense of belonging. Conversely, 21.1% disagree, and 7.9% strongly disagree. This suggests that the possibility of these green public spaces in Bağcılar does not significantly foster a sense of belonging for many residents, indicating a need for strategies to enhance community engagement and identity within these spaces.

Table 6.19: Aspects of Green Public Spaces Survey Results.

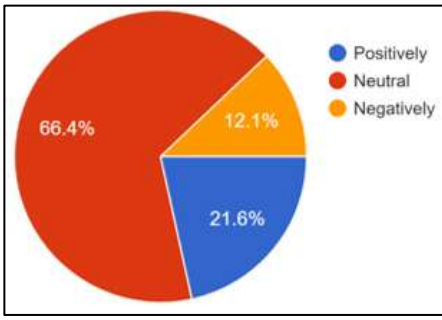


Aspects	Frequency	Percentage
Recreation	10	8.7%
Relaxation	49	42.6%
Interaction	49	42.6%
Physical Exercise	7	6.1%
Total	116	100%

Table 6.19 clarifies the primary aspects of green public spaces as perceived by participants. Relaxation and social interaction were the most common purposes, with both being selected by 42.6% of respondents. Recreation was identified by 8.7%, and physical exercise by only 6.1%. This recommends the possibility of green public spaces in Bağcılar are primarily valued for their calming and social benefits, while recreational and physical exercise opportunities are less emphasized. This highlights the potential to diversify the functions of these spaces to cater to a broader range of activities and preferences.

6.7.5.2 Impact on daily life

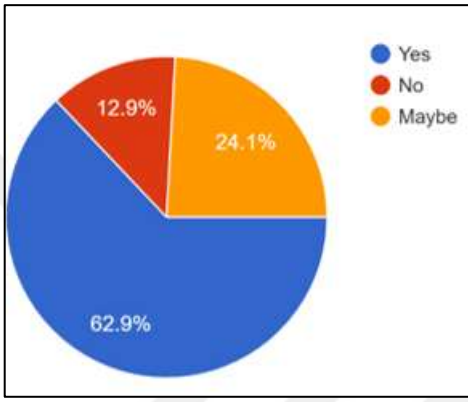
Table 6.20: Quality of Life Survey Results.



impact	Frequency	Percentage
Positively	25	21.6%
Neutral	77	66.4%
Negatively	14	12.1%
Total	116	100%

Table 6.20 shows that green public spaces are believed to enhance people's quality of life. The most participants (66.4%) had a neutral assessment, indicating neither a substantial positive nor negative answer. Conversely, 21.6% had a positive influence and 12.1% reported a negative impact. Possibility shows that even if green spaces have some positive impacts, their overall effect on people's quality of life may be increased, underscoring the need for functional, accessible, and design changes to better serve community needs.

Table 6.21: Prioritize Low-Income Neighborhood Survey Results.

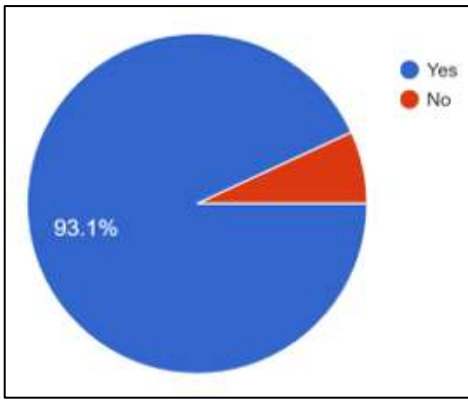


rate	Frequency	Percentage
yes	73	62.9%
no	15	12.9%
Maybe	28	24.1%
Total	116	100%

Table 6.21 shows that 62.9% of participants believe green public spaces should prioritize low-income neighborhoods, while 24.1% responded with "maybe," and 12.9% disagreed. The survey participants resulted in strong support for prioritizing resource allocation and green space development in low-income areas to promote equity and inclusivity in urban planning

6.7.5.3 Security

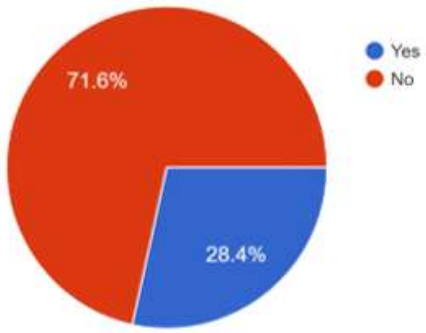
Table 6.22: Feeling Safe Using the Green Spaces During the Day Survey Results.



rate	Frequency	Percentage
yes	108	93.1%
no	8	6.9%
Total	116	100%

Table 6.22 shows that 93.1% of participants feel safe using green spaces during the day, while only 6.9% do not. This result specifies that most users perceive these spaces as safe environments during daylight hours, which is a positive aspect for their usability and accessibility.

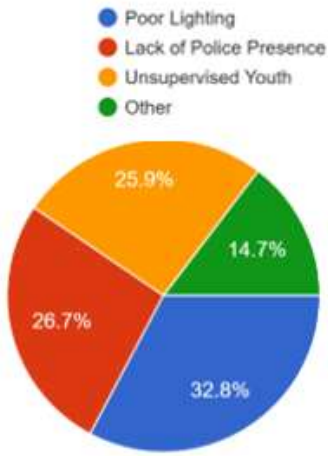
Table 6.23: Using the Green Spaces at Night Survey Results.



rate	Frequency	Percentage
yes	83	71.6%
no	33	28.4%
Total	116	100%

Table 6.32 shows that 71.6% of participants use green spaces at night, while 28.4% do not. The majority feel comfortable utilizing these spaces in the evening for nighttime accessibility and safety.

Table 6.24: The Primary Safety Concerns Survey Results.



Primary safety concerns	Frequency	Percentage
Poor lighting	10	32.8%
Lack of police presence	17	26.7%
Unsupervised youth	55	25.9%
other	27	14.7%
Total	116	100%

Table 6.24 identifies the key safety challenges that green public spaces face. 32.8 percent of people mention poor lighting as their main safety concern, while 25.9 percent and 26.7 percent follow with youth unsupervised areas and police absence, respectively. Other safety issues made up 14.7% of the responses. According to our study results, fixing lighting problems and making security visible at night can make green spaces safer.

6.7.6 Summary of The Survey Results of Bağcilar District

Table 6-17 and Table 6-18 show that green spaces get much less use at night compared to daytime. Most participants (93.1%) feel protected in green spaces during daylight hours, but this drops to 71.6% during night hours. As a result, 28.4% avoid going to these areas after dark. Table 6-15 shows what safety issues make people avoid using green spaces at night. People most often raise concerns about weak lighting (32.8%) before mentioning youth who use areas without supervision (25.9%) and police absence (26.7%). The study shows that people consider green spaces secure during daylight, but better lighting, security, and police presence would make them safer at night. By solving these safety problems, we create green spaces that serve everyone in the community.

Table 6.25: Summary of the Survey Results.

Dimension	**Survey Indicators**	**Observation**
Accessibility	Distance to park, transport mode	43% live >500m from nearest park
Safety	Feeling safe during day/night, safety concerns	Only 21% feel safe at night
Quality of Life	Park condition ratings, usage frequency	Parks rated moderate; limited evening use
Belonging	Sense of neighborhood identity, emotional attachment	Higher among youth
Social Cohesion	Participation in activities, community interaction	Low levels of organized activity reported
Equity	Income levels vs. park access	Perceived inequality in low-income areas
Participation	Feedback mechanisms, inclusion in planning	Limited; few reported involvement
Human Rights	Free access, equitable treatment	Concerns over distribution and inclusivity

The survey findings confirm that residents of Bağcılar experience considerable inequality in access to and quality of green public spaces. While physical access is a challenge in itself,

social dimensions such as perceived inclusivity and public participation are also significantly lacking. These deficits undermine efforts toward social cohesion and community well-being. The results support the need for more equitable design interventions and for prioritizing the voices of marginalized groups in planning processes, with the thesis's conceptual dimensions of social sustainability. Questions on accessibility and safety demonstrate spatial and social barriers to green space use. Responses on belonging and cohesion illustrate weak community integration, especially in older demographics. Perceptions of inequality directly support the critique of unequal green space distribution from the GIS findings. Finally, the lack of public participation in decision-making processes reflects an urgent need for inclusive urban governance. Together, these results validate the applied framework and provide user-centered data supporting policy and design recommendations. (see Table 6.25).

a. 43% of respondents live more than 500 meters from their nearest park, indicating significant accessibility concerns.

b. Only 21% of residents feel safe using green spaces at night, reflecting both real and perceived security issues.

c. Overall, quality of life in relation to green space was rated as moderate, with limited use during non-daylight hours.

d. Younger residents reported a stronger sense of belonging, while older demographics showed lower engagement.

e. Low levels of organized activity and weak feedback channels suggested limited community cohesion and participation.

The following part of the Bağcılar analysis, which evaluates two of the green public spaces in Bağcılar, this evaluation is to understand the current condition of these parks according to the social sustainability dimensions and the core theories that has been discussed in this research to understand what type of strategies needed to be implemented to enhance the social sustainability in provide a set of recommendation in the fowling chapter in this research.

6.8 EVALUATION OF SELECTED PARKS IN BAĞCILAR

In this section, I analyzed two of the parks in bağcılar. One of them is a big park which is in Güneşli (Aliya Izzet Begoviç Park). The second one is a small park (M. Fevzi Çakmak Park) that is for kids, which is considered that this type of park is the most built type of green spaces in bağcılar rather than open spaces areas or other public areas due to massive number of kids and young age people living in this region.

6.8.1 Aliya Izzet Begoviç Park Urban Green Public Park

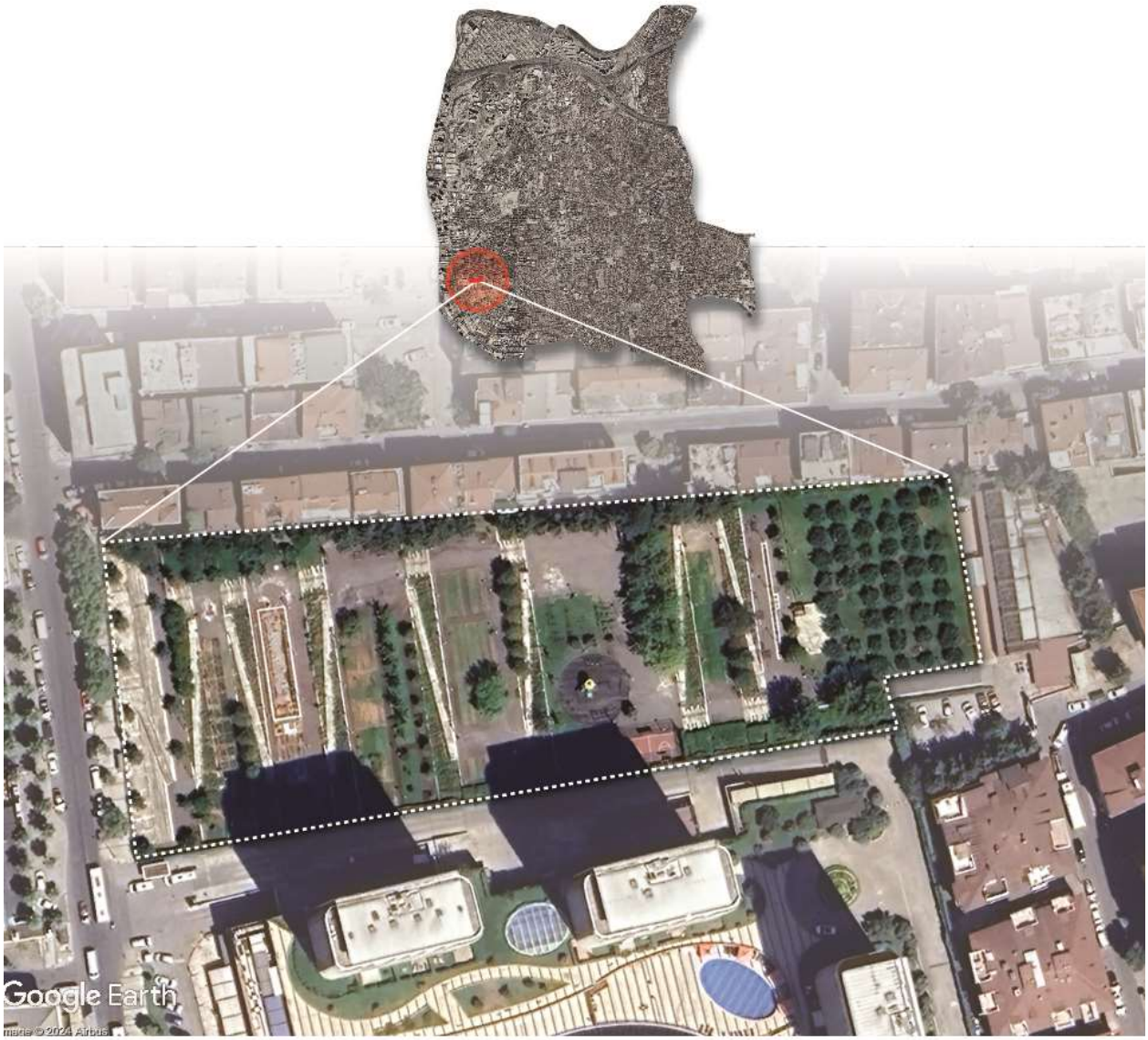


Figure 6.21: Location of Aliya Izzet Begoviç Park in Bağcilar, Prepared by Author.

Aliya İzzet Begoviç Park is a prominent space in the neighborhood that serves the people living in güneşli neighborhood and is considered a big park, approximately 9000 Square meters, with multilevel topography centered between residential blocks (see Figure 6.21).

Factors Influencing Accessibility

a. Design Elements:

    i. Fences form an outer boundary around the park, restricting the easy movement while blocking outside views.

    ii. The walkways are narrow and precise, with basic landscaping elements that are easy to understand.

    iii. Only a few seating areas exist

b. Environmental Factors:

    ii. Few plants and limited trees make the park hard to enjoy for visitors.

    iii. With its small size and enclosed layout with the ramp, the park cannot serve a vast number of people or a public event.

a. User Satisfaction:

    i. Regular Park benches are one of the amenities in the park, but there are a few other community activities.

b. Demographic Factors:

    i. The park is designed to serve as both a senior citizens' space and a kids ‘space.

    ii. The park’s infrastructure and design better suit passive rather than active recreational activities.

Figure 6.22: Aliya İzzet Begoviç Park Barriers Analysis, Prepared by Author.

The park is positioned between residential blocks with two gated entrances, as shown in Figure 6.22. The park's design layout determines how well people can use and move through it. The park's running fence has blocked physical access and visual sightlines, restricting movement throughout these spaces. Although the park features organized pathways, these pathways are narrow and only serve basic amenities, with limited greenery. The park's sitting areas are essential and poorly positioned, which makes them hard to use.

People using the park show strong dissatisfaction because it fails to offer welcoming areas or exciting facilities. The few benches available do not create enough space for people to connect. The park's position in a residential area means it can be used by seniors and families, but its basic facilities cannot meet their needs. The space mainly serves people who want to relax, but it does not offer enough space for active users to join in. There was a lack of entrances that could integrate with the surrounding buildings, even existing features such as a fountain. It appeared that a lack of maintenance and the wall surrounding the park added a layer of isolation within the residential surrounding buildings.

Figure 6.23: Aliya İzzet Begoviç Park Analysis, Prepared by Author.

Aliya İzzet Begoviç Park demonstrates how physical barriers and exclusive design features can reduce the social utility of green public spaces. Despite being centrally located, the park fails to facilitate interaction or a sense of community. (see figure 6.23).

a. Limited Park access and low spatial permeability restrict neighborhood integration.

b. Poor infrastructure and the absence of user-specific facilities lower the quality of stay.

c. Marginalized groups. Especially women, the elderly, and people with disabilities are underrepresented among users.

Table 6.23 shows that these outcomes highlight a breakdown in multiple social sustainability dimensions: equity, participation, and quality of life. Redesign strategies should prioritize walkable entry points, safety enhancements, and community-led planning mechanisms.

Table 6.26: Evaluation Results: Aliya İzzet Begoviç Park Analysis, Prepared by Author.

Dimension	**Assessment**
Accessibility	Few entry points; lacks pedestrian connectivity
Safety	Poor lighting; isolated corners
Quality of Life	Limited amenities; lacks shaded seating
Belonging	Poor neighborhood visibility
Social Cohesion	No structured activities or meeting spots
Equity	Underused by vulnerable groups
Participation	No evidence of co-designed elements
Human Rights	Open access but not inclusive

B. Factors Influencing Equity:

a. Improve Accessibility: The seating elements are old and basic. The park is less inclusive because of the restricted entry and the walls around it.

b. Engage Public Participation: Community members can join efforts to make the park work and look better.

c. Design for Cultural Sensitivity: The park lacks cultural or locally relevant features that could make it more engaging for the community.

d. Enhance Access for Poor Communities: Its central location is accessible to nearby residents but lacks facilities to encourage equitable use.

Figure 6.24: Aliya İzzet Begoviç Park Proposed Solutions Analysis, Prepared by Author.

From the standpoint of equity, several changes are required. Accessibility needs to be taken care of first. The park's surrounded by walls that limit physical access, while the two entrances lessen inclusivity (see Figure 6.24). Furthermore, no locally or culturally relevant characteristics in the park would increase its value to the neighborhood. Despite being conveniently positioned and reachable by locals, it lacks amenities to promote equitable use, especially for low-income families. Functions needed to be added to serve all ages with diverse activities, lights, and adventures in different forms and shapes to increase security and implement cultural elements to increase its value to the neighborhood.

The following park is considered one of the most common parks within the Bağcılar region. It is commonly used as a playground for kids, so it was selected as an example for this research.

6.8.2 M. Fevzi Çakmak Urban Green Public Park

Figure 6.25: M. Fevzi Çakmak Park Location, Prepared by Author.

A small urban park stands in the middle of a densely built residential community in Bağcılar, Istanbul. The park serves as a localized green space, as the kids surround the area. The following analysis evaluates its spatial characteristics, accessibility, and urban integration. Houses stand tight next to each other, forming an urban layout surrounding the park. Its enclosed space and pathways make it hard to fit into city life. (see figure 6.25). The park area designated for children includes basic playground equipment without modern exciting attractions. The few trees in an urban area help make the environment greener. The space restricts its usage choices because it stays compact and structured.

A. Factors Influencing Accessibility:

a. Design Elements: Poorly maintained access ramps make it hard for disabled people to get around and use facilities equally. The park's access is limited because walls and entry gates restrict people from entering through specific areas.

b. Environmental Factors: Physical barriers from fences limit the number of people entering the space. The gated entrance builds a sophisticated yet private space that may turn away random visitors and block views from nearby streets.

c. User Satisfaction: Few access points combined with poor infrastructure elements create negative experiences for users who want complete and easy access to the park. Adults have fewer recreation options in the park.

d. Demographic Factors: People with disabilities and walking-dependent residents face more obstacles when trying to use public spaces. Due to its small space and child-friendly design, the park serves mainly children and young people, but it offers few benefits to adults and senior citizens.

Table 6.27: Evaluation Results of the M. Fevzi Çakmak Park, Prepared by Author.

Dimension	**Assessment**
Accessibility	Secluded but multiple entrances
Safety	Better lighting, but road barrier exposure
Quality of Life	Varied facilities; better comfort
Belonging	Embedded in residential context
Social Cohesion	Informal gathering spaces available
Equity	Not fully inclusive to gender and disabled groups
Participation	Standard municipal design: no user engagement noted
Human Rights	Restricted usability for elderly and disabled

The park has direct access from nearby narrow roads to serve its neighborhood residents. The park's security barriers and controlled access limit how easy it is to move through the area and block views to the surrounding streets. The park's disabled access ramps need repairs to help everyone enter the space safely. The park's exclusive design discourages random visitors from entering while keeping the space private, which reduces its public access value. The park struggles to reach major roads because of poor accessibility. (see Table 6.27).

a. More inclusive spatial layout supports better social interaction and perceived safety.

b. Facilities cater to broader age groups, improving usability and comfort.

c. However, infrastructural and design elements still fall short in meeting the needs of disabled users.

M. Fevzi Çakmak Park exhibits relatively improved performance across most social sustainability indicators compared to Aliya İzzet Begoviç Park. Nevertheless, it too suffers from a lack of participatory design and equitable access for all demographics. This evaluation emphasizes that even well-equipped parks can miss critical inclusivity goals without community-informed design processes and universal accessibility measures. These independent assessments make it evident that although M. Fevzi Çakmak Park performs better across several dimensions, neither park fully achieves the integrated goals of social sustainability. Both cases underscore the importance of user-centered and inclusive design in future urban green space development.

Figure 6.26: M. Fevzi Çakmak Park Barriers Analysis, Prepared by Author.

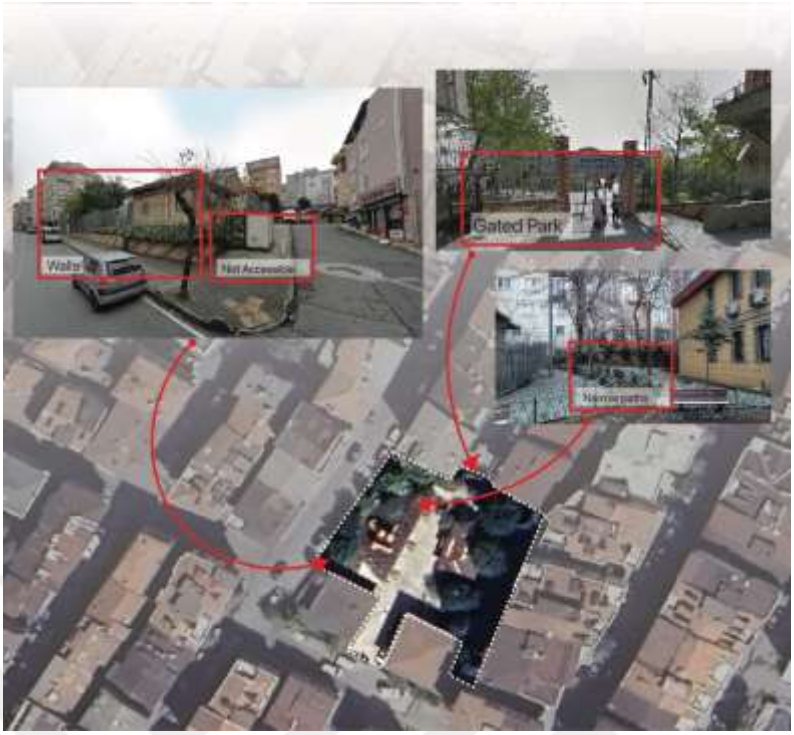


Figure 6.27: M. Fevzi Çakmak Park Analysis, Prepared by Author.

Social Inclusivity: The park's small size and closed layout show it is best suited for quiet relaxation and walking. Although this space serves residents, it fails to create an inclusive area for different types of users. The small playground offers little entertainment for children, and the park's design keeps disabled people from using it. The park lacks spaces for everyone, plus special spots for different age groups and cultural backgrounds, so it cannot become a meeting place for many people (see Figures 6.26-6.27).

Environmental Considerations**:** The park's green spaces help improve the urban microclimate by providing shade and beauty to this dense urban setting. However, the park's simple plantings make boosting natural ecosystems and wildlife diversity harder. The park's sparse trees show they cannot significantly reduce urban heat island temperatures nearby (see Figure 6.28).

Figure 6.28: M. Fevzi Çakmak Park Analysis Solutions, Prepared by Author.

B. Factors Influencing Equity:

a. Increase Accessibility: Removing or modifying boundary fences improves both physical and visual ways to move through spaces. Fixing ramps to follow disability standards makes improving disabled users' access to buildings easier.

b. Enhance Inclusivity: Creating spaces that serve several purposes, like upgrading playgrounds and adding shade areas and small activity spots, will draw more people to public spaces. Universal design features help everyone use spaces better, making life easier for disabled and senior citizens.

c. Improve Connectivity: Increase the park's visibility and usage.

d. Augment Green Features: Expanding tree coverage and adding diverse vegetation can improve ecological value and provide greater environmental benefits.

e. Encourage Community Engagement: Collaborative design initiatives involving the residents can ensure the park better reflects the community's needs and aspirations.

The park offers substantial potential to serve its local community. It shows promise, but its present barriers make it hard for everyone to use it effectively. The poor ramp condition alongside the basic playground shows that we need specific actions to make the park available and valuable for everyone. Strategic changes will make the park an asset that improves neighborhood relationships and environmental standards in Bağcılar.

6.8.3 Summary of the Selected Urban Green Public Spaces Evaluations in Bağcilar

This section summarizes and identifies Aliya İzzet Begoviç Park and M. Fevzi Çakmak Green Public Spaces, and proposes concise, practical strategies that will enhance each park's role as an open, safe, comfortable, and socially engaging space for all residents to strengthen its overall social sustainability (see Table 6.28).

Table 6.28: Comparative Findings and Recommendations for the Selected Urban Green Public Spaces in Bağcılar, Prepared by Author.

Factor	**Aliya İzzet Begoviç Park: Issues**	**M. Fevzi Çakmak Park: Issues**	**Recommendations**
Access	- High walls and locked gates- No ramps or continuous paths from streets	- Entrances behind fences- Broken or missing sidewalks	- Use low railings or planting beds instead of walls- Create new gates aligned with sidewalks- Install gently sloping ramps at each entry
Safety	- Dark spots under overgrown shrubs- No sightlines to surrounding streets	- Good lighting but edges border busy roads- Hidden back niches	- Prune edge vegetation to open views- Add low-glare LED lights along all routes and perimeter- Maintain clear sight corridors to encourage informal surveillance

Table 6.28: Comparative Findings and Recommendations for the Selected Urban Green Public Spaces in Bağcılar, Prepared by Author "Table Continued".

Comfort & Wayfinding	- Benches hidden behind walls- Signs end at fences	- Shelters only near playground- Paths stop at barriers	- Cluster benches near open edges visible from the street- Use pergolas or shade trees instead of solid shelters- Extend simple wayfinding from sidewalks into seating areas
Belonging	- Solid fencing creates separation- No local art or cultural markers	- Road barriers isolate park- No visual links to community life	- Lower fences to planter walls or decorative railings- Invite community groups to paint entry mosaics- Align gates with nearby homes and gathering spots
Social Space	- Large lawns lack gathering spots- No movable seating for groups	- Small plaza with fixed benches- Shade is uneven	- Define open "social nooks" at park edges- Provide lightweight, movable benches and tables- Host pop-up events (markets, performances) spilling onto sidewalks
Equity	- Steep steps block elderly or wheelchair users- Fast-closing gates	- Ramps too steep- No tactile paving or audio cues	- Regrade ramps to universal-design standards- Install self-opening or wide swing gates- Add tactile guide strips from street into park core
Participation	- No visible channels for resident feedback- Rules posted behind gates	- Fully top-down design- Notices only inside fenced areas	- Install open "idea boards" at each entry- Hold quarterly co-design workshops in edge zones- Publicize meetings via local cafés and community center
Inclusivity	- Uniform bench heights; no varied rest points- Play areas fully fenced	- Few seating types; no low-vision signage- Activity zones isolated	- Integrate stepped seating walls and leaning rails of various heights- Replace rigid fences with planter beds or bollards- Add clear audio/tactile signs along main loops

The physical and social barriers have been developed in both parks through gated parks with walls and hidden corners. These urban green public spaces, the edges needed to be more

integrated with surrounding areas and replace these solid walls with low railings and new gates, keep the vegetation on the edges and inside the parks short to provide clear visibility, and enhance lighting to transform the parks into safer and friendlier places for the residents. The arrangement of shaded seats in clusters and the continuation of easy wayfinding signage in the park would entice people to linger and look around. Also include residents in the design solutions to introduce entrance art, e.g., specify movable furniture to outline flexible "social nooks" to enhance neighborhood identity and facilitate informal meetings. Ensuring that all people can move openly by designing softer ramps, automatically opening gates, and braille tracks will enable free movement of all people, old and young, families, and those with disabilities. Lastly, open-air idea boards and regular co-design workshops would allow residents to influence park regulations, activities, and small-scale improvements, making every green space a real community center.

As this research focused on the social sustainability theories, after the analysis was conducted, following the methodological basis of this research, the following chapter presents the findings of this research for Bağcılar.

7. FINDINGS

A comprehensive understanding of how the green spaces contributed to the social sustainability in Bağcılar was made possible by combining descriptive and inferential statistics with qualitative content and analysis. While the qualitative study provided a more in-depth understanding of the citizens' lived experiences, the quantitative analysis explained the significant connections between the demographic properties and social sustainability limitations. Residents in lower-income communities, for instance, reported having less access to the green spaces, according to the survey, which supports the idea that socioeconomic factors influenced how people use the public spaces. Safety issues as well, specifically those about ineffective amenities and bad lighting. The mixed methods approach used in this thesis allowed for a comprehensive consideration of the social sustainability in Bağcılar's green areas by combining the statistical analysis with the qualitative statements.

In the social sustainability framework, considering the green public spaces in the Bağcılar district exposed both important views and concerns. With limited green areas, physical barriers, and inadequate paths limiting public accessibility, accessibility became a central issue. By limiting fair use of current spaces, the district's urban fabric, which is marked by high population density and socioeconomic disproportions, exacerbates this problem. While some demographic groups, including the youngsters and the elderly, may greatly benefit from better access, existing designs fall short of sustaining their requests, according to the survey data and interpretations.

The non-appearance of interesting aspects, such as cultural factors or well-planned entertaining areas, severely impacts existing parks' effectiveness and attractiveness. Their functionality as the district centers is further reduced by their lack of vegetation and poor preservation. Even though it has a central position, areas such as Aliya Izzet Begoviç Park show the district-wide bias of underutilization because of physical fences, a lack of cultural integration, and a lack of facilities. Bağcılar's green public areas show a significant environmental inequality when seen through the equity lens. The urban centre outline is directed by the high-concentration areas, but low-integration boundary areas commonly lack enough green space or public transportation networks. Residents' thoughts of their general quality of life, sense of security, and sense of belonging all indicate these distinctions.

Although centre areas serve densely populated metropolitan spaces, diversity and a range of social activities are not entirely supported by their structural design.

This comprehensive approach provided a strong framework for comprehending the intricate relationships between social sustainability and urban green areas in a heavily populated area of Istanbul. Understanding how locals engage with public green spaces requires considering the aspects of accessibility, inclusivity, social equality, and quality of life.

An informed response to these research results through context-specific urban design interventions and participatory community engagement approaches integrated at the framework and dimension levels of social sustainability can be an effective means of improving social sustainability and bringing real benefits to how people live in Bağcilar, which according to the all analysis, the comparative evaluation of the survey results with the morphological analysis that conducted in this research, this chapter provides a set of recommendations as the findings of this research to enhance the Bağcılar's green public spaces..

a. Connectivity and Accessibility of Bağcılar Region: Significant differences in access to green public spaces between the neighborhoods have been identified using spatial analysis. Although there was a 500-meter buffer zone of green space around the specified spaces, physical accessibility was limited by barriers such as inadequate access and limitations. Specifically overlooked were. The secondary neighborhoods emphasize the need to expand the green space and improve the connection.

b. Social Cohesion and Inclusivity of Bağcılar Region: According to survey results, the community's varied demands were commonly not met by the green areas that were already there. These areas' potential as a Centre for social interaction and cohesion is diminished by their lack of attractive descriptions and the limited facilities, which limit them to inactive leisure time activities. This was particularly noticeable in the parks, such as Aliya İzzet Begoviç Park, which lacked the architectural characteristics required to foster inclusion and active participation, regardless of its central location.

c. Visual Appeal and Environment of Bağcılar Region: Another significant problem was maintaining green public spaces. Dispersed vegetation, poorly maintained landscaping, and minimum tree coverage reduced these spaces' eco-friendly environmental and

aesthetic value. These defects also made parks less usable during peak hours by strengthening the impact of the urban heat island. Improving these spaces' aesthetic and ecological qualities might significantly improve their capacity to adopt community participation and well-being.

d. Security and Safety of Bağcılar Region: One frequent topic was security issues, particularly at night. These spaces were further confined by the limited or unwelcoming state commonly constructed by the barrier and the lack of open conditions. Adopting security through better design and community monitoring might promote larger and safer usage.

e. Community Engagement and Equity of Bağcılar Region: The dispersion of green spaces has been affected by economic investigation, which has also proved that low-income neighborhoods have a harder time getting access to good public areas. This inequality highlights the importance of prioritizing disadvantaged groups in equitable urban layout. Furthermore, the study discovered an unavailability of the regionally or culturally applicable factors, showing a chance to incorporate the locals in co-designing spaces that symbolize their requirements and conventions.

The study outcomes also emphasized the importance of urban planning in promoting social harmony. Public spaces are essential for building communal interactions; nevertheless, in their current state, they are commonly divided rather than bringing people together. Issues such as ineffective enlightenment, limited entrances, and a lack of participatory planning practices worsen this distribution. Furthermore, survey results proved that many citizens believe the current spaces are unsafe, especially at night, because of the low visibility and insufficient illumination (see Table 7.1).

Table 7.1: Comprehensive Findings Table of the Research, Prepared by Author.

Dimension	Quantitative Findings	Qualitative Insights	Recommendations
Accessibility and Connectivity	- 65% reported limited access- Secondary neighbourhoods exhibited notably lower connectivity scores	- Inadequate pedestrian infrastructure- Limited entrances cited as significant barriers	- Enhance pedestrian pathways- Add additional entrances- Prioritize peripheral neighbourhoods
Social Cohesion and Inclusivity	- Only 32% satisfied with amenities- 48% reported limited or no engagement	- Lack of culturally relevant and diverse recreational facilities	- Integrate inclusive design- Create multifunctional spaces
Visual Appeal and Environmental Quality	- Only 28% rated visual appeal positively- Dispersed vegetation coverage contributing to urban heat island	- Poor maintenance- Insufficient greenery and shaded areas	- Enhance tree coverage and landscaping- Regular maintenance programs
Security and Safety	- 70% reported safety concerns- Poorly lit parks significantly underutilized	- Insufficient lighting- Poor visibility creating insecurity	- Improve lighting, especially pathways and entrances- Design open layouts for visibility
Community Engagement and Equity	- 60% of economically disadvantaged respondents dissatisfied with distribution	- Facilities less maintained in lower-income neighbourhoods- Lack of culturally relevant amenities	- Prioritize development in disadvantaged areas- Active participatory planning with diverse socio-economic groups

The results are consistent with the insignificant concept of social sustainability, emphasizing the necessity of:

a. Improve accessibility: Some strategies include reducing physical barriers, increasing access to entrances, and expanding the connectivity of green spaces to serve the area.

b. Improve inclusivity: It consists of various amenities and design characteristics that adapt to different age groups and activities.

c. Aesthetics and enhancements of the environments: increasing the amount of vegetation, tree coverage, and landscaping design to improve visible activity.

d. Communities' contribution is engaging citizens in the design and improvement of green public spaces to promote diversity and cultural significance.

e. Safety Improvements: Including illumination and open outlines to improve security and promote usage.

This comprehensive analysis highlights critical barriers and opportunities related to social sustainability through urban green spaces in Bağcılar. Accessibility challenges also limit social inclusivity, inadequate environmental quality, safety concerns, and evident socio-economic disparities collectively undermine community well-being, social cohesion, and quality of life. Addressing these interconnected issues requires strategic, targeted interventions that combine urban design improvements, systematic maintenance, safety enhancements, and inclusive community engagement practices. Implementing these recommendations will significantly enhance the effectiveness and attractiveness of Bağcılar's green public spaces, directly contributing to broader social sustainability goals.

8. CONCLUSION

This thesis aimed to explore the social sustainability within the urban green spaces. These spaces are utilized by the citizens from diverse socio-economic environments and ethnicities for community interaction. The Bağcılar district, identified for its comprehensiveness, which, compared to the other urban green areas, was chosen as the critical point of this study. A case study in Bağcılar, Istanbul, evaluated how these spaces support the key ideas necessary for social sustainability.

The findings conclude that the urban green areas facilitate essential social sustainability dimensions. It adopts a sense of belonging and encourages human rights and participation, which are essentially tied to the social connections created through interactions. These spaces are required for improving the environment, contributing to social interactions, and are fundamentally inclusive, delivering facilities to all citizens without discrimination. Promoting equity and reducing poverty create identical opportunities for all visitors.

Key insights from the Bağcılar case study reveal the essential aspects influencing social sustainability within urban green public spaces. The district's accessibility is compromised by inadequate instructions and a lack of outlines accommodating people with challenges. Even standard security measures, which are known as the social connections, contribute to a sense of security in these places. Even though there aren’t any visible geographical divisions, social cohesion becomes less effective when the community connections aren't maintained. Visitor satisfaction is closely tied to linking the entertaining and attraction requirements, which finally improves the living environment and a higher quality of life. Additionally, confident connections are promoted within the area, which fosters a sense of belonging and encourages revisits. These spaces become more attractive when both resources and opportunities are distributed equally, and their democratic character is improved by the chance of communication and inclusivity across social, linguistic, religious, and belief divides, which expands the social networks and develops involvement opportunities.

Social sustainability is also greatly influenced by demographic factors. Lower-income visitors showed more social cohesion and commitment to creating associations than higher-

income groups. Men believed that the green areas offered more opportunities to improve equality and well-being than women. While older persons emphasized the strength of social networks and accepted the lack of arguments, younger visitors showed a higher sense of belonging. Additionally, people with higher incomes were less secure in these areas; however, they were informed that accessibility should be improved. These findings highlight how urban green public spaces are necessary for enhancing social commitment, inclusion, and community well-being. Propose environmental features, such as urban furniture, parks, lighting, and recreational facilities, which are fundamental in improving social collaborations and adopting social sustainability.

The study highlights that combining social sustainability into the design and improvement of urban green public spaces can help create a healthier community with strong social connections. The scale developed in this thesis affords a beneficial foundation for future investigation. Nonetheless, the exclusive properties of each green public space require modifications in future studies. Additionally, the research could investigate diverse urban green typologies and more deeply examine the dimensions such as security, quality of life, and public contribution.

REFERENCES

Açıkgöz, R., & Yusufoğlu, Ö. Ş. (2012). Türkiye'de yoksulluk olgusu ve toplumsal yansımaları. İnsan ve Toplum Bilimleri Araştırmaları Dergisi, 1(1), 76-117.

Amin, A. (2008). Collective culture and urban public space. City, 12(1), 5-24.

Alexander, C. (1977). A pattern language: towns, buildings, construction. Oxford university press.

Atalay, H., & Gülersoy, N. Z. (2023). Developing social sustainability criteria and indicators in urban planning: a holistic and integrated perspective.

Akcali, S., & Ispalar Cahantimur, A. (2023). How socio-spatial aspects of urban space influence social sustainability: a case study. Journal of Housing and the Built Environment, 38(4), 2525-2557.

Baffoe, G., & Mutisya, E. (2015). Social sustainability: A review of indicators and empirical application. Environmental Management and Sustainable Development, 4(2), 242-262.

Bakar, N. A., Malek, N. A., & Mansor, M. (2016). Access to parks and recreational opportunities in urban low-income neighbourhood. Procedia-social and behavioral sciences, 234, 299-308.

Basiago, A. D. (1995). Methods of defining 'sustainability'. Sustainable development, 3(3), 109-119.

Günay, B. (1999). Property Relations and Urban Space. METU Faculty of Architecture Press.

Berkeley Group and UK-GBC. (2012). The social sustainability framework: A guide to assessing social sustainability in urban development. Berkeley Group. Retrieved from Berkeley Group

Berkeley Group, and UK-GBC. (2012). "Practical How-to Guide: How to Use a Social Sustainability Framework,".

Bramley, G., et al. (2009). Social sustainability and urban form: evidence from five British cities. Environment and Planning A.

Brundtland, G. H. (1985). World commission on environment and development. Environmental policy and law, 14(1), 26-30.

Bruntland, G. (1987). Our common future. The World Commission on Environment 1 and Development, 45-65.

Burton, E., Williams, K., & Jenks, M. (1996). Compact city and urban sustainability: conflicts and complexities. The compact city: a sustainable urban form, 231-247.

Brill, M. (1989). Transformation, nostalgia, and illusion in public life and public place. In Public places and spaces (pp. 7-29). Boston, MA: Springer US.

Canter, D. (1977). The Psychology of Place. Architectural Press.

Carmona, M. (2010). Contemporary public space, part two: Classification. Journal of urban design, 15(2), 157-173.

Carmona, M. (2010). Contemporary Public Space: Critique and Classification, Part One: Critique. Journal of Urban Design, 15(1), 123-148.

Carmona, M. (2021). Public places urban spaces: The dimensions of urban design. Routledge.

Carr, S., Francis, M., Rivlin, L. G., & Stone, A. M. (1992). Public Space. Cambridge University Press.

Castells, M. (2000). The Rise of the Network Society. Blackwell Publishers. Retrieved from E-Bookshelf.

Castells, M. (2007). Communication, Power and Counter-power in the Network Society. International Journal of Communication.

Chan, E., & Lee, G. K. (2008). Critical factors for improving social sustainability of urban renewal projects. Social indicators research, 85, 243-256.

Chidister, D. (1998). Privatization and Public Space: The Transformation of Urban Landscapes.

Chiodelli, F., & Moroni, S. (2014). Typology of spaces and topology of toleration: City, pluralism, ownership. Journal of Urban Affairs, 36(2), 167-181.

Colantonio, A. (2007). Social sustainability: An exploratory analysis of its definition, assessment methods, metrics and tools.

Colantonio, A. (2008). Traditional and emerging prospects in social sustainability. *Measuring Social Sustainability: Best Practice from Urban Renewal in the EU*, *2*, 129.

Colantonio, A., & Dixon, T. (2011). Urban regeneration and social sustainability: Best practice from European cities. John Wiley & Sons.

Corbett, J., & Corbett, M. (2000). Designing sustainable communities: Learning from village homes.

Cowan, R., Hill, D., & Campbell, K. (2005). Start with the park: Creating sustainable urban green spaces in areas of housing growth and renewal. Cabe Space.

Cranz, G., & Boland, M. (2004). Defining the sustainable park: a fifth model for urban parks. Landscape journal, 23(2), 102-120.

Cuthill, M. (2009). Strengthening the? social? in sustainable development: Developing a conceptual framework for social sustainability in a rapid urban growth region in Australia. Sustainable Development.

Cohen, D. A., Han, B., Derose, K. P., Williamson, S., Marsh, T., Rudick, J., & McKenzie, T. L. (2012). Neighborhood poverty, park use, and park-based physical activity in a Southern California city. Social science & medicine, 75(12), 2317-2325.

Cullen, G. (1961) Townscape, London: Architectural Press.

Cresswell, T., & Merriman, P. (Eds.). (2011). Geographies of mobilities: Practices, spaces, subjects. Ashgate Publishing, Ltd..

Davidson, K., & Wilson, L. (2009, November). A critical assessment of urban social sustainability. 4th State of Australian Cities National Conference, 24-27 November 2009, Perth, Australia.

Dempsey, N. (2008). Quality of the built environment in urban neighbourhoods. Planning, Practice & Research, 23(2), 249-264.

Dempsey, N., Bramley, G., Power, S., & Brown, C. (2011). The social dimension of sustainable development: Defining urban social sustainability. Sustainable development, 19(5), 289-300.

Deniz, D. (2016). Improving perceived safety for public health through sustainable development. Procedia-Social and Behavioral Sciences, 216, 632-642.

DfID, U. K. (1999). Sustainable livelihoods guidance sheets. London: DFID, 445, 710.

Dillard, J., Dujon, V., & King, M. C. (Eds.). (2008). Understanding the social dimension of sustainability. Routledge.

Woodcraft, S. B., & Dixon, T. (2013). Creating strong communities–measuring social sustainability in new housing development. Town and Country Planning Association, 82(11), 473-480.

Early, D. (1993). What is sustainable Design, The Urban Ecology, Society of Urban Ecology, Berkley.

Enyedi, G. (2002). Social sustainability of large cities. Ekistics, 142-144.

Enyedi, G. (2004). Public Participation in Socially Sustainable Urban Development. UNESCO. Retrieved from unesdoc.unesco.org.

Ekinci, Z., & Sağlam, H. (2016). Meanings and social roles of the republic period urban parks in Ankara. Procedia-Social and Behavioral Sciences, 216, 610-621.

Eizenberg, E., & Jabareen, Y. (2017). Social sustainability: A new conceptual framework. Sustainability, 9(1), 68.

Gehl, J. (2011). Life between buildings.

Gibson, S., Loukaitou-Sideris, A., & Mukhija, V. (2019). Ensuring Park equity: a California case study. Journal of urban design, 24(3), 385-405.

Gomez, E., Baur, J. W., Hill, E., & Georgiev, S. (2015). Urban parks and psychological sense of community. Journal of Leisure Research, 47(3), 388-398.

Goodland, R. (2003). The concept of environmental sustainability. Annual review of ecology and systematics, 26(1), 1-24.

Greco, A., & Giacometti, V. (2013). Accessibility and Social Sustainability. Assessment tools for urban spaces and buildings. In Proceedings PLEA 2013.

Gehl, J. & Gemzo, L. (1996) Public spaces-public life, Copenhagen: Arkitektens Forlag.

Hacıoğlu, G. (2020). A study on social sustainability in urban green spaces: The case of İnciraltı City Forest (Master's thesis, Izmir Institute of Technology (Turkey)).

Haq, S. M. A. (2011). Urban green spaces and an integrative approach to sustainable environment. Journal of environmental protection, 2(5), 601-608.

Ho, C. H., Sasidharan, V., Elmendorf, W., Willits, F. K., Graefe, A., & Godbey, G. (2005). Gender and ethnic variations in urban park preferences, visitation, and perceived benefits. Journal of leisure research, 37(3), 281-306.

Holden, M. (2012). Urban policy engagement with social sustainability in metro Vancouver. Urban Studies, 49(3), 527-542.

Hong, A., Sallis, J. F., King, A. C., Conway, T. L., Saelens, B., Cain, K. L., ... & Frank, L. D. (2018). Linking green space to neighbourhood social capital in older adults: The role of perceived safety. Social Science & Medicine, 207, 38-45.

Ijla, A. M. (2012). Does public space create social capital?. International journal of sociology and anthropology, 4(2), 48.

Jacobs, J. (1961). The Death and Life of Great American Cities. Random House.

Jacobs, J. (2016). The death and life of great American cities. Vintage.

Jennings, V., & Bamkole, O. (2019). The relationship between social cohesion and urban green space: An avenue for health promotion. International journal of environmental research and public health, 16(3), 452.

Kap, S. D. (2006). Avrupa peyzaj sözleşmesi kapsamında yeşil alan kullanımı; İstanbul Boğaziçi ön görünüm bölgesi örneği (Master's thesis, [yy]).

Keleş, R. (2013). 100 soruda çevre: Çevre sorunları ve çevre politikası. Yakın Kitabevi.

Kurtaslan, B. Ö. (2017). Başarılı kent parkı planlama ve yönetimi yaklaşımının Teardrop Park (New York) örneğinde araştırılması. OPUS Toplum Araştırmaları Dergisi, 7.

Kazmierczak, A. E., & James, P. (2007). The role of urban green spaces in improving social inclusion.

Lawton, C. A., & Kallai, J. (2002). Gender differences in wayfinding strategies and anxiety about wayfinding: A cross-cultural comparison. Sex roles, 47, 389-401.

Lintsen, H., Veraart, F., Smits, J. P., & Grin, J. (2018). Well-being, sustainability and social development: The Netherlands 1850–2050 (p. 572). Springer Nature.

Littig, B., & Griessler, E. (2006). Social sustainability: a catchword between political pragmatism and social theory. International Journal of Sustainable Development.

Liu, S., & Zhu, X. (2004). Accessibility analyst: an integrated GIS tool for accessibility analysis in urban transportation planning. Environment and Planning B: Planning and Design, 31(1), 105-124.

Low, S., & Smith, N. (Eds.). (2013). The politics of public space. Routledge.

Luther, M., & Gruehn, D. (2001). Putting a price on urban green spaces. Landscape Design, 23-26.

Macintosh, A., & Wilkinson, D. (2006). Environment Protection and Biodiversity Conservation Act: An ongoing failure.

Macintosh, A., & Wilkinson, D. (2006). Which direction?: A review of monitoring & reporting in Australia.

Madanipour, A. (2003). Public and private spaces of the city. Routledge.

Manderson, A. K. (2006). A systems-based framework to examine the multi-contextural application of the sustainability concept. Environment, Development and Sustainability, 8, 85-97.

McKenzie, S. (2004). Social Sustainability: Towards Some Definitions. Hawke Research Institute Working Paper Series No 27.

Montgomery, J. (1998). Making a City: Urbanity, Vitality and Urban Design. Journal of Urban Design.

MacIntosh, A., & Wilkinson, D. (2006). Digital government: Technology and public sector performance. Routledge.

Michael, Y. M. A. K., & Peacock, C. J. (2011, January). Social sustainability: A comparison of case studies in UK, USA and Australia. In 17th Pacific Rim Real Estate Society Conference, Gold Coast (pp. 16-19).

Nash, V., & Christie, I. (2003). Making sense of community. London: Institute for Public Policy Research.

Nath, T. K., Han, S. S. Z., & Lechner, A. M. (2018). Urban green space and well-being in Kuala Lumpur, Malaysia. Urban Forestry & Urban Greening, 36, 34-41.

OECD. (2016). Perspectives on Global Development 2017 International Migration in a Shifting World. OECD Publishing.

Özdal Oktay, S. (2015). Mahalle ölçeğinde sürdürülebilirlik değerlendirme araçlarının Ozel irdelenmesi ve yerele özgü bir yöntem önerisi.

Sönmez Özdemir, S. (2024). Potentials and limitations of social area analysis: The case of Bağcılar district, Istanbul. International Journal of Social Sciences and Humanities Invention, 11*(5), 8144–8154.* *https://doi.org/10.18535/ijsshi/v11i05.02*

Sitte, C., Collins, G. R., & Collins, C. C. (1986). Camillo Sitte: The Birth of Modern City Planning: with a translation of the 1889 Austrian edition of his City Planning According to Artistic Principles. Rizzoli.

Partridge, E. (2005). Social Sustainability: A Useful Theoretical Framework? University of Technology, Sydney.

Pengelly Consultants. (2010). 'Nature nearby': Accessible Natural Greenspace Guidance. Natural England.

Punter, J. (1991). Participation in Urban Planning. University of Wales Press.

Pope, J., Annandale, D., & Morrison-Saunders, A. (2004). Conceptualising sustainability assessment. Environmental impact assessment review, *24*(6), 595-616.

PPS. "What Role Can Design Play in Creating Safer Parks?" PPS, 2008. What Role can Design Play in Creating Safer Parks?. https://www.pps.org/article/what-role-candesign-play-in-creating-safer-parks.

Rabare, R. S., Okech, R., & Onyango, G. M. (2009). The role of urban parks and socio-economic development: Case study of Kisumu Kenya. Theoretical and Empirical Researches in Urban Management, 4(3 (12), 22-36.

Rigolon, Alessandro, Matthew Browning, and Viniece Jennings. "Inequities in the Quality of Urban Park Systems: An Environmental Justice Investigation of Cities in the United States." Landscape and Urban Planning 178, no. May (2018): 156–69.

Relph, E. (1976). Place and placelessness (Vol. 67, p. 45). London: Pion.

Forrest, R., & Kearns, A. (2001). Social cohesion, social capital and the neighbourhood. Urban studies, 38(12), 2125-2143.

Sachs, I. (1999). Social sustainability and whole development: exploring the dimensions of sustainable development. Sustainability and the social sciences: a cross-disciplinary approach to integrating environmental considerations into theoretical reorientation, 25-36.

Seeland, K., Dübendorfer, S., & Hansmann, R. (2009). Making friends in Zurich's urban forests and parks: The role of public green space for social inclusion of youths from different cultures. Forest Policy and economics, 11(1), 10-17.

Shirazi, M. R., & Keivani, R. (2017). Critical reflections on the theory and practice of social sustainability in the built environment–a meta-analysis. Local Environment, 22(12), 1526-1545.

Smith, A. (2010). The relationship between major events, the urban fabric and social sustainability. In Social Sustainability in Urban Areas (pp. 199-220). Routledge.

Smith, N., & Low, S. (2006). *The politics of public space*. Routledge. Retrieved from Routledge.

Stren, R., & Polèse, M. (2000). Understanding the new sociocultural dynamics of cities: Comparative urban policy in a global context. The social sustainability of cities: diversity and the management of change, 3-38.

Stiglitz, J. E. (2002). Employment, social justice and societal well-being. International Labour Review, 141(1-2), 9-29.

Tabassum, S., & Sharmin, F. (2013). Accessibility analysis of parks at urban neighbourhood: The case of Dhaka. Asian Journal of Applied Science and Engineering, 2(2), 48-61.

Talen, E. (1999). Sense of community and neighbourhood form: An assessment of the social doctrine of new urbanism. Urban studies, 36(8), 1361-1379.

Tan, C., Tang, Y., & Wu, X. (2019). Evaluation of the equity of urban park green space based on population data spatialization: A case study of a central area of Wuhan, China. Sensors, 19(13), 2929.

Tekeli, İ. (2001). Sürdürülebilirlik Kavramı Üzerinde İrdelemeler. Cevat Geray'a Armağan, Mülkiyeliler Birliği Yayınları, 25, 729-746.

Timisi, N. (2012). Modern Urban Parks, Leisure Time and Gender. Kadın Araştırmaları Dergisi, (11).

Traunmueller, M., Marshall, P., & Capra, L. (2016, May). "... when you're a Stranger" Evaluating Safety Perceptions of (un) familiar Urban Places. In Proceedings of the Second International Conference on IoT in Urban Space (pp. 71-77).

UN, Human Settlements Programme. (2000). UN-Habitat annual report.

United Nations. (1996). Report of the United Nations Conference on Human Settlements (Habitat II). United Nations

United Nations. (2016). The New Urban Agenda. United Nations Conference on Housing and Sustainable Urban Development (Habitat III).

Uludağ, Z. (1998). The social construction of meaning in landscape architecture: A case study of Gençlik Parkı in Ankara (Doctoral dissertation, Middle East Technical University (Turkey)).

Viederman, S. (1994). The Economics of Sustainability. In M. O'Connor (Ed.), Is Capitalism Sustainable? Political Economy and the Politics of Ecology (pp. 35-45). Guilford Press.

Vos, R. O. (2007). Defining sustainability: a conceptual orientation. Journal of Chemical Technology & Biotechnology: International Research in Process, Environmental & Clean Technology, 82(4), 334-339.

Vallance, S., Perkins, H. C., & Dixon, J. E. (2011). What is social sustainability? A clarification of concepts. Geoforum, 42(3), 342-348.

Western Australian Council of Social Service Inc. (2003). Models of Social Sustainability.

Whyte, W. H. (2005). The Social Life of Small Urban Spaces. Project for Public Spaces.

Woodcraft, S. (2012). Social sustainability and new communities: Moving from concept to practice in the UK. Procedia-Social and Behavioral Sciences, 68, 29-42.

Woodcraft, S. B., & Dixon, T. (2013). Creating strong communities–measuring social sustainability in new housing development. Town and Country Planning Association, 82(11), 473-480.

WCED. “Report of the World Commission on Environment and Development: Our Common Future.” World Commission on Environment and Development, 1987. https://doi.org/10.1080/07488008808408783.

Yiftachel, O., & Hedgcock, D. (1993). Urban social sustainability: the planning of an Australian city. *Cities*, *10*(2), 139-157.

Yıldız, S., Kıvrak, S., Gültekin, A. B., & Arslan, G. (2020). Built environment design-social sustainability relation in urban renewal. Sustainable Cities and Society, 60, 102173.

Zhou, X., & Parves Rana, M. (2012). Social benefits of urban green space: A conceptual framework of valuation and accessibility measurements. Management of Environmental Quality: An International Journal, 23(2), 173-189.