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From urban sustainability transformations to green gentrification: urban renewal in Gaziosmanpaşa, Istanbul

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Abstract

Processes aiming to achieve urban transformation that includes sustainability can result in green gentrification and thus promote exclusivist, private green spaces. At the same time, they compromise the ability of cities to promote more systemic sustainable development. Istanbul has long been a site of planned gentrification and displacement through urban renewal and regeneration projects, which have recently touted a sustainability angle. While sustainable urban renewal can have positive impacts on human health and well-being and is critical for addressing climate change and other environmental challenges, the benefits are rarely evenly distributed. Through an examination of sustainability-oriented urban renewal projects in Istanbul's Gaziosmanpaşa district, this study shows that vulnerable residents have been displaced by the planned gentrification and that such consequences are likely to be amplified by visions of green sustainability. It also illustrates that plans to harness the city's drive for economic growth and urban development risk making large parts of the "green" districts affordable only for relatively well-off citizens. Based on semi-structured interviews, non-participatory observation, and analysis of project and municipality-level documents, we find that even though seismic vulnerability and energy efficiency are cited as reasons for these transformations towards sustainability, policymakers are not paying sufficient attention to the political ecology of social exclusion and an increase in inequality that can result from sustainability-oriented urban renewal.

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1 Introduction

Urban renewal, regeneration, and transformation projects around the world are increasingly being used as vehicles for promoting sustainable green cities. Urban renewal includes increasing green space, developing public transportation, increasing the energy efficiency of new and existing buildings, and improving waste management systems (Fitzgerald 2010). Such initiatives can have positive impacts on human health and well-being and are critical to addressing climate change and other environmental challenges (Kardan et al. 2015; Gould and Lewis 2016). However, the benefits of sustainability-oriented urban transformation and renewal are rarely evenly distributed. Instead, they can lead to negative trade-offs such as increasing social and economic inequality and social exclusion.

Green gentrification can be defined as the revaluation and/or allocation of undeveloped lands as a result of public or private investments and "a process of creating and reinforcing environmental privilege for elites in the city" (Gould and Lewis 2016, p. 13). Green and sustainability-oriented urban renewal presents risks for cities that aim to become more sustainable by implementing urban greening and revitalizing environmental amenities (Anguelovski 2015; Checker 2011; Curran and Hamilton 2012; Frantzeskaki et al. 2016). Such processes are often driven by profit rather than sustainability (Anguelovski 2015; Sham 2012), and they leave historically disadvantaged residents vulnerable to displacement and social exclusion (Pearsall 2010; Cucca 2012; Dooling 2009; Gould and Lewis 2016; Quastel 2009; Haase et al. 2017).

To achieve the objective of leaving no one behind espoused by the 2030 Agenda for Sustainable Development and SDG 11 ("make cities and human settlements inclusive, safe, resilient, and sustainable"), sustainability-oriented urban transformations need to reduce, not increase, inequality and social vulnerability (UN 2015). This cannot be achieved, however, if urban sustainability planning is seen as "post-political" (Swyngedouw 2010) and if negative consequences such as green gentrification are ignored or even promoted, albeit tacitly, by policymakers.

Research on green gentrification has focused primarily on relatively small-scale urban greening and sustainability initiatives in developed countries (Anguelovski et al. 2017; Sandberg 2014; Schuetze and Chelleri 2015). Few investigations have been conducted on the impact of large-scale sustainability-driven urban transformation strategies in middle- and low-income countries and countries governed by authoritarian regimes. The present study aimed to determine the extent to which sustainability-related urban transformation in a middle-income country results in green gentrification. We analysed the urban transformation projects implemented in Gaziosmanpaşa, a large district of Istanbul, which, having undergone planned gentrification in the past (Kocabas and Gibson 2011), adopted a sustainability approach to large-scale urban renewal with the goal of generating livable neighbourhoods that are both green and sustainable.

We conducted semi-structured interviews to elicit stakeholder views on the various dimensions of Gaziosmanpaşa's urban renewal plans. Sixteen interviews were conducted between April and August 2016 with representatives of the main actors directly involved in or affected by the urban renewal: the Gaziosmanpaşa Municipality, energy efficiency businesses, private urban planning companies, a private construction company, green building NGOs, urban planners, and academicians. Anonymized details of respondents' sectors and profiles are provided in Appendix I. The interview questions explored the interviewees' knowledge about and opinions on sustainability in Istanbul, urban renewal in general, transformation and energy efficiency, and trade-offs between the economic, social, and environmental dimensions of urban renewal in Istanbul. We also collected data through non-participatory observation on

four field visits to two neighbourhoods, Sarıgöl and Merkez. To complement the primary data, we performed an in-depth analysis of relevant documentation (including Istanbul earthquake reports, the 2014 Istanbul Regional Plan for 2014–2023, the Gaziosmanpaşa Municipality Urban Renewal Strategy Plan, regulatory documents, and legal cases related to urban and landscape planning in Gaziosmanpaşa). Detailed socio-economic data on the district was not publicly accessible.

2 Theoretical context

2.1 Planned gentrification

Gentrification was originally characterized by Glass (1964) as "the occupation and renovation or upgrading of dwellings in working-class inner-city neighborhoods by the middle-classes". Smith (2002) defines gentrification more broadly, as a return of productive capital investment to the city rather than simply a change in the class position of residents. To those descriptors, Davidson and Lees (2005) add elements such as social upgrading through an influx of high-income groups, landscape change, and direct or indirect displacement of low-income groups. The latter's interpretation encompasses new construction, planning, tax code changes, changes in urban political government, new forms of consumption, and wider cultural shifts linked with neoliberalism (Castree et al. 2013).

The concept of planned gentrification draws on Smith's (2002) argument that "the process of gentrification, which initially emerged as a sporadic, quaint, and local anomaly in the housing markets of some cities, is now thoroughly generalized as an urban strategy that takes over from liberal urban policy" (p. 427). Critics (e.g. Starecheski 2014) have pointed out that market mechanisms that shape gentrification were pro-actively created in order to ensure profit maximization. Mah (2012) argues that planned gentrification is the main underlying strategy of recent UK housing-led regeneration strategies that targeted poor areas, while Chaskin and Joseph (2015) describe the policies behind mixed-income housing in Chicago as "planned gentrification" and argue that social service providers, private developers, public housing agencies, local political leaders, and community activists have failed to socially integrate former lower-income residents of public housing into these new mixed-income developments.

2.2 Green gentrification

While urban geographers have investigated planned gentrification and the social, economic, political, cultural, and spatial dimensions of gentrification for decades, the environmental aspect of gentrification has largely been ignored (Bryson 2013). Environmental history scholars examining the relationship between nature and society in urban areas (e.g. Hurley 1995; Tarr 1996; Melosi 1999) concluded that the natural environment is essential for urban development. However, Isenberg (2006) finds that these studies neglect the social conflicts behind the transformation of urban environments and have ignored the role nature plays in the creation of urban areas. Urban scholars who introduced the term "green gentrification" took their lead from these critics and emphasized the connection between uses of nature and stratified urban development. Dooling (2009) argues that, it includes "the implementation of an environmental planning agenda related to public green spaces that leads to the displacement

or exclusion of the most economically vulnerable human population while espousing an environmental ethics" (p. 630).

Green gentrification generally occurs when actions are taken to improve public green spaces, to clean up undesirable land such as brownfields, to revitalize property values (Gamper-Rabindran and Timmins 2012) and to close the "environmental rent gap" (Bryson 2013). These events are at times referred to as environmental gentrification (Curran and Hamilton 2012; Checker 2011), green gentrification (Gould and Lewis 2016), or ecological gentrification (Dooling 2009; Quastel 2009). Eckerd (2011), however, argues that revitalizing undesirable areas is not the only way to trigger green gentrification. Specific environmental upgrades—for example, "improved" public spaces such as green areas (Checker 2011), energy-efficient buildings (Gould and Lewis 2016), and public transportation infrastructure such as bike lanes (Lugo 2018)—can also contribute to green gentrification. This raises concerns of equity and justice in neighbourhood improvement (Eckerd 2011), and Curran and Hamilton (2012, p. 1027) ask, "Who gets to decide what green looks like?" It is widely argued that communities must play a primary role in establishing sustainable and livable areas in their urban space (Evans 2002; Harvey 2008).

Understanding green gentrification is increasingly relevant as more cities adopt sustainability-related policies (Gould and Lewis 2016) or include greening strategies in their urban renewal or transformation processes without considering social justice (Anguelovski 2015; Sham 2012). Many cities actively seek to adopt resilient urban planning and urban greening strategies (Fainstein 2018; Harnik 2010; Karlenzig et al. 2007; Birch and Wachter, 2011), often with the intention of mitigating future climate change impacts. However, recent studies have shown that focusing on social justice in sustainable urban planning is controversial (Isenhour et al. 2015; Patel 2015; Carman 2015). For instance, the "landscape urbanism" implemented in Delhi (Patel 2015) and in Buenos Aires (Carman 2015) created native habitat designs, including various species and landscapes that consume fewer resources, but they prioritized ecological and aesthetic concerns over the needs of local residents. Additionally, in the case of Bushwick Inlet Park on the Greenpoint-Williamsburg waterfront in Brooklyn, New York, Gould and Lewis (2016) show how clearing up brownfields for real estate development can lead to urban greening's becoming a tool for attracting wealthy people and displacing poor tenants who cannot afford the increased rent prices.

Therefore, current debates focus on understanding the links between sustainability, environmental upgrades, and social inclusiveness, as research shows that less affluent citizens in gentrified areas are the most vulnerable and are at risk of being displaced after the improvements (Cucca 2012; Dooling 2009; Gould and Lewis 2016; Quastel 2009; Haase et al. 2017). Having examined the Lene-Voigt-Park in Leipzig, Germany, where the creation of green space and social facilities revalued the housing stocks in an old working-class neighbourhood and caused the displacement of the area's socio-economically disadvantaged dwellers, de Haase et al. (2017) point out that although greening can contribute to better urban quality of life, it does not necessarily ensure social inclusiveness. Several other scholars have similarly argued that greening, upgrading public spaces, and investing in social infrastructure without considering social justice can and do result in green gentrification and heightened social exclusion (Anguelovski et al. 2018; Gould and Lewis 2016; Curran and Hamilton 2012; Checker 2011; Lugo 2018). These findings demonstrate that urban sustainability processes are neither apolitical nor totally beneficial; rather, they include trade-offs and potential inequities that need to be understood and considered as part of public policy development.

3 Urban renewal, sustainability concerns, and planned gentrification in Istanbul

3.1 Istanbul

Greater Istanbul, with its population of over 15 million, is home to one fifth of the total population of Turkey (Turk Stat 2018). The city has undergone numerous large-scale changes, largely resulting from rapid urbanization and development. While these changes have enabled economic growth, they have also led to urban sprawl and negative environmental and social impacts (Erbas 2013). Much of the rapid population growth—from 1 million in the 1950s to over 15 million in 2018—was unplanned, and illegal urban development was often undertaken in earthquake-prone areas. In recent years, Istanbul officials and city planners reached a consensus that large-scale urban renewal was necessary (Goksin et al. 2015).

Urban renewal projects in Istanbul started in the 2000s, with the primary objective of attracting international capital via cultural tourism. Considering that the construction sector is typically the cornerstone of investment in emerging markets, Istanbul promoted a globalized vision for the city that would achieve economic growth through construction and investments in real estate (Balaban 2011). Turkey's economic growth therefore relies on construction, and urban renewal has become a buzzword for stimulating the construction sector. Urban planning and environmental protection challenges have resulted as national and local governments responded to the short-term economic demands of real estate developers by deregulating urban planning and development (Balaban 2013). Urban renewal projects in Istanbul are also seen as a tool for developing the substandard and unplanned housing stock in inner-city neighbourhoods and reducing the existing rent gap between potential land value and the quality of the housing stock (Karaman 2013). Cast as a planned gentrification process (Lelandais 2014; Uysal 2012; Candan and Kolluoglu 2008; Kocabas and Gibson 2011), these projects resulted in the forced eviction of poor inhabitants, especially of those without property title deeds in neighbourhoods such as Sulukule (Uysal 2012) and Tarlabaşı (Yilmaz 2008). According to the United Nations Advisory Group on Forced Evictions, around 80,000 people were directly affected by urban renewal projects in eight regeneration areas in Istanbul, and the homes of 12,730 were destroyed (UN Habitat 2009).

Turkish authorities instituted tenure legalization as the primary strategy for tackling informal settlements called gecekondu ("built overnight") (Karaman 2013). All gecekondu settlements that had been built on state-owned land before 1984 were issued non-tradable pre-deed title assignation documents (*tapu tahsis belgesi*) (TAD) (1984 Amnesty Law 2981). The TAD recognized residents' right to use the land and certified legal ownership of the land if a cadastral plan and a subsequent improvement plan was approved by the district municipality. The pre-deeds, therefore, while not conferring full ownership rights, granted legal status to those residents. Residents who did not hold deeds or pre-deeds were categorized as illegal occupants.

Redevelopment projects have targeted substandard and unplanned housing stock in key locations in Istanbul. Kuyucu and Unsal (2010) claim that this process constituted a landmark in the transition from a populist to a neoliberal mode of governance that incorporated undervalued and unplanned public and private land into the formal economy to reduce the rent gap. Instead of providing TADs to gecekondu residents, the new landownership model encouraged national and local authorities to relocate residents into formal public housing units constructed by the Turkish Mass Housing Unit (TOKI), where they were forced into apartment ownership in return for monthly mortgage payments (Karaman 2013).

Since 2012, urban renewal in Istanbul has ramped up considerably. The publicly stated reason is the need to mitigate the significant earthquake risk that Istanbul faces. In 2009, a study by the Istanbul Metropolitan Municipality (IMM) estimated that a major earthquake (Mw = 7.5) near Istanbul could feasibly result in 16,000 buildings damaged beyond repair (2% of the city's 800,000-plus buildings), 40,000 extensively damaged (5%), and 150,000 moderately damaged (19%). Such an earthquake could cause 20,000 to 30,000 casualties, leave about 400,000 households in need of shelter, and create US$40bn in economic losses (IMM 2009). Addressing this risk played a crucial role in the 2012 enactment of the Transformation of Areas Under Disaster Risks Law No. 6306 (commonly called the urban transformation law or the disaster law), which in turn has been instrumental in expanding and consolidating construction activity in Turkey, particularly in Istanbul, where the number of seismically vulnerable buildings is highest (Istanbul Earthquake Report 2017). The law allows owners of seismically vulnerable buildings to hire a developer to demolish their buildings and erect earthquake-resilient buildings in their place. The law also empowers the Ministry of Environment and Urbanization (MoEU) to designate urban transformation zones, expropriate private property, and execute redevelopment projects, subject to the approval of the Council of Ministries. Depending on the land status (public or private), either the IMM or the particular district municipality has executive authority over urban redevelopment. The land can either be transferred to TOKI or the municipality can form a public-private partnership. By 2018, over 40 urban renewal areas had been designated for renewal under the urban transformation law (MoEU 2018).

Istanbul is divided into 39 district municipalities, each with its own governing structure and which is overseen by the IMM, which has been run by the pro-Islamic Justice and Development Party (Adalet ve Kalkınma Partisi—hereafter AKP) since 2004. The IMM is in charge of the overall strategic master plan for the city and approves the budgets and zoning plans for all 39 districts. Individual municipalities administer their own municipal services. The IMM expressed its desire to make Istanbul a sustainable, livable, and climate-friendly city (IMSP 2015). It developed a climate change action plan that emphasizes energy efficiency and green building standards in the residential areas of Istanbul and the reduction of GHG emissions to promote energy savings (ICCAP 2016). In addition, in 2007, Turkey adopted its Energy Performance of Buildings Regulation Under the Energy Efficiency Law, and energy performance certificates (EPC) were introduced in 2011 with the goal of certifying all buildings in Istanbul by 2019. A minimum C-level energy standard is mandatory for all existing buildings and is a prerequisite for licencing new buildings (NEEAP 2017). These plans and regulations are evidence that Istanbul's sustainability agenda is progressing,

3.2 Urban renewal and planned gentrification in Gaziosmanpaşa

Gaziosmanpaşa, the ninth most populous district of Istanbul with nearly 500,000 inhabitants (TurkStat 2016), occupies 11.73 km^2 and encompasses 16 neighbourhoods. It is located on the European side of Istanbul and is close to the central businesses and financial districts of the city. The district is well connected to highway networks and to two of the three bridges over the Bosporus strait, and its accessibility will be further improved when the underground railway network reaches the district, expected in 2019. Half of Gaziosmanpaşa's population is under the age of 20, and unemployment and crime rates are high (Goksin et al. 2015). With the fifth lowest average net income and the second lowest standard of living of all of Istanbul's districts (IRP 2014), Gaziosmanpaşa offers less than 1 m^2 of green space per capita, well below

the 10.2 m^2 per capita stipulated by the Turkish zoning regulation for urban areas (İGEP 2011). It is home to large, unplanned low-quality informal residential areas, most of which were built by refugees arriving from Bulgaria and Yugoslavia in the 1950s. The area was then further populated through internal migration from Asia Minor (Goksin et al. 2015). The building stock in the district is a combination of low-rise gecekondu houses with gardens and declining multi-storey buildings. The average number of storeys in Gaziosmanpaşa is 2 (KEYM n.d.), while the number of storeys in greater Istanbul is 5.7 and 4 in Turkey overall (Turk Stat 2011). After the 2012 legislation, the district started implementing urban renewal projects in a few neighbourhoods, one of which was the Sarıgöl project, which has been criticized for planned gentrification and the resulting marginalization of poor residents (Goksin et al. 2015; Çamlıbel et al. 2015). Current urban renewal projects in Gazisomanpaşa cover 3.92 km^2 of Istanbul's 11.06 km^2 that is classified as high risk for earthquakes; this represents 36% of the total regeneration area in Istanbul, making it the largest renewal project in the city (MoEU 2018) (Fig. 1).

The MoEU, TOKI, the Gaziosmanpaşa Municipality, and GOPAS (a municipality-owned construction company) lead the urban planning process, land distribution, and the commissioning of construction activities related to the district's urban renewal. Because the majority of the residents cannot afford to hire a developer to rebuild their property, they are obliged to negotiate with TOKI and GOPAS to transform their buildings into new apartment complexes (mostly high-density apartment units). Depending on the rent value and whether the land is public or private, either TOKI or GOPAS implements the construction activities through subcontracted developers. TOKI or GOPAS or one of their subcontractors then mediates negotiations between residents and private developers for their respective shares in the eventual redeveloped property. Due to the complex landscape of land ownership and occupancy (title deeds, TADs, and residents with no rights), the actual number of residents in Gaziosmanpaşa is unknown. Depending on the nature of their property and the market value of the renewal project, rightful owners are offered either a percentage of their existing property after the project's completion or full monetary compensation for their property's current value. In the case of TAD owners, who do not have full legal status, a "demolition value" is offered for their existing building instead of the full value of the land and the building combined. The potential impact of an expected natural disaster (earthquake) on socio-economically vulnerable people, coupled with such mechanisms, leads to planned gentrification.

Fig. 1 The location of the Gaziosmanpaşa district in Istanbul (Urban Transformation Master Plan of Gaziosmanpaşa 2015)

3.3 Integrated and sustainable planning in Gaziosmanpaşa

The MoEU implementation of the 2012 the Urban Transformation Law No. 6306 resulted in a total of 3.92 km^2 in 13 of the 16 Gaziosmanpaşa neighbourhoods being declared urban renewal areas. The transformation was delegated to the district municipality (Goksin et al. 2015), led by then-mayor Erhan Erol, who hired a local urban planning and architecture firm and an international one to jointly develop a master plan. This master plan took an integrated, strategic, and sustainable approach to transforming the district, including a LEED[1] Neighborhood Development vision. It accounted for environmental risks, included features that promoted well-being, sustainable transport, and harmony with natural systems, reduced energy consumption and carbon emission, and showcased the social, cultural, and historic values of the community (LEED ND 2018). The plan was to construct energy-efficient buildings (LEED-certified and in accordance with the energy efficiency regulations of Turkey), install solar panels, implement waste and storm water recycling, increase green living spaces, and promote improved recreational facilities and to ensure that public infrastructure and transportation met the needs of the residents (Usta et al. 2015; Çamlıbel et al. 2015). Storm water was to be recycled into an aggregation system and used for landscaping and green space irrigation. Overall, the plan aimed at increasing education areas by 58%, cultural areas by 4%, green spaces by 114%, administrative areas by 16%, sanitary areas by 20%, religious buildings (i.e. mosques) by 83%, and parking facilities by 383% (Usta et al. 2015) (Fig. 2).

4 Analysis and results

4.1 Change in planning: from integrated and sustainable to parcel-based urban renewal

In 2014, the mayor of Gaziosmanpaşa was replaced and the plans for urban renewal changed. Under the leadership of the new mayor, Hasan Tahsin Usta, the master plan was altered before being sent to the MoEU for approval. According to our interviewees familiar with the plan, the altered plan's main intent was to increase the density of buildings and residents and to create green spaces, with LEED-certified buildings only in projects with high market value. This departure from the plan's original sustainability goals and specifications prompted the withdrawal of both the local and international urban planning and architecture companies from the project. The Istanbul branch of the Chamber of Urban Planners sued the Gaziosmanpaşa Municipality in December 2015 on grounds that the new plan disregarded the master criteria of the law on Land Development Planning and Control (Law No. 3194). According to the lawsuit, the Gaziosmanpaşa master plan provided for only 31.9% of the requirements of Law No. 3194 in terms of land development and increased the population density without allocating sufficient space for recreational areas (case documentation provided by the Chamber). Moreover, the altered plan did not specify the size or location of recreational facilities in the designated neighbourhoods, nor did it consider population density or connectivity between neighbourhoods. The case was resolved with the cancellation of the altered master plan by the Council of State, the highest administrative court in Turkey (Bianet Haber 2017).

[1] Leadership in Energy and Environmental Design

Fig. 2 A significant increase in green areas planned for the Gazisomanpasa Master Plan (Urban Transformation Master Plan of Gaziosmanpaşa 2015)

Several NGO interviewees highlighted the fact that property negotiations generated negative reactions from dwellers, who joined forces to form the Gaziosmanpaşa Neighborhood Association (GNA). The earthquake vulnerability designation under the urban transformation law and the allocation of property by GOPAS generated further public discontent. The GNA contested the 2015 decision that resulted in the cancellation of the earthquake-risky status of four neighbourhoods (Yıldıztabya, Pazariçi, Mevlana, and Karayolları), home to approximately 90,000 residents (Usta et al. 2015). According to an interviewee from the municipality, this delayed the implementation of urban renewal projects in the district.

In 2016, the Gaziosmanpaşa Municipality started implementing fast-track land expropriations (relying on the Law of Expropriation No. 294); in cases where negotiations were taking too long because of complex land ownership arrangements, the Council of Ministers authorized municipalities to seize property so as to accelerate construction activity. GOPAS, TOKI, and private developers then agreed on a protocol for land distribution and revenue sharing in the district. The GNA and the Gaziosmanpaşa Shelter Assembly (*Gaziosmanpaşa Barınma Meclisi*) opened a court case to stop the fast-track expropriation (the case is ongoing at the time of writing) claiming that no extraordinary conditions existed that would legitimize such legally binding decisions on private properties.

After the cancellation of the master plan and the initiation of the government's fast-track land expropriation, urban renewal in Gaziosmanpaşa moved away from the integrated whole-district approach towards a parcel-based one, where projects were developed on a smaller scale through subcontracted developers in different locations of the district with no overall coordination. Sustainability concerns for these projects were, for the most part, ignored in the rush to densify buildings and increase profit. The interview data show that green building businesses were established in Turkey—by entrepreneurs who had been educated abroad—mostly through collaboration with the U.S. Green Building Council. Since LEED and BREEAM[2] certification schemes provide networking and international visibility in the real estate market,

[2] Building Research Establishment Environmental Assessment Method (BREEAM) is the world's longest established method of assessing, rating, and certifying the sustainability of buildings (source: www.breeam.com).

developers targeting high-income consumers wanted to benefit from such marketing value for their residential projects. According to the manager of a municipality-owned construction company, the company's brief is to implement the urban renewal project. Sustainability features such as energy efficiency, waste recycling, and seismic resilience are seen as nice but costly add-ons. This stance was corroborated by another interviewee, the founder of a green building consultancy firm, who emphasized that building green in Turkey is difficult because developers want to build as cheaply and quickly as possible. The overall master plan is still being used to legitimize the new process. Despite this overly grim picture, a few notable sustainability-oriented urban renewal projects exist in the district—in the Sarıgöl and Merkez neighbourhoods.

4.2 Green gentrification in the Sarıgöl and Merkez neighbourhoods

4.2.1 Sarıgöl

The Sarıgöl neighbourhood has undergone two renewal processes in the past, each of which led to gentrification. Gentrification occurred by making housing prohibitively expensive for local residents to acquire title deeds for their homes and by offering low compensation for those without full deed documentation (Camlibel et al. 2015). Altogether, the initial redevelopment plan resulted in over 600 houses being demolished, and residents who had only pre-title deeds were forced to sell at low prices and leave the neighbourhood (Goksin et al. 2015). Because the current owners were unable to afford the replacement buildings, sales were opened to the public. According to an urban planner interviewee who was familiar with the case, the right to housing, health, and a secure life was "completely ignored by the administration, which only considered revenue generation and totally glossed over social justice". As a result of these redevelopment plans, a number of individuals and neighbourhood associations filed court cases to challenge the urban transformation law.

The renewal process in Sarıgöl, still ongoing at the time of writing, is increasingly taking on a green and sustainable angle. The equity dimension is missing, however. The few sustainability-focused projects are mainly gated community ones that are being developed by different construction companies in collaboration with GOPAS, the MoEU, and, more often, TOKI. One such community is Misal Project (n.d.), a 15.3-ha project started in May 2017, implemented by TOKI and a private construction company. The project includes LEED-certified buildings and over 5 ha of green areas. Advertisements highlight the green and well-being aspects of the project, such as bringing natural life into courtyards, a 1.5-km bike trail within the gated community, and shared spaces to encourage social interaction between residents (Misal Istanbul: https://www.misalistanbul.com). The project will cost $37.6 million, and housing units will sell for between $70,000 (for 71 m^2) and $216,000[3] (for 120 m^2).

4.2.2 Merkez

The Merkez neighbourhood is located in the southwestern part of the Gaziosmanpaşa district, close to Istanbul's trade center. Developers expect higher revenues from this area due to easy connections to the main transportation corridors in the city and to views of the Golden Horn (see the WeHaliç Project: https://bit.ly/2Z6ppLs). The WeHaliç project (shown in Fig. 3) is the

[3] The housing prices were gathered from the sale offices of the aforementioned projects.

Fig. 3 Aerial view of the WeHaliç construction site (picture is taken by Mahir Yazar) and the envisioned outcome of the WeHaliç project (source: https://bit.ly/2Z6ppLs)

first apartment complex project in the Merkez neighbourhood that aims to be certified as a LEED Gold green building (EmlakKulisi 2016). Consisting of high-rise luxury apartments, the project is slated for completion in 2019 and is managed jointly by GOPAS and a private developer. The project also aims to earn LEED-Neighborhood certification by setting clear green neighbourhood goals (making energy-efficient buildings, utilizing grey water, implementing green roofs, and generating renewable energy) and by focusing on social facilities like schools and mosques and extensive green space (WeHaliç Project n.d.). Most of the current residents are of low socio-economic status, so with the price of apartments ranging from $47,000 (for 74 m^2) to $217,000 (for 145 m^2), the project is marketed to wealthy individuals. According to the Turkish Central Bank (TCMB) Housing Price Index for Istanbul (2019), housing unit prices in Gaziosmanpaşa (Turkish Lira (TL)/m^2) range from 3328 TL ($576) to 4000 TL ($693) (Hürriyet Emlak Endeksi n.d.). The aforementioned housing prices at the two neighbourhoods are much higher than the average for Gaziosmanpaşa and for Istanbul overall. Given the average income level in the district, these units will be unaffordable for the majority of existing residents. It is interesting to note that all information about negotiations with residents is classified, and the relevant actors are reluctant to give interviews.

These two projects (Misal Istanbul and WeHaliç) share a vision of sustainable neighbourhoods in which benefits will be experienced only by those who can afford to live in these green-gated communities. The targeted residents are mostly foreigners and wealthy business people. These benefits will come at the expense of those outside the gates of the community, as has occurred with other gated community projects in Istanbul (Geniş 2007; Candan and Kolluoğlu 2008; Kurtuluş 2011). With more and more parcel-based renewal projects that take a sustainability-oriented approach, gentrification processes in Istanbul are increasingly becoming “green”.

5 Discussion: from sustainability transformations to green gentrification

The Sarıgöl and Merkez neighbourhood projects highlight that purportedly sustainable urban renewal projects are unlikely to provide sustainability for the current residents of Gaziosmanpaşa. Instead, they increase the market value of selected locations so as to attract wealthier residents and businesses. According to our interviewees, this is partially because it is

the only way to finance urban renewal, regardless of whether or not it is sustainability-oriented. This is consistent with other green gentrification research which shows that greening strategies often are used as a tool to improve residential landscapes in decayed urban areas (Birch and Wachter 2011) and that increasing green spaces (both qualitatively and quantitatively) positively affects real estate values (Kolbe and Wüstemann 2014).

The goal of Gaziosmanpaşa's current mayor is to turn the district into one of the 10 most preferred residential and business districts of Istanbul by 2023 through the rapid construction of modern buildings and infrastructure and the removal of unplanned construction (Usta 2017). Several interviewees emphasized that the vision and drive behind the sustainability approach came from the former mayor but that the new mayor wanted to increase population density to facilitate increased profitability of urban renewal processes, thus subordinating the original sustainability aims, except where sustainable and green approaches in combination abetted profitability. Urban renewal in the district has resulted in green gentrification through the parcel-based stratification of sustainability assets and the exclusion of existing residents who lack title deeds or the financial means to purchase new residences in the green redeveloped areas.

Furthermore, while the urban planners and building energy efficiency engineers we interviewed expressed the need to create a green and healthy city and pointed out that urban renewal and sustainability-oriented businesses can play a significant role in this, most do not believe the government has the political will, vision, or ability to implement sustainable and inclusive urban renewal. This is supported by research that has described the Turkish economy as a "constructocracy", meaning that the construction sector has become a key driver of the Turkish economy (Schelifer 2013). Balaban (2013) argues that Law 6306 was primarily designed to boost the construction industry output as a response to the downturn in the Turkish economy that occurred after the global financial crisis. Along with the growth of construction sector through foreign and public investments, the Ministry of Environment and Urbanization gave significant power to TOKI in terms of planning, land purchase, and construction activities (Balaban 2013). This arrangement created a powerful coalition of politicians, bureaucrats, and business leaders which has eliminated competition and excluded the voices of citizens and disadvantaged groups (Keyder 2005; Türkün 2011).

In addition, despite the stated focus on mitigating seismic risks, the urban renewal projects that have been implemented so far are not located in the highest risk areas, but rather in areas where real estate value is high, in key locations close to the city center (Uysal 2012; Yılmaz 2008). Numerous researchers have argued that profit was the main motivation of these urban renewal projects (Akkar 2011; Dinçer 2011; Enlil 2011; Lovering and Türkmen 2011; Uysal 2012; Lelandais 2014; Akçalı and Korkut 2015; Kuokkanen and Yazar 2018). The first urban renewal projects were parcel-based and therefore not part of a strategic holistic plan that aimed to redevelop entire neighbourhoods. Additionally, in retrospect, the structural integrity and earthquake resilience of the new buildings have been questioned (Goksin et al. 2015).

The urban renewal projects discussed in this paper have the potential to benefit from Gaziosmanpaşa's holistic master plan. Yet it remains an enormous challenge for profit-seeking capital to look beyond lucrative short-term returns and to take into account broader environmental and social concerns. The parcel-based approach fosters uneven green development in that it focuses only on the most profitable areas of the district, thus creating in-and-out migration and excluding those who reside on less valuable land. Such redevelopment based on constructing energy-efficient buildings and private green areas for prospective affluent residents exacerbates displacement and inequality in the district, culminating in green gentrification.

Green gentrification in the Gaziosmanpaşa urban renewal project manifests itself in green concepts (including green roofs, trees, recreational facilities, and parks) exclusively for sustainable residences in gated communities. The urban renewal planning approach reveals that the concepts of sustainable neighbourhoods and green buildings with international green certificates such as those issued by LEED and BREEAM contribute prestige value to residential projects, thus encouraging a broad understanding of "green" as something elite and exclusive which has to be purchased and privatized. The prestige value of LEED and BREEAM certification is thus being used as a way to privatize green spaces instead of opening up new public green spaces or upgrading the existing green areas in the district.

Earlier planned gentrification in the district created financial barriers to residents seeking to acquire appropriate title deeds, resulting in forced relocation (Camlibel et al. 2015; Goksin et al. 2015). This continues in the current urban renewal phase with a new so-called green angle. Istanbul thus represents a case of green gentrification that is relevant to other cities under similar constraints.

6 Conclusion

The urban landscape in Istanbul is changing through an ostensibly seismic risk-driven urban renewal process. The Gaziosmanpaşa case shows that when it comes to valuable land, local governments can easily compromise a sustainability agenda in the pursuit of more immediate economic benefits, so what is sustained is only green property units and exclusive enclaves with a high market value. The Gaziosmanpaşa urban renewal shows that the district's sustainable vision and the construction of green residential units with iconic international environmental building certifications resulted in green gentrification.

The Gaziosmanpaşa case shows that in situ urban renewal master plans with inclusive sustainability features can easily be subverted by local authorities whose underlying aim is to extract profits from green areas designated for public use. When these factors are merged with the construction of green residential units with international building certification, the result is green gentrification. In this case, the consequences are inequality and exclusion. This study enhances our understanding of green gentrification and its links to natural disaster preparedness and policymaking. It illustrates how natural disaster preparedness contributes to a powerful urban coalition that politically and financially increases the power of the national government while weakening the involvement of civil organizations in the urban governance of sustainable development. The study also shows that natural disaster preparedness was used as a pretext for overriding sustainability imperatives with respect to green public spaces, resulting in the privatization of green areas for the purposes of constructing sustainable boutique-style gated communities. The power dynamics, especially between the powerful constructocracy and other actors, and the inequality realized in creating urban and green spaces should be further analysed, particularly with respect to what the implications might be of green gentrification processes that are ostensibly driven by natural disaster preparedness.

Research has shown that past urban renewal processes in Istanbul and elsewhere have resulted in exclusion and increased inequality. We maintain that the situation is unlikely to change with sustainable approaches unless more focus is placed on including local residents and empowering them to remain in the district by supporting investment in sustainable housing that is more affordable. These findings are relevant for urban policymakers and scholars who are interested in urban sustainability and renewal processes. They highlight that, even though sustainability and

seismic vulnerability make it necessary to transform urban systems in cities like Istanbul, in order to "leave no one behind" in accordance with the goals of the 2030 Agenda for Sustainable Development and SDG 11, relevant officials must pay attention to the political ecology of the potential social exclusion and increased inequalities that can result from urban renewal.

Future research should investigate how green-sustainable buildings are prioritized by the housing market in the process of urban planning (versus creating green areas for public use), and more detailed data on the environmental and social impacts of large-scale urban sustainability renewal projects should be collected. Case studies should also be carried out on sustainable urban renewal projects, in different contexts, that have led to more (or less) green gentrification so as to provide insights into how high levels of social exclusion can be avoided in urban transformations towards sustainability.

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